

From: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)
To: bwr.crrc@tampabay.rr.com; [Kevin J Grimsley](#); [R. Rodriguez](#)
Cc: [Doug Leeper](#); [Marty Kelly](#); [J Weaver](#)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Tuesday, January 17, 2012 12:54:04 PM

Brad, Kevin and Mr. Rodriguez,

Brad and Kevin,

Thanks for sharing the various recent e-mails. I only got home late yesterday afternoon and back to the e-mail world.

A few points quickly.

1. I fully share Brad's concerns regarding installation of the gauges at the Chass station. I was with Brad when we viewed these last Saturday. I was amazed to see the units laying on the bottom (in mud/on tree roots) particularly the stage gauges are not secured to a fixed datum point. I did take some photographs but these are difficult to interpret given that it was fairly windy that day. While no expert I think this requires serious on-site review; just maybe some movement of the stage sensor or switching from one to the other gave the 'apparent change' in the data I commented about. What did the PEquip mean in the data set?

I have some other observations about the reverse flow at the site, but will address those later.

2. Regarding USGS policy not to share the equation for the Chass that you stated has not been changed. Such a positioning does not fall in line with the attempts to have a Working Group to look at these critical spring flows. Where is the spirit of cooperation? It does not make sense that this can be shared with a formal FOIA request but not between members of the Working Group. Kevin, I realize you have to follow policy.

Mr. Rodriguez: Please share the USGS policy regarding this position.

3. Regarding the acoustic velocity meter in the SE Fork. As I said in an earlier e-mail with over 2500 readings surely some preliminary interpretation/comparison to the calculated flows is possible.

I note on 10/19 and 10/20 data collection appears to have been turned Off while conducting field measurements. The results comparing calculated flows with measured flows were interesting;

Meas. Number	Date	Time	MeasuringStream Agency	Gage flow (ft ³ /s)	Gage Height (ft)	Calc Flow (ft ³ /s)	Calc Flow Time	
183	2011-10-20	05:51	USGS	76.2	1.80	64	6:00	119%
182	2011-10-20	05:24	USGS	75.4	1.85	59	5:30	128%
181	2011-10-19	14:46:30	USGS	68.2	2.64	51	14:45	134%
180	2011-10-19	14:18:30	USGS	59.0	2.69	51	14:15	116%
179	2011-10-19	13:46	USGS	59.8	2.73	55	13:45	109%
178	2011-10-19	13:25	USGS	55.8	2.76	46	13:30	121%
177	2011-10-19	12:54:30	USGS	50.6	2.78	50	13:00	101%
176	2011-10-19	12:26:30	USGS	55.8	2.82	49	12:30	114%
175	2011-10-19	11:59	USGS	52.9	2.84	45	12:00	118%
174	2011-10-19	11:25:30	USGS	49.8	2.88	49	11:30	102%
173	2011-10-19	10:51	USGS	43.8	2.92	44	11:00	100%
172	2011-10-19	10:24	USGS	45.2	2.96	52	10:30	87%
171	2011-10-05	11:46:30	USGS	48.8	0.70	63	11:45	77%

170	2011-10-05 11:42:30	USGS	52.6	0.70	63	11:45	83%
169	2011-10-05 11:40	USGS	53.6	0.70	63	11:45	85%
168	2011-10-05 11:36:30	USGS	54.1	0.70	51	11:30	106%

Calculated Flows taken from USGS Real Time Data.

No comments were received about the calculated negative flows and the association with the dS/dt factor in the SE Fork equation being for 30 minutes rather than 15 minutes for the :30 minute data.

Martyn

From: BWR.CRRC@tampabay.rr.com
To: kjgrims@usgs.gov
CC: martynellijay@hotmail.com
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Tue, 17 Jan 2012 10:05:03 -0500

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](#)
To: [Brad Rimbey@CRRC](#)
Cc: [Martyn Johnson](#)
Sent: Monday, January 16, 2012 3:01 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are subject to change at any time. We've had past problems where people have reported discharge values as supplied by

the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?
http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)
To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
Cc: [Brent Whitley](mailto:Brent.Whitley@usgs.gov) ; [Dana Bryan](mailto:Dana.Bryan@usgs.gov) ; [Doug Leeper](mailto:Doug.Leeper@usgs.gov) ; [Al Grubman](mailto:Al.Grubman@usgs.gov) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov) ; [Marty Kelly](mailto:Marty.Kelly@usgs.gov) ; [Norman Hopkins](mailto:Norman.Hopkins@usgs.gov) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@usgs.gov) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@usgs.gov)
Sent: Friday, January 13, 2012 3:16 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663.

Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com>
To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>
Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <mille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rrodrigu@usgs.gov>
Date: 01/12/2012 05:31 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yesterday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley)
To: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)
Cc: [Brent Whitley](mailto:Brent.Whitley) ; [Brad Rimbey](mailto:Brad.Rimbey) ; [Dana Bryan](mailto:Dana.Bryan) ; [Doug Leeper](mailto:Doug.Leeper) ; [Al Grubman](mailto:Al.Grubman) ; [J Weaver](mailto:J.Weaver) ; [Marty Kelly](mailto:Marty.Kelly) ; [Norman Hopkins](mailto:Norman.Hopkins) ; rebecca.bays@bocc.citrus.fl.us ; rkane ; [Ron Miller](mailto:Ron.Miller) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso) ; [R Rodriguez](mailto:R.Rodriguez)
Sent: Thursday, January 12, 2012 1:57 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at any other time over the past several years.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa

USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <rmille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rodrigu@usgs.gov>, J Weaver <joweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>
Date: 01/12/2012 12:33 PM
Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are ^P Eqp .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

From: [Alan Martyn Johnson](#)
To: [Kevin J. Grimsley](#); [Brad Rimley](#)
Cc: [Doug Leeper](#); [Marty Kelly](#); [Ron Basso](#); [R Rodriguez](#)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Wednesday, January 18, 2012 8:18:20 AM

Kevin,
Chass Gage Site

From the way the cables were routed to the probes it did not appear that the probes had an intended location (fixed supports/housings as SE Fork installation). The probes are not close to the station as shown in the photograph Chass Draft Report by SWFWMD.

SE Fork

Regarding the SE Fork velocity meter, I thought this needed a stage area to be determined and given the bridge supports are practically vertical the stage area should be easily adjusted for stage height.

I will agree the velocity profile across the stream under the Fishbowl Drive bridge does vary considerably with higher velocity on the left bank than the shallower right bank and influenced strongly by the flow changing direction at that point in the river. About a year ago I did some rudimentary checks myself developing a stage area and using a orange/stopwatch to check the velocity and calculate discharge. Crude, old school but effective at demonstrating to me the equation had problems. And yes I did time the orange numerous times and different stage heights.

Presumably the positioning of the velocity meter was to maximize its location relative to the mean velocity location across the stream. I would have thought Doug would appreciate some preliminary feedback as SWFWMD helped fund this installation and are about to issue a new report.

Interesting Observations

1. Recently (last 10 days) the vent just upstream of the bridge (right bank about 10 feet from the bank and 30-40 feet from the bridge) has been discharging strongly at lower stage/tide levels. I sampled water directly from the vent and it has Specific Conductance 5200-5400 on the two occasions I measured it (similar to the higher salinity vents in the main springs). This water stays on the right bank and significantly increases the specific conductance to about 1000 more than the main flow mid stream to left bank. I also have a much better understanding of how the gauge sees higher specific conductance water. Kids bath tub Dots by Cranola make a good alternative to those fancy dye cakes you are no doubt familiar with. Water from the SE Fork flows over the water in the Blue Water area as the stage increases; quite easy to see in the afternoon as the divers/swimmers/manatee have churned up the Blue Water and you can see how it mixes with the clear water from the SE Fork, the dye simply confirmed.
2. The unnamed vent about 15 feet from the right bank directly opposite the McClain residence. The river bed closer to the center of the river from this spring has dropped (collapsed) at least 2 feet in the last couple of months and the flow has decreased to the point that it is now hard to see the 'boil' even at low water. This vent discharges water 1100-1200 microsms as sampled from the vent.

Just thought some people may be interested.

Martyn

To: BWR.CRRC@tampabay.rr.com

Date: Tue, 17 Jan 2012 21:50:29 -0500
From: kjgrims@usgs.gov
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
CC: martynellijay@hotmail.com

Hi Brad and Martyn,

If the pressure and conductance probes at the Chaz gage are out "laying in the mud" as you've described, then someone (probably a curious bypasser) has removed them from their proper housing and not put them back correctly. This happened a few months ago as well so I wouldn't be surprised if it happened again.

The velocity meter at SE Fork is working fine, but the data won't be meaningful until we've collected a series of corresponding discharge measurements over a full range of conditions. As we've explained at the workshop meetings, that process is likely to take a year and could be more. As soon as we have enough velocity AND corresponding discharge data to develop a relationship, we will make that data available.

We installed a velocity meter at Chaz main several years ago, but there was too much vegetation for it to work correctly. However, several people have noted that the vegetation is far less than it used to be so it might be worth another try. We could provide partial funding for adding a velocity meter at Chaz, but the rest of the funding would have to come from another federal, state, or local government entity.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 17, 2012, at 10:05 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

|

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)
To: [Brad Rimbey@CRRRC](mailto:Brad.Rimbey@CRRRC.com)
Cc: [Martyn Johnson](mailto:Martyn.Johnson@usgs.gov)
Sent: Monday, January 16, 2012 3:01 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are subject to change at any time. We've had past problems where people have reported discharge values as supplied by the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRRC" <BWR.CRRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?

http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)
To: [Brad Rimbey@CRRRC](mailto:Brad.Rimbey@CRRRC)
Cc: [Brent Whitley](mailto:Brent.Whitley@sierra-properties.com) ; [Dana Bryan](mailto:Dana.Bryan@dep.state.fl.us) ; [Doug Leeper](mailto:Doug.Leeper@swfwmd.state.fl.us) ; [Al Grubman](mailto:Al.Grubman@gmail.com) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@swfwmd.state.fl.us) ; [Marty Kelly](mailto:Marty.Kelly@swfwmd.state.fl.us) ; [Norman Hopkins](mailto:Norman.Hopkins@amyhfrf.org) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@tampabay.rr.com) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@swfwmd.state.fl.us)
Sent: Friday, January 13, 2012 3:16 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663. Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: "Brad Rimbey@CRRRC" <BWR.CRRC@tampabay.rr.com>
To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>
Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhfrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <mille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rrodrigu@usgs.gov>
Date: 01/12/2012 05:31 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yestersday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.
----- Original Message -----

From: [Kevin J Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: [Brent Whitley](#) ; [Brad Rimbey](#) ; [Dana Bryan](#) ; [Doug Leeper](#) ;
[Al Grubman](#) ; [J Weaver](#) ; [Marty Kelly](#) ; [Norman Hopkins](#) ;
rebecca.bays@bocc.citrus.fl.us ; [rkane](#) ; [Ron Miller](#) ;
robert.knight@bocc.citrus.fl.us ; [Ron Basso](#) ; [R Rodriguez](#)
Sent: Thursday, January 12, 2012 1:57 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at any other time over the past several years.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <rmille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhfr.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rodrigu@usgs.gov>, J Weaver <jweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>
Date: 01/12/2012 12:33 PM
Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as

reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are ^P Eqp .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release

Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

From: [Kevin J Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: [Brad Rimley](#); [Doug Leeper](#); [Marty Kelly](#); [Ron Basso](#); [R Rodriguez](#)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Wednesday, January 18, 2012 9:25:43 AM

Martyn,

The probes at Chaz do have pipes installed to protect them. If they're not in those pipes then someone moved them after our last visit in December.

In addition to the stage/area relationship we also have to develop the mean velocity relationship. We try to install the velocity meter as close to the mean as possible, but we never assume that it's collecting the mean and it almost never does. The "location" of a mean velocity also shifts depending on conditions so it's almost impossible to always collect a true mean velocity from a fixed location. I'm sure that Doug and SWFWMD are aware that every velocity meter we install takes around a year to develop discharge.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Kevin J Grimsley <kjgrims@usgs.gov>, Brad Rimley <bwr.crc@tampabay.rr.com>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, R Rodriguez <rrodrigu@usgs.gov>
Date: 01/18/2012 08:18 AM
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Kevin,

Chass Gage Site

From the way the cables were routed to the probes it did not appear that the probes had an intended location (fixed supports/housings as SE Fork installation). The probes are not close to the station as shown in the photograph Chass Draft Report by SWFWMD.

SE Fork

Regarding the SE Fork velocity meter, I thought this needed a stage area to be determined and given the bridge supports are practically vertical the stage area should be easily adjusted for stage height.

I will agree the velocity profile across the stream under the Fishbowl Drive bridge does vary considerably with higher velocity on the left bank than the shallower right bank and influenced strongly by the flow changing direction at that point in the river. About a year ago

I did some rudimentary checks myself developing a stage area and using a orange/stopwatch to check the velocity and calculate discharge. Crude, old school but effective at demonstrating to me the equation had problems. And yes I did time the orange numerous times and different stage heights.

Presumably the positioning of the velocity meter was to maximize its location relative to the mean velocity location across the stream. I would have thought Doug would appreciate some preliminary feedback as SWFWMD helped fund this installation and are about to issue a new report.

Interesting Observations

1. Recently (last 10 days) the vent just upstream of the bridge (right bank about 10 feet from the bank and 30-40 feet from the bridge) has been discharging strongly at lower stage/tide levels. I sampled water directly from the vent and it has Specific Conductance 5200-5400 on the two occasions I measured it (similar to the higher salinity vents in the main springs). This water stays on the right bank and significantly increases the specific conductance to about 1000 more than the main flow mid stream to left bank. I also have a much better understanding of how the gauge sees higher specific conductance water. Kids bath tub Dots by Cranola make a good alternative to those fancy dye cakes you are no doubt familiar with. Water from the SE Fork flows over the water in the Blue Water area as the stage increases; quite easy to see in the afternoon as the divers/swimmers/manatee have churned up the Blue Water and you can see how it mixes with the clear water from the SE Fork, the dye simply confirmed.
2. The unnamed vent about 15 feet from the right bank directly opposite the McClain residence. The river bed closer to the center of the river from this spring has dropped (collapsed) at least 2 feet in the last couple of months and the flow has decreased to the point that it is now hard to see the 'boil' even at low water. This vent discharges water 1100-1200 microsms as sampled from the vent.

Just thought some people may be interested.

Martyn

To: BWR.CRRRC@tampabay.rr.com
Date: Tue, 17 Jan 2012 21:50:29 -0500
From: kjgrims@usgs.gov
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
CC: martynellijay@hotmail.com

Hi Brad and Martyn,

If the pressure and conductance probes at the Chaz gage are out "laying in the mud" as you've described, then someone (probably a curious bypasser) has removed them from their proper housing and not put them back correctly. This happened a few months ago as well so I wouldn't be surprised if it happened again.

The velocity meter at SE Fork is working fine, but the data won't be meaningful until we've collected a series of corresponding discharge measurements over a full range of conditions. As we've explained at the workshop meetings, that process is likely to take a year and could be more. As soon as we have enough velocity AND corresponding discharge data to develop a relationship, we will make that data

available.

We installed a velocity meter at Chaz main several years ago, but there was too much vegetation for it to work correctly. However, several people have noted that the vegetation is far less than it used to be so it might be worth another try. We could provide partial funding for adding a velocity meter at Chaz, but the rest of the funding would have to come from another federal, state, or local government entity.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 17, 2012, at 10:05 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin_J_Grimsley)
To: [Brad Rimbey@CRRC](mailto:Brad_Rimbey@CRRC)
Cc: [Martyn Johnson](mailto:Martyn_Johnson)
Sent: Monday, January 16, 2012 3:01 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the

one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are subject to change at any time. We've had past problems where people have reported discharge values as supplied by the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?

http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)
To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC.com)
Cc: [Brent Whitley](mailto:Brent.Whitley@usgs.gov) ; [Dana Bryan](mailto:Dana.Bryan@usgs.gov) ; [Doug Leeper](mailto:Doug.Leeper@usgs.gov) ; [Al Grubman](mailto:Al.Grubman@usgs.gov) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov) ; [Marty Kelly](mailto:Marty.Kelly@usgs.gov) ; [Norman Hopkins](mailto:Norman.Hopkins@usgs.gov) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@usgs.gov) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@usgs.gov)

Sent: Friday, January 13, 2012 3:16 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663. Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com>
To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>
Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <mille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rrodrigu@usgs.gov>
Date: 01/12/2012 05:31 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yesterday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimsley)
To: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)
Cc: [Brent Whitley](mailto:Brent.Whitley) ; [Brad Rimbey](mailto:Brad.Rimbey) ; [Dana Bryan](mailto:Dana.Bryan) ; [Doug Leeper](mailto:Doug.Leeper) ; [Al Grubman](mailto:Al.Grubman) ; [J Weaver](mailto:J.Weaver) ; [Marty Kelly](mailto:Marty.Kelly) ; [Norman Hopkins](mailto:Norman.Hopkins) ; rebecca.bays@bocc.citrus.fl.us ; rkane ; [Ron Miller](mailto:Ron.Miller) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso) ; [R Rodriguez](mailto:R.Rodriguez)
Sent: Thursday, January 12, 2012 1:57 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at

any other time over the past several years.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <rmille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rrodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>
Date: 01/12/2012 12:33 PM
Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are ^P Eqp .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

From: [Kevin J Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: bwr.crrc@tampabay.rr.com; [Doug Leeper](#); [Marty Kelly](#)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Wednesday, January 18, 2012 12:10:55 PM

Martyn,

1) Just so everyone else in this thread knows, I have explained in a separate email how we do have a mount for the probes at Chaz and it appears they've been removed by a curious passer-by. The "P" flag is to mark the data as provisional. The "Eqp" flag indicates that the data was blocked from being released due to an equipment error.

2) We gladly and voluntarily participated in the Springs Coast MFL working group to help educate the public and stakeholders about what we do and how we do it. To be clear, we're not withholding information that can simply be retrieved through a FOIA request. We believe that a FOIA request would not apply to these equations because they are interpretive in nature. The data that we collect and the discharge values that we calculate are always completely open to the public. Equations and "ratings" change all the time. If you want to know the discharge for the Chassahowitzka River, or any other river that we gage, our data is always available through NWISWeb.

Mr. Rodriguez asked me to respond to your question about our policy. As far as I know, there is not an overall USGS policy on releasing discharge equations. It is left up to the discretion of each state's Science Center. I can honestly tell you that this policy has been in effect for longer than I've been around. I can also say that when I worked for the Louisiana Water Science Center, we had the same policy.

3) As I explained in previous emails, it will take a year or possibly more to begin getting discharge from the velocity meter installed at SE Fork.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: <bwr.crrc@tampabay.rr.com>, Kevin J Grimsley <kjgrims@usgs.gov>, R Rodriguez <rrodrigu@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, J Weaver <jdweaver@usgs.gov>
Date: 01/17/2012 12:53 PM
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Brad, Kevin and Mr. Rodriguez,

Brad and Kevin,

Thanks for sharing the various recent e-mails. I only got home late yesterday afternoon and back to the e-mail world.

A few points quickly.

1. I fully share Brad's concerns regarding installation of the gauges at the Chass station. I was with Brad when we viewed these last Saturday. I was amazed to see the units laying on the bottom (in mud/on tree roots) particularly the stage gauges are not secured to a fixed datum point. I did take some photographs but these are difficult to interpret given that it was fairly windy that day. While no expert I think this requires serious on-site review; just maybe some movement of the stage sensor or switching from one to the other gave the 'apparent change' in the data I commented about. What did the PEquip mean in the data set?

I have some other observations about the reverse flow at the site, but will address those later.

2. Regarding USGS policy not to share the equation for the Chass that you stated has not been changed. Such a positioning does not fall in line with the attempts to have a Working Group to look at these critical spring flows. Where is the spirit of cooperation? It does not make sense that this can be shared with a formal FOIA request but not between members of the Working Group. Kevin, I realize you have to follow policy.

Mr. Rodriguez: Please share the USGS policy regarding this position.

3. Regarding the acoustic velocity meter in the SE Fork. As I said in an earlier e-mail with over 2500 readings surely some preliminary interpretation/comparison to the calculated flows is possible.

I note on 10/19 and 10/20 data collection appears to have been turned Off while conducting field measurements. The results comparing calculated flows with measured flows were interesting;

Meas. Number	Date Time	Measuring Agency	Stream flow (ft ³ /s)	Gage Height (ft)	Calc Flow (ft ³ /s)	Calc Flow Time	
183	2011-10-20 05:51	USGS	76.2	1.80	64	6:00	119%
182	2011-10-20 05:24	USGS	75.4	1.85	59	5:30	128%
181	2011-10-19 14:46:30	USGS	68.2	2.64	51	14:45	134%
180	2011-10-19 14:18:30	USGS	59.0	2.69	51	14:15	116%
179	2011-10-19 13:46	USGS	59.8	2.73	55	13:45	109%
178	2011-10-19 13:25	USGS	55.8	2.76	46	13:30	121%
177	2011-10-19 12:54:30	USGS	50.6	2.78	50	13:00	101%
176	2011-10-19 12:26:30	USGS	55.8	2.82	49	12:30	114%
175	2011-10-19 11:59	USGS	52.9	2.84	45	12:00	118%
174	2011-10-19 11:25:30	USGS	49.8	2.88	49	11:30	102%
173	2011-10-19 10:51	USGS	43.8	2.92	44	11:00	100%
172	2011-10-19 10:24	USGS	45.2	2.96	52	10:30	87%
171	2011-10-05 11:46:30	USGS	48.8	0.70	63	11:45	77%
170	2011-10-05 11:42:30	USGS	52.6	0.70	63	11:45	83%
169	2011-10-05 11:40	USGS	53.6	0.70	63	11:45	85%
168	2011-10-05 11:36:30	USGS	54.1	0.70	51	11:30	106%

Calculated Flows taken from USGS Real Time Data.

No comments were received about the calculated negative flows and the association with the dS/dt factor in the SE Fork equation being for 30 minutes rather than 15 minutes for the :30 minute data.

Martyn

From: BWR.CRRC@tampabay.rr.com
To: kjgrims@usgs.gov
CC: martynellijay@hotmail.com
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Tue, 17 Jan 2012 10:05:03 -0500

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimsley@usgs.gov)
To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC.com)
Cc: [Martyn Johnson](mailto:Martyn.Johnson@usgs.gov)
Sent: Monday, January 16, 2012 3:01 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are

subject to change at any time. We've had past problems where people have reported discharge values as supplied by the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?

http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)

To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC.com)

Cc: [Brent Whitley](mailto:Brent.Whitley@usgs.gov) ; [Dana Bryan](mailto:Dana.Bryan@usgs.gov) ; [Doug Leeper](mailto:Doug.Leeper@usgs.gov) ; [Al Grubman](mailto:Al.Grubman@usgs.gov) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov) ; [Marty Kelly](mailto:Marty.Kelly@usgs.gov) ; [Norman Hopkins](mailto:Norman.Hopkins@usgs.gov) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@usgs.gov) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@usgs.gov)

Sent: Friday, January 13, 2012 3:16 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663. Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com>
To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>
Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <mille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rodrigu@usgs.gov>
Date: 01/12/2012 05:31 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yesterday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley)

To: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)

Cc: [Brent Whitley](mailto:Brent.Whitley) ; [Brad Rimbey](mailto:Brad.Rimbey) ; [Dana Bryan](mailto:Dana.Bryan) ; [Doug Leeper](mailto:Doug.Leeper) ; [Al Grubman](mailto:Al.Grubman) ; [J Weaver](mailto:J.Weaver) ; [Marty Kelly](mailto:Marty.Kelly) ; [Norman Hopkins](mailto:Norman.Hopkins) ; rebecca.bays@bocc.citrus.fl.us ; rkane ; [Ron Miller](mailto:Ron.Miller) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso) ; [R Rodriguez](mailto:R.Rodriguez)

Sent: Thursday, January 12, 2012 1:57 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at any other time over the past several years.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <mille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>
Date: 01/12/2012 12:33 PM
Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are ^P Eqp .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

From: [Brad Rimbey@CRRRC](mailto:Brad.Rimbey@CRRRC)
To: [Kevin J Grimsley](#); [Alan Martyn Johnson](#)
Cc: [Marty Kelly](#); [Doug Leeper](#)
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Wednesday, January 18, 2012 2:27:27 PM

Kevin,

I will be sending a formal FOIA to USGS to once again request the data which has been previously requested from you. I would very surprised if I am not provided with everything I have previously requested from you.

I have done many public records requests over my years as an engineering consultant for the legal industry. I have never been denied anything that I have requested. As you may soon discover, Florida has one of the most broad public records laws of any State in the Union. All of the data which has previously been requested from you was obtained via cooperative funding from a Florida government agency (SWFWMD). USGS does not own this data. USGS does not own any equations derived from this data. This data and any equations derived from this data were paid for by the citizens of the United States. This data and any equations derived from this data are the property of the citizens of the United States. It is ours for the asking.

I have no doubt that any Government agency could claim that releasing data gathered by their agency may cause some inconvenience to their agency. Too bad. We live in democracy and the Government works for us not vise-versa. The Freedom of Information Act is the law and I expect USGS to comply with the law.

I suspect you will be hearing from the USGS FOIA officer shortly.

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: bwr.crrc@tampabay.rr.com ; [Doug Leeper](#) ; [Marty Kelly](#)
Sent: Wednesday, January 18, 2012 12:10 PM
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Martyn,

1) Just so everyone else in this thread knows, I have explained in a separate email how we do have a mount for the probes at Chaz and it appears they've been removed by a curious passer-by. The "P" flag is to mark the data as provisional. The "Eqp" flag indicates that the data was blocked from being released due to an equipment error.

2) We gladly and voluntarily participated in the Springs Coast MFL working group to help educate the public and stakeholders about what we do and how we do it. To be clear, we're not withholding information that can simply be retrieved through a FOIA request. We believe that a FOIA request would not apply to these equations because they are interpretive in nature. The data that we collect and the discharge values that we calculate are always completely open to the public. Equations and "ratings" change all the time. If you want to know the discharge for the Chassahowitzka River, or any other river that we gage, our data is always available through NWISWeb.

Mr. Rodriguez asked me to respond to your question about our policy. As far as I know, there is not an overall USGS policy on releasing discharge equations. It is left up to the discretion of each state's Science Center. I can honestly tell you that this policy has been in effect for longer than I've been

around. I can also say that when I worked for the Louisiana Water Science Center, we had the same policy.

3) As I explained in previous emails, it will take a year or possibly more to begin getting discharge from the velocity meter installed at SE Fork.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: <bwr.crc@tampabay.rr.com>, Kevin J Grimsley <kjgrims@usgs.gov>, R Rodriguez <rrodrigu@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, J Weaver <jdweaver@usgs.gov>
Date: 01/17/2012 12:53 PM
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Brad, Kevin and Mr. Rodriguez,

Brad and Kevin,

Thanks for sharing the various recent e-mails. I only got home late yesterday afternoon and back to the e-mail world.

A few points quickly.

1. I fully share Brad's concerns regarding installation of the gauges at the Chass station. I was with Brad when we viewed these last Saturday. I was amazed to see the units laying on the bottom (in mud/on tree roots) particularly the stage gauges are not secured to a fixed datum point. I did take some photographs but these are difficult to interpret given that it was fairly windy that day. While no expert I think this requires serious on-site review; just maybe some movement of the stage sensor or switching from one to the other gave the 'apparent change' in the data I commented about. What did the PEquip mean in the data set?

I have some other observations about the reverse flow at the site, but will address those later.

2. Regarding USGS policy not to share the equation for the Chass that you stated has not been changed. Such a positioning does not fall in line with the attempts to have a Working Group to look at these critical spring flows. Where is the spirit of cooperation? It does not make sense that this can be shared with a formal FOIA request but not between members of the Working Group. Kevin, I realize you have to follow policy.

Mr. Rodriguez: Please share the USGS policy regarding this position.

3. Regarding the acoustic velocity meter in the SE Fork. As I said in an earlier e-mail

with over 2500 readings surely some preliminary interpretation/comparison to the calculated flows is possible.

I note on 10/19 and 10/20 data collection appears to have been turned Off while conducting field measurements. The results comparing calculated flows with measured flows were interesting;

Meas.	Date	Time	Measuring	Stream	Gage	Calc	Calc	
Number			Agency	flow	Height	Flow	Flow	
				(ft ³ /s)	(ft)	(ft ³ /s)	Time	
183	2011-10-20	05:51	USGS	76.2	1.80	64	6:00	119%
182	2011-10-20	05:24	USGS	75.4	1.85	59	5:30	128%
181	2011-10-19	14:46:30	USGS	68.2	2.64	51	14:45	134%
180	2011-10-19	14:18:30	USGS	59.0	2.69	51	14:15	116%
179	2011-10-19	13:46	USGS	59.8	2.73	55	13:45	109%
178	2011-10-19	13:25	USGS	55.8	2.76	46	13:30	121%
177	2011-10-19	12:54:30	USGS	50.6	2.78	50	13:00	101%
176	2011-10-19	12:26:30	USGS	55.8	2.82	49	12:30	114%
175	2011-10-19	11:59	USGS	52.9	2.84	45	12:00	118%
174	2011-10-19	11:25:30	USGS	49.8	2.88	49	11:30	102%
173	2011-10-19	10:51	USGS	43.8	2.92	44	11:00	100%
172	2011-10-19	10:24	USGS	45.2	2.96	52	10:30	87%
171	2011-10-05	11:46:30	USGS	48.8	0.70	63	11:45	77%
170	2011-10-05	11:42:30	USGS	52.6	0.70	63	11:45	83%
169	2011-10-05	11:40	USGS	53.6	0.70	63	11:45	85%
168	2011-10-05	11:36:30	USGS	54.1	0.70	51	11:30	106%

Calculated Flows taken from USGS Real Time Data.

No comments were received about the calculated negative flows and the association with the dS/dt factor in the SE Fork equation being for 30 minutes rather than 15 minutes for the :30 minute data.

Martyn

From: BWR.CRRC@tampabay.rr.com
 To: kjgrims@usgs.gov
 CC: martynellijay@hotmail.com
 Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
 Date: Tue, 17 Jan 2012 10:05:03 -0500

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the

stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimmsley@usgs.gov)

To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC.com)

Cc: [Martyn Johnson](mailto:Martyn.Johnson@usgs.gov)

Sent: Monday, January 16, 2012 3:01 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are subject to change at any time. We've had past problems where people have reported discharge values as supplied by the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?

http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimley@usgs.gov)

To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)

Cc: [Brent Whitley](mailto:Brent.Whitley@sierra-properties.com) ; [Dana Bryan](mailto:Dana.Bryan@dep.state.fl.us) ; [Doug Leeper](mailto:Doug.Leeper@swfwmd.state.fl.us) ; [Al Grubman](mailto:Al.Grubman@gmail.com) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov) ; [Marty Kelly](mailto:Marty.Kelly@swfwmd.state.fl.us) ; [Norman Hopkins](mailto:Norman.Hopkins@amyhrf.org) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@tampabay.rr.com) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@swfwmd.state.fl.us)

Sent: Friday, January 13, 2012 3:16 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663. Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.

Hydrologic Data Chief, Tampa

USGS, Florida Water Science Center

10500 University Center Drive, Suite 215

Tampa, FL 33612

kjgrims@usgs.gov

813-498-5064

From: "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com>

To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>

Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <rmille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rodrigu@usgs.gov>

Date: 01/12/2012 05:31 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yesterday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](#)

To: [Alan Martyn Johnson](#)

Cc: [Brent Whitley](#) ; [Brad Rimbey](#) ; [Dana Bryan](#) ; [Doug Leeper](#) ; [Al Grubman](#) ; [J Weaver](#) ; [Marty Kelly](#) ; [Norman Hopkins](#) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](#) ; [Ron Miller](#) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](#) ; [R Rodriguez](#)

Sent: Thursday, January 12, 2012 1:57 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at any other time over the past several years.

Kevin Grimsley, P.E.

Hydrologic Data Chief, Tampa

USGS, Florida Water Science Center

10500 University Center Drive, Suite 215

Tampa, FL 33612

kjgrims@usgs.gov

813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>

To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <rmille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rrodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>

Date: 01/12/2012 12:33 PM

Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are ^P Eq_P .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the

Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

From: [Ron Basso](#)
To: [Alan Martyn Johnson](#); [Doug Leeper](#)
Cc: [Ron Miller](#); [Al Grubman](#); [Brad Rimbey](#); [Norman Hopkins](#); [J Weaver](#); [R Rodriguez](#); [Kevin J Grimsley](#); [Paul Williams](#); [Claire E. Muirhead](#)
Subject: RE: Homosassa MFL's
Date: Wednesday, January 18, 2012 11:34:16 AM
Attachments: [2011_12_WCP_total.xlsx](#)

Mr. Johnson:

I've completed your request regarding the number of well construction permits issued in the six-county region of our Northern District over the last year (January 1, 2011 to January 1, 2012). I have attached the information in an excel file for your review. We are still researching the number of water use permits (new, modifications, or renewals) issued over the last year in the same region.

The well construction permit data indicates that there were 715 small diameter wells (less than 6 inches diameter) completed over the six-county region during the last year. These include wells installed for domestic self-supply, household irrigation wells, and livestock watering wells. As I mentioned in my earlier email, these wells do not meet our water use permit threshold and are exempt from those permitting requirements. A driller only needs to obtain a well construction permit to install these wells. We do not regulate them. However, their use is quite small. If we assume a use of 500 gallons per day (gpd) per well, the total water use for all 715 wells is only 357,500 gpd. This amounts to less than one-half of one percent of all groundwater withdrawn in the six-county region.

Only 9 larger diameter wells (6 inches well diameter or greater) were installed in the six-county region over the last year. These wells are part of a water use permit and their use is regulated by the District. If you have any questions, please do not hesitate to contact me.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Tuesday, January 03, 2012 1:00 PM
To: Doug Leeper
Cc: Ron Miller; Al Grubman; Brad Rimbey; Ron Basso; Marty Kelly; Norman Hopkins; J Weaver; R Rodriguez; Kevin J Grimsley
Subject: Homosassa MFL's

Doug,

It has been some 15 months since you started a process seeking public input regarding the MFL's for the Homosassa River. In a series of public meetings and forming a working group you have heard from members of the public and various stakeholder representatives. In the meetings Chassahowitzka, Crystal River and the Homosassa were involved. The question now is how will all this be incorporated in what is presented to the SWFWMD Board regarding the Chassahowitzka and Homosassa Rivers. I have heard comments about some of the older flow data being incorporated in the report, but it will not influence the data used in the 'all controlling' Northern District Model. I have heard that all the e-mails letters and presentations will be in 'appendices', but I doubt the Board will read these. So what will be presented?

Will a revised draft report or final report be published prior to presentation to the Board?
Will public input regarding major increase in barnacle growth as evidence of harm be included?
Will some preliminary analysis of acoustic doppler flow data SE Fork be included?
Will the USGS review of flow measurements/methodology in the Homosassa be mentioned?

In the Executive Summary page 20 of the July 12, 2010 Peer-Review Draft the wording includes:

Estimated combined discharge past United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009

.....
Declines in flow to the system associated with groundwater withdrawals were estimated to be approximately 2.3 cfs, including a 1 cfs decline in the springs contributing to flow past the USGS gages in the Homosassa Main Springs run and Southeast Fork. This 1 cfs change in flow was considered insignificant as compared to the estimated average flow of 152 cfs for the two sites, so available flow records for the sites were considered representative of baseline conditions for evaluation of minimum flow criteria. Because break-points in ecological responses were not observed, a fifteen percent loss of resource or habitat was adopted as representative of significant harm.

The most sensitive resource responses to modeled flow reductions were exhibited by fish and invertebrate plankton and nekton, i.e., free-floating and actively swimming organisms. Flow reductions of 2.7 percent or less from median baseline conditions were associated with fifteen percent reductions in predicted abundances of individual pseudo-species or taxa. Similar or increased sensitivity to flow reductions was predicted for many taxa across the range of baseline flows, in particular for baseline flows less than the median flows.

.....
Modeled responses of a number of salinity-based habitats in the Homosassa River main channel were also relatively sensitive to flow reductions. Flow reductions of less than five percent were associated with more than fifteen percent reductions in selected salinity-based habitats determined from isohalines with salinities of 2, 3, 5 and 12.

.....
Based on review of resource and habitat-based criteria, the recommended minimum flows for the Homosassa River system are defined as a five percent reduction from baseline flows. Given the minimal existing withdrawal impacts on flow, the recommended minimum flows are a five percent reduction from combined flows measured on a daily basis at the USGS gauge sites in the Homosassa Springs run and Southeast Fork of the Homosassa River.

Reminder: Few believe the 2.3 cfs is an accurate reflection of groundwater withdrawal reduction.

I am hoping that a 'new' Executive Summary will rely less on estimates to develop a defined answer.

Hopefully, through all the meetings/discussion we better recognize the legal requirement to set MFL's was a good concept when it was first enacted. To truly protect the future, minimum levels in the aquifer controlled by strict limits on groundwater withdrawals may be much more effective as a proactive approach for protecting Outstanding Florida Waters along the Spring Coast and all the economic activities which rely on water as a resource.

DECEMBER 13 Memo

Thanks to all who put the efforts into documenting and responding to the October workshop. I have read the December 13 memo posted on the web site. I have a number of comments and questions. For ease of reference I have numbered them.

1. **Semantics over shadow the real issues and cloud the facts.**

December 13 Memo page 4

Staff also notes that a strict definition of "mining groundwater" is where groundwater withdrawals exceed annual recharge to the aquifer, and based on this definition, there is no "mining" of groundwater in the Northern District. In the spring's coast groundwater basin, average recharge to the Upper Floridan aquifer is about 14 inches per year, while current groundwater withdrawals are approximately one inch per year.

Where does this strict definition come from? From my search it does not appear to have made it to the web yet. Sucking water out of the aquifer using power pumps sure sounds like a form of mining which is; *removing minerals (resources) from the ground, the process or business of removing minerals (resources) from the ground*. Semantics water is not a mineral, but it certainly is a valuable resource for which the equilibrium is moving in the wrong direction.

The facts in the statement. Over 7% of the water making it into the aquifer is being pumped out. This is 7% that does not provide the driving force to push water through the ground to the springs.

No pumping is equilibrium.

Looking at the often quoted Weeki Wachee Well it is clear that the water table has been declining. Similar is true for the Lecanto well mentioned in the July 2010 report.

Graph of DAILY Elevation above NGVD 1929, feet, Tampa DCP data



NOTE: IF THE USGS GRAPH DOES NOT COPY INTO THE E-MAIL; it is the presentation quality graph of daily data on the USGS web site for Weeki Wachee Well 1970-present..

Can the decline in well level all be attributed to rainfall? Take 2003 and 2004, both years saw high rainfall due to hurricanes and the water table increased to over 23 feet both years, but look how quickly the levels dropped to just over 16 feet. Compare that drop to what happened in the early 80's. Was spring flow lower in the 80's so the water table dropped more slowly? Or, could increased groundwater withdrawals be the difference?

It is always so easy to get apples and oranges mixed, but where do the 14 and 1 inch come from.

Specifically in the quote from page 4, the origin of the *average* 14 inches recharge is not referenced and similarly for the *current* one inch associated with withdrawals.

Appreciated this data may be combined from a number reports.

Looking in the Homosassa reviews, recharge is not mentioned in the July 12, 2010 Draft Review.

In the Appendices to the Review it is stated (page 338 of the pdf file under 2.0 Hydrogeologic Conditions):

The highest recharge rates to the UFA occur in west-central Hernando and Citrus Counties with values ranging between 10 and 25 inches per year (Sepulveda, 2002).

And further (on page 340):

The United States Geological Survey (USGS) developed a water budget for the basin for calendar years 1997 and 1998 (Knochenmus and Yobbi, 2001). According to Knochenmus and Yobbi's calculations, average annual values for the following water budget components were:

Rainfall = 52 inches (in)/yr,

Evapotranspiration = 32 in/yr,

Springflow = 12.5 in/yr,

Groundwater Withdrawals = 0.6 in/yr,

Groundwater Outflow = 6.7 in/yr and

Change in Storage = 0.2 in/yr

Based on the USGS water budget, net recharge to the UFA averaged 20 in/yr for the two-year period. As a percentage of recharge, groundwater withdrawals averaged about three percent of annual recharge.

QUESTION: PLEASE EXPLAIN WHERE THE AVERAGE 14 INCHES RECHARGE AND CURRENT 1 INCH WITHDRAWAL FIGURES COME FROM.

2. Groundwater Withdrawals

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

Something does not seem to add up. Early 2011 the following was a response to a question about new wells:

“Review of the District’s Well Construction Database indicates that 213 and 941 permits were issued for withdrawals in Citrus County during the past year and past three years, respectively.”.....”With regard to water-use permitting..... Fewer than ten of the hundreds of surface- and groundwater use permit requests received by the Brooksville Regulation Department during the past three years were not issued.

Note that this department of the District handles water use permitting for withdrawals in the northern portion of the District, which includes Citrus County, Hernando County, Pasco County, Sumter County, and portions of Lake, Levy and Marion counties.”

QUESTION A: WITH ALL THESE NEW WELLS AND WATER USE PERMITS HOW CAN CONSUMPTION HAVE DECLINED/REMAINED FLAT? Some data to support the statement would be useful.

QUESTION B: How many well construction permits and water use permits were issued during 2011 and how many were rejected. Same basis as previous data would be helpful.

3. Rainfall; the giver or the excuse.

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

December 13 Memo page 20

Staff acknowledges Mr. Miller's comments and notes that minimum flows and levels do, in effect, serve to establish a limit or cap beyond which further water withdrawals would be significantly harmful to area water resources and ecology. Once incorporated into District rules, minimum flows and levels become one criterion used in the evaluation of requests for water use permits. Similarly, minimum flows and levels help identify withdrawal limits that are incorporated into water supply planning efforts.

December 13 Memo page 25

Staff acknowledges Mr. Johnson's comments but does not support a five-year moratorium on the issuance or renewal of water use permits for area groundwater withdrawals. Staff does support the careful evaluation of all future renewals or issuances of water use permits in the Springs Coast area and elsewhere in the District.

Actions Speak Louder Than Words.

Sooner or later it will be recognized water management must deal with the rainfall as it occurs. Rainfall is income, you have to deal with the income you have this year.

The growers who tonight (January 3, 2012) will spray tremendous quantities of water from the aquifer on their crops are drawing from limited resources. It appears later rather than sooner attention will be paid to limiting water withdrawals; but for right now water use permits are issued to anyone who submits the correct paperwork. Moreover, when the circumstances are 'such' (like tonight's freeze) the limits will be waived....this highly probable for MFL's also The information regarding well construction and water use permits requested earlier combined with declines at wells in the area over the next few days will help validate if actions speak louder than words.

4, Discharge Measurements

December 13 Memo page 24 and 25

Staff notes that Mr. Grimsley addressed Mr. Johnson's questions about the ongoing efforts related to measurement of discharge in the Southeast Fork of the Homosassa River during the October workshop.

Response: Mr. Kevin Grimsley, with the United States Geological Survey, noted that equipment used to measure water velocities was installed at the Southeast Fork gage site in September and that negative velocities were recorded at the site last week as a meteorological front passed through the area. Mr. Grimsley added that it would be approximately six months to one year before sufficient data have been obtained for development of a velocity index rating curve for the gage site.

The USGS real time data indicates data from the acoustic doppler flow measuring equipment was operational early September with data collected at 15 minutes past each hour, 24 readings each day. With over 2500 readings some preliminary indication of how this equipment correlates with the calculated discharge data must be possible. The equations for the calculated data were developed by regression analysis of far less data than 2500 measurements.

It is noteworthy that since installation of the acoustic doppler unit, calculated data at the 30 minutes past the hour intervals is being calculated using a dS/dt (change in stage height) component in the formula for 30 minutes rather than for 15 minutes.

At 05:30 on October 19, 2011 the calculated figure was -0.27 cfs; this was calculated using a stage height change of 0.1 (2.67 to 2.77) multiplied by the equation constant of 418.14 or a contribution of -41.8 cfs the next two calculated reading were at 05:45 am of 20 cfs (stage change 2.77 to 2.82) and 06:00 am of 20 cfs (stage change 2.82 to 2.87) both these stage changes result in contribution of -20.91 cfs. Realizing this is more detail than most of you need lets just say this was/is not the only occurrence. Presumably this difference in calculation will be addressed when the data approval process takes place.

Date/Time	Calculated Discharge	Stage Change
10/19 05:30	-0.27 cfs	0,1
10/27 02:30	-1.1 cfs	0,14
11/22 14:30	-3.0 cfs	0.14
11/27 03:30	-0.17cfs	0.13
11/28 03:30	-3.8 cfs	0.13

On October 19/20, 2011 USGS conducted Field Measurements Acoustic Doppler data collection was suspended from 08:30 until 15:30 allowing 15 minute dS/dt calculated component to be reported. Calculated versus field measurement discharge is shown in the following table.

Number	Date	Time	Stream flow (ft ³ /s)	Calculated Flow Real Time Data (ft ³ /s)	
180	2011-10-20	05:51	76.2	64	84%
179	2011-10-20	05:24	75.4	59	78%
178	2011-10-19	14:46:30	68.2	51	75%
177	2011-10-19	14:18:30	59.0	51	86%
176	2011-10-19	13:46	59.8	55	92%
175	2011-10-19	13:25	55.8	46	82%
174	2011-10-19	12:54:30	50.6	50	99%
173	2011-10-19	12:26:30	55.8	49	88%

172	2011-10-19	11:59	52.9	45	85%
171	2011-10-19	11:25:30	49.8	49	98%
170	2011-10-19	10:51	43.8	44	100%
169	2011-10-19	10:24	45.2	52	115%

SUMMARY/CONCLUSION

-
With over 15 months of review the difference between estimated data and a defined MFL should be better understood. Also, the methods by which measurement/monitor compliance will be handled should be more confidently understood and scientifically verifiable.

Protecting and managing a resource as valuable as water to the future economy of the Springs Coast and the ecology of Outstanding Florida Waters in the area is a responsibility that will be assessed in the future. Maybe if some of the long term residents are respected when they say harm is already evident in the Homosassa River (major increase in barnacle growth, reduced fish population and noticeable flow reductions) the task will be easier.

Jan 1 2011 to Jan 1 2012

County	Well Construction	Well Completions	Domestic	Household		WUP Wells			Total	
	Permits Issued			Irrigation Wells	Livestock	(6 inches diam or greater)	Monitor	Plugged		Other
Citrus	300	266	122	66	2	1	38	26	11	266
Hernando	300	274	73	97	0	4	32	49	19	274
Lake	10	9	7	2	0	0	0	0	0	9
Levy	104	76	56	7	4	1	5	2	1	76
Marion	300	299	96	89	11	2	35	57	9	299
Sumter	202	185	58	21	4	1	35	55	11	185
Total:	1,216	1,109	412	282	21	9	145	189	51	1,109

**Total Small Diameter Wells
(Domestic, Home Irrigation, Livestock) 715**

Total WUP Wells (6 in diam or greater) 9

From: [Alan Martyn Johnson](#)
To: [Kevin J Grimsley](#)
Cc: [Brad Rimley](#); [Doug Leeper](#); marty.kelly@swfwmd.state.fl.us; [Ron Basso](#); [R Rodriguez](#)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Thursday, January 19, 2012 9:16:40 AM
Attachments: [PICT0041.JPG](#)

Kevin,

There was certainly no evidence of any 'pipes' at the location that are for housing the sensors. The cables lay unprotected in the water and are routed to the right of the tree in the photograph. The sensors lay about 12-18 inches from the front right side of the tree. The photograph attached shows the boat ramp in the background. The Gage Station as shown in the Figure 2-3 in the Chass Draft Report is about 15-20 feet behind the tree trunk. The white pvc pipe does not appear large enough to house the sensors and the cables if routed up this would have no protection or support back to the 'box' (cables would be 6 feet above water level).

Brad had mentioned about these sensors laying on the bottom unprotected some months ago after viewing the installation at the SE Fork, which to the best of my memory was at the time the velocity meter had just been installed. I doubt the current location of the sensors for the Chass Site is the result of some curious passerby.

Kevin,

I am sharing the photograph for the benefit of others and have no doubt you have visited the Chass on numerous occasions. Possibly, like myself, you assumed the sensors were at the location as shown in Fig 2-3 and directly below the 'box'. I am confident that now this has been pointed out you will initiate actions to have the installation brought to a good standard.

Martyn

To: martynellijay@hotmail.com
CC: bwr.crrc@tampabay.rr.com; doug.leeper@swfwmd.state.fl.us; marty.kelly@swfwmd.state.fl.us; ron.basso@swfwmd.state.fl.us; rrodrigu@usgs.gov
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
From: kjgrims@usgs.gov
Date: Wed, 18 Jan 2012 09:25:14 -0500

Martyn,

The probes at Chaz do have pipes installed to protect them. If they're not in those pipes then someone moved them after our last visit in December.

In addition to the stage/area relationship we also have to develop the mean velocity relationship. We try to install the velocity meter as close to the mean as possible, but we never assume that it's collecting the mean and it almost never does. The "location" of a mean velocity also shifts depending on conditions so it's almost impossible to always collect a true mean velocity from a fixed location. I'm sure that Doug and SWFWMD are aware that every velocity meter we install takes around a year to develop discharge.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center

10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Kevin J Grimsley <kjgrims@usgs.gov>, Brad Rimley <bwr.crrc@tampabay.rr.com>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, R Rodriguez <rrodrigu@usgs.gov>
Date: 01/18/2012 08:18 AM
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Kevin,
Chass Gage Site

From the way the cables were routed to the probes it did not appear that the probes had an intended location (fixed supports/housings as SE Fork installation). The probes are not close to the station as shown in the photograph Chass Draft Report by SWFWMD.

SE Fork

Regarding the SE Fork velocity meter, I thought this needed a stage area to be determined and given the bridge supports are practically vertical the stage area should be easily adjusted for stage height.

I will agree the velocity profile across the stream under the Fishbowl Drive bridge does vary considerably with higher velocity on the left bank than the shallower right bank and influenced strongly by the flow changing direction at that point in the river. About a year ago I did some rudimentary checks myself developing a stage area and using a orange/stopwatch to check the velocity and calculate discharge. Crude, old school but effective at demonstrating to me the equation had problems. And yes I did time the orange numerous times and different stage heights.

Presumably the positioning of the velocity meter was to maximize its location relative to the mean velocity location across the stream. I would have thought Doug would appreciate some preliminary feedback as SWFWMD helped fund this installation and are about to issue a new report.

Interesting Observations

1. Recently (last 10 days) the vent just upstream of the bridge (right bank about 10 feet from the bank and 30-40 feet from the bridge) has been discharging strongly at lower stage/tide levels. I sampled water directly from the vent and it has Specific Conductance 5200-5400 on the two occasions I measured it (similar to the higher salinity vents in the main springs). This water stays on the right bank and significantly increases the specific conductance to about 1000 more than the main flow mid stream to left bank. I also have a much better understanding of how the gauge sees higher specific conductance water. Kids bath tub Dots by Cranola make a good alternative to those fancy dye cakes you are no doubt

familiar with. Water from the SE Fork flows over the water in the Blue Water area as the stage increases; quite easy to see in the afternoon as the divers/swimmers/manatee have churned up the Blue Water and you can see how it mixes with the clear water from the SE Fork, the dye simply confirmed.

2. The unnamed vent about 15 feet from the right bank directly opposite the McClain residence. The river bed closer to the center of the river from this spring has dropped (collapsed) at least 2 feet in the last couple of months and the flow has decreased to the point that it is now hard to see the 'boil' even at low water. This vent discharges water 1100-1200 microsms as sampled from the vent.

Just thought some people may be interested.

Martyn

To: BWR.CRRC@tampabay.rr.com
Date: Tue, 17 Jan 2012 21:50:29 -0500
From: kjgrims@usgs.gov
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011
CC: martynellijay@hotmail.com

Hi Brad and Martyn,

If the pressure and conductance probes at the Chaz gage are out "laying in the mud" as you've described, then someone (probably a curious bypasser) has removed them from their proper housing and not put them back correctly. This happened a few months ago as well so I wouldn't be surprised if it happened again.

The velocity meter at SE Fork is working fine, but the data won't be meaningful until we've collected a series of corresponding discharge measurements over a full range of conditions. As we've explained at the workshop meetings, that process is likely to take a year and could be more. As soon as we have enough velocity AND corresponding discharge data to develop a relationship, we will make that data available.

We installed a velocity meter at Chaz main several years ago, but there was too much vegetation for it to work correctly. However, several people have noted that the vegetation is far less than it used to be so it might be worth another try. We could provide partial funding for adding a velocity meter at Chaz, but the rest of the funding would have to come from another federal, state, or local government entity.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 17, 2012, at 10:05 AM, "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the quick response. I am aware that the USGS stage-based regression equations for spring flow are empirical in basis and would therefore only be applicable to a specific data set. I am also aware that USGS periodically sends a tech to gather field flow measurements to validate the stage-based regression equations. I will send a formal request USGS FOIA Officer if that is what you prefer.

I recently looked at the USGS pressure, temperature, and conductivity gages for Chaz Main (USGS 02310650). Are you aware that these gages are not rigidly affixed to anything? They are simply laying in the mud at the base of a cypress tree near the Chaz public boat ramp. Considering the sensitivity of the regression equations to tidal stage, it would seem that a rigid mount would be required on at least the pressure gage.

Do you have any information regarding when the ADV meter data will be available from the SE Fork of the Homosassa? I think the ADV meter was installed in September. It seems "provisional" data (as a minimum) should be available to the public by now.

Do you have any idea what it would take to get an ADV meter installed at Chaz Main? The Chaz Main spring pool is currently scheduled to be "dredged" (de-mucked) in April. This project will hopefully have a positive affect on the flow from Chaz Main. I think it would be interesting to get some direct velocity measurements from an ADV meter before and after spring cleanout project. Can you help make this happen?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimsley@usgs.gov)
To: [Brad Rimbey@CRRRC](mailto:Brad.Rimbey@CRRRC.com)
Cc: [Martyn Johnson](mailto:Martyn.Johnson@usgs.gov)
Sent: Monday, January 16, 2012 3:01 PM
Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

There are several reasons why we don't normally release discharge regression equations such as the one at Chassahowitzka. In my opinion, the biggest reason is that (as you've noted) the equations are subject to change at any time. We've had past problems where people have reported discharge values as supplied by the USGS while using an outdated equation. This can potentially lead to a lot of confusion and misinformation.

As you know, we're always making new measurements and evaluating our discharge equations. Whenever we feel like we can make a significant improvement in calculating the discharge, we'll update the equation.

We're not trying to be secretive, and if you'd like to make a formal FOIA request you're certainly entitled to that. We're simply trying to avoid confusion from outdated and multiple equations.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jan 16, 2012, at 9:46 AM, "Brad Rimbey@CRRRC" <BWR.CRRRC@tampabay.rr.com> wrote:

Hi Kevin,

Thanks for the link to the station on Howard's dock. I am not sure why I could not find it by using the FL map on the USGS waterdata website. Probably not the best way to locate these stations.

I am surprised that USGS does not release the discharge regression equations which are used to predict the spring discharge rates that are published by USGS. Do you know the rationale for the secrecy? Is there some National security issue here? Refusing to release these equations to the public would seemingly be a violation of the Federal Freedom of Information Act and possibly the Florida Public Records statute (119 F.S.) as well.

It does not appear that USGS is currently using the regression equations published in Table 1 of USGS WRI 01-4230 to predict spring discharge rates in Chassahowitzka and Homosassa. Are you able to confirm this?

http://www.swfwmd.state.fl.us/files/database/site_file_sets/1961/Knochnemus_and_Yobbi_2001_-_Hydrology_of_the_coastal_springs_groundwater_basin_.pdf

Would it be more appropriate for me to request the current regression equations from USGS FOIA Officer Davis J Newman at <http://www.usgs.gov/foia/> ?

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](mailto:Kevin.J.Grimmsley@usgs.gov)

To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRRC.com)

Cc: [Brent Whitley](mailto:Brent.Whitley@sierra-properties.com) ; [Dana Bryan](mailto:Dana.Bryan@dep.state.fl.us) ; [Doug Leeper](mailto:Doug.Leeper@swfwmd.state.fl.us) ; [Al Grubman](mailto:Al.Grubman@gmail.com) ; [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@sierra-properties.com) ; [Marty Kelly](mailto:Marty.Kelly@swfwmd.state.fl.us) ; [Norman Hopkins](mailto:Norman.Hopkins@amyhrf.org) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](mailto:rkane@usgs.gov) ; [Ron Miller](mailto:Ron.Miller@tampabay.rr.com) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](mailto:Ron.Basso@swfwmd.state.fl.us)

Sent: Friday, January 13, 2012 3:16 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Brad,

Unfortunately, it is our long standing policy that we do not release our discharge regression equations to the public.

The gage at Howard's dock has always been on NWISWeb, station number 02310663. Here's the link - http://waterdata.usgs.gov/fl/nwis/uv/?site_no=02310663&PARAMeter_cd=00065.00060

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: "Brad Rimbey@CRRC" <BWR.CRRC@tampabay.rr.com>

To: "Alan Martyn Johnson" <martynellijay@hotmail.com>, "Kevin J Grimsley" <kjgrims@usgs.gov>

Cc: "Brent Whitley" <brentwhitley@sierra-properties.com>, "Dana Bryan" <dana.bryan@dep.state.fl.us>, "Doug Leeper" <doug.leeper@swfwmd.state.fl.us>, "Al Grubman" <grubman1@gmail.com>, "J Weaver" <jdweaver@usgs.gov>, "Marty Kelly" <marty.kelly@swfwmd.state.fl.us>, "Norman Hopkins" <norman@amyhrf.org>, <rebecca.bays@bocc.citrus.fl.us>, "rkane" <rkane@usgs.gov>, "Ron Miller" <mille76@tampabay.rr.com>, <robert.knight@bocc.citrus.fl.us>, "Ron Basso" <ron.basso@swfwmd.state.fl.us>, "R Rodriguez" <rrodrigu@usgs.gov>

Date: 01/12/2012 05:31 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

Hi Kevin,

Could you please provide the equation used to calculate the discharge at station 02310650 along with an explanation of any variables (and their source) used in the equation?

Also, I was at Howard Bryant's dock yesterday on the Chaz. USGS has been maintaining a gauge station on that dock for several years. It appears that USGS is doing this under contract for SWFWMD. The SWFWMD SID is 20025 (survey control FLO 2761). The gauge station appears to have full telemetry but none of the data is available on the USGS real-time website <http://waterdata.usgs.gov/fl/nwis/rt>. Could you please provide a link to that data?

Thanks,

Brad W. Rimbey, P.E.

----- Original Message -----

From: [Kevin J Grimsley](#)

To: [Alan Martyn Johnson](#)

Cc: [Brent Whitley](#) ; [Brad Rimbey](#) ; [Dana Bryan](#) ; [Doug Leeper](#) ; [Al Grubman](#) ; [J Weaver](#) ; [Marty Kelly](#) ; [Norman Hopkins](#) ; rebecca.bays@bocc.citrus.fl.us ; [rkane](#) ; [Ron Miller](#) ; robert.knight@bocc.citrus.fl.us ; [Ron Basso](#) ; [R Rodriguez](#)

Sent: Thursday, January 12, 2012 1:57 PM

Subject: Re: Chassahowitzka Discharge Jan 2010 thru Dec 2011

The equation used to calculate discharge at station 02310650 was not changed in August 2011 or at any other time over the past several years.

Kevin Grimsley, P.E.

Hydrologic Data Chief, Tampa

USGS, Florida Water Science Center

10500 University Center Drive, Suite 215

Tampa, FL 33612

kjgrims@usgs.gov

813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>

To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Ron Miller <rmille76@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Brad Rimbey <brimbey3@tampabay.rr.com>, Norman Hopkins <norman@amyhfr.org>, Brent Whitley <brentwhitley@sierra-properties.com>, Dana Bryan <dana.bryan@dep.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, rkane <rkane@usgs.gov>, R Rodriguez <rodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>, <robert.knight@bocc.citrus.fl.us>, <rebecca.bays@bocc.citrus.fl.us>

Date: 01/12/2012 12:33 PM

Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are P^{Eqp} .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn[attachment "Chass Discharge Jan 2010 Dec 2011.xls" deleted by Kevin J

Grimsley/WRD/USGS/DOI]

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12



From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#); [J Weaver](#)
Cc: [Doug Leeper](#); [Ron Basso](#); [Marty Kelly](#); [Mark Hammond](#); [Mike Heyl](#); [Kevin J Grimsley](#); [Brad Rimley](#); [Al Grubman](#); [Ron Miller](#); [Norman Hopkins](#); [Brent Whitley](#)
Subject: Discharge Chassahowitzka
Date: Thursday, January 19, 2012 9:50:09 AM
Attachments: [Chassahowitzka Discharge Question.xls](#)

Mr. Rodriguez,

Please share the policy document which precludes USGS sharing the equation used to calculate Discharge at Chassahowitzka Station 02310650, as requested in an earlier e-mail from myself and from Brad Rimley as a member of the working group.

The ecological future of the Homosassa River, Crystal River and Chassahowitzka River depend heavily on data from USGS/SWFWMD gage sites and on open and honest dialogue about the accuracy of the generated data. To that end I would like to draw your attention to some Chassahowitzka data that appears to fall short of logical explanation.

The data is from USGS web site for the Chassahowitzka Gage Site 02310650. As you will see in the attached spreadsheet I have highlighted the apparent disconnect between the calculated discharge measurements and the specific conductance measurement.

A section of the spreadsheet covering Jan 5/6 is show below and I will walk you thru my interpretation.

21:45 negative flow is calculated, water that past the gages earlier may be returning at the same temperature and specific conductance.

22:30 the water passing the gages is clearly mixed with water of higher temperature and higher specific conductance.

23:45 positive flow is calculated. I have added cumulative volume past the gage site (it is shown as cfs for ease of understanding but could be multiplied by time to represent volume). 23:45 thru 01:45 Specific conductance continues to increase, note the temperature remains at 22.3/22.4.

01:00/01:15 high stage is reached and calculated flow has increased to 36 and 54 cfs.

Positive flows calculated for hour and half while stage continues to increase.

01:30 thru 02:45 temperature an specific conductance indicate this is water which passed the gages under negative flow conditions yet the cumulative positive flow has been more than five times the highest cumulative negative flow.

03:45 temperature and specific conductance are back close to representative of spring water. Going to the spreadsheet this is fully achieved about an hour later.

Time	Stage Ht	Discharge	Temp	SpecCond	15 min Discharge	Cumulative Discharge
01/05/2012 21:00 EST	0.70 ^P	33 ^P	21.2 ^P	1,990 ^P		
01/05/2012 21:15 EST	0.75 ^P	15 ^P	21.1 ^P	1,980 ^P		
01/05/2012 21:30 EST	0.81 ^P	5.2 ^P	21.1 ^P	1,980 ^P	5.2	5.2
01/05/2012 21:45 EST	0.88 ^P	-4.3 ^P	21.2 ^P	1,970 ^P	-4.3	0.9
01/05/2012 22:00 EST	0.96 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-13.1
01/05/2012 22:15 EST	1.04 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-27.1
01/05/2012 22:30 EST	1.12 ^P	-15 ^P	21.8 ^P	3,770 ^P	-15	-42.1

01/05/2012 22:45 EST	1.20 ^P	-15 ^P	22.0 ^P	4,970 ^P	-15	-57.1
01/05/2012 23:00 EST	1.28 ^P	-16 ^P	22.0 ^P	5,270 ^P	-16	-73.1
01/05/2012 23:15 EST	1.35 ^P	-7.2 ^P	22.2 ^P	5,560 ^P	-7.2	-80.3
01/05/2012 23:30 EST	1.42 ^P	-7.6 ^P	22.3 ^P	5,800 ^P	-7.6	-87.9
01/05/2012 23:45 EST	1.48 ^P	1.1 ^P	22.3 ^P	5,950 ^P	1.1	-86.8
01/06/2012 00:00 EST	1.54 ^P	0.72 ^P	22.3 ^P	6,040 ^P	0.72	-86.08
01/06/2012 00:15 EST	1.59 ^P	9.5 ^P	22.3 ^P	6,120 ^P	9.5	-76.58
01/06/2012 00:30 EST	1.64 ^P	9.2 ^P	22.3 ^P	6,160 ^P	9.2	-67.38
01/06/2012 00:45 EST	1.68 ^P	18 ^P	22.3 ^P	6,230 ^P	18	-49.38
01/06/2012 01:00 EST	1.70 ^P	36 ^P	22.4 ^P	6,300 ^P	36	-13.38
01/06/2012 01:15 EST	1.70 ^P	54 ^P	22.4 ^P	6,420 ^P	54	40.62
01/06/2012 01:30 EST	1.68 ^P	72 ^P	22.4 ^P	6,580 ^P	72	112.62
01/06/2012 01:45 EST	1.65 ^P	82 ^P	22.4 ^P	6,620 ^P	82	194.62
01/06/2012 02:00 EST	1.62 ^P	82 ^P	22.3 ^P	6,570 ^P	82	276.62
01/06/2012 02:15 EST	1.58 ^P	91 ^P	22.3 ^P	6,080 ^P	91	367.62
01/06/2012 02:30 EST	1.54 ^P	91 ^P	22.2 ^P	5,500 ^P	91	458.62
01/06/2012 02:45 EST	1.50 ^P	91 ^P	22.0 ^P	4,760 ^P	91	549.62
01/06/2012 03:00 EST	1.46 ^P	92 ^P	21.4 ^P	3,740 ^P	92	641.62
01/06/2012 03:15 EST	1.42 ^P	92 ^P	21.4 ^P	3,120 ^P		
01/06/2012 03:30 EST	1.37 ^P	101 ^P	21.5 ^P	2,800 ^P		
01/06/2012 03:45 EST	1.32 ^P	102 ^P	21.4 ^P	2,550 ^P		

How is it possible the specific conductance can continue to increase when the flow becomes positive?

Agreed water of high specific conductance that passes the gauge/sensor under negative flow must elute from the upstream areas before the spring water shows at the gauge/sensor. But, I have great difficulty understanding how specific conductance continues to increase after the discharge (calculated) becomes positive. As you can see in the spreadsheet this is not a one time occurrence it is the norm. The highlighted temperature records appear to correlate more with the specific conductance data than the calculated discharge data.

An explanation would be appreciated, preferably not a one liner. I am always willing to learn.

If this is in anyway unclear please do not hesitate to ask for a more thorough explanation of my concern.

Martyn

From: [Mike Heyl](mailto:Mike.Heyl)
To: [Martyn Johnson \(martynellijay@hotmail.com\)](mailto:Martyn.Johnson)
Cc: [Doug Leeper](mailto:Doug.Leeper); [Ron Basso](mailto:Ron.Basso); [Al Grubman \(grubman1@gmail.com\)](mailto:Al.Grubman); [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](mailto:Brad.Rimbey); [Norman Hopkins \(norman@amyhrf.org\)](mailto:Norman.Hopkins); [Brent Whitley](mailto:Brent.Whitley); [Dana Bryan \(Dana.Bryan@dep.state.fl.us\)](mailto:Dana.Bryan); Robert.Knight@bocc.citrus.fl.us; [Rebecca Bays \(rebecca.bays@bocc.citrus.us\)](mailto:Rebecca.Bays); [Kevin J. Grimsley](mailto:Kevin.J.Grimsley); [Cara S. Martin](mailto:Cara.S.Martin)
Subject: RE: Chassahowitzka Discharge Jan 2010 thru Dec 2011
Date: Thursday, January 19, 2012 12:41:24 PM
Attachments: [M. Johnson 2012_01_12_response.pdf](#)

Mr. Johnson –

Doug Leeper asked that I respond to your January 12 inquiry (appended) regarding the proposed Chassahowitzka MFL and the 2010-2011 flows. My response is attached.

MGH

=====

Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org

=====

<i>SWFWMD/Ecologic Evaluation</i>	<i>(7:00 am - 3:30 pm)</i>
<i>7601 U.S. Highway 301</i>	<i>1-813-985-7481 Ext 2211</i>
<i>Tampa, Fl. 33637-6759</i>	<i>1-813-987-6747 (Fax)</i>

----- *Note : District Limit for Incoming Email is 5 Megabytes* -----

An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing

=====

Please Note: All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Thursday, January 12, 2012 12:33 PM
To: Doug Leeper; Marty Kelly; Ron Basso; Ron Miller; Al Grubman; Brad Rimbey; Norman Hopkins; Brent Whitley; Dana Bryan; Kevin J Grimsley; rkane; R Rodriguez; J Weaver; robert.knight@bocc.citrus.fl.us; rebecca.bays@bocc.citrus.fl.us
Subject: Chassahowitzka Discharge Jan 2010 thru Dec 2011

A few days ago I shared some data regarding discharge for the Homosassa River system.

Although I have not been as involved with the Chassahowitzka I took the time to look at the last two years data for Chassahowitzka in the same way.

The Executive Summary of the Chassahowitzka November 2010 Draft Report states:

- The median flow of the Chassahowitzka River based on estimated and measured flows for the baseline period (1967-2007) used for determination of the minimum flows recommended in this report was 63 cubic feet per second (cfs).
- Therefore, it is recommended that the minimum flow for the Chassahowitzka River system (including all contributing springs and associated creeks) be maintained at 89 percent of the baseline flow.

The attached spreadsheet shows the daily mean discharge data as reported by USGS for the

Chassahowitzka Gage Site 02310650 from Jan 1, 2010 thru Dec 31, 2011. For days on which mean discharge is reported (712 days) 46% of the days were at or below the recommended MFL and only 10% of the days was flow above the baseline.

When reviewing this data I recalled a question I asked late August 2011 about the equation used to calculate the discharge for the Chass as the equation in the Yobbi and Knochenmus Report did not match the reported results.

I was told the USGS does not share the equations.

In the spreadsheet you will note for 08/13/2011 thru 08/18/2011 the entries are P Eqp .

Although in no way conclusive, it is possible that someone made a change in the equation used to calculate discharge in mid August 2011.

So, I compared reported data before and after 08/13/2011. The data is in the spreadsheet; before 52% of the days discharge was at/below the recommended MFL after it was 16%. Similarly, for days discharge was at/above the base line 7% before and 28% after.

A part of these higher calculated discharges are due to levels in the Weeki Wachee well being slightly higher during the latter months of 2011; particularly October 2011. This is also evident in the Homosassa data shared the other day, but the figures for the Chassahowitzka are much more than appears to be related to Weeki Wachee well levels alone.

This deserves comment/explanation from SWFWMD/USGS.

The point of this e-mail is to draw attention to the fact the calculated discharge into the Chassahowitzka has frequently been below the recommended MFL during the last two years. The data source is the same as used to develop the recommended minimum flow which results in significant harm.

As always comments and corrections welcome.

Martyn

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail) about flows in the Chassahowitzka River and the application of the proposed minimum flows and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a percentage of flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later, the 63 cfs flow rate is not an MFL criterion.

The percent of flow approach is easier to understand where there is a surface water withdrawal. A draft 2010 MFL rule for the system read in part (emphasis added):

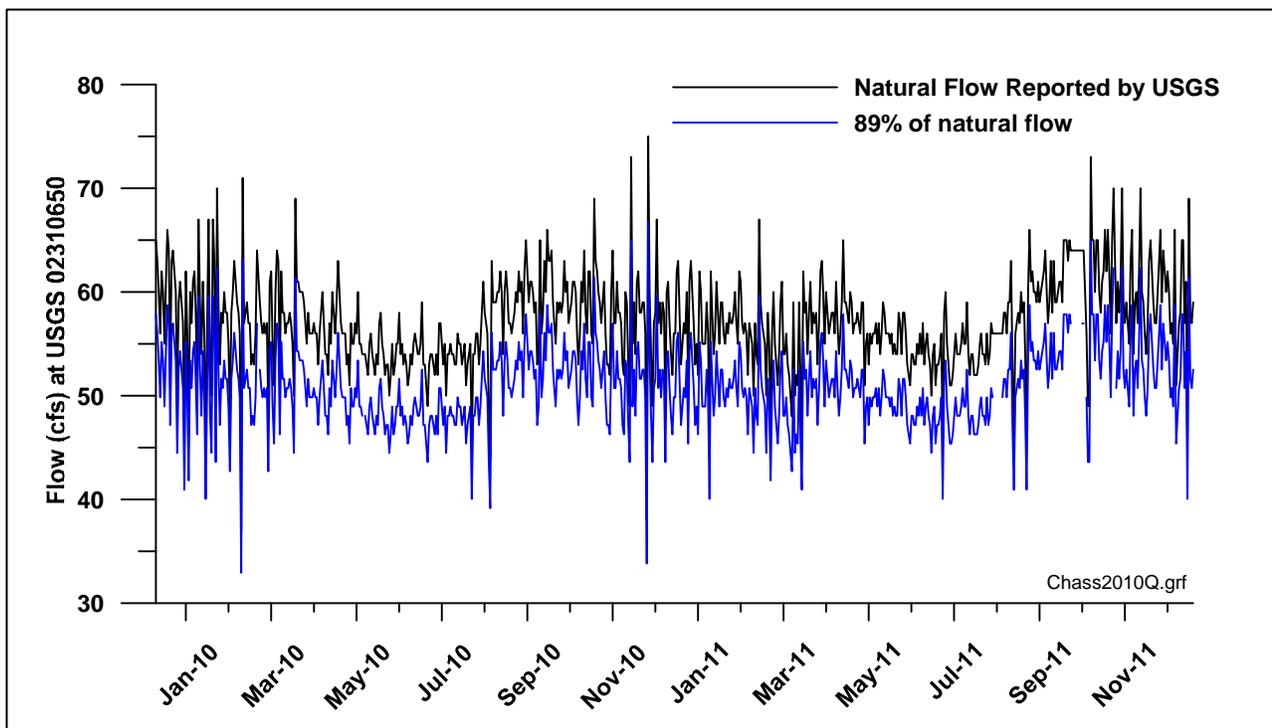
“40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent.”

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below. Each day is multiplied by 89% to determine how much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a recommended MFL, nor does it figure into the application of the MFL rule.



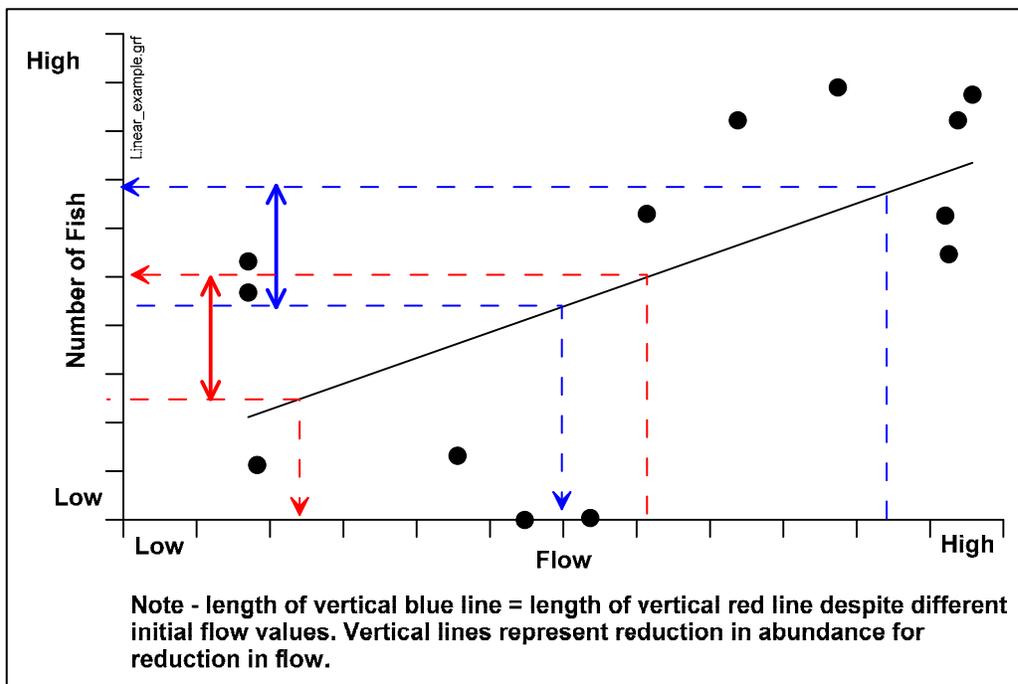
In light of your comments and in rereading the Executive Summary of the November 2010 draft report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of the word “baseline” should be improved and clarified. I will endeavor to do so in final report.

Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted. This value represents the median of daily flows from 1/1/1967 through 11/29/2007. Development of this data set is documented in Chapter 10.1 of the November draft report. The data set reflects measured and estimated flows slightly downstream of the Main spring at the present location of the USGS gage 02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than the median. In this case, the record exhibits a statistically significant declining trend that is described in section 2.4 of the November draft report, so it should come as no surprise that the majority of the flow values below the median have occurred in the more recent years. The median flow is simply the “middle point” of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka.

It should be noted that ,provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in the following illustration of hypothetical response. In the case of the proposed Chassahowitzka MFL, the following metrics exhibited linear response to flow or salinity and thus are independent of the initial flow value chosen for evaluation:

- Benthic diversity
- All of the plankton tow fish and invertebrate abundance (13 pseudo taxa)
- Seine and trawl abundance responses (8 pseudo taxa)
- Salinity (as function of flow and location)



The remaining biological responses (mollusc, submersed aquatic vegetation, and remaining fish/invertebrates) that were evaluated were non-linear with respect to flow and were assessed using 63 cfs as the initial flow condition for the system.

It should also be noted that the following metrics were not evaluated using the 63 cfs median flow. These metrics were developed using the hydrodynamic model and actual recent daily flows reported by the USGS:

Acute thermal refuge (using 2001– 2002 flows) for

- Area
- Volume

Chronic thermal refuge (using 2001 flows) for

- Area
- Volume

Salinity habitat (using 2004 through 2006 flows)

- Area for 2, 5, 10, and 15 ppt salinity
- Volume for 2, 5, 10, and 15 ppt salinity
- Shoreline length for 2, 5, 10, and 15 ppt salinity

Reviewing Table 8-1 for the flow term used in the individual determinations, the three most conservative are:

1. Acute thermal refuge (area) – Based on actual 2001 – 2002 flows.
2. Fish/Invertebrates - 63 cfs initial flow.
 - a. 3 of 8 responses incorporated into the MFL are linear relationships and independent of initial flow conditions.
3. 5 ppt salinity habitat (volume and shoreline) – Based on actual 2004 – 2006 flows.

Thanks for your continued interest in the development of minimum flows for the Chassahowitzka River and other Springs Coast systems. Please let me know if you have any questions regarding the information I've provided.

From: Brad.Rimbey@CRRC
To: djnewman@usgs.gov
Cc: [Dan Hilliard](#); [Cara S. Martin](#); [Kevin J. Grimsley](#); Rebecca.Bays@bocc.citrus.fl.us; Dana.Bryan@dep.state.fl.us; [Brent Whitley](#); [Norman Hopkins](#); [Al Grubman](#); [Ron Basso](#); [Doug Leeper](#); [Mickey Newberger](#); [Martyn Johnson](#); [Mike Heyl](#)
Subject: Freedom of Information Act Public Records Request
Date: Thursday, January 19, 2012 4:35:22 PM

David J. Newman
USGS FOIA Officer
12201 Sunrise Valley Drive
Mail Stop 807
Reston, VA 20192

RE: Freedom of Information Act - Public Records Request

Dear Mr. Newman,

Pursuant to the Federal Freedom of Information Act and Florida Public Records Statute (Chapter 119 F.S.), please provide me with following public records or information.

1) The USGS regression equations which are currently (as of January 19, 2012) being used to predict the discharge at the following USGS stations

- a) USGS 02310525 WEEKI WACHEE RIVER NEAR BROOKSVILLE FL
- b) USGS 02310545 WEEKI WACHEE RIVER NR WEEKI WACHEE SPRINGS FL
- c) USGS 02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA FL
- d) USGS 02310663 CHASSAHOWITZKA RIVER NEAR CHASSAHOWITZKA FL
- e) USGS 02310673 CHASSAHOWITZKA R AT DOG ISL NR
- f) USGS 02310674 CHASSAHOWITZKA R AT MOUTH NR CHASSAHOWITZKA FL
- g) USGS 02310675 HIDDEN RIVER NEAR HOMOSASSA FL
- h) USGS 02310678 HOMOSASSA SPRINGS AT HOMOSASSA SPRINGS FL
- i) USGS 02310688 SE FORK HOMOSASSA SPRING AT HOMOSASSA SPRINGS FL
- j) USGS 02310700 HOMOSASSA R AT HOMOSASSA FL
- k) USGS 02310742 CRYSTAL RIVER AT MOUTH OF KINGS BAY FL
- l) USGS 02310747 CRYSTAL RIVER AT BAGLEY COVE NEAR CRYSTAL RIVER FL
- m) USGS 02310752 SALT RIVER NEAR CRYSTAL RIVER FL

2) The data range to which each of these equations is applicable (i.e. the beginning and ending date for the applicable data set from each USGS station)

3) A brief description of the variables used in each of the requested regression equations.

Please note that the Florida Public Records statute was referenced in this request because the monitoring for all of the recorded data in this request was cooperatively funded by a Florida state agency (SWFWMD).

Thank you in advance for assistance.

Brad W. Rimbey, P.E.

From: [Alan Martyn Johnson](#)
To: [Doug Leeper](#); [Al Grubman \(grubman1@gmail.com\)](#); [Bill Geiger \(bgeiger@cityofbrooksville.us\)](#); [Bill Pouder \(bill.pouder@myfwc.com\)](#); [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](#); [Brad Rimbey \(BWR.CRRRC@tampabay.rr.com\)](#); [Brent Whitley \(brentwhitley@sierra-properties.com\)](#); [Brockway, Alys \(abrockway@co.hernando.fl.us\)](#); [Dennis D. Dutcher \(Dennis3ds@aol.com\)](#); [Frank DiGiovanni \(administration@inverness-fl.gov\)](#); [Greenwood, Kathleen \(Kathleen.Greenwood@dep.state.fl.us\)](#); [Helen Spive; Hilliard, Dan \(2buntings@comcast.net\)](#); [Hoehn, Ted](#); [Hope Corona \(hopecorona@tampabay.rr.com\)](#); [Jim Farley \(jfarley682@aol.com\)](#); [Katie Tripp \(ktripp@savethemanatee.org\)](#); [Norman Hopkins \(norman@amyhrf.org\)](#); [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](#); [Richard Kane \(rkane@usgs.gov\)](#); [Richard Radack \(rradack@cityofbrooksville.us\)](#); [Ron Miller \(rmille76@tampabay.rr.com\)](#); [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](#); [Sullivan, Jack \(jsullivan@carltonfields.com\)](#); [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#); [Whitey Markle \(whmarkle@gmail.com\)](#); [\(janicehowie@aol.com\)](#); [Abdon Sidibie \(asidibie@chronicle.online.com\)](#); [Alex McPherson \(aamcpherson@msn.com\)](#); [Ann - 2 Hodgson \(ahodgson@gmail.com\)](#); [Ann Hodgson \(ahodgson@audubon.org\)](#); [Bernard Berauer \(bberauer@aol.com\)](#); [Beverly Overa \(boverly@tampabay.rr.com\)](#); [Bill Garvin \(wgarvin@tampabay.rr.com\)](#); [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](#); [Brack Barker \(brack154@msn.com\)](#); [Carl Matthai \(thebabesmimi@gmail.com\)](#); [Casey, Emily \(fcnwr@atlantic.net\)](#); [Charles Dean \(dean.charles.web@flsenate.gov\)](#); [Charles Stonerock \(katcha.stonerock3@gmail.com\)](#); [Chris Safos \(chrissafos@embarqmail.com\)](#); [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](#); [Darlene Herth \(2cetechology21@gmail.com\)](#); [Darrell Snedecor \(president@citruscountyaudubon.com\)](#); [Don Hiers \(dhiers3@gmail.com\)](#); [Douglas Dame \(doug_dame@yahoo.com\)](#); [Elaine Luther \(barneyandcap@hotmail.com\)](#); [Emily Casey \(ecasey21@hotmail.com\)](#); [Emma Knight \(eknight@wetlandsolutionsinc.com\)](#); [George Harbin \(gharbin@tampabay.rr.com\)](#); [George McClog \(classof47@gmail.com\)](#); [Gorgon O'Connor \(gorgon_o@yahoo.com\)](#); [Harry Steiner \(harry109@aol.com\)](#); [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](#); [Jane Perrin \(jcsperinmd@sbcglobal.net\)](#); [Jerry Morton \(JerrMorton@aol.com\)](#); [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](#); [Jim Collins \(jimmiekey22@yahoo.com\)](#); [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](#); [Joe Calamari](#); [John Lord \(jclord109@yahoo.com\)](#); [John Mayo \(freedomway1@gmail.com\)](#); [Karen Johnstone \(kjohns213@sbcglobal.net\)](#); [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](#); [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](#); [Linda Pierce \(tpierce35@tampabay.rr.com\)](#); [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](#); [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](#); [Matthew Corona \(mcorona1@tampabay.rr.com\)](#); [Max Rhinesmith \(rhinesmith@webtv.net\)](#); [Amber Breland](#); [Andy Houston \(ahouston@crystalriverfl.org\)](#); [Art Yerian \(A.Yerian@dep.state.fl.us\)](#); [Ben Weiss](#); [Beth Hovinde](#); [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](#); [Courtney Edwards \(cedwards@savethemanatee.org\)](#); [Dale Jones \(Jones@MyFWC.com\)](#); [Dana Bryan \(dana.bryan@dep.state.fl.us\)](#); [Darrell Snedecor](#); [David Hamilton \(countyadministrator@hernandocounty.us\)](#); [David Hankla \(david_hankla@fws.gov\)](#); [Don Wright \(wright@sura.org\)](#); [Dusty McDewitt \(mcdewitt@usgs.gov\)](#); [Ed Call \(marvin.call@MyFWC.com\)](#); [Eric Nagid \(eric.nagid@MyFWC.com\)](#); [FFWCC MFLs Review E-Mail Address \(fwwconservationplanningservices@myfwc.com\)](#); [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](#); [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](#); [Joyce Kleen@fws.gov](#); [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](#); [Keith Ramos \(Keith.Ramos@fws.gov\)](#); [Kent Smith \(kent.smith2@myfwc.com\)](#); [Kevin Grimsley \(kgrims@usgs.gov\)](#); [Michael Lusk \(Michael_Lusk@fws.gov\)](#); [Mitchell Newberger \(mnewberger@verizon.net\)](#); [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](#); [Nicole Adimey \(Nicole_Adimey@fws.gov\)](#); [Paul Thomas \(paulw.thomas@MyFWC.com\)](#); [Ron Mezich \(ron.mezich@MyFWC.com\)](#); [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](#); [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](#); [Tracy Colson](#); [Wallace, Traci](#); [Adkins, Jim](#); [Bitter, Jim](#); [Bryant, Richard](#); [Cantero, Vince](#); [Carpenter, Paul](#); [Daniels, Chase](#); [Dueker, Duane](#); [Gramling, Hugh](#); [Harrelson, Cathy](#); [Hubbell, Pete](#); [Johnson, Eric](#); [Keim, Robert](#); [Kincaid, Todd](#); [Kline, Allen](#); [Knight, Bob](#); [Knight, Robert](#); [Knudson, Ross](#); [Overa, Tom](#); [Owen, Rick](#); [Parrow, Liz](#); [Rolf Auermann \(rauerman@tampabay.rr.com\)](#); [Rusnak, Teddi](#); [Tarochinoe, Joseph](#); [Watkins, Priscilla](#); [Watrous, Russell](#); [Wilson, Roger](#)
Cc: [Amy K. Harroun](#); [Barbara Matrone](#); [Cara S. Martin](#); [Chris Zajac](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen Lloyd](#); [Ken Weber](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Mike Heyl](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Veronica Craw](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES
Date: Thursday, January 19, 2012 7:38:54 PM
Attachments: [M_Johnson_2012_01_12_response11.pdf](#)

Please note the words in Doug's e-mail I have made red lettering and yellow highlight.

If you are concerned about the future of Homosassa, Chassahowitzka, Crystal or any other spring fed river in the SWFWMD this is ESSENTIAL READING.

Baseline flows will be no more if a draft rule is approved, at least as I read this response from SWFWMD (key part copied into this message).

The gap in the quote is a graph which does not copy into the e-mail text so go to the attachment for the complete response.

Yellow highlight added.

QUOTE

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail) about flows in the Chassahowitzka River and the application of the proposed minimum flows

and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a percentage of

flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent

of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later,

the 63 cfs flow rate is not an MFL criterion.

The percent of flow approach is easier to understand where there is a surface water withdrawal.

A draft 2010 MFL rule for the system read in part (emphasis added):

"40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). **The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent.**"

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you

evaluated, the results would appear as below. Each day is multiplied by 89% to determine how

much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a recommended MFL, nor does it figure into the application of the MFL rule.

GRAPH GAP

In light of your comments and in rereading the Executive Summary of the November 2010 draft

report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of

the word "baseline" should be improved and clarified. I will endeavor to do so in final report.

Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted.

This value represents the median of daily flows from

1/1/1967 through 11/29/2007. Development of this data set is documented in Chapter 10.1 of

the November draft report. The data set reflects measured and estimated flows slightly

downstream of the Main spring at the present location of the USGS gage 02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than

the median. In this case, the record exhibits a statistically significant declining trend that is described in section 2.4 of the November draft report, so it should come as no surprise that the

majority of the flow values below the median have occurred in the more recent years. The median flow is simply the "middle point" of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka.

It should be noted that, provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in

the following illustration of hypothetical response. In the case of the proposed Chassahowitzka

MFL, the following metrics exhibited linear response to flow or salinity and thus are independent

of the initial flow value chosen for evaluation:

UNQUOTE

This response was to an e-mail I sent indicating 46% of the days in the last two year flows into the Chassahowitzka were below the minimum flows set in the draft report. A similar e-mail sent a couple of days earlier indicated on 84% of the days in the last two years flows into the Homosassa were below the minimum flows set in the corresponding draft report.

It is worrying to contemplate the agenda are these ideas to confuse us by;

- semantics eg *(From above) If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you*

evaluated, the results would appear as below...Chass is a spring fed river, or

- legal jargon about amending a legal definitions by rule changes.

Is it to just keep on pumping the aquifer?

The hypothetical fish reduction graph, if you read the attachment, is.....

Some serious common sense questions need to be answered. What is the minimum flow and what criteria say it has been reached; day, week, month? What are the recovery plans for these rivers (Chassahowitzka and SE Fork of Homosassa are on the Impaired Waters list by Department of Environmental Protection)?

Martyn

I guess this will upset a lot of people, but this needs nipping in the bud. I trust there will be a rethink of this matter and a fast correction made. I could have posted this on the working group web site but how many would have read it.

From: Doug.Leeper@swfwmd.state.fl.us
Date: Fri, 13 Jan 2012 15:55:10 -0500
Subject: Update - Chassahowitzka and Homosassa Minimum Flows

Greetings:

I'm writing to provide an update on the status of minimum flows development for the Chassahowitzka and Homosassa River systems by the Southwest Florida Water Management District. The District would like to make it as convenient as possible for the stakeholders to review final reports and attend the Governing Board meeting where the information will be presented. To provide staff the necessary time to consider public concerns, complete revisions, and provide stakeholders an opportunity to review the revised reports, District staff will not be presenting **the proposed minimum flows rule amendments** to the District Governing Board until April.

The revised reports are expected to be ready for public review by the end of February. District staff expects to have the final reports ready for the rule amendments presentation, which is planned for April 24, 2012 at the Governing Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for development of minimum flows for the Chassahowitzka and Homosassa River systems, or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [Ron Basso](#); [Doug Leeper](#)
Cc: [Ron Miller](#); [Al Grubman](#); [Brad Rimbey](#); [Norman Hopkins](#); [J Weaver](#); [R Rodriguez](#); [Kevin J Grimsley](#); [Paul Williams](#); [Claire E. Muirhead](#)
Subject: RE: Homosassa MFL's
Date: Friday, January 20, 2012 8:06:23 AM

Ron,

Thanks for taking the time to collect this information.

Do I assume correctly;

- Monitor wells are for use by USGS/SWFWMD to monitor the aquifer and have no withdrawals
- Plugged is a well that was drilled but the water quantity or quality did not meet expectations to install a pump and were thus plugged/sealed
- What falls in the other category...no need to list all just one or two examples if you have them handy as they do not fall into the 715.

The 9 large wells (over 100,000 gpd as I understand) do they have to specify the 'intended' gpd? In other words if they plan on drawing 200,000 gpd is that stated in the request....I guess the answer is yes if it is regulated. If you have the gpd for these wells please share if not no problem.

I notice that Citrus, Hernando and Marion each have a total of 300 permits issued; is there some sort of maximum permits per year per county or is this simply coincident?

Thanks again for the time taken to answer the questions.

Martyn

From: Ron.Basso@swfwmd.state.fl.us
To: martynellijay@hotmail.com; Doug.Leeper@swfwmd.state.fl.us
CC: rmille76@tampabay.rr.com; grubman1@gmail.com; brimbey3@tampabay.rr.com; norman@amyhrf.org; jdweaver@usgs.gov; rrodrigu@usgs.gov; kjgrims@usgs.gov; Paul.Williams@swfwmd.state.fl.us; Claire.Muirhead@swfwmd.state.fl.us
Date: Wed, 18 Jan 2012 11:34:04 -0500
Subject: RE: Homosassa MFL's

Mr. Johnson:

I've completed your request regarding the number of well construction permits issued in the six-county region of our Northern District over the last year (January 1, 2011 to January 1, 2012). I have attached the information in an excel file for your review. We are still researching the number of water use permits (new, modifications, or renewals) issued over the last year in the same region.

The well construction permit data indicates that there were 715 small diameter wells (less than 6 inches diameter) completed over the six-county region during the last year. These include wells installed for domestic self-supply, household irrigation wells, and livestock watering wells. As I mentioned in my earlier email, these wells do not meet our water use permit threshold and are exempt from those permitting requirements. A driller only needs to obtain a well construction permit to install these wells. We do not regulate them. However, their use is quite small. If we

assume a use of 500 gallons per day (gpd) per well, the total water use for all 715 wells is only 357,500 gpd. This amounts to less than one-half of one percent of all groundwater withdrawn in the six-county region.

Only 9 larger diameter wells (6 inches well diameter or greater) were installed in the six-county region over the last year. These wells are part of a water use permit and they're use is regulated by the District. If you have any questions, please do not hesitate to contact me.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Tuesday, January 03, 2012 1:00 PM
To: Doug Leeper
Cc: Ron Miller; Al Grubman; Brad Rimbey; Ron Basso; Marty Kelly; Norman Hopkins; J Weaver; R Rodriguez; Kevin J Grimsley
Subject: Homosassa MFL's

Doug,
It has been some 15 months since you started a process seeking public input regarding the MFL's for the Homosassa River. In a series of public meetings and forming a working group you have heard from members of the public and various stakeholder representatives. In the meetings Chassahowitzka, Crystal River and the Homosassa were involved. The question now is how will all this be incorporated in what is presented to the SWFWMD Board regarding the Chassahowitzka and Homosassa Rivers. I have heard comments about some of the older flow data being incorporated in the report, but it will not influence the data used in the 'all controlling' Northern District Model. I have heard that all the e-mails letters and presentations will be in 'appendices', but I doubt the Board will read these. So what will be presented?

Will a revised draft report or final report be published prior to presentation to the Board?
Will public input regarding major increase in barnacle growth as evidence of harm be included?

Will some preliminary analysis of acoustic doppler flow data SE Fork be included?
Will the USGS review of flow measurements/methodology in the Homosassa be mentioned?

In the Executive Summary page 20 of the July 12, 2010 Peer-Review Draft the wording includes:

Estimated combined discharge past United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009

.....
Declines in flow to the system associated with groundwater withdrawals were estimated to be

approximately 2.3 cfs, including a 1 cfs decline in the springs contributing to flow past the USGS gages in the Homosassa Main Springs run and Southeast Fork. This 1 cfs change in flow was considered insignificant as compared to the estimated average flow of 152 cfs for the two sites, so available flow records for the sites were considered representative of baseline conditions for evaluation of minimum flow criteria. Because break-points in ecological responses were not observed, a fifteen percent loss of resource or habitat was adopted as representative of significant harm.

The most sensitive resource responses to modeled flow reductions were exhibited by fish and invertebrate plankton and nekton, i.e., free-floating and actively swimming organisms. Flow reductions of 2.7 percent or less from median baseline conditions were associated with fifteen percent reductions in predicted abundances of individual pseudo-species or taxa. Similar or increased sensitivity to flow reductions was predicted for many taxa across the range of baseline flows, in particular for baseline flows less than the median flows.

.....
Modeled responses of a number of salinity-based habitats in the Homosassa River main channel were also relatively sensitive to flow reductions. Flow reductions of less than five percent were associated with more than fifteen percent reductions in selected salinity-based habitats determined from isohalines with salinities of 2, 3, 5 and 12.

.....
Based on review of resource and habitat-based criteria, the recommended minimum flows for the Homosassa River system are defined as a five percent reduction from baseline flows. Given the minimal existing withdrawal impacts on flow, the recommended minimum flows are a five percent reduction from combined flows measured on a daily basis at the USGS gauge sites in the Homosassa Springs run and Southeast Fork of the Homosassa River.

Reminder: Few believe the 2.3 cfs is an accurate reflection of groundwater withdrawal reduction.

I am hoping that a 'new' Executive Summary will rely less on estimates to develop a defined answer.

Hopefully, through all the meetings/discussion we better recognize the legal requirement to set MFL's was a good concept when it was first enacted. To truly protect the future, minimum levels in the aquifer controlled by strict limits on groundwater withdrawals may be much more effective as a proactive approach for protecting Outstanding Florida Waters along the Spring Coast and all the economic activities which rely on water as a resource.

DECEMBER 13 Memo

Thanks to all who put the efforts into documenting and responding to the October workshop. I have read the December 13 memo posted on the web site. I have a number of comments and questions. For ease of reference I have numbered them.

1. **Semantics over shadow the real issues and cloud the facts.**

December 13 Memo page 4

Staff also notes that a strict definition of "mining groundwater" is where groundwater withdrawals exceed annual recharge to the aquifer, and based on this definition, there is no "mining" of groundwater in the Northern District. In the spring's coast groundwater basin, average recharge to the Upper Floridan aquifer is about 14 inches per year, while current groundwater withdrawals are approximately one inch per year.

Where does this strict definition come from? From my search it does not appear to have made it to the

web yet. Sucking water out of the aquifer using power pumps sure sounds like a form of mining which is; *removing minerals (resources) from the ground, the process or business of removing minerals (resources) from the ground.* Semantics water is not a mineral, but it certainly is a valuable resource for which the equilibrium is moving in the wrong direction.

The facts in the statement. Over 7% of the water making it into the aquifer is being pumped out. This is 7% that does not provide the driving force to push water through the ground to the springs.

No pumping is equilibrium.

Looking at the often quoted Weeki Wachee Well it is clear that the water table has been declining. Similar is true for the Lecanto well mentioned in the July 2010 report.

Graph of DAILY Elevation above NGVD 1929, feet, ,Tampa DCP data



NOTE: IF THE USGS GRAPH DOES NOT COPY INTO THE E-MAIL; it is the presentation quality graph of daily data on the USGS web site for Weeki Wachee Well 1970-present..

Can the decline in well level all be attributed to rainfall? Take 2003 and 2004, both years saw high rainfall due to hurricanes and the water table increased to over 23 feet both years, but look how quickly the levels dropped to just over 16 feet. Compare that drop to what happened in the early 80's. Was spring flow lower in the 80's so the water table dropped more slowly? Or, could increased groundwater withdrawals be the difference?

It is always so easy to get apples and oranges mixed, but where do the 14 and 1 inch come from. Specifically in the quote from page 4, the origin of the **average 14 inches recharge** is not referenced and similarly for the **current one inch associated with withdrawals.** Appreciated this data may be combined from a number reports.

Looking in the Homosassa reviews, recharge is not mentioned in the July 12, 2010 Draft Review.

In the Appendices to the Review it is stated (page 338 of the pdf file under 2.0 Hydrogeologic Conditions):

The highest recharge rates to the UFA occur in west-central Hernando and Citrus Counties with values ranging between 10 and 25 inches per year (Sepulveda, 2002).

And further (on page 340):

The United States Geological Survey (USGS) developed a water budget for the basin for calendar years 1997 and 1998 (Knochenmus and Yobbi, 2001). According to Knochenmus and Yobbi's calculations, average annual values for the following water budget components were:

Rainfall = 52 inches (in)/yr,

Evapotranspiration = 32 in/yr,

Springflow = 12.5 in/yr,

Groundwater Withdrawals = 0.6 in/yr,

Groundwater Outflow = 6.7 in/yr and

Change in Storage = 0.2 in/yr

Based on the USGS water budget, net recharge to the UFA averaged 20 in/yr for the two-year period.

As a percentage of recharge, groundwater withdrawals averaged about three percent of annual recharge.

QUESTION: PLEASE EXPLAIN WHERE THE AVERAGE 14 INCHES RECHARGE AND CURRENT 1 INCH WITHDRAWAL FIGURES COME FROM.

2. Groundwater Withdrawals

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

Something does not seem to add up. Early 2011 the following was a response to a question about new wells:

"Review of the District's Well Construction Database indicates that 213 and 941 permits were issued for withdrawals in Citrus County during the past year and past three years, respectively."....."With regard to water-use permitting..... Fewer than ten of the hundreds of surface- and groundwater use permit requests received by the Brooksville Regulation Department during the past three years were not issued. Note that this department of the District handles water use permitting for withdrawals in the northern portion of the District, which includes Citrus County, Hernando County, Pasco County, Sumter County, and portions of Lake, Levy and Marion counties."

QUESTION A: WITH ALL THESE NEW WELLS AND WATER USE PERMITS HOW CAN CONSUMPTION HAVE DECLINED/REMAINED FLAT? Some data to support the statement would be useful.

QUESTION B: How many well construction permits and water use permits were issued during 2011 and how many were rejected. Same basis as previous data would be helpful.

3. Rainfall; the giver or the excuse.

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

December 13 Memo page 20

Staff acknowledges Mr. Miller's comments and notes that minimum flows and levels do, in effect, serve to establish a limit or cap beyond which further water withdrawals would be significantly harmful to area water resources and ecology. Once incorporated into District rules, minimum flows and levels become one criterion used in the evaluation of requests for water use permits. Similarly, minimum flows and levels help identify withdrawal limits that are incorporated into water supply planning efforts.

December 13 Memo page 25

Staff acknowledges Mr. Johnson's comments but does not support a five-year moratorium on the issuance or renewal of water use permits for area groundwater withdrawals. Staff does support the careful evaluation of all future renewals or issuances of water use permits in the Springs Coast area and elsewhere in the District.

Actions Speak Louder Than Words.

Sooner or later it will be recognized water management must deal with the rainfall as it occurs. Rainfall is income, you have to deal with the income you have this year.

The growers who tonight (January 3, 2012) will spray tremendous quantities of water from the aquifer on their crops are drawing from limited resources. It appears later rather than sooner attention will be paid to limiting water withdrawals; but for right now water use permits are issued to anyone who submits the correct paperwork. Moreover, when the circumstances are 'such'(like tonight's freeze) the limits will be waived....this highly probable for MFL's also. The information regarding well construction and water use permits requested earlier combined with declines at wells in the area over the next few days will help validate if actions speak louder than words.

4. Discharge Measurements

December 13 Memo page 24 and 25

Staff notes that Mr. Grimsley addressed Mr. Johnson's questions about the ongoing efforts related to measurement of discharge in the Southeast Fork of the Homosassa River during the October workshop.

Response: Mr. Kevin Grimsley, with the United States Geological Survey, noted that equipment used to measure water velocities was installed at the Southeast Fork gage site in September and that negative velocities were recorded at the site last week as a meteorological front passed through the area. Mr. Grimsley added that it would be approximately six months to one year before sufficient data have been obtained for

development of a velocity index rating curve for the gage site.

The USGS real time data indicates data from the acoustic doppler flow measuring equipment was operational early September with data collected at 15 minutes past each hour, 24 readings each day. With over 2500 readings some preliminary indication of how this equipment correlates with the calculated discharge data must be possible. The equations for the calculated data were developed by regression analysis of far less data than 2500 measurements.

It is noteworthy that since installation of the acoustic doppler unit, calculated data at the 30 minutes past the hour intervals is being calculated using a dS/dt(change in stage height) component in the formula for 30 minutes rather than for 15 minutes.

At 05:30 on October 19, 2011 the calculated figure was -0.27 cfs; this was calculated using a stage height change of 0.1 (2.67 to 2.77) multiplied by the equation constant of 418.14 or a contribution of - 41.8 cfs the next two calculated reading were at 05:45 am of 20 cfs (stage change 2.77 to 2.82) and 06:00 am of 20 cfs (stage change 2.82 to 2.87) both these stage changes result in contribution of - 20.91 cfs. Realizing this is more detail than most of you need lets just say this was/is not the only occurrence. Presumably this difference in calculation will be addressed when the data approval process takes place.

Date/Time	Calculated Discharge	Stage Change
10/19 05:30	-0.27 cfs	0,1
10/27 02:30	-1.1 cfs	0,14
11/22 14:30	-3.0 cfs	0.14
11/27 03:30	-0.17cfs	0.13
11/28 03:30	-3.8 cfs	0.13

On October 19/20, 2011 USGS conducted Field Measurements Acoustic Doppler data collection was suspended from 08:30 until 15:30 allowing 15 minute dS/dt calculated component to be reported. Calculated versus field measurement discharge is shown in the following table.

Number	Date	Time	Stream flow (ft ³ /s)	Calculated Flow Real Time Data (ft ³ /s)	
180	2011-10-20	05:51	76.2	64	84%
179	2011-10-20	05:24	75.4	59	78%
178	2011-10-19	14:46:30	68.2	51	75%
177	2011-10-19	14:18:30	59.0	51	86%
176	2011-10-19	13:46	59.8	55	92%
175	2011-10-19	13:25	55.8	46	82%
174	2011-10-19	12:54:30	50.6	50	99%
173	2011-10-19	12:26:30	55.8	49	88%
172	2011-10-19	11:59	52.9	45	85%
171	2011-10-19	11:25:30	49.8	49	98%
170	2011-10-19	10:51	43.8	44	100%
169	2011-10-19	10:24	45.2	52	115%

SUMMARY/CONCLUSION

With over 15 months of review the difference between estimated data and a defined MFL should be better understood. Also, the methods by with measurement/monitor compliance will be handled should be more confidently understood and scientifically verifiable.

Protecting and managing a resource as valuable as water to the future economy of the Springs Coast and the ecology of Outstanding Florida Waters in the area is a responsibility that will be assessed in the

future. May be if some of the long term residents are respected when they say harm is already evident in the Homosassa River (major increase in barnacle growth, reduced fish population and noticeable flow reductions) the task will be easier.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#)
Cc: [rkane](#); [Kevin J. Grimsley](#); [Doug Leeper](#)
Subject: RE: Discharge Chassahowitzka
Date: Friday, January 20, 2012 8:17:58 AM

Thanks appreciated.

Martyn

To: martynellijay@hotmail.com
CC: rkane@usgs.gov; kjgrims@usgs.gov
Subject: Re: Discharge Chassahowitzka
From: rrodrigu@usgs.gov
Date: Fri, 20 Jan 2012 07:48:55 -0500

Mr. Johnson,

We are checking with our headquarters regarding your request to release the regression equations used to calculate discharge at the subject site. They will get back to me next week and I will forward that information to you.

Thank you,

Rafael W. Rodriguez
Director
USGS Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
Phone: (813) 498-5024
Cell: (813) 463-3660
Fax: (813) 498-5003
rrodrigu@usgs.gov
<http://fl.water.usgs.gov>

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: R Rodriguez <rrodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, <mark.hammond@swfwmd.state.fl.us>, <mike.hey1@swfwmd.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, Brad Rimley <bwr.crrc@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Ron Miller <rmille76@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>
Date: 01/19/2012 09:50 AM
Subject: Discharge Chassahowitzka

Mr. Rodriguez,

Please share the policy document which precludes USGS sharing the equation used to calculate Discharge at Chassahowitzka Station 02310650, as requested in an earlier e-mail from myself and from Brad Rimley as a member of the working group.

The ecological future of the Homosassa River, Crystal River and Chassahowitzka River depend heavily on data from USGS/SWFWMD gage sites and on open and honest dialogue about the accuracy of the generated data. To that end I would like to draw your attention to some Chassahowitzka data that appears to fall short of logical explanation.

The data is from USGS web site for the Chassahowitzka Gage Site 02310650. As you will see in the attached spreadsheet I have highlighted the apparent disconnect between the calculated discharge measurements and the specific conductance measurement.

A section of the spreadsheet covering Jan 5/6 is show below and I will walk you thru my interpretation.

21:45 negative flow is calculated, water that past the gages earlier may be returning at the same temperature and specific conductance.

22:30 the water passing the gages is clearly mixed with water of higher temperature and higher specific conductance.

23:45 positive flow is calculated. I have added cumulative volume past the gage site (it is shown as cfs for ease of understanding but could be multiplied by time to represent volume). 23:45 thru 01:45 Specific conductance continues to increase, note the temperature remains at 22.3/22.4.

01:00/01:15 high stage is reached and calculated flow has increased to 36 and 54 cfs.

Positive flows calculated for hour and half while stage continues to increase.

01:30 thru 02:45 temperature an specific conductance indicate this is water which passed the gages under negative flow conditions yet the cumulative positive flow has been more than five times the highest cumulative negative flow.

03:45 temperature and specific conductance are back close to representative of spring water. Going to the spreadsheet this is fully achieved about an hour later.

Time	Stage Ht	Discharge	Temp	SpecCond		
01/05/2012 21:00 EST	0.70 ^P	33 ^P	21.2 ^P	1,990 ^P	15 min	Cumulative
01/05/2012 21:15 EST	0.75 ^P	15 ^P	21.1 ^P	1,980 ^P	Discharge	Discharge
01/05/2012 21:30 EST	0.81 ^P	5.2 ^P	21.1 ^P	1,980 ^P	5.2	5.2
01/05/2012 21:45 EST	0.88 ^P	-4.3 ^P	21.2 ^P	1,970 ^P	-4.3	0.9
01/05/2012 22:00 EST	0.96 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-13.1
01/05/2012 22:15 EST	1.04 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-27.1
01/05/2012 22:30 EST	1.12 ^P	-15 ^P	21.8 ^P	3,770 ^P	-15	-42.1
01/05/2012 22:45 EST	1.20 ^P	-15 ^P	22.0 ^P	4,970 ^P	-15	-57.1
01/05/2012 23:00 EST	1.28 ^P	-16 ^P	22.0 ^P	5,270 ^P	-16	-73.1
01/05/2012 23:15 EST	1.35 ^P	-7.2 ^P	22.2 ^P	5,560 ^P	-7.2	-80.3
01/05/2012 23:30 EST	1.42 ^P	-7.6 ^P	22.3 ^P	5,800 ^P	-7.6	-87.9
01/05/2012 23:45 EST	1.48 ^P	1.1 ^P	22.3 ^P	5,950 ^P	1.1	-86.8
01/06/2012 00:00 EST	1.54 ^P	0.72 ^P	22.3 ^P	6,040 ^P	0.72	-86.08
01/06/2012 00:15 EST	1.59 ^P	9.5 ^P	22.3 ^P	6,120 ^P	9.5	-76.58

01/06/2012 00:30 EST	1.64 ^P	9.2 ^P	22.3 ^P	6,160 ^P	9.2	-67.38
01/06/2012 00:45 EST	1.68 ^P	18 ^P	22.3 ^P	6,230 ^P	18	-49.38
01/06/2012 01:00 EST	1.70 ^P	36 ^P	22.4 ^P	6,300 ^P	36	-13.38
01/06/2012 01:15 EST	1.70 ^P	54 ^P	22.4 ^P	6,420 ^P	54	40.62
01/06/2012 01:30 EST	1.68 ^P	72 ^P	22.4 ^P	6,580 ^P	72	112.62
01/06/2012 01:45 EST	1.65 ^P	82 ^P	22.4 ^P	6,620 ^P	82	194.62
01/06/2012 02:00 EST	1.62 ^P	82 ^P	22.3 ^P	6,570 ^P	82	276.62
01/06/2012 02:15 EST	1.58 ^P	91 ^P	22.3 ^P	6,080 ^P	91	367.62
01/06/2012 02:30 EST	1.54 ^P	91 ^P	22.2 ^P	5,500 ^P	91	458.62
01/06/2012 02:45 EST	1.50 ^P	91 ^P	22.0 ^P	4,760 ^P	91	549.62
01/06/2012 03:00 EST	1.46 ^P	92 ^P	21.4 ^P	3,740 ^P	92	641.62
01/06/2012 03:15 EST	1.42 ^P	92 ^P	21.4 ^P	3,120 ^P		
01/06/2012 03:30 EST	1.37 ^P	101 ^P	21.5 ^P	2,800 ^P		
01/06/2012 03:45 EST	1.32 ^P	102 ^P	21.4 ^P	2,550 ^P		

How is it possible the specific conductance can continue to increase when the flow becomes positive?

Agreed water of high specific conductance that passes the gauge/sensor under negative flow must elute from the upstream areas before the spring water shows at the gauge/sensor. But, I have great difficulty understanding how specific conductance continues to increase after the discharge (calculated) becomes positive. As you can see in the spreadsheet this is not a one time occurrence it is the norm. The highlighted temperature records appear to correlate more with the specific conductance data than the calculated discharge data.

An explanation would be appreciated, preferably not a one liner. I am always willing to learn.

If this is in anyway unclear please do not hesitate to ask for a more thorough explanation of my concern.

Martyn[attachment "Chassahowitzka Discharge Question.xls" deleted by Rafael W Rodriguez/WRD/USGS/DOI]

From: [Ron Basso](#)
To: [Alan Martyn Johnson](#); [Doug Leeper](#)
Cc: [Ron Miller](#); [Al Grubman](#); [Brad Rimbey](#); [Norman Hopkins](#); [J Weaver](#); [R Rodriguez](#); [Kevin J Grimsley](#); [Paul Williams](#); [Claire E. Muirhead](#); [Brent Whitley](#)
Subject: RE: Homosassa MFL"s
Date: Friday, January 20, 2012 9:06:40 AM

Mr. Johnson:

I thought you may have some questions regarding those other types of wells. You are correct that a monitor well refers to a well that is used to simply record water levels or water quality or both. They are not withdrawal wells. These monitor wells can be SWFWMD/USGS wells but most of them are probably related to groundwater contamination sites where they are installed to identify the extent of pollution and monitor water quality. Plugged wells refer to wells that have been cemented from bottom to top. It is the established way to properly abandon a well. Wells are plugged for a variety of reasons – say if a well exists and someone wants to build on top of it or roadway is expanded. Or the well was installed for monitoring purposes and is no longer needed or if well casing has corroded or the well has sanded up. Wells have a finite life with metal casing. The “other” category consists of HVAC (air conditioning) return wells, standby wells (only used for emergency purposes), or well repairs.

The 9 large wells are classified by diameter (i.e. 6 inches or greater) which triggers them requiring a water use permit regardless of the withdrawal quantity – so they don’t necessarily pump 100,000 gpd – they could pump less if they are 6 inches in diameter depending on their use. The owner of these large diameter wells is required to obtain a water use permit for their withdrawals – this is separate from the well construction permit. The withdrawal request is evaluated by our water use permitting staff. The withdrawal request is subject to meeting a number of rules regarding environmental impacts, interference with adjacent users, and reasonableness of use. I don’t have a water use permit number associated with these 9 wells without conducting further research but the District will not issue a well construction permit unless it is confirmed that the owner of a large diameter well has a water use permit for withdrawals from that well. On the matter of the 300 well construction permits each issued for the three counties, it’s just coincidence. You can see that the actual number of wells completed varied between each county. We are still gathering information on the number of water use permits modified, renewed, or newly issued for this area over the last year and we should be able to send you that information shortly. Please contact me if you have any additional questions regarding this response.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Friday, January 20, 2012 8:06 AM
To: Ron Basso; Doug Leeper
Cc: Ron Miller; Al Grubman; Brad Rimbey; Norman Hopkins; J Weaver; R Rodriguez; Kevin J Grimsley; Paul Williams; Claire E. Muirhead
Subject: RE: Homosassa MFL's

Ron,

Thanks for taking the time to collect this information.

Do I assume correctly;

- Monitor wells are for use by USGS/SFWMD to monitor the aquifer and have no withdrawals
- Plugged is a well that was drilled but the water quantity or quality did not meet expectations to install a pump and were thus plugged/sealed
- What falls in the other category...no need to list all just one or two examples if you have them handy as they do not fall into the 715.

The 9 large wells (over 100,000 gpd as I understand) do they have to specify the 'intended' gpd? In other words if they plan on drawing 200,000 gpd is that stated in the request...I guess the answer is yes if it is regulated. If you have the gpd for these wells please share if not no problem.

I notice that Citrus, Hernando and Marion each have a total of 300 permits issued; is there some sort of maximum permits per year per county or is this simply coincident?

Thanks again for the time taken to answer the questions.

Martyn

From: Ron.Basso@swfwmd.state.fl.us
To: martynellijay@hotmail.com; Doug.Leeper@swfwmd.state.fl.us
CC: rmille76@tampabay.rr.com; grubman1@gmail.com; brimbey3@tampabay.rr.com; norman@amyhrf.org; jdweaver@usgs.gov; rrodrigu@usgs.gov; kjgrims@usgs.gov; Paul.Williams@swfwmd.state.fl.us; Claire.Muirhead@swfwmd.state.fl.us
Date: Wed, 18 Jan 2012 11:34:04 -0500
Subject: RE: Homosassa MFL's

Mr. Johnson:

I've completed your request regarding the number of well construction permits issued in the six-county region of our Northern District over the last year (January 1, 2011 to January 1, 2012). I have attached the information in an excel file for your review. We are still researching the number of water use permits (new, modifications, or renewals) issued over the last year in the same region.

The well construction permit data indicates that there were 715 small diameter wells (less than 6 inches diameter) completed over the six-county region during the last year. These include wells installed for domestic self-supply, household irrigation wells, and livestock watering wells. As I

mentioned in my earlier email, these wells do not meet our water use permit threshold and are exempt from those permitting requirements. A driller only needs to obtain a well construction permit to install these wells. We do not regulate them. However, their use is quite small. If we assume a use of 500 gallons per day (gpd) per well, the total water use for all 715 wells is only 357,500 gpd. This amounts to less than one-half of one percent of all groundwater withdrawn in the six-county region.

Only 9 larger diameter wells (6 inches well diameter or greater) were installed in the six-county region over the last year. These wells are part of a water use permit and their use is regulated by the District. If you have any questions, please do not hesitate to contact me.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Tuesday, January 03, 2012 1:00 PM
To: Doug Leeper
Cc: Ron Miller; Al Grubman; Brad Rimbey; Ron Basso; Marty Kelly; Norman Hopkins; J Weaver; R Rodriguez; Kevin J Grimsley
Subject: Homosassa MFL's

Doug,
It has been some 15 months since you started a process seeking public input regarding the MFL's for the Homosassa River. In a series of public meetings and forming a working group you have heard from members of the public and various stakeholder representatives. In the meetings Chassahowitzka, Crystal River and the Homosassa were involved. The question now is how will all this be incorporated in what is presented to the SWFWMD Board regarding the Chassahowitzka and Homosassa Rivers. I have heard comments about some of the older flow data being incorporated in the report, but it will not influence the data used in the 'all controlling' Northern District Model. I have heard that all the e-mails letters and presentations will be in 'appendices', but I doubt the Board will read these. So what will be presented?

Will a revised draft report or final report be published prior to presentation to the Board?
Will public input regarding major increase in barnacle growth as evidence of harm be included?
Will some preliminary analysis of acoustic doppler flow data SE Fork be included?
Will the USGS review of flow measurements/methodology in the Homosassa be mentioned?

In the Executive Summary page 20 of the July 12, 2010 Peer-Review Draft the wording includes:

Estimated combined discharge past United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009

.....
Declines in flow to the system associated with groundwater withdrawals were estimated to be approximately 2.3 cfs, including a 1 cfs decline in the springs contributing to flow past the USGS gages in the Homosassa Main Springs run and Southeast Fork. This 1 cfs change in flow was considered insignificant as compared to the estimated average flow of 152 cfs for the two sites, so available flow records for the sites were considered representative of baseline conditions for evaluation of minimum flow criteria. Because break-points in ecological responses were not observed, a fifteen percent loss of resource or habitat was adopted as representative of significant harm.

The most sensitive resource responses to modeled flow reductions were exhibited by fish and invertebrate plankton and nekton, i.e., free-floating and actively swimming organisms. Flow reductions of 2.7 percent or less from median baseline conditions were associated with fifteen percent reductions in predicted abundances of individual pseudo-species or taxa. Similar or increased sensitivity to flow reductions was predicted for many taxa across the range of baseline flows, in particular for baseline flows less than the median flows.

.....
Modeled responses of a number of salinity-based habitats in the Homosassa River main channel were also relatively sensitive to flow reductions. Flow reductions of less than five percent were associated with more than fifteen percent reductions in selected salinity-based habitats determined from isohalines with salinities of 2, 3, 5 and 12.

.....
Based on review of resource and habitat-based criteria, the recommended minimum flows for the Homosassa River system are defined as a five percent reduction from baseline flows. Given the minimal existing withdrawal impacts on flow, the recommended minimum flows are a five percent reduction from combined flows measured on a daily basis at the USGS gauge sites in the Homosassa Springs run and Southeast Fork of the Homosassa River.

Reminder: Few believe the 2.3 cfs is an accurate reflection of groundwater withdrawal reduction.

I am hoping that a 'new' Executive Summary will rely less on estimates to develop a defined answer.

Hopefully, through all the meetings/discussion we better recognize the legal requirement to set MFL's was a good concept when it was first enacted. To truly protect the future, minimum levels in the aquifer controlled by strict limits on groundwater withdrawals may be much more effective as a proactive approach for protecting Outstanding Florida Waters along the Spring Coast and all the economic activities which rely on water as a resource.

DECEMBER 13 Memo

Thanks to all who put the efforts into documenting and responding to the October workshop. I have read the December 13 memo posted on the web site. I have a number of comments and questions. For ease of reference I have numbered them.

1. **Semantics over shadow the real issues and cloud the facts.**

December 13 Memo page 4

Staff also notes that a strict definition of "mining groundwater" is where groundwater withdrawals exceed annual recharge to the aquifer, and based on this definition, there is

no “mining” of groundwater in the Northern District. In the spring’s coast groundwater basin, average recharge to the Upper Floridan aquifer is about 14 inches per year, while current groundwater withdrawals are approximately one inch per year.

Where does this strict definition come from? From my search it does not appear to have made it to the web yet. Sucking water out of the aquifer using power pumps sure sounds like a form of mining which is; *removing minerals (resources) from the ground, the process or business of removing minerals (resources) from the ground.* Semantics water is not a mineral, but it certainly is a valuable resource for which the equilibrium is moving in the wrong direction.

The facts in the statement. Over 7% of the water making it into the aquifer is being pumped out. This is 7% that does not provide the driving force to push water through the ground to the springs. No pumping is equilibrium.

Looking at the often quoted Weeki Wachee Well it is clear that the water table has been declining. Similar is true for the Lecanto well mentioned in the July 2010 report.

Graph of DAILY Elevation above NGVD 1929, feet, ,Tampa DCP data



NOTE: IF THE USGS GRAPH DOES NOT COPY INTO THE E-MAIL; it is the presentation quality graph of daily data on the USGS web site for Weeki Wachee Well 1970-present..

Can the decline in well level all be attributed to rainfall? Take 2003 and 2004, both years saw high rainfall due to hurricanes and the water table increased to over 23 feet both years, but look how quickly the levels dropped to just over 16 feet. Compare that drop to what happened in the early 80's. Was spring flow lower in the 80's so the water table dropped more slowly? Or, could increased groundwater withdrawals be the difference?

It is always so easy to get apples and oranges mixed, but where do the 14 and 1 inch come from.

Specifically in the quote from page 4, the origin of the **average** 14 inches recharge is not referenced and similarly for the **current** one inch associated with withdrawals. Appreciated this data may be combined from a number reports.

Looking in the Homosassa reviews, recharge is not mentioned in the July 12, 2010 Draft Review. In the Appendices to the Review it is stated (page 338 of the pdf file under 2.0 Hydrogeologic Conditions):

The highest recharge rates to the UFA occur in west-central Hernando and Citrus Counties with values ranging between 10 and 25 inches per year (Sepulveda, 2002).

And further (on page 340):

The United States Geological Survey (USGS) developed a water budget for the basin for calendar years 1997 and 1998 (Knochenmus and Yobbi, 2001). According to Knochenmus and Yobbi's calculations, average annual values for the following water budget components were:

Rainfall = 52 inches (in)/yr,

Evapotranspiration = 32 in/yr,

Springflow = 12.5 in/yr,

Groundwater Withdrawals = 0.6 in/yr,

Groundwater Outflow = 6.7 in/yr and

Change in Storage = 0.2 in/yr

Based on the USGS water budget, net recharge to the UFA averaged 20 in/yr for the two-year period. As a percentage of recharge, groundwater withdrawals averaged about three percent of annual recharge.

QUESTION: PLEASE EXPLAIN WHERE THE AVERAGE 14 INCHES RECHARGE AND CURRENT 1 INCH WITHDRAWAL FIGURES COME FROM.

2. Groundwater Withdrawals

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

Something does not seem to add up. Early 2011 the following was a response to a question about new wells:

"Review of the District's Well Construction Database indicates that 213 and 941 permits were issued for withdrawals in Citrus County during the past year and past three years, respectively."....."With regard to water-use permitting..... Fewer than ten of the hundreds of surface- and groundwater use permit requests received by the Brooksville Regulation Department during the past three years were not issued. Note that this department of the District handles water use permitting for withdrawals in the northern portion of the District, which includes Citrus County, Hernando County, Pasco County, Sumter County, and portions of Lake, Levy and Marion counties."

QUESTION A: WITH ALL THESE NEW WELLS AND WATER USE PERMITS HOW CAN CONSUMPTION HAVE DECLINED/REMAINED FLAT? Some data to support the statement would be useful.

QUESTION B: How many well construction permits and water use permits were issued during 2011 and how many were rejected. Same basis as previous data would be helpful.

3. Rainfall; the giver or the excuse.

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

December 13 Memo page 20

Staff acknowledges Mr. Miller's comments and notes that minimum flows and levels do, in effect, serve to establish a limit or cap beyond which further water withdrawals would be significantly harmful to area water resources and ecology. Once incorporated into District rules, minimum flows and levels become one criterion used in the evaluation of requests for water use permits. Similarly, minimum flows and levels help identify withdrawal limits that are incorporated into water supply planning efforts.

December 13 Memo page 25

Staff acknowledges Mr. Johnson's comments but does not support a five-year moratorium on the issuance or renewal of water use permits for area groundwater withdrawals. Staff does support the careful evaluation of all future renewals or issuances of water use permits in the Springs Coast area and elsewhere in the District.

Actions Speak Louder Than Words.

Sooner or later it will be recognized water management must deal with the rainfall as it occurs. Rainfall is income, you have to deal with the income you have this year.

The growers who tonight (January 3, 2012) will spray tremendous quantities of water from the aquifer on their crops are drawing from limited resources. It appears later rather than sooner attention will be paid to limiting water withdrawals; but for right now water use permits are issued to anyone who submits the correct paperwork. Moreover, when the circumstances are 'such'(like tonight's freeze) the limits will be waived....this highly probable for MFL's also The information regarding well construction and water use permits requested earlier combined with declines at wells in the area over the next few days will help validate if actions speak louder than words.

4. Discharge Measurements

December 13 Memo page 24 and 25

Staff notes that Mr. Grimsley addressed Mr. Johnson's questions about the ongoing efforts related to measurement of discharge in the Southeast Fork of the Homosassa River during the October workshop.

Response: Mr. Kevin Grimsley, with the United States Geological Survey, noted that equipment used to measure water velocities was installed at the Southeast Fork gage site

in September and that negative velocities were recorded at the site last week as a meteorological front passed through the area. Mr. Grimsley added that it would be approximately six months to one year before sufficient data have been obtained for development of a velocity index rating curve for the gage site.

The USGS real time data indicates data from the acoustic doppler flow measuring equipment was operational early September with data collected at 15 minutes past each hour, 24 readings each day. With over 2500 readings some preliminary indication of how this equipment correlates with the calculated discharge data must be possible. The equations for the calculated data were developed by regression analysis of far less data than 2500 measurements.

It is noteworthy that since installation of the acoustic doppler unit, calculated data at the 30 minutes past the hour intervals is being calculated using a dS/dt (change in stage height) component in the formula for 30 minutes rather than for 15 minutes.

At 05:30 on October 19, 2011 the calculated figure was -0.27 cfs; this was calculated using a stage height change of 0.1 (2.67 to 2.77) multiplied by the equation constant of 418.14 or a contribution of - 41.8 cfs the next two calculated reading were at 05:45 am of 20 cfs (stage change 2.77 to 2.82) and 06:00 am of 20 cfs (stage change 2.82 to 2.87) both these stage changes result in contribution of - 20.91 cfs. Realizing this is more detail than most of you need lets just say this was/is not the only occurrence. Presumably this difference in calculation will be addressed when the data approval process takes place.

Date/Time	Calculated Discharge	Stage Change
10/19 05:30	-0.27 cfs	0,1
10/27 02:30	-1.1 cfs	0,14
11/22 14:30	-3.0 cfs	0.14
11/27 03:30	-0.17cfs	0.13
11/28 03:30	-3.8 cfs	0.13

On October 19/20, 2011 USGS conducted Field Measurements Acoustic Doppler data collection was suspended from 08:30 until 15:30 allowing 15 minute dS/dt calculated component to be reported. Calculated versus field measurement discharge is shown in the following table.

Number	Date	Time	Stream flow (ft ³ /s)	Calculated Flow Real Time Data (ft ³ /s)	
180	2011-10-20	05:51	76.2	64	84%
179	2011-10-20	05:24	75.4	59	78%
178	2011-10-19	14:46:30	68.2	51	75%
177	2011-10-19	14:18:30	59.0	51	86%
176	2011-10-19	13:46	59.8	55	92%
175	2011-10-19	13:25	55.8	46	82%
174	2011-10-19	12:54:30	50.6	50	99%
173	2011-10-19	12:26:30	55.8	49	88%
172	2011-10-19	11:59	52.9	45	85%
171	2011-10-19	11:25:30	49.8	49	98%
170	2011-10-19	10:51	43.8	44	100%
169	2011-10-19	10:24	45.2	52	115%

SUMMARY/CONCLUSION

With over 15 months of review the difference between estimated data and a defined MFL should be better understood. Also, the methods by with measurement/monitor compliance will be handled should

be more confidently understood and scientifically verifiable.

Protecting and managing a resource as valuable as water to the future economy of the Springs Coast and the ecology of Outstanding Florida Waters in the area is a responsibility that will be assessed in the future. May be if some of the long term residents are respected when they say harm is already evident in the Homosassa River (major increase in barnacle growth, reduced fish population and noticeable flow reductions) the task will be easier.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: Doug Leeper
To: ["Voyles, Carolyn"](#)
Subject: RE: Springs Coast Update
Date: Friday, January 20, 2012 3:21:00 PM

Hi Carolyn:

We are still working on the Chassahowitzka and Homosassa MFLs. Current (previously proposed) MFLs are 89 and 95% of natural flows, respectively. I expect that the revised MFLs for Homosassa will be different than currently proposed; not yet sure about the revised MFLs for the Chassahowitzka.

Our plan is to develop and release revised reports by the end of February, allow time for public review/comment, and then take proposed rule amendments to the Governing Board in April.

Work on Crystal River/Kings Bay is ongoing.

Let me know if you need additional information.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Voyles, Carolyn [mailto:Carolyn.Voyles@dep.state.fl.us]
Sent: Friday, January 13, 2012 3:28 PM
To: Doug Leeper
Subject: Springs Coast Update

Hi Doug!

What is going on with the Springs Coast issues? Have you made any decisions about your approach?

I hope all is well.

Thanks.

Carolyn Voyles
Office of Water Policy
FL Dept. of Environmental Protection

3900 Commonwealth Blvd., MS 46
Tallahassee, FL 32399-3000
(850) 245-3150 (office)
(850) 245-3145 (fax)

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: Doug Leeper
To: ["martynellijay@hotmail.com"](mailto:martynellijay@hotmail.com)
Cc: [Cara S. Martin](#); [Chris Zajac](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Doug Leeper](#); [Gary E. Williams](#); [Jay Yingling](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Mike Heyl](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Veronica Crow](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: Additional Response to Jan 3, 2012 E-Mail
Date: Monday, January 23, 2012 5:31:00 PM

Martyn:

With this e-mail, I'd like to address some questions and comments raised in the e-mail you sent to me on January 3, 2012, and which is reproduced at the bottom of this e-mail. In this attempt to address your concerns, I have reproduced text from your e-mail below in italics and blue font and followed the excerpts with responses. The responses included in this e-mail build upon the responses provided by Ron Basso in e-mails sent to you on January 3, 2012 and earlier today.

Excerpt: "It has been some 15 months since you started a process seeking public input regarding the MFL's for the Homosassa River. In a series of public meetings and forming a working group you have heard from members of the public and various stakeholder representatives. In the meetings Chassahowitzka, Crystal River and the Homosassa were involved. The question now is how will all this be incorporated in what is presented to the SWFWMD Board regarding the Chassahowitzka and Homosassa Rivers. I have heard comments about some of the older flow data being incorporated in the report, but it will not influence the data used in the 'all controlling' Northern District Model. I have heard that all the e-mails letters and presentations will be in 'appendices', but I doubt the Board will read these. So what will be presented?"

Response: As appropriate, input from interested stakeholders will be incorporated into summary information/analyses presented in revised reports on proposed minimum flows for the Chassahowitzka and Homosassa River systems. In addition, all public input/comment will be included in appendices to the revised reports. The revised reports and appendices will be provided to Governing Board members prior to their consideration of rule amendments concerning the proposed minimum flows. To assist Board members with their consideration of the substantial public input, staff expects to develop summary information on major stakeholder concerns.

Excerpt: "Will a revised draft report or final report be published prior to presentation to the Board?"

Response: Yes, current expectation is that a revised report will be completed and made available for stakeholder review sometime next month.

Excerpt: "Will public input regarding major increase in barnacle growth as evidence of harm be included?"

Response: Information on the District funded study of barnacle distribution in the Homosassa and other Springs Coast rivers is included on Page 108 of the July 12, 2012 draft report on proposed minimum flows for the Homosassa River system, and will be updated in the revised report. The revised report may be expected to include information addressing stakeholder input regarding barnacle distribution in the river.

Excerpt: *Will some preliminary analysis of acoustic doppler flow data SE Fork be included?*

Response: Staff does not currently anticipate including preliminary analysis of data collected using the recently installed equipment at the Southeast Fork gage site, but will likely note the changes made at the gage site and the expectation for future data availability.

Excerpt: *Will the USGS review of flow measurements/methodology in the Homosassa be mentioned?*

Response: I'm not quite sure what is meant by your question, although I note that information pertaining to the new streamflow measurement instrumentation in the Southeast Fork of the Homosassa River and in Halls River will be mentioned in the revised report.

Excerpt (highlighting not reproduced): *"In the Executive Summary page 20 of the July 12, 2010 Peer-Review Draft the wording includes:*

Estimated combined discharge past United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009

.....

Declines in flow to the system associated with groundwater withdrawals were estimated to be approximately 2.3 cfs, including a 1 cfs decline in the springs contributing to flow past the USGS gages in the Homosassa Main Springs run and Southeast Fork. This 1 cfs change in flow was considered insignificant as compared to the estimated average flow of 152 cfs for the two sites, so available flow records for the sites were considered representative of baseline conditions for evaluation of minimum flow criteria. Because break-points in ecological responses were not observed, a fifteen percent loss of resource or habitat was adopted as representative of significant harm. The most sensitive resource responses to modeled flow reductions were exhibited by fish and invertebrate plankton and nekton, i.e., free-floating and actively swimming organisms. Flow reductions of 2.7 percent or less from median baseline conditions were associated with fifteen percent reductions in predicted abundances of individual pseudo-species or taxa. Similar or increased sensitivity to flow reductions was predicted for many taxa across the range of baseline flows, in particular for baseline flows less than the median flows.

.....

Modeled responses of a number of salinity-based habitats in the Homosassa River main channel were also relatively sensitive to flow reductions. Flow reductions of less than five percent were associated with more than fifteen percent reductions in selected salinity based habitats determined from isohalines with salinities of 2, 3, 5 and 12.

.....

Based on review of resource and habitat-based criteria, the recommended minimum flows for the Homosassa River system are defined as a five percent reduction from baseline flows. Given the minimal existing withdrawal impacts on flow, the recommended minimum flows are a five percent reduction from combined flows measured on a daily basis at the USGS gauge sites in the Homosassa Springs run and Southeast Fork of the Homosassa River.

Doug,

It has been some 15 months since you started a process seeking public input regarding the MFL's for the Homosassa River. In a series of public meetings and forming a working group you have heard from members of the public and various stakeholder representatives. In the meetings Chassahowitzka, Crystal River and the Homosassa were involved. The question now is how will all this be incorporated in what is presented to the SWFWMD Board regarding the Chassahowitzka and Homosassa Rivers. I have heard comments about some of the older flow data being incorporated in the report, but it will not influence the data used in the 'all controlling' Northern District Model. I have heard that all the e-mails letters and presentations will be in 'appendices', but I doubt the Board will read these. So what will be presented?

Will a revised draft report or final report be published prior to presentation to the Board?
Will public input regarding major increase in barnacle growth as evidence of harm be included?
Will some preliminary analysis of acoustic doppler flow data SE Fork be included?
Will the USGS review of flow measurements/methodology in the Homosassa be mentioned?

In the Executive Summary page 20 of the July 12, 2010 Peer-Review Draft the wording includes:

Estimated combined discharge past United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009

.....
Declines in flow to the system associated with groundwater withdrawals were estimated to be approximately 2.3 cfs, including a 1 cfs decline in the springs contributing to flow past the USGS gages in the Homosassa Main Springs run and Southeast Fork. This 1 cfs change in flow was considered insignificant as compared to the estimated average flow of 152 cfs for the two sites, so available flow records for the sites were considered representative of baseline conditions for evaluation of minimum flow criteria. Because break-points in ecological responses were not observed, a fifteen percent loss of resource or habitat was adopted as representative of significant harm.

The most sensitive resource responses to modeled flow reductions were exhibited by fish and invertebrate plankton and nekton, i.e., free-floating and actively swimming organisms. Flow reductions of 2.7 percent or less from median baseline conditions were associated with fifteen percent reductions in predicted abundances of individual pseudo-species or taxa. Similar or increased sensitivity to flow reductions was predicted for many taxa across the range of baseline flows, in particular for baseline flows less than the median flows.

.....
Modeled responses of a number of salinity-based habitats in the Homosassa River main channel were also relatively sensitive to flow reductions. Flow reductions of less than five percent were associated with more than fifteen percent reductions in selected salinity based habitats determined from isohalines with salinities of 2, 3, 5 and 12.

.....
Based on review of resource and habitat-based criteria, the recommended minimum flows for the Homosassa River system are defined as a five percent reduction from baseline flows. Given the minimal existing withdrawal impacts on flow, the recommended minimum flows are a five percent reduction from combined flows measured on a daily basis at the USGS gauge sites in the Homosassa Springs run and Southeast Fork of the Homosassa River.

Reminder: Few believe the 2.3 cfs is an accurate reflection of groundwater withdrawal reduction. I am hoping that a 'new' Executive Summary will rely less on estimates to develop a defined answer.

Hopefully, through all the meetings/discussion we better recognize the legal requirement to set MFL's was a good concept when it was first enacted. To truly protect the future, minimum levels in the aquifer controlled by strict limits on groundwater withdrawals may be much more effective as a proactive approach for protecting Outstanding Florida Waters along the Spring Coast and all the economic activities which rely on water as a resource.

DECEMBER 13 Memo

Thanks to all who put the efforts into documenting and responding to the October workshop. I have read the December 13 memo posted on the web site. I have a number of comments and questions. For ease of reference I have numbered them.

1. Semantics over shadow the real issues and cloud the facts.

December 13 Memo page 4

Staff also notes that a strict definition of "mining groundwater" is where groundwater withdrawals exceed annual recharge to the aquifer, and based on this definition, there is no "mining" of groundwater in the Northern District. In the spring's coast groundwater basin, average recharge to the Upper Floridan aquifer is about 14 inches per year, While current groundwater withdrawals are approximately one inch per year.

Where does this strict definition come from? From my search it does not appear to have made it to the web yet. Sucking water out of the aquifer using power pumps sure sounds like a form of mining which is; *removing minerals (resources) from the ground, the process or business of removing minerals (resources) from the ground*. Semantics water is not a mineral, but it certainly is a valuable resource for which the equilibrium is moving in the wrong direction.

The facts in the statement. Over 7% of the water making it into the aquifer is being pumped out. This is 7% that does not provide the driving force to push water through the ground to the springs.

No pumping is equilibrium.

Looking at the often quoted Weeki Wachee Well it is clear that the water table has been declining. Similar is true for the Lecanto well mentioned in the July 2010 report. Graph of DAILY Elevation above NGVD 1929, feet, ,Tampa DCP data

NOTE: IF THE USGS GRAPH DOES NOT COPY INTO THE E-MAIL; it is the presentation quality graph of daily data on the USGS web site for Weeki Wachee Well 1970-present..

Can the decline in well level all be attributed to rainfall? Take 2003 and 2004, both years saw high rainfall due to hurricanes and the water table increased to over 23 feet both years, but look how quickly the levels dropped to just over 16 feet. Compare that drop to what happened in the early 80's. Was spring flow lower in the 80's so the water table dropped more slowly? Or, could increased groundwater withdrawals be the difference?

It is always so easy to get apples and oranges mixed, but where do the 14 and 1 inch come from.

Specifically in the quote from page 4, the origin of the **average** 14 inches recharge is not referenced and similarly for the **current** one inch associated with withdrawals.

Appreciated this data may be combined from a number reports.

Looking in the Homosassa reviews, recharge is not mentioned in the July 12, 2010 Draft Review.

In the Appendices to the Review it is stated (page 338 of the pdf file under 2.0 Hydrogeologic Conditions):

The highest recharge rates to the UFA occur in west-central Hernando and Citrus Counties with values ranging between 10 and 25 inches per year (Sepulveda, 2002).

And further (on page 340):

The United States Geological Survey (USGS) developed a water budget for the basin for calendar years 1997 and 1998 (Knochenmus and Yobbi, 2001). According to Knochenmus and Yobbi's calculations, average annual values for the following water budget components were:

Rainfall = 52 inches (in)/yr,

Evapotranspiration = 32 in/yr,

Springflow = 12.5 in/yr,

Groundwater Withdrawals = 0.6 in/yr,

Groundwater Outflow = 6.7 in/yr and

Change in Storage = 0.2 in/yr

Based on the USGS water budget, net recharge to the UFA averaged 20 in/yr for the two year period. As a percentage of recharge, groundwater withdrawals averaged about three percent of annual recharge.

QUESTION: PLEASE EXPLAIN WHERE THE **AVERAGE** 14 INCHES RECHARGE AND **CURRENT** 1 INCH WITHDRAWAL FIGURES COME FROM.

2. Groundwater Withdrawals

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

Something does not seem to add up. Early 2011 the following was a response to a question about new wells:

"Review of the District's Well Construction Database indicates that 213 and 941 Permits were issued for withdrawals in Citrus County during the past year and past three years, respectively." "With regard to water-use permitting..... Fewer than ten of the hundreds of surface- and groundwater use permit requests received by the Brooksville Regulation Department during the past three years were not issued. Note that this department of the District handles water use permitting for withdrawals in the northern portion of the District, which includes Citrus County, Hernando County, Pasco County, Sumter County, and portions of Lake, Levy and Marion counties."

QUESTION A: WITH ALL THESE NEW WELLS AND WATER USE PERMITS HOW CAN CONSUMPTION HAVE DECLINED/REMAINED FLAT? Some data to support the statement would be useful.

QUESTION B: How many well construction permits and water use permits were issued during 2011 and how many were rejected. Same basis as previous data would be helpful.

3. Rainfall; the giver or the excuse.

December 13 Memo page 6

In response to these assertions, staff notes that groundwater consumption in the Springs Coast area has actually declined slightly or remained flat since 2006. In the Northern Groundwater Basin, aquifer water levels and spring flows have declined largely due to low rainfall conditions occurring over the last 20 years.

December 13 Memo page 20

Staff acknowledges Mr. Miller's comments and notes that minimum flows and levels do, in effect, serve to establish a limit or cap beyond which further water withdrawals would be significantly harmful to area water resources and ecology. Once incorporated into District rules, minimum flows and levels become one criterion used in the evaluation of requests for water use permits. Similarly, minimum flows and levels help identify withdrawal limits that are incorporated into water supply planning efforts.

December 13 Memo page 25

Staff acknowledges Mr. Johnson's comments but does not support a five-year moratorium on the issuance or renewal of water use permits for area groundwater withdrawals. Staff does support the careful evaluation of all future renewals or issuances of water use permits in the Springs Coast area and elsewhere in the District.

Actions Speak Louder Than Words.

Sooner or later it will be recognized water management must deal with the rainfall as it occurs. Rainfall is income, you have to deal with the income you have this year.

The growers who tonight (January 3, 2012) will spray tremendous quantities of water from the aquifer on their crops are drawing from limited resources. It appears later rather than sooner attention will be paid to limiting water withdrawals; but for right now water use permits are issued to anyone who submits the correct paperwork. Moreover, when the circumstances are 'such' (like tonight's freeze) the limits will be waived....this highly probable for MFL's also The information regarding well construction and water use permits requested earlier combined with declines at wells in the area over the next few days will help validate if actions speak louder than words.

4, Discharge Measurements

December 13 Memo page 24 and 25

Staff notes that Mr. Grimsley addressed Mr. Johnson's questions about the ongoing efforts related to measurement of discharge in the Southeast Fork of the Homosassa River during the October workshop.

Response: Mr. Kevin Grimsley, with the United States Geological Survey, noted that equipment used to measure water velocities was installed at the Southeast Fork gage site in September and that negative velocities were recorded at the site last week as a meteorological front passed through the area. Mr. Grimsley added that it would be approximately six months to one year before sufficient data have been obtained for

development of a velocity index rating curve for the gage site.

The USGS real time data indicates data from the acoustic doppler flow measuring equipment was operational early September with data collected at 15 minutes past each hour, 24 readings each day. With over 2500 readings some preliminary indication of how this equipment correlates with the calculated discharge data must be possible. The equations for the calculated data were developed by regression analysis of far less data than 2500 measurements.

It is noteworthy that since installation of the acoustic doppler unit, calculated data at the 30 minutes past the hour intervals is being calculated using a dS/dt(change in stage height) component in the formula for 30 minutes rather than for 15 minutes.

At 05:30 on October 19, 2011 the calculated figure was -0.27 cfs; this was calculated using a stage height change of 0.1 (2.67 to 2.77) multiplied by the equation constant of 418.14 or a contribution of -41.8 cfs the next two calculated reading were at 05:45 am of 20 cfs (stage change 2.77 to 2.82) and 06:00 am of 20 cfs (stage change 2.82 to 2.87) both these stage changes result in contribution of -20.91 cfs. Realizing this is more detail than most of you need lets just say this was/is not the only occurrence. Presumably this difference in calculation will be addressed when the data approval process takes place.

Date/Time	Calculated Discharge	Stage Change
10/19 05:30	-0.27 cfs	0,1
10/27 02:30	-1.1 cfs	0,14
11/22 14:30	-3.0 cfs	0.14
11/27 03:30	-0.17cfs	0.13
11/28 03:30	-3.8 cfs	0.13

On October 19/20, 2011 USGS conducted Field Measurements Acoustic Doppler data collection was suspended from 08:30 until 15:30 allowing 15 minute dS/dt calculated component to be reported. Calculated versus field measurement discharge is shown in the following table.

**Number Date Time
Stream Calculated
Flow
flow Real Time
Data
(ft³/s) (ft³/s)**

180	2011-10-20 05:51	76.2	64	84%
179	2011-10-20 05:24	75.4	59	78%
178	2011-10-19 14:46:30	68.2	51	75%
177	2011-10-19 14:18:30	59.0	51	86%
176	2011-10-19 13:46	59.8	55	92%
175	2011-10-19 13:25	55.8	46	82%
174	2011-10-19 12:54:30	50.6	50	99%
173	2011-10-19 12:26:30	55.8	49	88%
172	2011-10-19 11:59	52.9	45	85%
171	2011-10-19 11:25:30	49.8	49	98%
170	2011-10-19 10:51	43.8	44	100%
169	2011-10-19 10:24	45.2	52	115%

SUMMARY/CONCLUSION

From: Brad.Rimbey@CRRRC
To: [Doug Leeper](#); [Mike Heyl](#)
Cc: [Ron Basso](#)
Subject: Fw: Springs Coast MFL Question
Date: Thursday, January 26, 2012 1:17:37 PM
Attachments: [Response to Mr Miller.docx](#)

Doug and Mike,

I meant to copy you guys on this too.

Brad

----- Original Message -----

From: Brad.Rimbey@CRRRC
To: Ron.Basso@swfwmd.state.fl.us
Cc: [Brent Whitley](#) ; [Mickey Newberger](#) ; [Ron Miller](#) ; [Martyn Johnson](#) ; [Norman Hopkins](#) ; [Dan Hilliard](#) ; [Al Grubman](#) ; [Todd Kincaid](#) ; BKnight@FloridaSpringsInstitute.org
Sent: Thursday, January 26, 2012 12:57 PM
Subject: Springs Coast MFL Question

Hi Ron,

On July 8, 2011, Ron Miller emailed a list of questions to you regarding the Homosassa MFL. On July 13, 2011, you replied to Mr. Miller's email with the attached M\$ Word document. In response to Mr. Miller's question "What happens to the Homosassa Springs when the Chassahowitzka is drawn down by 11%?", you replied "Since the allowable flow has been proposed at five percent for Homosassa Spring it is likely that this will limit groundwater withdrawals in the area so impacts to the Chassahowitzka will never reach 11%."

I understood your response to be an acknowledgment of the interconnection between the Homosassa and Chassahowitzka springsheds and that drawing down Chassahowitzka by 11% would result in greater than a 5% draw down of Homosassa. Please correct me if I am mistaken. Since the USGS Weeki Wachee well level is being used in the USGS regression equations to calculate flow for both Chassahowitzka and Homosassa, both rivers are obviously connected to Weeki Wachee's springshed too.

The Weeki Wachee MFL has already been adopted at 90% of the natural flow. SWFWMD's baseline flow for the Weeki Wachee MFL evaluation was 162 cfs. The **Scientific Peer Review of the Proposed Minimum Flows and Levels for the Weeki Wachee River System dated July 31, 2008** indicates that existing human usage is presently at or near the 10% **recommended limit** so little or no additional flow reductions should be allowed from groundwater use
http://www.swfwmd.state.fl.us/projects/mfl/reports/weeki_wachee_mfl_with_peer_review.pdf .

As you know, Weeki Wachee's springshed is directly adjacent and to and south of Chassahowitzka's springshed. As Weeki Wachee's groundwater supply is reduced, it seems that some of Chassahowitzka's historic groundwater supply would flow south until a state of quasi-equilibrium is reached. Assuming you agree, do you know how long it would take for a state of quasi-equilibrium to be achieved between the Weeki Wachee and Chassahowitzka springsheds?

In your Technical Memorandum dated December 1, 2008
http://www.swfwmd.state.fl.us/projects/mfl/reports/Chass_Appendices-section2.pdf , you indicated the NDM "projected reduction to Chassahowitzka Springs discharge due to current groundwater withdrawals of 0.7 cfs or about one percent of mean annual spring flow." SWFWMD's baseline flow

for the Chassahowitzka MFL evaluation was 63 cfs. If groundwater use has already reduced Weeki Wachee's 162 cfs baseline flow by nearly 10%, how can Chassahowitzka's 63 cfs baseline flow have been reduced by less than 1%? Even if we ignore the impact of groundwater pumping within Chassahowitzka's springshed, it seems that feeding the sizeable deficit created by groundwater pumping in Weeki Wachee's springshed would account for more than a 1% flow reduction in the relatively tiny Chassahowitzka.

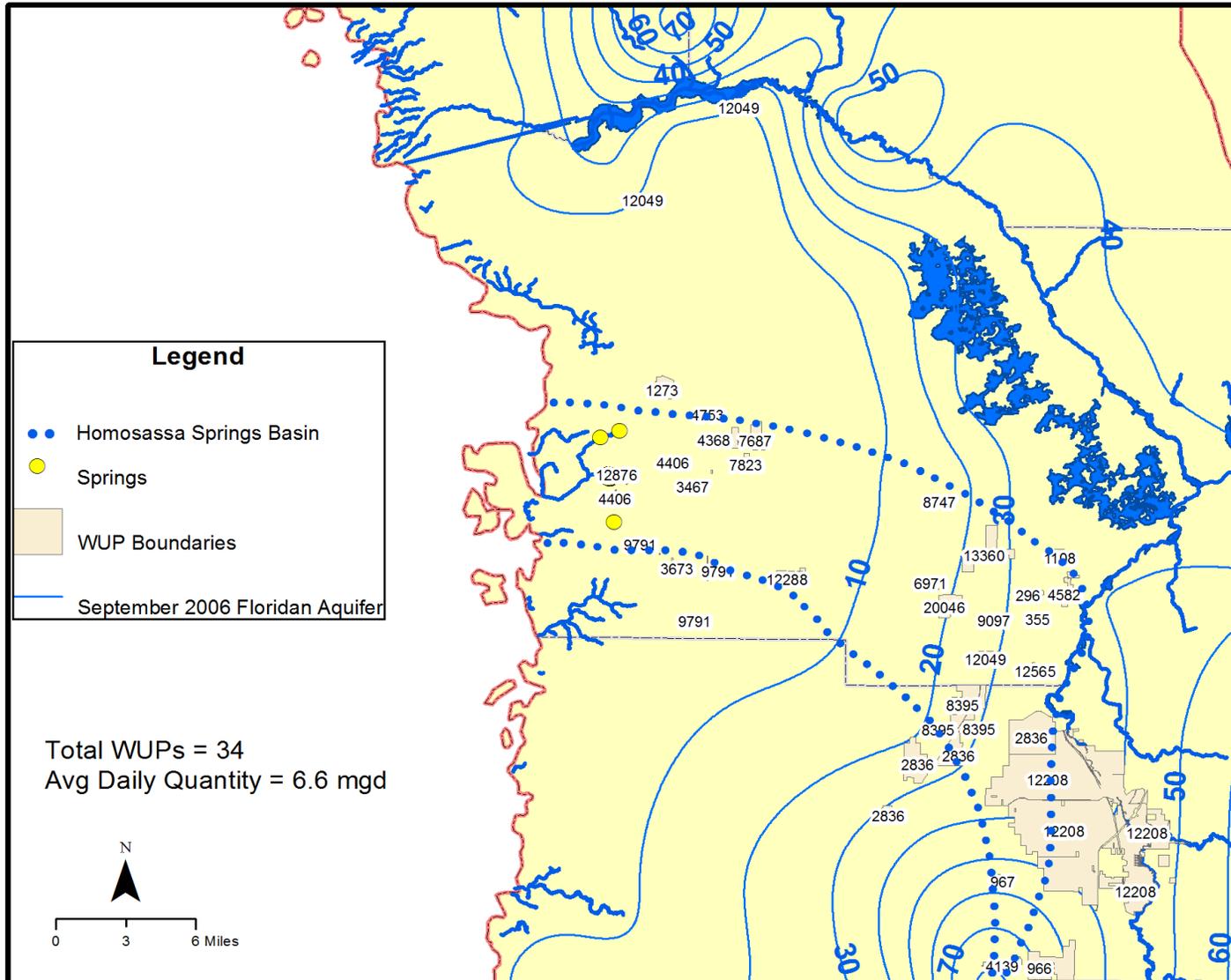
As always, I look forward to your response.

Brad W. Rimbey, P.E.

Response to Mr. Miller's email request:

1. Item 4 on the agenda --- Water Use Permitting

Please provide a table and map of all of the water withdrawal permits in the Homosassa Springs Springshed.



WUP_PERMIT	WUP_REVISI	PERMITTEE_	WATER_USE_	OWNED_PROP	AVG DAILY PERMITTED_GPD
296	2	Ray A Morris	AGRICULTURAL	37	11,100
355	2	L Norman And Linda L Adams	AGRICULTURAL	18	22,600
967	3	Hickory Hills Land Company, ATTN: Robert Thomas	AGRICULTURAL	93	68,100
1108	4	Z2F Citrus & Cattle LLC	AGRICULTURAL	105	99,000
1273	4	Post Oak Ranch LLC	AGRICULTURAL	533	61,500
2226	3	Edwin O'Neal	AGRICULTURAL	20	27,450
2836	3	United States Dept Of Agriculture	AGRICULTURAL	3817	21,400
4139	3	Aam Family Ltd Partnership	AGRICULTURAL	51	58,500
4582	2	Thomas W. & Mary L. Harrison	AGRICULTURAL	280	31,800
5091	3	Toby John & Joanna Caulfeild	AGRICULTURAL	20	300
6966	4	Larry W & Ruth A Davis	AGRICULTURAL	48	29,400
6971	2	John W & Margaret R White	AGRICULTURAL	51	30,900
7687	7	Crystal River Quarries Inc	AGRICULTURAL	460	62,050
8747	1	William Hunt	AGRICULTURAL	14	2,900
12146	1	Edwin E. and Barbara A. Harbour	AGRICULTURAL	20	9,280
12208	0	Board Of Trst'S Improv'T Tst Fnd Fdep-Div Of Rec & Parks Bureau	AGRICULTURAL	21639	143,400
12288	2	M & B Products	AGRICULTURAL	322	497,277
12565	0	Professional Horticultural Services	AGRICULTURAL	80	385,700
13360	0	Throgmartin-Henke Ranch &	AGRICULTURAL	0	231,500
20046	0	Pinewoods Plantation Nursery Inc	AGRICULTURAL	489	123,160
9115	1	Tru Gas Of Florida, Inc.	INDUSTRIAL AND COMMERCIAL	1	1,000
12049	1	Citrus Co Bocc	INDUSTRIAL AND COMMERCIAL	33	2,500
4368	2	Citrus County School Board	PUBLIC SUPPLY	160	161,000
4406	7	Homosassa Special Water District	PUBLIC SUPPLY	10	960,000
4753	3	Constate Utilities Inc	PUBLIC SUPPLY	1	81,200
7823	2	Central Florida Community College	PUBLIC SUPPLY	87	11,800
8395	3	Board Of Tst Internal Improv Tst Fund Of The State Of Florida	PUBLIC SUPPLY	1116	5,900
9097	2	Tarawood Utlities LLC	PUBLIC SUPPLY	5	99,600
9791	7	Citrus County Water Resources De c/o Robert Knight Director	PUBLIC SUPPLY	2	2,064,000
13290	0	Citrus Co Dept Of Public Works Glenn Mccracken Pe	PUBLIC SUPPLY	19	9,400
966	4	Hickory Hills LLC	RECREATION/AESTHETIC	2766	775,000
3467	2	Gibraltar Mausoleum Of Florida	RECREATION/AESTHETIC	40	45,400
3673	5	Suntacc & Company, Inc.	RECREATION/AESTHETIC	250	456,000
12876	1	Board Of Trustees Internal Imp & Homosassa Springs Wildlife Prk	RECREATION/AESTHETIC	203	12,600

Total: 6,602,717

There are a total of 34 water use permits within or near the Homosassa springshed as of December 2010. Total average daily permitted quantities for groundwater use is 6.6 mgd. They break down as follows:

WUP Type	No. of Permits	Avg Daily Quantity (mgd)
Agriculture	20	1.92
Industrial/Commercial	2	0.003
Mining	0	0
Public Supply	8	3.39
Recreation	4	1.29

There are 134 water use permitted wells within or near the Homosassa springshed. Total average daily permitted quantity from all 134 wells is 6.32 mgd. Slight differences in the total occur because some of the WUPs under the same permit number have parcels that are within and outside the springshed (i.e. 2836, 9791, 12049). A few of the permits include quantities outside the springshed and thus the permitted total is slightly higher than the sum of the wells.

Estimated and metered water use in the springshed for 2005 was 3.7 mgd from 143 wells.

2. **Item 5 on the Agenda --- Groundwater and Withdrawal Modeling**

These questions are with regard to the Northern District Model (NDM).

A. How does the model represent the underground flows including the fast flowing deep cracks and channels of the limestone foundation?

The NDM contains a finite-difference grid that consists of 182 columns and 275 rows of 2,500 ft uniformly spaced cells. The NDM is fully 3-Dimensional with top and bottom elevations specified for each model layer. Topographic elevations were assigned to the top of model layer 1 from a digital elevation model provided by SWFWMD, based on the USGS 30m National Elevation Dataset. The Florida Geological Survey supplied elevation data for all other layers in the model.

The NDM consists of seven layers that represent the primary geologic and hydrogeologic units including: 1. Surficial Sands; 2. Intermediate Confining Unit (ICU); 3. Suwannee Limestone; 4. Ocala Limestone; 5. upper Avon Park Formation; 6. Middle Confining Unit (MCU) I and MCU II; and 7. lower Avon Park Formation or Oldsmar Formation. The UFA is composed of the Suwannee Limestone, Ocala Limestone, and Upper Avon Park; the Lower Floridan aquifer (LFA) is composed of the permeable parts of both the lower Avon Park and the Oldsmar Formation. Due to the permeability contrasts between the units, each unit is simulated as a discrete model layer rather than using one model layer to represent a thick sequence of permeable units (e.g., UFA).

The NDM was calibrated to steady-state 1995 calendar year conditions and transient conditions from 1996 through 2002 using monthly stress periods. The model has recently been extended through 2006 (Version 3.0). This model is unique for west-central Florida in that it is the first regional flow model that represents the groundwater system as fully three-dimensional. Prior modeling efforts, notably Ryder (1985), Sepulveda (2002), and Knowles and others (2002), represented the groundwater system as quasi-three-dimensional.

The numerical model simulates hydrogeologic conditions through assignment of aquifer parameters that are based on aquifer performance testing, other hydraulic tests, prior knowledge, and geologic characteristics. A conceptual model of the system was developed prior to construction of the NDM whereby field data and other data from reports were analyzed to more fully understand the physical system. NDM parameters were adjusted within reasonable ranges based the hydrogeology of the system during the calibration process. Localized

karst features such as cracks, conduits, or channels in the subsurface are integrated in the model over a 2,500 ft cell size through equivalent porous media parameterization in the model.

B. How is the interaction with the salt water interface modeled?

The NDM simulates the fresh groundwater flow system within its domain. The potential movement of solutes (salts and minerals) can only be addressed through a transport model which is a completely different code. The District simulated the movement of the saline water interface in a separate saltwater intrusion model that is described at the end of the NDM report (Hydrogeologic, 2008). Detailed information on the model calibration is included in the 2008 report by Hydrogeologic, Inc., titled *Groundwater Flow and Saltwater Intrusion Model for the Northern District Water Resources Assessment Project Area, Version 1.0*. A subsequent version (2.0) was completed in 2010.

C. How is rainfall and water seepage from outside the area modeled?

The active domain of the NDM includes all of the Northern West-Central Florida Ground-Water Basin (NWCFGWB) of the Floridan aquifer. In addition, most of Lake County outside the NWCFGWB is also included in the model to assess water use near the SWFWMD eastern boundary. A groundwater basin has well-defined boundaries in a lateral direction with a definable bottom. Rainfall that falls within a groundwater basin provides recharge to the aquifer within that basin. Groundwater does not flow laterally between groundwater basins or outside of a basin.

Rainfall is converted to recharge in the model based on the following equation:

$$\text{Rainfall} - \text{ET} - \text{Runoff} = \text{Recharge}$$

Recharge is calculated outside the model based on radar-estimated rainfall, runoff, and evapotranspiration rates calculated based on land cover and water table depth. Once calculated, recharge is applied to layer 1 of the model. A detailed explanation is given in *Groundwater Flow and Saltwater Intrusion Model for the Northern District Water Resources Assessment Project Area, Version 1.0*, Hydrogeologic, Inc. 2008.

D. How does the model account for the delay between the time of the increasing rain fall and the time of increased spring flow?

The groundwater flow model simulates changes in aquifer levels, baseflow, and spring flow due to variations in stress. The principle stress components are recharge and pumping. The model is calibrated to the 1995 through 2006 period by matching well water levels and measured or estimated flows. Water budget values were calculated on a basin-wide basis for the 1995 steady-state and 1996-2006 transient models (Version 3.0). These values were generally consistent with empirical water budget estimates and previous models of the area. If the model simulates variations in aquifer head and flows consistent with observed values, then it provides confidence that the model is adequately accounting for variations in spring flow due to rainfall.

E. What are the model calibration methods and what data supports the agency claim of 2% prediction accuracy?

I'm not sure the agency claimed a "2% prediction accuracy", only that the model matches observed spring flows within two percent during the calibration period. The NDM calibration methods consisted of automatic and manual best-fit parameter adjustments to minimize aquifer head and flow error. General calibration statistics were to achieve a 10% or less match in observed versus simulated total flows for baseflow and spring flow. A mean error close to 0 ft and a mean absolute error of 4 ft were targeted for the Northern West-Central Florida Groundwater Basin observation wells in each aquifer.

In the 1995 steady-state model simulated flows for the Homosassa and Chassahowitzka group springs were generally within two percent of the observed (estimated) values. I've attached Table 4.7 from version 2.0 of the NDM that shows the difference between model simulated and observed flow rates for the nature coast

Table 4.7
Steady-State Simulated and Observed Spring Discharge Rates (cfs)

Spring	Magnitude	County	Group	Simulated Flow (cfs)	Observed Flow (cfs)	Residual (Observed-Simulated)	Percent Error
Magnesia Springs	3	Alachua	1	0.00	5.00	5.00	100
Crystal River Group	1	Citrus	22	330.35	350.00	19.65	6
Manatee Sanctuary Spring	1	Citrus	23	94.40	100.00	5.60	6
Halls River Head Main Spg	1	Citrus	30	99.24	102.00	2.76	3
Citrus Unnamed Spring	1	Citrus	51	98.03	100.00	1.97	2
Homosassa 1 Spring	2	Citrus	36	70.21	72.00	1.79	2
Se Fork Homosassa Spg	2	Citrus	37	41.93	43.00	1.07	2
Potters Creek Spring	2	Citrus	46	13.71	14.00	0.29	2
Crab Spring	2	Citrus	49	34.00	35.00	1.00	3
Chassahowitzka Main Spg	2	Citrus	50	63.70	65.00	1.30	2
Sulfur Springs	3	Citrus	13	0.00	5.00	5.00	100
Citrus-Blue Spring	3	Citrus	16	0.00	5.00	5.00	100
Tarpon Spring	3	Citrus	19	4.66	5.00	0.34	7
House Spring	3	Citrus	20	4.62	5.00	0.38	8
Hunters Spring	3	Citrus	21	0.00	5.00	5.00	100
Middle Springs	3	Citrus	24	0.00	5.00	5.00	100
Three Sisters Run Spg 2	3	Citrus	25	0.00	5.00	5.00	100
Three Sisters Run Spring	3	Citrus	26	0.00	5.00	5.00	100
Idiots Delight Spring	3	Citrus	27	0.00	5.00	5.00	100
Halls River 1 Spring	3	Citrus	31	4.88	5.00	0.12	2
Belcher Spring	3	Citrus	32	4.74	5.00	0.26	5
Abdoney Spring	3	Citrus	33	4.88	5.00	0.12	2
Mcclain Spring	3	Citrus	34	4.88	5.00	0.12	2
Trotter 1	3	Citrus	35	4.88	5.00	0.12	2
Pumphouse Spring	3	Citrus	38	4.88	5.00	0.12	2
Hidden River Head Spring	3	Citrus	39	6.26	7.00	0.74	11
Baird Spring	3	Citrus	52	2.95	3.00	0.05	2
Salt Creek Springs	4	Citrus	48	0.39	0.40	0.01	2
Weeki Wachee Spring	1	Hernando	65	137.61	148.00	10.39	7
Hernando Unnamed 10	2	Hernando	56	18.84	19.00	0.16	1
Blind Spring	2	Hernando	58	43.00	43.00	0.00	0
Mud Spring	2	Hernando	61	8.09	17.00	8.91	52
Salt Spring	2	Hernando	62	22.43	22.00	-0.43	-2
Jenkins Creek Spring	2	Hernando	64	15.06	15.00	-0.06	0
Betee Jay Spring	3	Hernando	53	6.95	7.00	0.05	1
Ryle Creek Spring	3	Hernando	54	7.95	8.00	0.05	1
Blue Run Spring	3	Hernando	55	4.96	5.00	0.04	1
Hernando Unnamed 08	3	Hernando	57	5.00	5.00	0.00	0
Hospital Hole	3	Hernando	63	5.04	5.00	-0.04	-1
Bobhill Spg Nr Aripeka	3	Hernando	68	2.04	2.00	-0.04	-2
Palm Island Spring	3	Hernando	69	5.00	5.00	0.00	0
Magnolia Spring	3	Hernando	70	1.01	1.00	-0.01	-1
Hernando Unnamed 02	4	Hernando	66	0.83	0.70	-0.13	-19
Boat Spring	4	Hernando	67	0.40	0.40	0.00	-1
Sulphur Spgs At Sul Spgs	2	Hillsborough	86	25.01	25.00	-0.01	0
Lettuce Lake Spring	3	Hillsborough	87	8.10	8.00	-0.10	-1
Six Mile Creek Spring	3	Hillsborough	88	1.01	1.00	-0.01	-1
Lowry Park Spring	3	Hillsborough	89	5.01	5.00	-0.01	0
Eureka Springs	3	Hillsborough	91	1.02	1.00	-0.02	-2

springs.

F. What are the actual measured and predicted flows for the Homosassa Springs Group flows for conditions that represent 1946, 1966, 1970, 1979, 1990, 2010 and 2030?

Flows are not measured for most of the springs within the Homosassa Springs Group. The NDM matches estimated or observed flows for 1995 and on a monthly basis from 1996 through 2006 for the Chassahowitzka main spring and Homosassa 1 spring (in Version 3.0). Once a model is calibrated, there are no further adjustments to aquifer parameters. Future scenarios are run by simply altering well withdrawals to fit a given condition (ex. 2030). There are no modeled flows outside the 1995-2006 period except for the non-pumping and 2030 prediction scenarios. Table 2 shows the predicted spring discharge rates in the 2030 simulation. Homosassa No. 1 spring's continuous discharge record starts in 1995. There are no continuously measured flows prior to 1995.

Table 2. Predicted Homosassa Spring group discharge under non-pumping and 2030 conditions.

Spring Name	Discharge for Non-Pumping Scenario (cfs)	Discharge for 2030 Pumping Scenario (cfs)	Difference (cfs)	Percent Difference
Abdoney Spring	4.98	4.87	-0.11	-2.13
Belcher Spring	4.98	4.77	-0.21	-4.29
Halls River 1 Spring	5.00	4.90	-0.10	-2.07
Halls River Head Main Spg	102.11	99.76	-2.35	-2.31
Hidden River Head Spring	6.61	6.05	-0.56	-8.47
Homosassa 1 Spring	71.65	70.16	-1.49	-2.07
Mcclain Spring	4.98	4.87	-0.11	-2.13
Pumphouse Spring	4.97	4.87	-0.10	-2.10
Trotter 1	4.97	4.87	-0.10	-2.02
Total	210.2	205.12	-5.13	-2.44

G. Does the model show that the drawdown of underground water alters the relative flows between the Weeki Wachee, Chassahowitzka, Homosassa and Crystal River Rivers?

The NDM is used as a predictive tool to model impact to all 93 springs in the domain. Groundwater withdrawn in the entire Northern West-Central groundwater Basin can impact spring discharge. However, the magnitude and proximity of withdrawals to the spring vent directly influences the potential impact to spring flow. The closer the withdrawal and greater the pumpage causes a larger decline in flow compared to a withdrawal much further away. Predicted impact to Weeki Wachee spring is much greater than the other springs due to relatively large groundwater withdrawals for Hernando County utilities and Cross Bar wellfield within the springshed. The drawdown in the Upper Floridan aquifer water level and spring discharges from 93 springs have been modeled for 2005 and 2030 conditions (when compared to a "pumps off" condition) to note change due to all withdrawals.

H. Does the model show that you can control different percent flow draw downs independently across the four above mentioned springsheds?

Not sure what you mean here. Predicted impacts vary amongst the four main spring groups due primarily to the proximity and magnitude of well withdrawals to each spring network, aquifer parameters near the springs, and variation in recharge to the Upper Floridan aquifer near each spring.

I. What happens to the Homosassa Springs when the Chassahowitzka is drawn down by 11%?

Since the allowable flow has been proposed at five percent for Homosassa Spring it is likely that this will limit groundwater withdrawals in the area so that impacts to Chassahowitzka will never reach 11%.

J. What happens to the Bluebird Springs when the Chassahowitzka is drawn down by 11%?

Bluebird springs is not actively simulated in the NDM. If Bluebird Springs is close to the Chassahowitzka Springs group, it's likely it'll be affected in a similar way.

From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#); [J Weaver](#); [Doug Leeper](#); [Marty Kelly](#); [Mark Hammond](#); [Mike Heyl](#); [Kevin J Grimsley](#); [rkane](#)
Cc: [Al Grubman](#); [Ron Miller](#); [Brad Rimley](#); [Brent Whitley](#); [Ron Basso](#); [Dana Bryan](#)
Subject: Follow up to Jan 19 Chassahowitzka
Date: Sunday, January 22, 2012 11:08:05 AM
Attachments: [Chass Question reverse flow.xls](#)

I know some of you think I am crazy. But, the fact is I keep thinking and trying to understand what is happening in these Outstanding Florida Waters. The more we understand these data the more we understand the springs.

January 19 I shared some discharge and specific conductance data for the Chassahowitzka that did not appear to make logical sense.

Well I have been looking further for an explanation.

In the attached spreadsheet the difference in stream level at the Chassahowitzka Main Spring 02310650 and the Chassahowitzka River 02310663 are compared. Chass Main is considerably higher most of the time. There are occasions when the Specific Conductivity readings are high when no reverse flow due to the stream levels appears possible; Jan 13,14 and 15.

A thought that crossed my mind is the higher Specific Conductance Water could be discharging from one or some of the springs and is not due to reverse flow but from seawater ingress into the aquifer. The times when the higher specific conductance is seen coincides with high water times at the Chass River Station. The higher the water level the longer the higher specific conductance is detected.

I have highlighted high water levels in turquoise, specific conductance over 3000 in yellow and the time Chass Main is higher stream level in green for ease of reference.

Kevin and Richard will recall the changes in the specific conductance seen in the data for the Homosassa Main Spring for which I suggested monitoring Specific Conductance at the spring (as opposed to the gage station...even volunteered my time to help) we still have not improved our understanding of that situation months later.

Next time I am in Homosassa I will find a nice day when the tides are right to take my kayak to the Chass and monitor specific conductance over an extended period. For Homosassa Springs 'they' do not let me kayak in the Homosassa Park, but my offer of time to help with that investigation stands.

In the meantime, any thoughts about this possible explanation for the Chass data is welcome.

Martyn

From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#)
Cc: [rkane](#); [Kevin J. Grimsley](#); [Doug Leeper](#)
Subject: RE: Discharge Chassahowitzka
Date: Friday, January 20, 2012 8:17:58 AM

Thanks appreciated.

Martyn

To: martynellijay@hotmail.com
CC: rkane@usgs.gov; kjgrims@usgs.gov
Subject: Re: Discharge Chassahowitzka
From: rrodrigu@usgs.gov
Date: Fri, 20 Jan 2012 07:48:55 -0500

Mr. Johnson,

We are checking with our headquarters regarding your request to release the regression equations used to calculate discharge at the subject site. They will get back to me next week and I will forward that information to you.

Thank you,

Rafael W. Rodriguez
Director
USGS Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
Phone: (813) 498-5024
Cell: (813) 463-3660
Fax: (813) 498-5003
rrodrigu@usgs.gov
<http://fl.water.usgs.gov>

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: R Rodriguez <rrodrigu@usgs.gov>, J Weaver <jdweaver@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Ron Basso <ron.basso@swfwmd.state.fl.us>, Marty Kelly <marty.kelly@swfwmd.state.fl.us>, <mark.hammond@swfwmd.state.fl.us>, <mike.hey1@swfwmd.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>, Brad Rimley <bwr.crrc@tampabay.rr.com>, Al Grubman <grubman1@gmail.com>, Ron Miller <rmille76@tampabay.rr.com>, Norman Hopkins <norman@amyhrf.org>, Brent Whitley <brentwhitley@sierra-properties.com>
Date: 01/19/2012 09:50 AM
Subject: Discharge Chassahowitzka

Mr. Rodriguez,

Please share the policy document which precludes USGS sharing the equation used to calculate Discharge at Chassahowitzka Station 02310650, as requested in an earlier e-mail from myself and from Brad Rimley as a member of the working group.

The ecological future of the Homosassa River, Crystal River and Chassahowitzka River depend heavily on data from USGS/SWFWMD gage sites and on open and honest dialogue about the accuracy of the generated data. To that end I would like to draw your attention to some Chassahowitzka data that appears to fall short of logical explanation.

The data is from USGS web site for the Chassahowitzka Gage Site 02310650. As you will see in the attached spreadsheet I have highlighted the apparent disconnect between the calculated discharge measurements and the specific conductance measurement.

A section of the spreadsheet covering Jan 5/6 is show below and I will walk you thru my interpretation.

21:45 negative flow is calculated, water that past the gages earlier may be returning at the same temperature and specific conductance.

22:30 the water passing the gages is clearly mixed with water of higher temperature and higher specific conductance.

23:45 positive flow is calculated. I have added cumulative volume past the gage site (it is shown as cfs for ease of understanding but could be multiplied by time to represent volume). 23:45 thru 01:45 Specific conductance continues to increase, note the temperature remains at 22.3/22.4.

01:00/01:15 high stage is reached and calculated flow has increased to 36 and 54 cfs.

Positive flows calculated for hour and half while stage continues to increase.

01:30 thru 02:45 temperature an specific conductance indicate this is water which passed the gages under negative flow conditions yet the cumulative positive flow has been more than five times the highest cumulative negative flow.

03:45 temperature and specific conductance are back close to representative of spring water. Going to the spreadsheet this is fully achieved about an hour later.

Time	Stage Ht	Discharge	Temp	SpecCond		
01/05/2012 21:00 EST	0.70 ^P	33 ^P	21.2 ^P	1,990 ^P	15 min	Cumulative
01/05/2012 21:15 EST	0.75 ^P	15 ^P	21.1 ^P	1,980 ^P	Discharge	Discharge
01/05/2012 21:30 EST	0.81 ^P	5.2 ^P	21.1 ^P	1,980 ^P	5.2	5.2
01/05/2012 21:45 EST	0.88 ^P	-4.3 ^P	21.2 ^P	1,970 ^P	-4.3	0.9
01/05/2012 22:00 EST	0.96 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-13.1
01/05/2012 22:15 EST	1.04 ^P	-14 ^P	21.2 ^P	1,970 ^P	-14	-27.1
01/05/2012 22:30 EST	1.12 ^P	-15 ^P	21.8 ^P	3,770 ^P	-15	-42.1
01/05/2012 22:45 EST	1.20 ^P	-15 ^P	22.0 ^P	4,970 ^P	-15	-57.1
01/05/2012 23:00 EST	1.28 ^P	-16 ^P	22.0 ^P	5,270 ^P	-16	-73.1
01/05/2012 23:15 EST	1.35 ^P	-7.2 ^P	22.2 ^P	5,560 ^P	-7.2	-80.3
01/05/2012 23:30 EST	1.42 ^P	-7.6 ^P	22.3 ^P	5,800 ^P	-7.6	-87.9
01/05/2012 23:45 EST	1.48 ^P	1.1 ^P	22.3 ^P	5,950 ^P	1.1	-86.8
01/06/2012 00:00 EST	1.54 ^P	0.72 ^P	22.3 ^P	6,040 ^P	0.72	-86.08
01/06/2012 00:15 EST	1.59 ^P	9.5 ^P	22.3 ^P	6,120 ^P	9.5	-76.58

01/06/2012 00:30 EST	1.64 ^P	9.2 ^P	22.3 ^P	6,160 ^P	9.2	-67.38
01/06/2012 00:45 EST	1.68 ^P	18 ^P	22.3 ^P	6,230 ^P	18	-49.38
01/06/2012 01:00 EST	1.70 ^P	36 ^P	22.4 ^P	6,300 ^P	36	-13.38
01/06/2012 01:15 EST	1.70 ^P	54 ^P	22.4 ^P	6,420 ^P	54	40.62
01/06/2012 01:30 EST	1.68 ^P	72 ^P	22.4 ^P	6,580 ^P	72	112.62
01/06/2012 01:45 EST	1.65 ^P	82 ^P	22.4 ^P	6,620 ^P	82	194.62
01/06/2012 02:00 EST	1.62 ^P	82 ^P	22.3 ^P	6,570 ^P	82	276.62
01/06/2012 02:15 EST	1.58 ^P	91 ^P	22.3 ^P	6,080 ^P	91	367.62
01/06/2012 02:30 EST	1.54 ^P	91 ^P	22.2 ^P	5,500 ^P	91	458.62
01/06/2012 02:45 EST	1.50 ^P	91 ^P	22.0 ^P	4,760 ^P	91	549.62
01/06/2012 03:00 EST	1.46 ^P	92 ^P	21.4 ^P	3,740 ^P	92	641.62
01/06/2012 03:15 EST	1.42 ^P	92 ^P	21.4 ^P	3,120 ^P		
01/06/2012 03:30 EST	1.37 ^P	101 ^P	21.5 ^P	2,800 ^P		
01/06/2012 03:45 EST	1.32 ^P	102 ^P	21.4 ^P	2,550 ^P		

How is it possible the specific conductance can continue to increase when the flow becomes positive?

Agreed water of high specific conductance that passes the gauge/sensor under negative flow must elute from the upstream areas before the spring water shows at the gauge/sensor. But, I have great difficulty understanding how specific conductance continues to increase after the discharge (calculated) becomes positive. As you can see in the spreadsheet this is not a one time occurrence it is the norm. The highlighted temperature records appear to correlate more with the specific conductance data than the calculated discharge data.

An explanation would be appreciated, preferably not a one liner. I am always willing to learn.

If this is in anyway unclear please do not hesitate to ask for a more thorough explanation of my concern.

Martyn[attachment "Chassahowitzka Discharge Question.xls" deleted by Rafael W Rodriguez/WRD/USGS/DOI]

From: [Ron Basso](#)
To: [Doug Leeper](#)
Subject: FW: Springs Coast MFL Question
Date: Monday, January 30, 2012 8:13:54 AM
Attachments: [NDIST_Hydro.ppt](#)

From: Ron Basso
Sent: Thursday, January 26, 2012 4:25 PM
To: 'Brad Rimbey@CRRRC'
Cc: Brent Whitley; Mickey Newberger; Ron Miller; Martyn Johnson; Norman Hopkins; Dan Hilliard; Al Grubman; Todd Kincaid; BKnight@FloridaSpringsInstitute.org
Subject: RE: Springs Coast MFL Question

Brad:

You are correct that due to the close proximity of Chassahowitzka and Homosassa Spring groups (about 5 miles apart), it is very unlikely that groundwater withdrawals could impact Chassahowitzka spring flows by 11% without triggering the 5% allowable reduction at Homosassa Springs – so that the smaller allowable flow would limit groundwater withdrawals in the immediate area.

The Weeki Wachee Deep well is used by the USGS to calculate flows based on statistical relationships between measured flow at each spring and the well water level. The USGS probably uses this well because it reflects the fluctuations of the Upper Floridan aquifer near the springs coast region and has a long and continuous record. As I've stated before, it's really the Floridan aquifer groundwater basin (the Northern West-Central Florida Groundwater Basin) that defines the geology of the region and where the withdrawals may directly impact spring flows. This is much larger than the individual springsheds that typically serve to identify where groundwater contaminants may eventually make their way into individual springs.

The allowable MFL springflow reduction at Weeki Wachee spring is 10%. Current groundwater withdrawal impacts are near 9%. I am not sure I understand your question about equilibrium between the Chassahowitzka and Weeki Wachee springsheds. Weeki Wachee spring is located about 13.5 miles south of Chassahowitzka springs or more than twice the distance between Homosassa and Chassahowitzka springs. Distance from the spring and magnitude of the withdrawal plays a major role in predicted springflow impacts. The reason impacts are so large to Weeki Wachee is that there are two major public supply wellfields located relatively close to the spring. Hernando County utilities wellfield in Spring Hill withdraws about 20 mgd on average immediately southeast of the spring. The Cross Bar wellfield, located in northern Pasco County, has historically withdrawn close to 30 mgd until recently. Both of these wellfields have impacted flow conditions at Weeki Wachee. That's 50 mgd just for these two facilities – *almost twice the withdrawals from all users in Citrus County today.*

The other thing to note is that the Floridan aquifer is largely unconfined in the springs coast region. The clay confining unit is thin and discontinuous due to the active karst geology in the

region. Aquifer storage is 100 to 1000 times greater in unconfined than in confined aquifers. In this type of system, the effect of groundwater withdrawals is more localized – cones of depression do not spread out large distances like in well-confined aquifers such as we have in the southern part of our District. The attached graphic from the USGS illustrates this effect.

I hope this addresses the questions in your email. Please contact me for any additional clarification.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Brad Rimbey@CRRC [mailto:BWR.CRRC@tampabay.rr.com]
Sent: Thursday, January 26, 2012 12:58 PM
To: Ron Basso
Cc: Brent Whitley; Mickey Newberger; Ron Miller; Martyn Johnson; Norman Hopkins; Dan Hilliard; Al Grubman; Todd Kincaid; BKnight@FloridaSpringsInstitute.org
Subject: Springs Coast MFL Question

Hi Ron,

On July 8, 2011, Ron Miller emailed a list of questions to you regarding the Homosassa MFL. On July 13, 2011, you replied to Mr. Miller's email with the attached M\$ Word document. In response to Mr. Miller's question "What happens to the Homosassa Springs when the Chassahowitzka is drawn down by 11%?", you replied "Since the allowable flow has been proposed at five percent for Homosassa Spring it is likely that this will limit groundwater withdrawals in the area so impacts to the Chassahowitzka will never reach 11%."

I understood your response to be an acknowledgment of the interconnection between the Homosassa and Chassahowitzka springsheds and that drawing down Chassahowitzka by 11% would result in greater than a 5% draw down of Homosassa. Please correct me if I am mistaken. Since the USGS Weeki Wachee well level is being used in the USGS regression equations to calculate flow for both Chassahowitzka and Homosassa, both rivers are obviously connected to Weeki Wachee's springshed too.

The Weeki Wachee MFL has already been adopted at 90% of the natural flow. SWFWMD's baseline flow for the Weeki Wachee MFL evaluation was 162 cfs. The **Scientific Peer Review of the Proposed Minimum Flows and Levels for the Weeki Wachee River System dated July 31, 2008** indicates that existing human usage is presently at or near the 10% **recommended limit** so little or no additional flow reductions should be allowed from groundwater use

http://www.swfwmd.state.fl.us/projects/mfl/reports/weeki_wachee_mfl_with_peer_review.pdf .

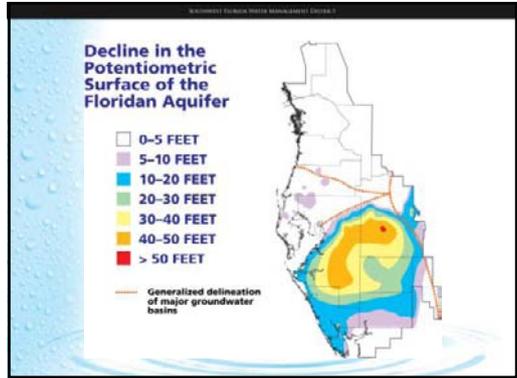
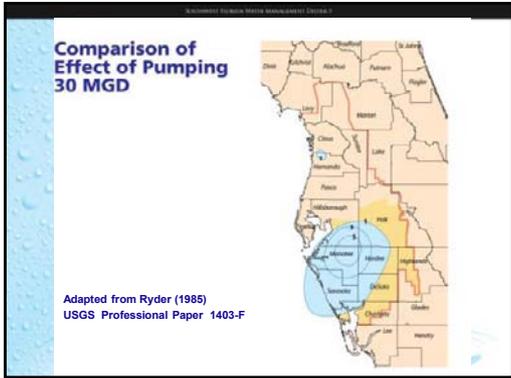
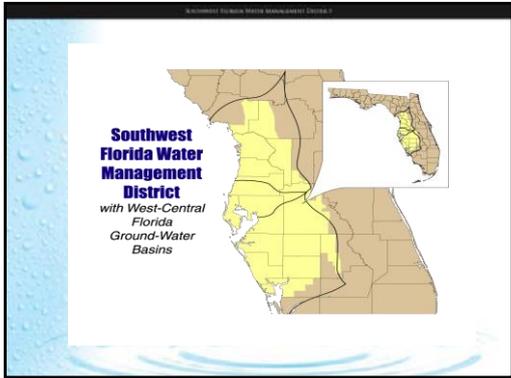
As you know, Weeki Wachee's springshed is directly adjacent and to and south of Chassahowitzka's springshed. As Weeki Wachee's groundwater supply is reduced, it seems that some of Chassahowitzka's historic groundwater supply would flow south until a state of quasi-equilibrium is reached. Assuming you agree, do you know how long it would take for a state of quasi-equilibrium to be achieved between the Weeki Wachee and Chassahowitzka springsheds?

In your Technical Memorandum dated December 1, 2008

http://www.swfwmd.state.fl.us/projects/mfl/reports/Chass_Appendices-section2.pdf , you indicated the NDM "projected reduction to Chassahowitzka Springs discharge due to current groundwater withdrawals of 0.7 cfs or about one percent of mean annual spring flow." SWFWMD's baseline flow for the Chassahowitzka MFL evaluation was 63 cfs. If groundwater use has already reduced Weeki Wachee's 162 cfs baseline flow by nearly 10%, how can Chassahowitzka's 63 cfs baseline flow have been reduced by less than 1%? Even if we ignore the impact of groundwater pumping within Chassahowitzka's springshed, it seems that feeding the sizeable deficit created by groundwater pumping in Weeki Wachee's springshed would account for more than a 1% flow reduction in the relatively tiny Chassahowitzka.

As always, I look forward to your response.

Brad W. Rimbey, P.E.



From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#); [Doug Leeper](#)
Cc: [rkane](#); [Kevin J. Grimsley](#); [Ron Miller](#); [Al Grubman](#); [Brad Rimley](#); [Norman Hopkins](#); [Brent Whitley](#)
Subject: Specific Conductance Homosassa Main Spring
Date: Saturday, January 28, 2012 9:03:41 AM
Attachments: [Homosassa Springs Specific Conductance Graphs.doc](#)
[Homosassa Stage-SpecificC_30_days_Jan_25.xls](#)

Earlier this week the Homosassa State Park offered to allow me access to the park to sample water at the main spring in order to pursue/confirm my hypothesis regarding variations in the specific conductivity with the stage height.

Next time I am in Homosassa, mid February, I will agree the dates and sampling location. Presently the sampling plan is to sample hourly during park opening hours for three days (Monday Wednesday Friday) at a location as close as possible to the main vent. This should provide sufficient data to confirm the variation in specific conductance is in water emanating from the spring.

USGS are welcome to participate, or may want to pursue other plans to follow up as indicated in an e-mail last year.

The proposed sampling should confirm if the readings are the result of “stratification”; something I doubt given the flow from the main spring and the additional flow from Alligator Spring downstream of the gage site.

Background

Last August I pointed out cycling in the Specific Conductance data from the Homosassa Springs 02310678, suggesting the cycling was generally inverse to stage, that is the lower specific conductance water was discharging at higher stage. My thought was that this resulted from a change in the ratio of water flow from the three vents which combine some 30+ feet down in the main spring vent. This added to and may help explain the increasing trend for higher salinity water I noted in earlier e-mails regarding deterioration of the Homosassa River.

The responses I received were;

“When I look at the data I would say that specific conductance lags the peak gage height but is not inverse of stage. I can’t say for sure why the lag but I think it is due to the hydraulics of the system. When the tide comes in some water will go into storage and this could be the reason behind the lag. You probably want to look at the salinity changes when the tide is out and then note what kind of changes you see. I haven’t really looked at this since it is outside the scope of our work orders.”

“We’re planning on performing a few cross-section conductance measurements to investigate this lag between the water level and conductance cycles. We’ll see what those measurements reveal, but we do not believe it has anything to do with variations in flow rates between the vents. We believe this is caused by stratification of flow around the gage location.”

The long term trend of increasing specific conductance was pointed out in a graph See Graph 1 in the attached word document. The graph is made difficult to read because of the high specific conductance readings associated with hurricanes. In Graph 2 I have removed the high readings that caused the scale in Graph 1 to be so large. This makes the trend easier to see.

Graph 3 in the word document shows the water levels at the Weeki Wachee Well for the years that specific conductance has been monitored at Homosassa Spring (started June 2004), when looking in more detail at the daily data it correlates with the peaks in minimum daily specific conductance occurring when the well level is lower.

Graph 4 shows the Weeki Wachee Well from 1966 when records started.

Water from the Homosassa main spring is deteriorating due to ingress of sea water most likely occurring because the hydraulic head from the aquifer is less; and so much so that this increased salinity alone may be creating conditions for the barnacle growth that local residents have seen in recent years.

In the attached Excel spreadsheet the specific conductance and stage height for the last 30 days is shown highlighted as follows;

Yellow specific conductance greater than 5400

Blue, specific conductance less than 4000

Red, high stage

Green, low stage

Low specific conductance is associated with high stage, unless the stage height is very low and limited/no salt water intrusion is occurring (Jan 3-5). The yellow high specific conductance occurs after stage heights have exceeded 3.5 feet and maximums occur as the stage is dropping which is indicative that the highest salinity water takes time to elute from the system. Dec 27-28 the stage height was over 4 ft. and the higher level of sea water intrusion (Spec Cond over 5000) can be seen to continue for over 12 hours. This demonstrates how sensitive the system has become.

You are welcome to make your own interpretation.

Martyn

From: [Alan Martyn Johnson](#)
To: [R Rodriguez](#); [Mike Heyl](#)
Cc: [Doug Leeper](#); [Kevin J. Grimsley](#); [Brad Rimley](#); [Al Grubman](#); [Ron Miller](#); [Norman Hopkins](#); [Brent Whitley](#); [rkane](#)
Date: Sunday, January 29, 2012 10:10:58 AM
Attachments: [Chassahowitzka 02310663 Discharge Jan 09 to23.xls](#)

Last week I shared some observations regarding the discharge data from the Chass Main Springs Gage Station, trying to understand what is happening as regards discharge and specific conductance. The apparent disconnects sparked my interest in what is happening downstream at the Chass River Gage Station 02310663. The attached spreadsheet shows the data.

May be someone has an explanation for these apparently low discharge numbers and/or can share the calculation method.

I have highlighted the specific conductance of less than 8000 in yellow, the high tide in red and low tide in green. The inflection point of calculated flow changing from outflow to inflow is blue.

It is clearly evident that spring origin water passes this station for extended periods at low tides. Jan 14-15 shows spring water running for 16 hours.

The part that is difficult to understand is the discharge cfs. You will see the averages for the two time periods is 16 cfs and 30 cfs. Considering the river thru to this point appears to confine the spring waters (no significant other outlet), these discharge numbers appear low.

The high and low tides match reasonably well with the inflection points, but there appears to be some factor in the calculation of discharge cfs that bias the inflow versus the outflow. Some of you may recall I questioned a similar bias in the data Homosassa River (Macrea's).

As noted on the USGS web site, daily mean discharge for the Chass is for a 24 hour period not the tidal cycle of 24.84 hours.

Just another gap in my or our understanding?

Martyn

From: Gordon.Lisa.Perras@epamail.epa.gov
To: [Doug Leeper](mailto:Doug.Leeper)
Subject: Fw: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Monday, January 30, 2012 3:00:47 PM
Attachments: [pic00235.gif](#)
[pic30833.gif](#)
[pic19711.gif](#)
[pic25760.gif](#)
[pic18896.gif](#)
[pic04643.gif](#)
[pic07285.gif](#)
[pic12550.gif](#)
[pic24806.gif](#)

Hey there Doug,

Your message below was forwarded to me by Boyd Blihovde, who we spoke with last week. Could I be added to the list to get updates on this? I spoke to Marty before he retired and let him know that EPA was asked to take part in the review of this MFL by a citizen named Mitchell Newberger. I had a great chat with Karen Lloyd a few weeks ago at Marty's suggestion and filled her in. We were planning on maybe setting up some time to talk in the next couple of weeks.

Thanks,

Lisa Gordon

Lisa Perras Gordon, Environmental Scientist
Water Quality Planning Branch
Water Protection Division
U.S. Environmental Protection Agency
Atlanta, Georgia
(404) 562-9317

Doug Leeper
<Doug.Leeper@wfwmd.state.fl.us> (Embedded image moved to file: pic00235.gif)
To
(Embedded image moved to file: pic30833.gif)
01/13/2012 03:55 PM "Al Grubman" (grubman1@gmail.com) <grubman1@gmail.com>, "Bill Geiger" (bgeiger@cityofbrooksville.us) <bgeiger@cityofbrooksville.us>, "Bill Pouder" (bill.pouder@myfwc.com) <bill.pouder@myfwc.com>, "Boyd Blihovde" (Boyd_Blihovde@fws.gov) <Boyd_Blihovde@fws.gov>, "Brad Rimbey" (BWR_CRRC@tampabay.rr.com) <BWR_CRRC@tampabay.rr.com>, "Brent Whitley" (brentwhitley@sierra-properties.com) <brentwhitley@sierra-properties.com>, "Brockway, Alys" (abrockway@co.hernando.fl.us) <abrockway@co.hernando.fl.us>, "Dennis D. Dutcher" (Dennis3ds@aol.com) <Dennis3ds@aol.com>, "Frank DiGiovanni" (administration@inverness-fl.gov) <administration@inverness-fl.gov>, "Greenwood, Kathleen" (Kathleen.Greenwood@dep.state.fl.us) <Kathleen.Greenwood@dep.state.fl.us>, Helen Spive <manatees2@gmail.com>, "Hilliard, Dan" (2buntlings@comcast.net) <2buntlings@comcast.net>, "Hoehn, Ted" <ted.hoehn@MyFWC.com>, "Hope Corona" (hopecorona@tampabay.rr.com) <hopecorona@tampabay.rr.com>, "Jim Farley" (jfarley682@aol.com) <jfarley682@aol.com>, "Katie Tripp" (ktripp@savethemanatee.org) <ktripp@savethemanatee.org>, "Norman Hopkins" (norman@amyhrf.org) <norman@amyhrf.org>, "Rebecca Bays" (rebecca.bays@bocc.citrus.fl.us) <rebecca.bays@bocc.citrus.fl.us>, "Richard Kane" (rkane@usgs.gov) <rkane@usgs.gov>, "Richard Radacky" (rradacky@cityofbrooksville.us) <rradacky@cityofbrooksville.us>, "Ron Miller" (rmille76@tampabay.rr.com) <rmille76@tampabay.rr.com>, "Sarah Tenison" (cityofweekiwachee@yahoo.com) <cityofweekiwachee@yahoo.com>, "Sullivan, Jack" (jsullivan@carltonfields.com) <jsullivan@carltonfields.com>, "Voyles, Carolyn" (Carolyn.Voyles@dep.state.fl.us) <Carolyn.Voyles@dep.state.fl.us>, "Whitey Markle" (whmarkle@gmail.com) <whmarkle@gmail.com>, "Janicehowie@aol.com" <janicehowie@aol.com>, "Abdon"

Sidbie
(asidbie@chronicle.online.com)
"
-<asidbie@chronicle.online.com>
"Alex McPherson
(aamcpherson@msn.com)"
-<aamcpherson@msn.com>, "Ann - 2
Hodgson (ahodgson@gmail.com)"
-<ahodgson@gmail.com>, "Ann
Hodgson (ahodgson@audubon.org)"
-<ahodgson@audubon.org>,
"Bernard Berauer
(bfberauer@aol.com)"
-<bfberauer@aol.com>, "Beverly
Overa
(boverly@tampabay.rr.com)"
-<boverly@tampabay.rr.com>,
"Bill Garvin
(wgarvin@tampabay.rr.com)"
-<wgarvin@tampabay.rr.com>, "Bob
Caldwell
(Bobcaldwell51@yahoo.com)"
-<Bobcaldwell51@yahoo.com>,
"Brack Barker
(brack154@msn.com)"
-<brack154@msn.com>, "Carl
Matthai
(thebabesmimi@gmail.com)"
-<thebabesmimi@gmail.com>,
"Casey, Emily
(fcnwr@atlantic.net)"
-<fcnwr@atlantic.net>, "Charles
Dean
(dean.charles.web@flsenate.gov)"
"
-<dean.charles.web@flsenate.gov>
"Charles Stonerock
(katcha.stonerock3@gmail.com)"
-<katcha.stonerock3@gmail.com>,
"Chris Safos
(chrissafos@embarqmail.com)"
-<chrissafos@embarqmail.com>,
"Czerwinski, Mike
(mcerwin@tampabay.rr.com)"
-<mcerwin@tampabay.rr.com>,
"Darlene Herth
(Zcetechnology21@gmail.com)"
-<Zcetechnology21@gmail.com>,
"Darrell Snedecor
(president@citruscountyaudubon.
com)"
-<president@citruscountyaudubon.
com>, "Don Hiers
(dhiers3@gmail.com)"
-<dhiers3@gmail.com>, "Douglas
Dame (doug_dame@yahoo.com)"
-<doug_dame@yahoo.com>, "Elaine
Luther
(barneyandcap@hotmail.com)"
-<barneyandcap@hotmail.com>,
"Emily Casey
(ecasey21@hotmail.com)"
-<ecasey21@hotmail.com>, "Emma
Knight
(eknight@wetlandsolutionsinc.co
m)"
-<eknight@wetlandsolutionsinc.co
m>, "George Harbin
(gharbin@tampabay.rr.com)"
-<gharbin@tampabay.rr.com>,
"George McClog
(classof47@gmail.com)"
-<classof47@gmail.com>, "Gorgon
O'Connor (gorgon_o@yahoo.com)"
-<gorgon_o@yahoo.com>, "Harry
Steiner (harry109@aol.com)"
-<harry109@aol.com>, "Jack
Calbeck
(calbeckj@citrus.k12.fl.us)"
-<calbeckj@citrus.k12.fl.us>,
"Jane Perrin
(jcsperinmd@sbcglobal.net)"
-<jcsperinmd@sbcglobal.net>,
"Jerry Morton
(jerrmorton@aol.com)"
-<jerrmorton@aol.com>, "Jessie
Gourlie
(gourliej@thirdplanetwind.com)"
-<gourliej@thirdplanetwind.com>,
"Jim Collins
(jimmiekey22@yahoo.com)"
-<jimmiekey22@yahoo.com>,
"Jimmie Smith
(Jimmie.Smith@myfloridahouse.go
v)"
-<Jimmie.Smith@myfloridahouse.go
v>, "Joe Calamari
-<jcalamari@coastal-engineering.
com>, "John Lord
(jclord109@yahoo.com)"
-<jclord109@yahoo.com>, "John
Mayo (freedomway1@gmail.com)"
-<freedomway1@gmail.com>, "Karen
Johnstone
(kjohns213@sbcglobal.net)"
-<kjohns213@sbcglobal.net>, "Kim
Caldwell
(caldwell.kimberly@yahoo.com)"
-<caldwell.kimberly@yahoo.com>,
"Kim Dinkins
(kim.dinkins@marioncountyfl.org
)"
-<kim.dinkins@marioncountyfl.org
>, "Linda Pierce
(lpierce35@tampabay.rr.com)"
-<lpierce35@tampabay.rr.com>,
"Linda Vanderveen
(hernandoaudubon@yahoo.com)"
-<hernandoaudubon@yahoo.com>,
"Mary Anne Lynn
(mlynn1978@tampabay.rr.com)"
-<mlynn1978@tampabay.rr.com>,
"Matthew Corona
(mcorona1@tampabay.rr.com)"
-<mcorona1@tampabay.rr.com>,
"Max Rhinesmith

(rhinesmith@webtv.net)"
<rhinesmith@webtv.net>, Amber
Breland
<amber_breland@fws.gov>, "Andy
Houston
(ahouston@crystalriverfl.org)"
<ahouston@crystalriverfl.org>,
"Art Yerlan
(A.Yerlan@dep.state.fl.us)"
<Art.Yerlan@dep.state.fl.us>,
Ben Weiss
<Benjamin_weiss@fws.gov>, Beth
Hovinde <bethse@gmail.com>,
"Brad Thorpe
(brad.thorpe@bocc.citrus.fl.us)"
<
<brad.thorpe@bocc.citrus.fl.us>
, "Courtney Edwards
(cedwards@savethemanatee.org)"
<cedwards@savethemanatee.org>,
"Dale Jones (Jones@MyFWC.com)"
<Jones@MyFWC.com>, "Dana Bryan
(dana.bryan@dep.state.fl.us)"
<dana.bryan@dep.state.fl.us>,
Darrell Snedecor
<darrell@snedecors.com>, "David
Hamilton
(countyadministrator@hernandoco
unty.us)"
<countyadministrator@hernandoco
unty.us>, "David Hankla
(david_hankla@fws.gov)"
<david_hankla@fws.gov>, "Don
Wright (wright@sura.org)"
<wright@sura.org>, "Dusty
McDevitt (mcdevitt@usgs.gov)"
<mcdevitt@usgs.gov>, "Ed Call
(marvin.call@MyFWC.com)"
<marvin.call@MyFWC.com>, "Eric
Nagid (eric.nagid@MyFWC.com)"
<eric.nagid@MyFWC.com>, "FFWCC
MFLs Review E-Mail Address
(fwsconservationplanningservice
s@myfwc.com)"
<fwsconservationplanningservice
s@myfwc.com>, "J. J. Kenney
(j.kenney@bocc.citrus.fl.us)"
<jj.kenney@bocc.citrus.fl.us>,
"Jennene Norman-Vacha
(jnvacha@ci.brooksville.fl.us)"
<jnvacha@ci.brooksville.fl.us>,
"Joyce Kleen@fws.gov"
<Joyce_Kleen@fws.gov>, "Kandi
Harper
(kandi.harper@bocc.citrus.fl.us)"
<
<kandi.harper@bocc.citrus.fl.us
>, "Keith Ramos
(Keith.Ramos@fws.gov)"
<Keith.Ramos@fws.gov>, "Kent
Smith (kent.smith2@myfwc.com)"
<kent.smith2@myfwc.com>, "Kevin
Grimsley (kjgrims@usgs.gov)"
<kjgrims@usgs.gov>, "Michael
Lusk (Michael_Lusk@fws.gov)"
<Michael_Lusk@fws.gov>,
"Mitchell Newberger
(mnewberger@verizon.net)"
<mnewberger@verizon.net>, "Nick
Robbins
(Nick.Robbins@dep.state.fl.us)"
<Nick.Robbins@dep.state.fl.us>,
"Nicole Adimey
(Nicole_Adimey@fws.gov)"
<Nicole_Adimey@fws.gov>, "Paul
Thomas
(paulw.thomas@MyFWC.com)"
<paulw.thomas@MyFWC.com>, "Ron
Mezich (ron.mezich@MyFWC.com)"
<ron.mezich@MyFWC.com>, "Shelly
Yaun
(shelly.yaun@dep.state.fl.us)"
<shelly.yaun@dep.state.fl.us>,
"Toby Brewer
(Toby.Brewer@dep.state.fl.us)"
<Toby.Brewer@dep.state.fl.us>,
Tracy Colson
<tracymanatee@centurylink.net>,
"Wallace, Traci"
<traci.wallace@MyFWC.com>,
"Adkins, Jim"
<jadkins@hernandocounty.us>,
"Bitter, Jim"
<jbitter@tampabay.rr.com>,
"Bryant, Richard"
<rangerb@bellsouth.net>,
"Cantero, Vince"
<vince.cantero@bocc.citrus.fl.u
s>, "Carpenter, Paul"
<paul.carp@verizon.net>,
"Daniels, Chase"
<chase.daniels@myfloridahouse.g
ov>, "Dueker, Duane"
<duanedueker@aol.com>,
"Gramling, Hugh"
<hgramling@tbwg.org>,
"Harrelson, Cathy"
<cathyharrelson@gmail.com>,
"Hubbell, Pete"
<phubbell@wraconsultants.com>,
"Johnson, Eric"
<eric.johnson@myfwc.com>,
"Johnson, Martyn"
<martynellijay@hotmail.com>,
"Keim, Robert"
<rkeim@gmail.com>, "Kincaid,
Todd" <kincaid@geohydros.com>,
"Kline, Allen"
<pastoralfarm@netsignia.net>,
"Knight, Bob"
<bknight@wetlandsolutionsinc.co
m>, "Knight, Robert"
<Robert.Knight@bocc.citrus.fl.u
s>, "Knudson, Ross"
<rosssef@aol.com>, "Overa, Tom"
<tovera1@tampabay.rr.com>,

From: Doug Leeper
To: "Gordon.Lisa-Perras@epamail.epa.gov"
Cc: [Laura Donaldson](#); [Karen West](#); [Christopher Pettit](#); [Veronica Crow](#); [Mike Heyl](#); [Gary E. Williams](#); [Kenneth R. Herd](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Tuesday, January 31, 2012 10:08:00 AM

Hi Lisa:

Per your request, I will add your name to the e-mail list I use for distribution of information pertaining to the development of minimum flows for the Homosassa, Chassahowitzka and other Springs Coast systems.

We've had some recent personnel changes here at the District, so our planned meeting/discussion will not involve Marty Kelly or Karen Lloyd. District staff likely to be involved in the discussion may include Laura Donaldson, Chris Pettit and Karen West with our Office of General Counsel, and Veronica Crow, Mike Heyl, Gary Williams and me representing our technical staff.

Please let me know when you have some dates in mind for our meeting/discussion.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gordon.Lisa-Perras@epamail.epa.gov [<mailto:Gordon.Lisa-Perras@epamail.epa.gov>]
Sent: Monday, January 30, 2012 3:01 PM
To: Doug Leeper
Subject: Fw: Update - Chassahowitzka and Homosassa Minimum Flows

Hey there Doug,

Your message below was forwarded to me by Boyd Blihovde, who we spoke with last week. Could I be added to the list to get updates on this? I spoke to Marty before he retired and let him know that EPA was asked to take part in the review of this MFL by a citizen named Mitchell Newberger. I had a great chat with Karen Lloyd a few weeks ago at Marty's suggestion and filled her in. We were planning on maybe setting up some time to talk in the next couple of weeks.

Thanks,

Lisa Gordon

Lisa Perras Gordon, Environmental Scientist Water Quality Planning Branch Water Protection Division
U.S. Environmental Protection Agency Atlanta, Georgia
(404) 562-9317

Doug Leeper

<Doug.Leeper@s
wfwmd.state.fl

.us> (Embedded image moved to file: pic00235.gif)

To

01/13/2012
03:55 PM

(Embedded image moved to file:
pic30833.gif)
"Al Grubman
(grubman1@gmail.com)"
<grubman1@gmail.com>, "Bill
Geiger
(bgeiger@cityofbrooksville.us)"
<bgeiger@cityofbrooksville.us>,
"Bill Pouder
(bill.pouder@myfwc.com)"
<bill.pouder@myfwc.com>, "Boyd
Blihovde
(Boyd_Blihovde@fws.gov)"
<Boyd_Blihovde@fws.gov>, "Brad
Rimbey
(BWR.CRRC@tampabay.rr.com)"
<BWR.CRRC@tampabay.rr.com>,
"Brent Whitley
(brentwhitley@sierra-properties
.com)"
<brentwhitley@sierra-properties
.com>, "Brockway, Alys
(abrockway@co.hernando.fl.us)"
<abrockway@co.hernando.fl.us>,
"Dennis D. Dutcher
(Dennis3ds@aol.com)"
<Dennis3ds@aol.com>, "Frank
DiGiovanni
(administration@inverness-fl.go
v)"
<administration@inverness-fl.go
v>, "Greenwood, Kathleen
(Kathleen.Greenwood@dep.state.f
l.us)"
<Kathleen.Greenwood@dep.state.f
l.us>, Helen Spive
<manatees2@gmail.com>,
"Hilliard, Dan
(2buntings@comcast.net)"
<2buntings@comcast.net>,
"Hoehn, Ted"
<ted.hoehn@MyFWC.com>, "Hope
Corona
(hopecorona@tampabay.rr.com)"
<hopecorona@tampabay.rr.com>,
"Jim Farley
(jfarley682@aol.com)"
<jfarley682@aol.com>, "Katie
Tripp
(ktripp@savethemanatee.org)"
<ktripp@savethemanatee.org>,
"Norman Hopkins
(norman@amyhrf.org)"
<norman@amyhrf.org>, "Rebecca
Bays
(rebecca.bays@bocc.citrus.fl.us

)"
<rebecca.bays@bocc.citrus.fl.us
>, "Richard Kane
(rkane@usgs.gov)"
<rkane@usgs.gov>, "Richard
Radacky
(rradacky@cityofbrooksville.us)
"
<rradacky@cityofbrooksville.us>
, "Ron Miller
(rmille76@tampabay.rr.com)"
<rmille76@tampabay.rr.com>,
"Sarah Tenison
(cityofweekiwachee@yahoo.com)"
<cityofweekiwachee@yahoo.com>,
"Sullivan, Jack
(jsullivan@carltonfields.com)"
<jsullivan@carltonfields.com>,
"Voyles, Carolyn
(Carolyn.Voyles@dep.state.fl.us
)"
<Carolyn.Voyles@dep.state.fl.us
>, "Whitey Markle
(whmarkle@gmail.com)"
<whmarkle@gmail.com>,
" (janicehowie@aol.com)"
<janicehowie@aol.com>, "Abdon
Sidibie
(asidibie@chronicle.online.com)
"
<asidibie@chronicle.online.com>
, "Alex McPherson
(aamcpherson@msn.com)"
<aamcpherson@msn.com>, "Ann - 2
Hodgson (ahodgson@gmail.com)"
<ahodgson@gmail.com>, "Ann
Hodgson (ahodgson@audubon.org)"
<ahodgson@audubon.org>,
"Bernard Berauer
(bfberauer@aol.com)"
<bfberauer@aol.com>, "Beverly
Overa
(boverly@tampabay.rr.com)"
<boverly@tampabay.rr.com>,
"Bill Garvin
(wgarvin@tampabay.rr.com)"
<wgarvin@tampabay.rr.com>, "Bob
Caldwell
(Bobcaldwell51@yahoo.com)"
<Bobcaldwell51@yahoo.com>,
"Brack Barker
(brack154@msn.com)"
<brack154@msn.com>, "Carl
Matthai
(thebabesmimi@gmail.com)"
<thebabesmimi@gmail.com>,
"Casey, Emily
(fcnwr@atlantic.net)"
<fcnwr@atlantic.net>, "Charles
Dean

(dean.charles.web@flsenate.gov)
"
<dean.charles.web@flsenate.gov>
, "Charles Stonerock
(katcha.stonerock3@gmail.com)"
<katcha.stonerock3@gmail.com>,
"Chris Safos
(chrissafos@embarqmail.com)"
<chrissafos@embarqmail.com>,
"Czerwinski, Mike
(mczerwin@tampabay.rr.com)"
<mczerwin@tampabay.rr.com>,
"Darlene Herth
(2cetechology21@gmail.com)"
<2cetechology21@gmail.com>,
"Darrell Snedecor
(president@citruscountyaudubon.
com)"
<president@citruscountyaudubon.
com>, "Don Hiers
(dhiers3@gmail.com)"
<dhiers3@gmail.com>, "Douglas
Dame (doug_dame@yahoo.com)"
<doug_dame@yahoo.com>, "Elaine
Luther
(barneyandcap@hotmail.com)"
<barneyandcap@hotmail.com>,
"Emily Casey
(ecasey21@hotmail.com)"
<ecasey21@hotmail.com>, "Emma
Knight
(eknight@wetlandsolutionsinc.co
m)"
<eknight@wetlandsolutionsinc.co
m>, "George Harbin
(gharbin@tampabay.rr.com)"
<gharbin@tampabay.rr.com>,
"George McClog
(classof47@gmail.com)"
<classof47@gmail.com>, "Gorgon
O'Connor (gorgon_o@yahoo.com)"
<gorgon_o@yahoo.com>, "Harry
Steiner (harry109@aol.com)"
<harry109@aol.com>, "Jack
Calbeck
(calbeckj@citrus.k12.fl.us)"
<calbeckj@citrus.k12.fl.us>,
"Jane Perrin
(jcsperrinmd@sbcglobal.net)"
<jcsperrinmd@sbcglobal.net>,
"Jerry Morton
(JerrMorton@aol.com)"
<JerrMorton@aol.com>, "Jessie
Gourlie
(gourliej@thirdplanetwind.com)"
<gourliej@thirdplanetwind.com>,
"Jim Collins
(jimmiekey22@yahoo.com)"
<jimmiekey22@yahoo.com>,
"Jimmie Smith

(Jimmie.Smith@myfloridahouse.gov)"
<Jimmie.Smith@myfloridahouse.gov>, Joe Calamari
<jcalamari@coastal-engineering.com>, "John Lord
(jclord109@yahoo.com)"
<jclord109@yahoo.com>, "John Mayo (freedomway1@gmail.com)"
<freedomway1@gmail.com>, "Karen Johnstone
(kjohns213@sbcglobal.net)"
<kjohns213@sbcglobal.net>, "Kim Caldwell
(caldwell.kimberly@yahoo.com)"
<caldwell.kimberly@yahoo.com>, "Kim Dinkins
(kim.dinkins@marioncountyfl.org)"
<kim.dinkins@marioncountyfl.org>, "Linda Pierce
(tpierce35@tampabay.rr.com)"
<tpierce35@tampabay.rr.com>, "Linda Vanderveen
(hernandoaudubon@yahoo.com)"
<hernandoaudubon@yahoo.com>, "Mary Anne Lynn
(mlynn1978@tampabay.rr.com)"
<mlynn1978@tampabay.rr.com>, "Matthew Corona
(mcorona1@tampabay.rr.com)"
<mcorona1@tampabay.rr.com>, "Max Rhinesmith
(rhinesmith@webtv.net)"
<rhinesmith@webtv.net>, Amber Breland
<amber_breland@fws.gov>, "Andy Houston
(ahouston@crystalriverfl.org)"
<ahouston@crystalriverfl.org>, "Art Yerian
(Al.Yerian@dep.state.fl.us)"
<Art.Yerian@dep.state.fl.us>, Ben Weiss
<Benjamin_weiss@fws.gov>, Beth Hovinde
<bethse@gmail.com>, "Brad Thorpe
(brad.thorpe@bocc.citrus.fl.us)"
<brad.thorpe@bocc.citrus.fl.us>, "Courtney Edwards
(cedwards@savethemanatee.org)"
<cedwards@savethemanatee.org>, "Dale Jones (Jones@MyFWC.com)"
<Jones@MyFWC.com>, "Dana Bryan
(dana.bryan@dep.state.fl.us)"
<dana.bryan@dep.state.fl.us>, Darrell Snedecor
<darrell@snedecors.com>, "David Hamilton

(countyadministrator@hernandoco
nty.us)"
<countyadministrator@hernandoco
nty.us>, "David Hankla
(david_hankla@fws.gov)"
<david_hankla@fws.gov>, "Don
Wright (wright@sura.org)"
<wright@sura.org>, "Dusty
McDevitt (mcdevitt@usgs.gov)"
<mcdevitt@usgs.gov>, "Ed Call
(marvin.call@MyFWC.com)"
<marvin.call@MyFWC.com>, "Eric
Nagid (eric.nagid@MyFWC.com)"
<eric.nagid@MyFWC.com>, "FFWCC
MFLs Review E-Mail Address
(fwcconservationplanningservice
s@myfwc.com)"
<fwcconservationplanningservice
s@myfwc.com>, "J. J. Kenney
(jj.kenney@bocc.citrus.fl.us)"
<jj.kenney@bocc.citrus.fl.us>,
"Jennene Norman-Vacha
(jnvacha@ci.brooksville.fl.us)"
<jnvacha@ci.brooksville.fl.us>,
"Joyce_Kleen@fws.gov"
<Joyce_Kleen@fws.gov>, "Kandi
Harper
(kandi.harper@bocc.citrus.fl.us
)"
<kandi.harper@bocc.citrus.fl.us
>, "Keith Ramos
(Keith.Ramos@fws.gov)"
<Keith.Ramos@fws.gov>, "Kent
Smith (kent.smith2@myfwc.com)"
<kent.smith2@myfwc.com>, "Kevin
Grimsley (kjgrims@usgs.gov)"
<kjgrims@usgs.gov>, "Michael
Lusk (Michael_Lusk@fws.gov)"
<Michael_Lusk@fws.gov>,
"Mitchell Newberger
(mnewberger@verizon.net)"
<mnewberger@verizon.net>, "Nick
Robbins
(Nick.Robbins@dep.state.fl.us)"
<Nick.Robbins@dep.state.fl.us>,
"Nicole Adimey
(Nicole_Adimey@fws.gov)"
<Nicole_Adimey@fws.gov>, "Paul
Thomas
(paulw.thomas@MyFWC.com)"
<paulw.thomas@MyFWC.com>, "Ron
Mezich (ron.mezich@MyFWC.com)"
<ron.mezich@MyFWC.com>, "Shelly
Yaun
(shelly.yaun@dep.state.fl.us)"
<shelly.yaun@dep.state.fl.us>,
"Toby Brewer
(Toby.Brewer@dep.state.fl.us)"
<Toby.Brewer@dep.state.fl.us>,
Tracy Colson

<tracymanatee@centurylink.net>, "Wallace, Traci"
<traci.wallace@MyFWC.com>, "Adkins, Jim"
<jadkins@hernandocounty.us>, "Bitter, Jim"
<jbitter@tampabay.rr.com>, "Bryant, Richard"
<rangerrb@bellsouth.net>, "Cantero, Vince"
<vince.cantero@bocc.citrus.fl.us>, "Carpenter, Paul"
<paul.carp@verizon.net>, "Daniels, Chase"
<chase.daniels@myfloridahouse.gov>, "Dueker, Duane"
<duanedueker@aol.com>, "Gramling, Hugh"
<hgramling@tbwg.org>, "Harrelson, Cathy"
<cathyharrelson@gmail.com>, "Hubbell, Pete"
<phubbell@wraconsultants.com>, "Johnson, Eric"
<eric.johnson@myfwc.com>, "Johnson, Martyn"
<martynelijay@hotmail.com>, "Keim, Robert"
<rbkeim@gmail.com>, "Kincaid, Todd" <kincaid@geohydros.com>, "Kline, Allen"
<pastoralfarm@netsignia.net>, "Knight, Bob"
<bknight@wetlandsolutionsinc.com>, "Knight, Robert"
<Robert.Knight@bocc.citrus.fl.us>, "Knudson, Ross"
<rosssef@aol.com>, "Overa, Tom" <tovera1@tampabay.rr.com>, "Owen, Rick"
<richard.owen@dep.state.fl.us>, "Parrow, Liz"
<eparrow@pjp2.net>, "Rolf Auermann"
(rauerman@tampabay.rr.com)" <rauerman@tampabay.rr.com>, "Rusnak, Teddi"
<tcrusnak@tampabay.rr.com>, "Tarochinoe, Joseph"
<tarkie38@yahoo.com>, "Watkins, Priscilla"
<priswat@tampabay.rr.com>, "Watrous, Russell"
<russelljwatrous@yahoo.com>, "Wilson, Roger"
<rogerseminole@tampabay.rr.com>

(Embedded image moved to file: pic19711.gif)

cc

(Embedded image moved to file: pic25760.gif)

"Amy K. Harroun"
<Amy.Harroun@swfwmd.state.fl.us
>, Barbara Matrone
<Barbara.Matrone@swfwmd.state.f
l.us>, "Cara S. Martin"
<Cara.Martin@swfwmd.state.fl.us
>, Chris Zajac
<Chris.Zajac@swfwmd.state.fl.us
>, "Darcy A. Brune"
<Darcy.Brune@swfwmd.state.fl.us
>, Dave Dewitt
<Dave.Dewitt@swfwmd.state.fl.us
>, Doug Leeper
<Doug.Leeper@swfwmd.state.fl.us
>, "Gary E. Williams"
<Gary.Williams@swfwmd.state.fl.
us>, Jay Yingling
<Jay.Yingling@swfwmd.state.fl.u
s>, Karen Lloyd
<Karen.Lloyd@swfwmd.state.fl.us
>, Ken Weber
<Ken.Weber@swfwmd.state.fl.us>,
"Kenneth R. Herd"
<Ken.Herd@swfwmd.state.fl.us>,
Laura Donaldson
<Laura.Donaldson@swfwmd.state.f
l.us>, Lou Kavouras
<Lou.Kavouras@swfwmd.state.fl.u
s>, Mark Barcelo
<Mark.Barcelo@swfwmd.state.fl.u
s>, Mark Hammond
<Mark.Hammond@swfwmd.state.fl.u
s>, Mike Heyl
<Mike.Heyl@swfwmd.state.fl.us>,
Paul Williams
<Paul.Williams@swfwmd.state.fl.
us>, "Robyn O. Felix"
<Robyn.Felix@swfwmd.state.fl.us
>, Ron Basso
<Ron.Basso@swfwmd.state.fl.us>,
Sid Flannery
<Sid.Flannery@swfwmd.state.fl.u
s>, Veronica Craw
<Veronica.Craw@swfwmd.state.fl.
us>, Xinjian Chen
<Xinjian.Chen@swfwmd.state.fl.u
s>, Yassert Gonzalez
<Yassert.Gonzalez@swfwmd.state.
fl.us>

(Embedded image moved to file: pic18896.gif)
Subject

(Embedded image moved to file:
pic04667.gif)
Update - Chassahowitzka and
Homosassa Minimum Flows

(Embedded image moved to file: pic07285.gif)
(Embedded image moved to file:
pic12550.gif)

Greetings:

I'm writing to provide an update on the status of minimum flows development for the Chassahowitzka and Homosassa River systems by the Southwest Florida Water Management District. The District would like to make it as convenient as possible for the stakeholders to review final reports and attend the Governing Board meeting where the information will be presented. To provide staff the necessary time to consider public concerns, complete revisions, and provide stakeholders an opportunity to review the revised reports, District staff will not be presenting the proposed minimum flows rule amendments to the District Governing Board until April.

H] \ Y \ \ H ^ X Y H X Y H X X] Y] H C B [X X \ K \ X Y ^ X] H H [[\ X Y C B H [H [Y [Y [\ [] [X \ [Y \ [

B

L] H \ [\ Y Y] [] H \ X 8 & \ X Y] X \ \ [B [K B B X \ H Y [Y H] [

Y [Z [[] [H C B \ Z] H [[\ H] \ \ [\ X \ \ Y [

B] \ Y H] \ X [Y [Y [\ X B H Y Y] B [K Y H

M

NCB KN

M

LM

M

H

^

C B Y , Y \ \] \ X] \ , B B B S T S P N [K [X Z [[H \ Y \ \ H X X B X [\] Y

H] \ Y H] \ X [Y [Y [\ X B \ [\ H \ X \] Z \ Y [[K [X Z [X [] Y \ B

K Y

From: [Bryan, Dana](#)
To: [Doug Leeper](#)
Cc: [Voyles, Carolyn](#); [Yerian, Art](#); [Owen, Richard](#)
Subject: Homosassa MFL
Date: Tuesday, January 31, 2012 9:22:26 AM

Hi, Doug! We haven't talked or emailed for a while, so I would appreciate an update on how the Homosassa MFL determination process and schedule are progressing.

I remember from the stakeholder meetings that SWFWMD was considering calculating the baseflow differently than what was done in the draft technical document – what was decided? As you might remember, I argued that the 90 measurements of higher historical flow should neither be ignored nor averaged in with more recent lower flow measurements, but rather should be used as evidence that discharge has already substantially declined in the spring system.

Thanks, in advance, for an update! - DCB

Dana C. Bryan
Environmental Policy Coordinator
Bureau of Natural and Cultural Resources
Florida Park Service
Florida Department of Environmental Protection
Douglas Building - MS 530
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000
850-245-3104; inter. ext. 53612; dana.bryan@dep.state.fl.us

Visit The **Real Florida**sm at <http://www.floridastateparks.org>

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: Doug Leeper
To: ["Bryan, Dana"](mailto:Dana.Bryan@dep.state.fl.us)
Cc: [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](mailto:Carolyn.Voyles@dep.state.fl.us)
Bcc: [Cara S. Martin](#); [Chris Zajac](#); [Christopher Pettit](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Doug Leeper](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen West](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Michael Molligan](#); [Mike Heyl](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Tammy Hinkle](#); [Veronica Craw](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: RE: Homosassa MFL
Date: Tuesday, January 31, 2012 11:46:00 AM

Hi Dana:

Hope all is well with you. I saw that Carolyn Voyles forwarded to you my recent e-mail concerning the District's current Springs Coast MFLs schedule.

With regard to the "historical" flow records for the Homosassa system, I will be including these data in the revised MFLs report. To minimize data density (abundance) effects for the more recently collected record vs. the historical record, I don't plan to present summary statistics based on individual measurements for the combined records. Rather, I think I will present summary statistics for the separate data sets, and if it seem useful, will also present annual average values for the combined data sets. I know this latter approach to data presentation was discussed at one or more of our workshops; I'll see how informative it appears to be, and include the annual average values/statistics in the report if it seems warranted.

I plan to discuss differences between the historic and more recent records, with regard to climatic/natural influences and potential withdrawal impacts. Do not, however, currently plan to use the historic records for the model evaluations/analyses used to identify potentially allowable percentage-of-flow reductions. I will plan on including an argument or "case" for this approach in the revised report.

Look forward to continuing to work with you on the Springs Coast systems.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Bryan, Dana [<mailto:Dana.Bryan@dep.state.fl.us>]
Sent: Tuesday, January 31, 2012 9:22 AM
To: Doug Leeper
Cc: Voyles, Carolyn; Yerian, Art; Owen, Richard
Subject: Homosassa MFL

Hi, Doug! We haven't talked or emailed for a while, so I would appreciate an update on how the Homosassa MFL determination process and schedule are progressing.

I remember from the stakeholder meetings that SWFWMD was considering calculating the baseflow differently than what was done in the draft technical document – what was decided? As you might remember, I argued that the 90 measurements of higher historical flow should neither be ignored nor averaged in with more recent lower flow measurements, but rather should be used as evidence that discharge has already substantially declined in the spring system.

Thanks, in advance, for an update! - DCB

Dana C. Bryan
Environmental Policy Coordinator
Bureau of Natural and Cultural Resources
Florida Park Service
Florida Department of Environmental Protection
Douglas Building - MS 530
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000
850-245-3104; inter. ext. 53612; dana.bryan@dep.state.fl.us

Visit The **Real Florida**sm at <http://www.floridastateparks.org>

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: [Greenwood, Kathleen](#)
To: [Doug Leeper](#)
Cc: [Llewellyn, Janet](#)
Subject: FW: Flow Background
Date: Monday, February 06, 2012 1:51:37 PM
Attachments: [Jan 8 10 final ltr to GJobsis Am Riv.pdf](#)
[Jan 8 10 final ltr to CSullins Mit Pol.pdf](#)
[Gordon Flow State Dir May 2011.pptx](#)
Importance: High

Doug,

Here is the information we received from Drew Bartlett related to the EPA issue.

Janet - if there is any additional information beyond what we told Doug on Thursday could you please forward it to him? Thanks. I mentioned that I thought Drew indicated they needed to meet with SWFWMD at some point - perhaps you can clarify whether I'm mistaken etc.

Kathleen P. Greenwood

*

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. Copy the url below to a web browser to complete the DEP survey:
<http://survey.dep.state.fl.us/?refemail=Kathleen.Greenwood@dep.state.fl.us>

*From: Llewellyn, Janet
*Sent: Monday, January 30, 2012 9:33 PM
*To: Shortelle, Ann; Greenwood, Kathleen
*Subject: Fw: Flow Background

*

*

*-----

*Sent from my BlackBerry Wireless Handheld Janet Llewellyn, DEP

*

*

*----- Original Message -----

*From: Bartlett, Drew
*To: Llewellyn, Janet; Cowley, Stacey; Hewitt, Betsy; Munson, Greg
*Sent: Mon Jan 30 20:56:00 2012
*Subject: FW: Flow Background

*

*

*

*

*From: Gordon.Lisa-Perras@epamail.epa.gov [Gordon.Lisa-Perras@epamail.epa.gov]
*Sent: Monday, January 30, 2012 10:07 AM
*To: Bartlett, Drew
*Cc: Benante.Joanne@epamail.epa.gov; Hansen.Susan@epamail.epa.gov;
*Godfrey.Annie@epamail.epa.gov; Joyner, Daryll
*Subject: Flow Background

*

*Hey there Drew,

*

*Hope all's well with you, Lissie and the kids.

*

*As far as background on flow, here's a letter we wrote to NC when American
*Rivers brought up something similar. Basically, policies and state laws which are
*primarily about water quantity, may in some instances, affect water quality. In

*those instances, those policies or laws should be consistent with the state WQS. As
*competition for dwindling freshwater supplies becomes more intense, this is
*starting to come up more and more, so Jim has had me talk about it at the last three
*state director's meetings so that everyone would know this has been
*coming up. Attaching one of those power points which gives a bit of
*history and includes some info on PUD.

*

*Any questions, give me a call or I'll be sending out a meeting invite for Thursday
*and we can chat then.

*

*Lisa G.

*

*

*

*

*(See attached file: Jan 8 10 final ltr to GJobsis Am Riv.pdf)(See attached file: Jan 8 10
*final ltr to CSullins Mit Pol.pdf)(See attached
*file: Gordon Flow State Dir May 2011.pptx)

*

*

*

*Lisa Perras Gordon, Environmental Scientist Water Quality Planning Branch Water
*Protection Division U.S. Environmental Protection Agency Atlanta, Georgia
*(404) 562-9317



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JAN 08 2010

Gerrit Jobsis, Director
Southeast Region
American Rivers
Devine Street, Suite 202
Columbia, South Carolina 29205

Dear Mr. Jobsis,

The Environmental Protection Agency (EPA) is in receipt of your letter, dated July 2, 2009, to Lisa Perras Gordon of the Water Quality Standards Section. Your letter requests that EPA review and address the sufficiency of policy guidance written by the North Carolina Division of Water Quality (DWQ). The policy guidance you forwarded to EPA for review, "Stream Mitigation for FERC-Related 401 Certifications," is a draft, internal guidance used by DWQ. You also specifically ask whether or not a state may "properly treat land preservation as compensatory mitigation for the adverse impacts of a project's flow regulation on aquatic uses." Your request for review has raised several questions regarding this state policy and its application in particular water quality standards (WQSs) certifications. EPA is currently in the process of thoroughly reviewing these issues with the State.

DWQ has not submitted this mitigation policy to EPA for review as a policy applying or implementing WQSs under 40 C.F.R. § 131.13. States may utilize policies implementing or applying WQSs which have not been submitted to or approved by EPA, but such policies must be consistent with the state's underlying EPA-approved WQSs.

With respect to your specific inquiry as to whether land preservation can be used as compensatory mitigation for adverse impacts of a project's flow on aquatic uses, the answer centers on whether the adverse impacts relate only to flow (water quantity), or whether these impacts are, in fact, affecting water quality standards. The Supreme Court in PUD No. 1 of Jefferson County v. Washington Department of Ecology, 114 S. Ct. 1990 (1994), addressed the question of whether flow may be linked to water quality standards and whether a state may include specific flow requirements in its CWA Section 401 Certifications or deny a certification based on flow. That case involved a Federal Energy Relicensing Commission (FERC) relicensing of a hydropower plant. In that instance, it was determined that the State could require the licensee to maintain certain stream flows as a condition of the Section 401 Certification in order to meet WQSs. The Court noted that the distinction between water "quality" and "quantity" is artificial and specifically addressed under what conditions flow or quantity could affect quality, stating:

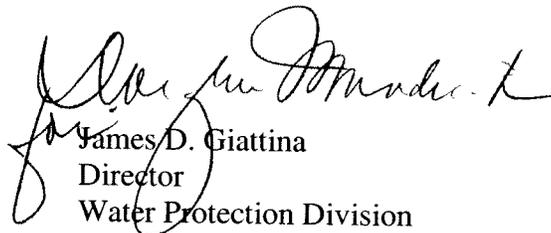
“In many cases, water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or...as a fishery.”

Therefore, flow can be determined to affect WQSs and minimum flow levels may be required to meet those standards. However, there could also be cases where the designated use and the associated narrative and numeric criteria and antidegradation policy may not be affected by certain changes in the flow regime. Flow levels, in those instances, may not be relevant to meeting the applicable WQSs. Determinations regarding the level of flow that may be necessary to meet applicable WQSs have to be made on a case-by-case basis, unless a specific WQS for flow has already been promulgated for the water at issue. If a particular level of flow is determined to be necessary to meet applicable WQSs for a FERC project, compensatory land mitigation cannot be used in exchange for the project’s adverse impacts on such flow.

It is important to note that for activities regulated by, and permitted under, Section 404 of the CWA, there are very specific conditions under which compensatory mitigation can be used for certain types of impacts to wetlands and other aquatic resources. Section 404 of the CWA is not a program that is delegated to the State of North Carolina, and is solely under the purview of EPA and the Corps of Engineers. Therefore, Section 404 Compensatory Mitigation and the extensive process and requirements associated with making such mitigation determinations are beyond the scope of this letter. For your information, Section 404 mitigation regulations and guidance can be referenced at the following web link: <http://www.epa.gov/wetlandsmitigation/#regs>.

EPA appreciates the opportunity to provide information to address American Rivers’ questions and concerns, and for your patience in awaiting our response. EPA is in the process of following up with the State regarding EPA’s concerns on the potential WQSs issues that could arise through application of this draft mitigation policy in the Section 401 Certification of FERC licenses. Please feel free to contact Lisa Perras Gordon at 404-562-9317, if you have any questions.

Sincerely,


James D. Giattina
Director
Water Protection Division

cc: Tom Welborn, Chief
Wetlands, Coastal and Oceans Branch, EPA Region 4

Coleen Sullins, Chief
Division of Water Quality, North Carolina DENR



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JAN 08 2010

Coleen Sullins, Chief
Division of Water Quality
North Carolina Department of Environment
and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Dear Ms. Sullins:

The Environmental Protection Agency (EPA) was provided a copy of the document, "Stream Mitigation for FERC-Related 401 Certifications," in a letter dated July 2, 2009, from American Rivers to EPA, which is enclosed. Based on discussions with your staff, we understand that this document is a draft, internal guidance used by the North Carolina Division of Water Quality (DWQ) in relation to Section 401 Certifications under the Clean Water Act (CWA) for projects licensed under the Federal Energy Regulatory Commission (FERC). This document has neither been submitted by the State for EPA's review or consideration as a Water Quality Standard (WQS) provision, nor as a policy that applies or implements WQS provisions. Based on the recent discussions, I understand that DWQ does not intend to take either of those actions in the future.

In the context of our response to American Rivers, EPA, in its discretion, conducted a preliminary review of this policy and its potential application to Section 401 Certifications for FERC licenses. Our initial review of this document has raised several questions regarding this state policy and its application in particular WQS certifications. EPA has concerns as to whether the policies in this document are consistent with the underlying EPA-approved State WQSs.

The document indicates that land preservation can be considered as compensatory mitigation in return for adverse impacts of a FERC project's flow regulation on aquatic uses. With respect to FERC projects, the use of land purchase or preservation cannot be used as a substitute for meeting provisions of the EPA-approved WQSs under the CWA, including the protection of designated uses and the water quality needed to protect such uses.

Also, based on EPA's initial review, application of policies in this draft mitigation document may be specifically inconsistent with several provisions of State WQSs that have been approved by EPA for CWA purposes. These include, but are not limited to, the following:

15A NCAC .0211

The policy may modify provisions within the State's Class C water quality standards applicable to all waters in the State. Specifically, these standards state: "Conditions Related to Best Usage: the waters shall be suitable for aquatic life propagation and maintenance of biological integrity, wildlife, secondary recreation, and agriculture."

15A NCAC 02B .0226

The policy may create an exemption to water quality standards that has not been properly adopted as a variance to standards that apply to a specific waterbody.

15A NCAC 02B .0101

The policy may replace authorities assigned to certain State entities in the adoption or removal of designated uses of State waters (and the water quality criteria necessary for protection of State waters).

15A NCAC 02B .0201

The policy may modify the State's current antidegradation policy in that application of the policy may result in the elimination of existing uses in certain State waters. It may also result in the lowering of water quality in certain waters without full consideration of antidegradation requirements that would otherwise apply to those waters.

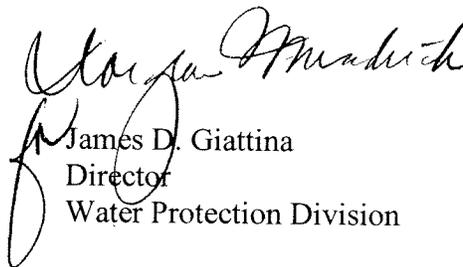
EPA believes that these potential concerns are substantial and asks that the State discontinue use of the policies in this draft document until we can discuss these issues further and reach a conclusion on their use in the future. Such policies should only be used when they result in a reasonable application of existing, EPA-approved WQSSs, including all provisions relating to designated uses, numeric criteria, narrative criteria, and antidegradation provisions. To ensure that EPA fully understands the breadth and implications of the draft policy, we also ask that DWQ provide EPA with information on all past applications of the policy in the development of requirements for CWA Section 401 Certifications.

EPA understands that DWQ has concerns as to the impacts of this position with respect to DWQ's Section 401 Certification of permits issued by the Corps of Engineers and EPA pursuant to Section 404 of the CWA. As you know, there are extensive federal regulations and guidance relating to Section 404 permits, and these materials outline the specific conditions under which compensatory mitigation can be used for certain types of impacts to wetlands and other aquatic resources. Section 404 Compensatory Mitigation and the extensive process and requirements associated with making such mitigation determinations, as well as Section 401 Certification of Section 404 permits, are beyond the scope of this letter and NC's draft mitigation guidance.

In further discussions between EPA and DWQ regarding this policy, DWQ has noted that the State's existing Section 401 Certification rules (15A NCAC 2H .0500) appear to focus heavily on policies relating to Section 404 permitting. It is our understanding that DWQ will begin reviewing these rules during this calendar year to make certain that these rules outline a certification process that ensures that all projects being certified meet applicable WQSs and revise such rules as necessary.

I look forward to your prompt response regarding the use of this policy for CWA Section 401 Certifications of FERC-related projects. Please feel free to contact me if you would like to further discuss the issues outlined in this letter.

Sincerely,



James D. Giattina
Director
Water Protection Division

Enclosure

cc: Tom Welborn, Chief
Wetlands, Coastal and Oceans Branch
EPA Region 4

Addressing Hydrologic Alteration under the CWA

Lisa Perras Gordon
Water Quality Standards Section

Hydrologic Alteration

The major ways that flow is altered:

- Dams/ Impoundments
- Withdrawals
 - Surface Water
 - Ground Water
- Storm Water



U.S. Flow Alteration...

- “The magnitudes of mean annual minimum and maximum streamflows were found to have been altered in 86% of assessed streams...”
- and,
- “The likelihood of biological impairment doubled with increasing severity of diminished streamflows.”

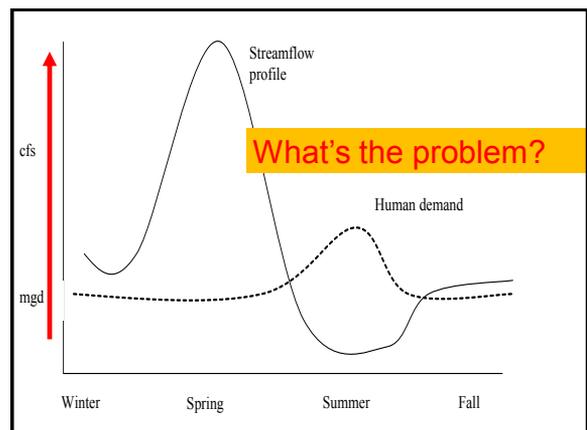
Carlisle, Wolock and Meador, 2010

Flow as a Hot Topic

- FERC License Renewals in the Southeast
- Drought
- Water Wars
- Development of State Regional Water Plans
- Increasing Impervious Surface
- Increasing Reservoir Creation

The Players

- State Water Resource Agencies
- Water Withdrawal Permitting Issues
- State Fisheries Agencies
- USGS/NOAA/USFWS
- Academic Researchers
- State WQS/Section 401 Staff/Mgt
- FERC
- TNC/American Rivers/River Keepers
- State/Regional/National/Global organizations



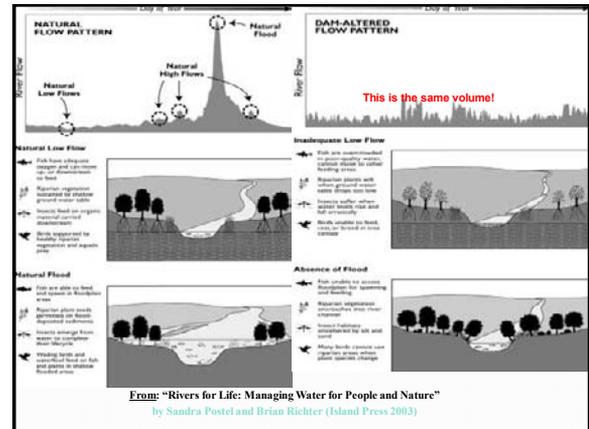


Water Quality Standards 101

- Designated Use
 - Fishable/Swimmable, Aquatic Life, Primary Recreation, Secondary Recreation, Drinking Water Supply, Agriculture & Industrial, Trout, Outstanding Waters, Unique Wetlands, High Quality Waters, etc.
- Water Quality Criteria necessary to support the Designated Use
 - Numeric
 - Narrative
- Antidegradation
 - Provide protection for existing uses.

Flow as a WQS

- Explicit
 - Narrative for flow
 - Numeric for flow
- Implicit –
 - Protect for aquatic life
 - Protect for designated uses
 - Protect for biological integrity
 - Protect for habitat
 - Antidegradation



Example Narrative Criteria:

- "Biological integrity = the ability of an aquatic ecosystem to support and maintain a balanced and indigenous community of organisms, having species composition, diversity, population densities and functional organization similar to that of reference conditions."
- Could be used to support natural timing and delivery of flow to support biological integrity.

And...

- Disrupt fish passage;
- Reduce protective cover;
- Increase accessibility to predation;
- Increase stream temperatures;
- Increase chemical stressors;
- Reduce diversity and abundance in shoreline habitats due to high flows;
- Increased sedimentation;
- Loss of mussel populations due to exposure.

FLOW-SENSITIVE FISH METRICS: Many fish community metrics are now available, including Habitat-Use Classifications (Bain and Meixler, 2008), Pollution tolerances, etc.

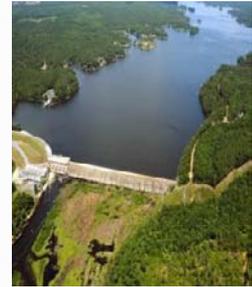
HABITAT- USE CLASSIFICATIONS (HUCs)

- **Fluvial Specialists (FS)**
- require flowing water
(ex. fallfish, brook trout)
- **Fluvial Dependents (FD)**
- need flowing water for some portion of their life cycle
(ex. white sucker, common shiner)
- **Macrohabitat Generalists (MG)**
- Don't require flowing water
(ex. largemouth bass, bluegill)



Duke Energy Carolinas

- 5 Reservoirs in SC
- License from 1958 – 2008
- Section 401 Cert issued May 2009, stating that there was a “reasonable assurance that WQS would be met...”



SC Board of Health and Environmental Control Denied Cert

“The Board finds that the WQ Certification does not provide sufficient flow to protect classified uses, the endangered shortnose sturgeon and adequate downstream flow...to provide reasonable assurance... that WQS will be met.”

NCDENR/Duke Energy FERC

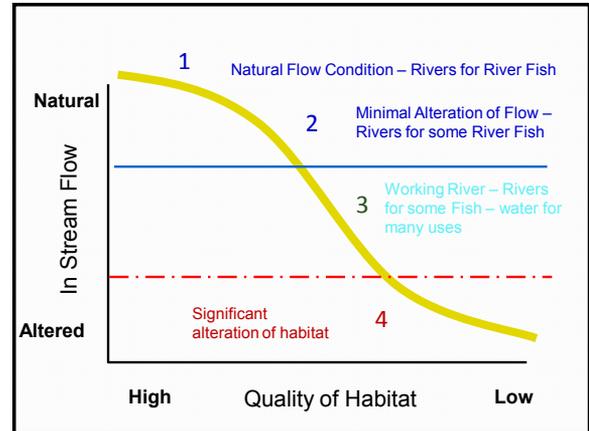
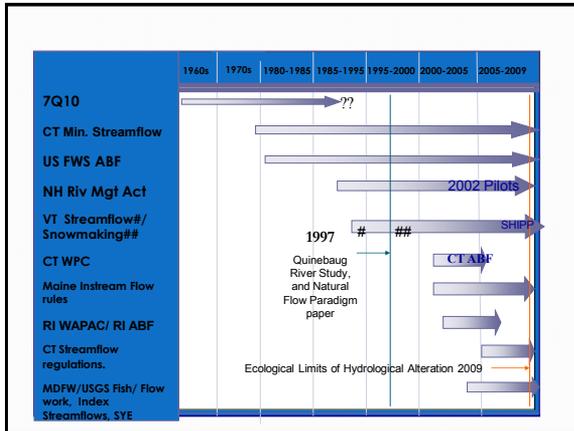
- American Rivers filed petition against NC stating that the 401 Certification for this FERC license did not protect for ‘biological integrity’ due to inadequate flow
- Requested R4 review of NC “Stream Mitigation for FERC-Related 401 Certifications” guidance as it related to reasonable assurance to meet WQS.
- Specifically asked EPA whether a state can “properly treat land preservation as compensatory mitigation for the adverse impacts of a project’s flow regulation on aquatic uses.”

EPA Response to American Rivers

- EPA response letter January 8, 2010
- Policies implementing or applying WQSs for CWA purposes **must be consistent with State’s underlying EPA-approved WQSs**
- Unless a specific WQS for flow exists, determinations regarding level of flow necessary to meet applicable WQS is case-by-case analysis
- If a particular flow level is determined to be necessary to meet WQSs for a FERC project, reasonable assurance of such flow necessary in order to issue 401 certification.

EPA Response to NC

- EPA requested DWQ to discontinue use of 401 stream mitigation policy until further review to determine whether poses any inconsistencies with their existing, EPA-approved WQSs, including:
 - Class C use requirements that “...the waters should be suitable for aquatic life, propagation and maintenance of biological integrity, wildlife, secondary recreation and agriculture”
 - Use removal and variance provisions; and
 - Anti-degradation
- EPA also working with DWQ regarding the appropriateness of any past applications of the mitigation policy in the development of requirements for specific 401 certs.



Tennessee DEC General WQ Criteria Chapter 1200-4-3

- (3) Fish and Aquatic Life
 - (o) Flow – Stream or other waterbody flows shall support the fish and aquatic life criteria.
- (4) Recreation
 - (m) Flow – Stream flows shall support recreational uses.

TDEC (con't)

- DeMinimis – an off-ramp from Antidegradation. 5% of 7Q10 or 10% cumulative removal.
- Water withdrawals will be considered de minimis if less than 5% of the 7Q10 flow of the stream is removed
- If more than one activity is authorized in a segment and the total of the impacts uses no more than 10% of the assimilative capacity, available habitat, or 7Q10 low flow, they are presumed to be de minimus.

New Hampshire

- New Hampshire surface water quality regulations (Chapter Env-Ws 1700 (1999)) www.des.state.nh.us/rules/Env-Ws1900.pdf state that "Unless the flows are caused by naturally occurring conditions, **surface water quantity shall be maintained at levels adequate to protect existing and designated uses.**" (Env-Ws 1703.1(d)).
- These rules shall apply to any person who causes point or non-point discharges to surface waters or who undertakes hydrologic modifications, such as dam construction or water withdrawals, or who undertakes any other activity that affects the beneficial uses or the level of water quality of surface waters.

Vermont

Vermont **WQS Hydrology Criteria** summarized

- 1. Stream Flow Protection
 - Class A (1): **No more than 5% 7Q10 change from natural flow regime, in aggregate**
 - Class B WMT 1: Changes from natural flow regime no more than minimal amount, uses fully supported
 - Class A (2) and other Class B: Any change from natural flow regime must support uses and comply with criteria. Site specific study preferred. [A(2) is water supply]
- 2. Flow Study Requirements/ site-specific
- 3. Water level fluctuations
- 4. High Flow Regime

New York

“No alteration that will impair the waters for their best usages.” WQS state that **achieving the best usage of water often requires an appropriate quantity of water as well as sufficient quality.** An appropriate quantity of water is vital to maintain best usages as a source of potable water supply, and for fishing, swimming, and secondary contact recreation. NYSDEQ has the authority to regulate flow in the absence of a WQS per State law, ECL Articles 15 and 17.

Supreme Court’s Ruling in PUD

- *PUD No. 1 of Jefferson County, et al. v. Washington Department of Ecology*, 511 U.S. 700, 719-21 (1994)
- Addressed question of whether flow may be linked to WQSs and whether a state may include specific flow requirements in CWA 401 certifications
- Challenge related to State of Washington’s inclusion of minimum flow requirements in a 401 certification for a FERC relicensing of hydropower plant

*** PUD ***

- “Petitioners also assert more generally that the CWA is only concerned with water ‘quality,’ and does not allow the regulation of water ‘quantity.’ This is an artificial distinction. In many cases, **water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery.**”

*** PUD ***

- “. . . § 304 of the Act expressly recognizes that water ‘pollution’ may result from ‘changes in the movement, flow, or circulation of any navigable waters . . . , including changes caused by the construction of dams.’ [CWA 304(f)] This concern with the flowage effects of dams and other diversions is also embodied in the EPA regulations, which expressly require existing dams to be operated to attain designated uses. 40 CFR 131.10(g)(4) (1992).”

*** PUD ***

- S.Ct. discussed argument that CWA, §§ 101(g) and 510(2), exclude the regulation of water quantity from direct regulation under the federally controlled WQSs
- § 303 Section 101(g) provides ‘that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter.’
- Similarly, § 510(2) provides that “[e]xcept as expressly provided” in this Act, nothing shall “be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters . . . of such States.” [CWA 510(2)]

*** PUD ***

- S.Ct. read CWA Sections 101(g) and 510(2) more narrowly than Petitioners
- “Sections 101(g) and 510(2) preserve the authority of each State to allocate water quantity as between users; they do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation.”

***** PUD *****

- S.Ct. cited to legislative history of the 1977 CWA amendment adding § 101(g)
- “The requirements [of the Act] may incidentally affect individual water rights It is not the purpose of this amendment to prohibit those incidental effects. It is the purpose of this amendment to insure that State allocation systems are not subverted, and that effects on individual rights, if any, are prompted by legitimate and necessary water quality considerations.” Legislative History of the CWA of 1977, Ser. No. 95-14, p. 532 (1978)

From: [Llewellyn, Janet](#)
To: [Doug Leeper](#)
Subject: FW: MFLs & Federal Case Law
Date: Tuesday, February 07, 2012 6:45:38 AM
Attachments: [511 US 700 \(PUD No 1 of Jefferson Cty v Washington Dept of Ecology 1994\).rtf](#)

Doug - In addition to the background information Kathleen sent you previously, attached is some case law to pass on to your attorney.

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. [DEP Customer Survey](#).

From: Bartlett, Drew
Sent: Wednesday, February 01, 2012 1:55 PM
To: Llewellyn, Janet; Shortelle, Ann; Coram, Phil; Vielhauer, Trina; Hewitt, Betsy
Subject: FW: MFLs & Federal Case Law

From: Cowley, Stacey
Sent: Thursday, January 26, 2012 7:14 PM
To: Bartlett, Drew
Cc: Vielhauer, Trina; Hewitt, Betsy; Joyner, Daryll
Subject: MFLs & Federal Case Law

Drew,

Attached is the case that we discussed (which was cited without the case name in Mr. N's letter)

Stacey Cowley
Senior Assistant General Counsel
Tel: (850) 245-2219



Supreme Court of the United States
 PUD NO. 1 OF JEFFERSON COUNTY and City of
 Tacoma, Petitioners
 v.
 WASHINGTON DEPARTMENT OF ECOLOGY et
 al.

No. 92-1911.
 Argued Feb. 23, 1994.
 Decided May 31, 1994.

City and local utility district appealed Washington State Department of Ecology's imposition of minimum stream flow rates as part of certification requirements under Federal Clean Water Act for building hydroelectric power plant. The Pollution Control Hearings Board reversed flow rate set by Department, and parties cross-appealed. The Superior Court, Thurston County, Carol A. Fuller, J., ruled that Department was not preempted from setting minimum stream flows. City moved for direct review. The Supreme Court, [121 Wash.2d 179, 849 P.2d 646](#), affirmed. On petition for certiorari, the Supreme Court of the United States, Justice O'Connor, held that: (1) states could condition certification of project on any limitations necessary to ensure compliance with state water quality standards or other appropriate requirements of state law; (2) minimum flow condition was appropriate requirement of state law; and (3) state's authority to impose minimum flow requirements would not be limited on theory that it interfered with Federal Energy Regulatory Commission's authority to license hydroelectric projects.

Affirmed.

Justice [Stevens](#) filed a concurring opinion.

Justice [Thomas](#) filed a dissenting opinion in which Justice [Scalia](#) joined.

West Headnotes

[11](#) Environmental Law [149E](#) [197](#)

[149E](#) Environmental Law
[149EV](#) Water Pollution
[149Ek194](#) Permits and Certifications
[149Ek197](#) k. Conditions and limitations.
[Most Cited Cases](#)
 (Formerly 199k25.7(21.1) Health and Environment)

States [360](#) [18.31](#)

[360](#) States
[360I](#) Political Status and Relations
[360I\(B\)](#) Federal Supremacy; Preemption
[360k18.31](#) k. Environment; nuclear projects. [Most Cited Cases](#)

Clean Water Act provision, requiring that project certification set forth effluent limitations and other limitations necessary to assure that any applicant will comply with provisions of Act and appropriate state law requirement, allowed state to impose "other limitations" on project in general to assure compliance with Clean Water Act provisions and appropriate state law requirements; state's ability to impose water quality limitations did not have to be specifically tied to a "discharge." Federal Water Pollution Control Act Amendments of 1972, § 401(a, d), as amended, [33 U.S.C.A. § 1341](#)(a, d).

[12](#) Environmental Law [149E](#) [196](#)

[149E](#) Environmental Law
[149EV](#) Water Pollution
[149Ek194](#) Permits and Certifications
[149Ek196](#) k. Discharge of pollutants. [Most Cited Cases](#)
 (Formerly 199k25.7(21.1) Health and Environment)

Clean Water Act provision requiring that project certification set forth effluent limitations and other limitations necessary to assure that applicant's compliance with provisions of the Act and appropriate state law requirements is most reasonably read as authorizing additional conditions and limitations on activity as a whole once threshold condition, the ex-

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

istence of a discharge, was satisfied. Federal Water Pollution Control Act Amendments of 1972, § 401(a, d), as amended, [33 U.S.C.A. § 1341](#)(a, d).

[\[3\]](#) Environmental Law [149E](#)  [197](#)[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

Statutes [361](#)  [219\(6.1\)](#)[361](#) Statutes[361VI](#) Construction and Operation[361VI\(A\)](#) General Rules of Construction[361k213](#) Extrinsic Aids to Construction[361k219](#) Executive Construction[361k219\(6\)](#) Particular Federal Sta-

tutes

[361k219\(6.1\)](#) k. In general. [Most](#)[Cited Cases](#)

Environmental Protection Agency (EPA) conclusion that “activities” of hydroelectric project applicant, not merely “discharges,” had to comply with state water quality standards was reasonable interpretation of Clean Water Act project certification provisions, and was entitled to deference. Federal Water Pollution Control Act Amendments of 1972, § 401, as amended, [33 U.S.C.A. § 1341](#).

[\[4\]](#) Environmental Law [149E](#)  [196](#)[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek196](#) k. Discharge of pollutants. [Most](#)[Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

States [360](#)  [18.31](#)[360](#) States[360I](#) Political Status and Relations[360I\(B\)](#) Federal Supremacy; Preemption

[360k18.31](#) k. Environment; nuclear projects. [Most Cited Cases](#)

State's authority under Clean Water Act to place restrictions on hydroelectric project activity as a whole was not unbounded; state could only ensure that project complied with applicable effluent limitations and other appropriate state law requirements. Federal Water Pollution Control Act Amendments of 1972, § 401(d), as amended, [33 U.S.C.A. § 1341\(d\)](#).

[\[5\]](#) Environmental Law [149E](#)  [196](#)[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek196](#) k. Discharge of pollutants. [Most](#)[Cited Cases](#)

(Formerly 199k25.7(13.1) Health and Environment)

States [360](#)  [18.31](#)[360](#) States[360I](#) Political Status and Relations[360I\(B\)](#) Federal Supremacy; Preemption[360k18.31](#) k. Environment; nuclearprojects. [Most Cited Cases](#)

Ensuring compliance with state water quality standards adopted pursuant to Clean Water Act was a proper function of water quality certification required under Act before federal license or permit could be issued for activity that could result in discharge into intrastate navigable waters; state water quality standards adopted pursuant to Act were among the “other limitations” with which state could ensure compliance through certification process. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[\[6\]](#) Environmental Law [149E](#)  [197](#)[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

(Cite as: **511 U.S. 700, 114 S.Ct. 1900**)

State could impose minimum flow condition as condition for water quality certification for hydroelectric project under Clean Water Act provision allowing states to condition certification upon any limitations necessary to ensure compliance with state water quality standards or any other “appropriate requirement of State law”; designated use of river as fish habitat directly reflected Act’s goal in maintaining chemical, physical and biological integrity of navigable waters and Act required that, in adopting water quality standards, state take into consideration use of waters for propagation of fish and wildlife. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 303(c)(2)(A), 401, 502(19), as amended, [33 U.S.C.A. §§ 1251\(a\), 1313\(c\)\(2\)\(A\), 1341, 1362\(19\)](#).

[7] Environmental Law 149E 197[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

Clean Water Act provision requiring state to institute comprehensive standards establishing water quality goals for intrastate waters, consisting of designated uses of navigable waters involved and water quality criteria for those waters based on those uses, requires that a project for which water quality certification is required be consistent with both designated use and water quality criteria; project that does not comply with designated use of water does not comply with applicable water quality standards. Federal Water Pollution Control Act Amendments of 1972, §§ 303(c)(2)(A), 401, as amended, [33 U.S.C.A. §§ 1313\(c\)\(2\)\(A\), 1341](#).

[8] Environmental Law 149E 197[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

For purposes of state Clean Water Act water quality certification provisions, certification requirement that applicant operate hydroelectric project consistent with state water quality standards, that is, consistently with designated uses of water body and water quality criteria, is both a “limitation” to ensure “compliance with * * * limitations” imposed under state water quality standards provision and an “appropriate” requirement of state law. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[9] Environmental Law 149E 189[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek187](#) Water Quality Standards or Plans[149Ek189](#) k. Classification of waters; designated uses. [Most Cited Cases](#)

(Formerly 199k25.7(17.1) Health and Environment)

Environmental Law 149E 190[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek187](#) Water Quality Standards or Plans[149Ek190](#) k. Particular water quality standards and criteria. [Most Cited Cases](#)

(Formerly 199k25.7(17.1) Health and Environment)

Clean Water Act water quality standards provisions contemplated enforcement of water use requirements as well as more specific and objective “criteria” contained in state water quality standards, given open ended nature of criteria themselves and in light of fact that Act permitted enforcement of broad narrative criteria based on qualities such as “aesthetics.” Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[10] Environmental Law 149E 189[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek187](#) Water Quality Standards or Plans[149Ek189](#) k. Classification of waters; des-

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

ignated uses. [Most Cited Cases](#)
(Formerly 199k25.7(2) Health and Environment)

Environmental Law 149E ↪190[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek187](#) Water Quality Standards or Plans[149Ek190](#) k. Particular water quality standards and criteria. [Most Cited Cases](#)

(Formerly 199k25.7(2) Health and Environment)

Under Clean Water Act, state's reliance on both "use designations" and "criteria to protect water quality" was not anomalous; specific numerical limitations embodied in criteria were convenient enforcement mechanism for identifying minimum water conditions which would generally achieve requisite water quality, while complementary requirement that activities also comport with designated uses enabled state to ensure that each "activity," even if unforeseen by criteria, would be consistent with specific uses and attributes of particular body of water. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[111] Environmental Law 149E ↪188[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek187](#) Water Quality Standards or Plans[149Ek188](#) k. In general. [Most Cited Cases](#)
(Formerly 199k25.7(3) Health and Environment)

Clean Water Act provisions governing state's obligation to institute state water quality standards did not restrict states to enforcement of only criteria component of water quality standards, which would, in essence, require states to study to level of great specificity each individual body of water to ensure that criteria applicable to that water were sufficiently detailed and individualized to fully protect water's designated uses. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[12] Environmental Law 149E ↪197[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

State's imposition of minimum stream flow condition of water quality certification for proposed hydroelectric project was proper application of state and federal antidegradation regulations, as it ensured that existing instream water use would be maintained and protected as required under federal regulations implementing Clean Water Act provisions requiring states to provide water quality certification standards. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313, 1341\(d\)](#).

[13] Environmental Law 149E ↪196[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek196](#) k. Discharge of pollutants. [Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

Clean Water Act provisions governing water quality certification requirements for hydroelectric projects allows regulation by states of water "quantity" as well as water "quality"; in many cases quantity is closely related to water quality, as sufficient lowering of quantity could destroy all designated uses of body of water, and Act recognizes that reduced stream flow could constitute water pollution. Federal Water Pollution Control Act Amendments of 1972, §§ 304(f), 502(19), as amended, [33 U.S.C.A. §§ 1314\(f\), 1362\(19\)](#).

[14] Environmental Law 149E ↪171[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek169](#) Concurrent and Conflicting Statutes or Regulations[149Ek171](#) k. Federal preemption. [Most Cited Cases](#)

(Formerly 199k25.7(3) Health and Environment)

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

Clean Water Act sections providing that state's authority to allocate quantities of water within its jurisdiction could not be superseded, abrogated, or otherwise impaired by the Act and that nothing in the Act could be construed as impairing or affecting state's right or jurisdiction with respect to state's waters, did not exclude water quantity issues from direct regulation under federally controlled water quality standards authorized in Clean Water Act; sections preserved state's authority to allocate water quantity as between users, but did not limit scope of water pollution controls that could be imposed on users who had obtained, pursuant to state law, water allocation. Federal Water Pollution Control Act Amendments of 1972, §§ 101(g), 510(2), as amended, [33 U.S.C.A. §§ 1251\(g\)](#), [1370\(2\)](#).

[\[15\]](#) Environmental Law [149E](#) 197[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek197](#) k. Conditions and limitations.[Most Cited Cases](#)

(Formerly 199k25.7(21.1) Health and Environment)

States [360](#) 18.31[360](#) States[360I](#) Political Status and Relations[360I\(B\)](#) Federal Supremacy; Preemption[360k18.31](#) k. Environment; nuclear projects. [Most Cited Cases](#)

State's authority to impose minimum flow requirement as condition of water quality certification required under Clean Water Act is not limited on theory that it interfered with Federal Energy Regulatory Commission's (FERC) licensing authority under the Federal Power Act; FERC had not yet acted on hydroelectric power project license application and it was possible that FERC would eventually deny application, or that any FERC license would contain same conditions as state certification under Clean Water Act standards. Federal Water Pollution Control Act Amendments of 1972, §§ 303, 401(d), as amended, [33 U.S.C.A. §§ 1313](#), [1341\(d\)](#); Federal Power Act, §§ 1 et seq., 321, as amended, [16 U.S.C.A. §§ 792 et seq.](#), [791a](#).

[\[16\]](#) Environmental Law [149E](#) 120[149E](#) Environmental Law[149EIV](#) Water, Wetlands, and Waterfront Conservation[149Ek119](#) Concurrent and Conflicting Statutes or Regulations[149Ek120](#) k. In general. [Most Cited Cases](#)**Environmental Law [149E](#) 196**[149E](#) Environmental Law[149EV](#) Water Pollution[149Ek194](#) Permits and Certifications[149Ek196](#) k. Discharge of pollutants. [Most Cited Cases](#)

(Formerly 199k25.7(13.1) Health and Environment)

Water Law [405](#) 2696[405](#) Water Law[405XV](#) Navigable Waters[405XV\(C\)](#) Lands Under Water[405XV\(C\)3](#) Reclamation and Improvement[405k2695](#) Permits and Application

Therefore

[405k2696](#) k. In general. [Most Cited](#)[Cases](#)

(Formerly 270k38 Navigable Waters)

Requirement for state water quality certification before federal license or permit could be issued for activities that could result in discharges into navigable waters applied not only to applications for licenses from Federal Energy Regulatory Commission (FERC), but to all federal licenses and permits for activities which could result in discharge into United States navigable waters, including licenses obtained pursuant to Rivers and Harbors Appropriation Act and permits obtained from Army Corps of Engineers for discharge of dredged or fill material. Federal Water Pollution Control Act Amendments of 1972, §§ 401, 403, 404(a, e), as amended, [33 U.S.C.A. §§ 1341](#), [1343](#), [1344](#)(a, e).

****1903 Syllabus ^{FN*}****[FN*](#)** The syllabus constitutes no part of the

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See [United States v. Detroit Lumber Co.](#), 200 U.S. 321, 337, 26 S.Ct. 282, 287, 50 L.Ed. 499.

700** Section 303 of the Clean Water Act requires each State, subject to federal approval, to institute comprehensive standards establishing water quality goals for all intrastate waters, and requires that such standards “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” Under Environmental Protection Agency (EPA) regulations, the standards must also include an antidegradation policy to ensure that “[e]xisting instream water uses and the level of water quality necessary to protect [those] uses [are] maintained and protected.” States are required by § 401 of the Act to provide a water quality certification before a federal license or permit can be issued for any activity that may result in a discharge into intrastate navigable waters. As relevant here, the certification must “set forth any effluent limitations and other limitations ... necessary to assure that any applicant” will comply with various provisions of the Act and “any other appropriate” state law requirement. § 401(d). Under Washington's comprehensive water quality standards, characteristic uses of waters classified as Class AA include fish migration, rearing, and spawning. Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips *1904** River, a Class AA water, which would reduce the water flow in the relevant part of the river to a minimal residual flow of between 65 and 155 cubic feet per second (cfs). In order to protect the river's fishery, respondent state environmental agency issued a § 401 certification imposing, among other things, a minimum stream flow requirement of between 100 and 200 cfs. A state administrative appeals board ruled that the certification condition exceeded respondent's authority under state law, but the State Superior Court reversed. The State Supreme Court affirmed, holding that the antidegradation provisions of the State's water quality standards require the imposition of minimum stream flows, and that § 401 authorized the stream flow condition and conferred on States power to consider all state action related to water quality in imposing conditions on § 401 certifications.

Held: Washington's minimum stream flow re-

quirement is a permissible condition of a § 401 certification. Pp. 1908-1914.

***701** a) A State may impose conditions on certifications insofar as necessary to enforce a designated use contained in the State's water quality standard. Petitioners' claim that the State may only impose water quality limitations specifically tied to a “discharge” is contradicted by § 401(d)'s reference to an applicant's compliance, which allows a State to impose “other limitations” on a project. This view is consistent with EPA regulations providing that activities-not merely discharges-must comply with state water quality standards, a reasonable interpretation of § 401 which is entitled to deference. State standards adopted pursuant to § 303 are among the “other limitations” with which a State may ensure compliance through the § 401 certification process. Although § 303 is not specifically listed in § 401(d), the statute allows States to impose limitations to ensure compliance with § 301 of the Act, and § 301 in turn incorporates § 303 by reference. EPA's view supports this interpretation. Such limitations are also permitted by § 401(d)'s reference to “any other appropriate” state law requirement. Pp. 1908-1910.

(b) Washington's requirement is a limitation necessary to enforce the designated use of the river as a fish habitat. Petitioners err in asserting that § 303 requires States to protect such uses solely through implementation of specific numerical “criteria.” The section's language makes it plain that water quality standards contain two components and is most naturally read to require that a project be consistent with both: the designated use and the water quality criteria. EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. Moreover, the Act permits enforcement of broad, narrative criteria based on, for example, “aesthetics.” There is no anomaly in the State's reliance on both use designations and criteria to protect water quality. Rather, it is petitioners' reading that leads to an unreasonable interpretation of the Act, since specified criteria cannot reasonably be expected to anticipate all the water quality issues arising from every activity that can affect a State's hundreds of individual water bodies. Washington's requirement also is a proper application of the state and federal antidegradation regulations, as it ensures that an existing instream water use will be “maintained and protected.” Pp. 1910-1912.

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

(c) Petitioners' assertion that the Act is only concerned with water quality, not quantity, makes an artificial distinction, since a sufficient lowering of quantity could destroy all of a river's designated uses, and since the Act recognizes that reduced stream flow can constitute water pollution. Moreover, §§ 101(g) and 510(2) of the Act do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. Those provisions preserve each State's authority to allocate water quantity as between *702 users, but the § 401 certification does not purport to determine petitioners' proprietary right to the river's water. In addition, the Court is unwilling to read implied limitations into § 401 based on petitioners' claim that a conflict exists between the condition's imposition and the Federal Energy Regulatory Commission's authority to license hydroelectric**1905 projects under the Federal Power Act, since FERC has not yet acted on petitioners' license application and since § 401's certification requirement also applies to other statutes and regulatory schemes. Pp. 1912-1914.

[121 Wash.2d 179, 849 P.2d 646 \(1992\)](#), affirmed.

[O'CONNOR](#), J., delivered the opinion of the Court, in which [REHNQUIST](#), C.J., and [BLACKMUN](#), [STEVENS](#), [KENNEDY](#), [SOUTER](#), and [GINSBURG](#), JJ., joined. [STEVENS](#), J., filed a concurring opinion, *post*, p. 1914. [THOMAS](#), J., filed a dissenting opinion, in which [SCALIA](#), J., joined, *post*, p. 1915.

[Howard E. Shapiro](#), Washington, DC, for petitioners.

[Christine O. Gregoire](#), Olympia, WA, for respondents.

[Lawrence G. Wallace](#), Washington, DC, for the U.S. as amicus curiae, by special leave of the Court.

For U.S. Supreme Court briefs, see:1993 WL 632338 (Pet.Brief)1993 WL 632337 (Resp.Brief)1994 WL 131622 (Reply.Brief)

*703 Justice [O'CONNOR](#) delivered the opinion of the Court.

Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips River in Washington State. We must decide whether

respondent state environmental agency (hereinafter respondent) properly conditioned a permit for the project on the maintenance of specific minimum stream flows to protect salmon and steelhead runs.

*704 I

This case involves the complex statutory and regulatory scheme that governs our Nation's waters, a scheme that implicates both federal and state administrative responsibilities. The Federal Water Pollution Control Act, commonly known as the Clean Water Act, 86 Stat. 816, as amended, [33 U.S.C. § 1251 et seq.](#), is a comprehensive water quality statute designed to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” [§ 1251\(a\)](#). The Act also seeks to attain “water quality which provides for the protection and propagation of fish, shellfish, and wildlife.” [§ 1251\(a\)\(2\)](#).

To achieve these ambitious goals, the Clean Water Act establishes distinct roles for the Federal and State Governments. Under the Act, the Administrator of the Environmental Protection Agency (EPA) is required, among other things, to establish and enforce technology-based limitations on individual discharges into the country's navigable waters from point sources. See [§§ 1311, 1314](#). Section 303 of the Act also requires each State, subject to federal approval, to institute comprehensive water quality standards establishing water quality goals for all intrastate waters. [§§ 1311\(b\)\(1\)\(C\), 1313](#). These state water quality standards provide “a supplementary basis ... so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.” [EPA v. California ex rel. State Water Resources Control Bd.](#), 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).

A state water quality standard “shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” [33 U.S.C. § 1313\(c\)\(2\)\(A\)](#). In setting standards, the State must comply with the following broad requirements:

“Such standards shall be such as to protect the public health or welfare, enhance the quality of water and *705 serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies,

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

propagation of fish and wildlife, recreational [and other purposes.]” *Ibid.*

See also [§ 1251\(a\)\(2\)](#).

A 1987 amendment to the Clean Water Act makes clear that § 303 also contains an “antidegradation policy”—that is, a policy requiring**1906 that state standards be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation. Specifically, the Act permits the revision of certain effluent limitations or water quality standards “only if such revision is subject to and consistent with the antidegradation policy established under this section.” [§ 1313\(d\)\(4\)\(B\)](#). Accordingly, EPA’s regulations implementing the Act require that state water quality standards include “a statewide antidegradation policy” to ensure that “[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” [40 CFR § 131.12 \(1993\)](#). At a minimum, state water quality standards must satisfy these conditions. The Act also allows States to impose more stringent water quality controls. See [33 U.S.C. §§ 1311\(b\)\(1\)\(C\), 1370](#). See also [40 CFR § 131.4\(a\)](#) (1993) (“As recognized by section 510 of the Clean Water Act [[33 U.S.C. § 1370](#)], States may develop water quality standards more stringent than required by this regulation”).

The State of Washington has adopted comprehensive water quality standards intended to regulate all of the State’s navigable waters. See Washington Administrative Code (WAC) 173-201-010 to 173-201-120 (1986). The State created an inventory of all the State’s waters, and divided the waters into five classes. 173-201-045. Each individual fresh surface water of the State is placed into one of these classes. 173-201-080. The Dosewallips River is classified AA, extraordinary. 173-201-080(32). The water quality *706 standard for Class AA waters is set forth at 173-201-045(1). The standard identifies the designated uses of Class AA waters as well as the criteria applicable to such waters.^{FNI}

^{FNI} WAC 173-201-045(1) (1986) provides in pertinent part:

“(1) **Class AA (extraordinary).**

“(a) General characteristic. Water quality

of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

“(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

“(i) Water supply (domestic, industrial, agricultural).

“(ii) Stock watering.

“(iii) Fish and shellfish:

Salmonid migration, rearing, spawning, and harvesting.

Other fish migration, rearing, spawning, and harvesting.

.....

“(iv) Wildlife habitat.

“(v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).

“(vi) Commerce and navigation.

“(c) Water quality criteria

“(i) Fecal coliform organisms.

“(A) Freshwater-fecal coliform organisms shall not exceed a geometric mean value of 50 organisms/100 mL, with not more than 10 percent of samples exceeding 100 organisms/100 mL.

“(B) Marine water-fecal coliform organisms shall not exceed a geometric mean value of 14 organisms/100 mL, with not more than 10 percent of samples exceeding 43 organisms/100 mL.

“(ii) Dissolved oxygen [shall exceed specific amounts].

.....

“(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

“(vi) Temperature shall not exceed [certain levels].

.....

“(v) pH shall be within [a specified range].

“(vi) Turbidity shall not exceed [specific levels].

“(vii) Toxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use.

“(viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.”

*707 In addition to these specific standards applicable to Class AA waters, the State has adopted a statewide antidegradation policy. That policy provides:

“(a) Existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed.

“(b) No degradation will be allowed of waters lying in national parks, national recreation areas, national wildlife refuges, national scenic rivers, and other areas of national ecological importance.

.....

“(f) In no case, will any degradation of water quality be allowed if this degradation interferes with or becomes injurious to existing water uses and

causes long-term **1907 and irreparable harm to the environment.” 173-201-035(8).

As required by the Act, EPA reviewed and approved the State's water quality standards. See [33 U.S.C. § 1313\(c\)\(3\)](#); [42 Fed.Reg. 56792 \(1977\)](#). Upon approval by EPA, the state standard became “the water quality standard for the applicable waters of that State.” [33 U.S.C. § 1313\(c\)\(3\)](#).

States are responsible for enforcing water quality standards on intrastate waters. § 1319(a). In addition to these primary enforcement responsibilities, § 401 of the Act requires States to provide a water quality certification before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters. [33 U.S.C. § 1341](#). Specifically, § 401 requires an applicant for a federal license or permit to conduct any activity “which may result in any discharge into the navigable waters” to obtain from the State a certification “that any such discharge will comply with the applicable provisions of sections [1311, 1312, 1313, 1316, and 1317 of this title].” [33 U.S.C. § 1341\(a\)](#). Section 401(d) further provides that “[a]ny certification*708 ... shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant ... will comply with any applicable effluent limitations and other limitations, under section [1311 or 1312 of this title] ... and with any other appropriate requirement of State law set forth in such certification.” [33 U.S.C. § 1341\(d\)](#). The limitations included in the certification become a condition on any federal license. *Ibid.* ^{FN2}

^{FN2}. Section 401, as set forth in [33 U.S.C. § 1341](#), provides in relevant part:

“(a) Compliance with applicable requirements; application; procedures; license suspension

“(1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State ... that any such discharge will comply with the applicable provisions of [sections 1311,](#)

[1312](#), [1313](#), [1316](#), and [1317](#) of this title.

.....

“(d) Limitations and monitoring requirements of certification

“Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under [section 1311](#) or [1312](#) of this title, standard of performance under [section 1316](#) of this title, or prohibition, effluent standard, or pretreatment standard under [section 1317](#) of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section.”

II

Petitioners propose to build the Elkhorn Hydroelectric Project on the Dosewallips River. If constructed as presently planned, the facility would be located just outside the Olympic National Park on federally owned land within the Olympic National Forest. The project would divert water from a 1.2-mile reach of the river (the bypass reach), run the *709 water through turbines to generate electricity and then return the water to the river below the bypass reach. Under the Federal Power Act (FPA), 41 Stat. 1063, as amended, [16 U.S.C. § 791a et seq.](#), the Federal Energy Regulatory Commission (FERC) has authority to license new hydroelectric facilities. As a result, petitioners must get a FERC license to build or operate the Elkhorn Project. Because a federal license is required, and because the project may result in discharges into the Dosewallips River, petitioners are also required to obtain state certification of the project pursuant to § 401 of the Clean Water Act, [33 U.S.C. § 1341](#).

The water flow in the bypass reach, which is currently undiminished by appropriation, ranges seasonally between 149 and 738 cubic feet per second (cfs). The Dosewallips supports two species of salmon, coho and chinook, as well as steelhead trout. As originally proposed, the project was to include a di-

version dam which would completely block **1908 the river and channel approximately 75% of the river's water into a tunnel alongside the streambed. About 25% of the water would remain in the bypass reach, but would be returned to the original riverbed through sluice gates or a fish ladder. Depending on the season, this would leave a residual minimum flow of between 65 and 155 cfs in the river. Respondent undertook a study to determine the minimum stream flows necessary to protect the salmon and steelhead fishery in the bypass reach. On June 11, 1986, respondent issued a § 401 water quality certification imposing a variety of conditions on the project, including a minimum stream flow requirement of between 100 and 200 cfs depending on the season.

A state administrative appeals board determined that the minimum flow requirement was intended to enhance, not merely maintain, the fishery, and that the certification condition therefore exceeded respondent's authority under state law. App. to Pet. for Cert. 55a-57a. On appeal, the *710 State Superior Court concluded that respondent could require compliance with the minimum flow conditions. *Id.*, at 29a-45a. The Superior Court also found that respondent had imposed the minimum flow requirement to protect and preserve the fishery, not to improve it, and that this requirement was authorized by state law. *Id.*, at 34a.

The Washington Supreme Court held that the antidegradation provisions of the State's water quality standards require the imposition of minimum stream flows. [121 Wash.2d 179, 186-187, 849 P.2d 646, 650 \(1993\)](#). The court also found that § 401(d), which allows States to impose conditions based upon several enumerated sections of the Clean Water Act and “any other appropriate requirement of State law,” [33 U.S.C. § 1341\(d\)](#), authorized the stream flow condition. Relying on this language and the broad purposes of the Clean Water Act, the court concluded that § 401(d) confers on States power to “consider all state action related to water quality in imposing conditions on section 401 certificates.” [121 Wash.2d, at 192, 849 P.2d, at 652](#). We granted certiorari, [510 U.S. 810, 114 S.Ct. 55, 126 L.Ed.2d 25 \(1993\)](#), to resolve a conflict among the state courts of last resort. See [121 Wash.2d 179, 849 P.2d 646 \(1993\)](#); [Georgia Pacific Corp. v. Dept. of Environmental Conservation](#), 159 Vt. 639, 628 A.2d 944 (1992) (table); [Power Authority of New York v. Williams](#), 60 N.Y.2d 315, 469 N.Y.S.2d 620, 457 N.E.2d 726 (1983). We now affirm.

III

The principal dispute in this case concerns whether the minimum stream flow requirement that the State imposed on the Elkhorn Project is a permissible condition of a § 401 certification under the Clean Water Act. To resolve this dispute we must first determine the scope of the State's authority under § 401. We must then determine whether the limitation at issue here, the requirement that petitioners maintain minimum stream flows, falls within the scope of that authority.

*711 A

There is no dispute that petitioners were required to obtain a certification from the State pursuant to § 401. Petitioners concede that, at a minimum, the project will result in two possible discharges—the release of dredged and fill material during the construction of the project, and the discharge of water at the end of the tailrace after the water has been used to generate electricity. Brief for Petitioners 27–28. Petitioners contend, however, that the minimum stream flow requirement imposed by the State was unrelated to these specific discharges, and that as a consequence, the State lacked the authority under § 401 to condition its certification on maintenance of stream flows sufficient to protect the Dosewallips fishery.

[1][2] If § 401 consisted solely of subsection (a), which refers to a state certification that a “discharge” will comply with certain provisions of the Act, petitioners' assessment of the scope of the State's certification authority would have considerable force. Section 401, however, also contains subsection (d), which expands the State's authority to impose conditions on the certification of a **1909 project. Section 401(d) provides that any certification shall set forth “any effluent limitations and other limitations ... necessary to assure that *any applicant*” will comply with various provisions of the Act and appropriate state law requirements. [33 U.S.C. § 1341\(d\)](#) (emphasis added). The language of this subsection contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a “discharge.” The text refers to the compliance of the applicant, not the discharge. Section 401(d) thus allows the State to impose “other limitations” on the project in general to assure compliance with various provisions of the Clean Water Act and with “any other appropriate requirement of State law.” Although the dissent asserts that

this interpretation of § 401(d) renders § 401(a)(1) superfluous, *post*, at 1916, we see no such anomaly. Section 401(a)(1) identifies the category of activities *712 subject to certification—namely, those with discharges. And § 401(d) is most reasonably read as authorizing additional conditions and limitations on the activity as a whole once the threshold condition, the existence of a discharge, is satisfied.

[3] Our view of the statute is consistent with EPA's regulations implementing § 401. The regulations expressly interpret § 401 as requiring the State to find that “there is a reasonable assurance that the *activity* will be conducted in a manner which will not violate applicable water quality standards.” [40 CFR § 121.2\(a\)\(3\)](#) (1993) (emphasis added). See also EPA, Wetlands and 401 Certification 23 (Apr.1989) (“In 401(d), the Congress has given the States the authority to place any conditions on a water quality certification that are necessary to assure that the applicant will comply with effluent limitations, water quality standards, ... and with ,any other appropriate requirement of State law””). EPA's conclusion that *activities* -not merely discharges—must comply with state water quality standards is a reasonable interpretation of § 401, and is entitled to deference. See, e.g., [Arkansas v. Oklahoma](#), 503 U.S. 91, 110, 112 S.Ct. 1046, 1059, 117 L.Ed.2d 239 (1992); [Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.](#), 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984).

[4] Although § 401(d) authorizes the State to place restrictions on the activity as a whole, that authority is not unbounded. The State can only ensure that the project complies with “any applicable effluent limitations and other limitations, under [\[33 U.S.C. §§ 1311, 1312\]](#)” or certain other provisions of the Act, “and with any other appropriate requirement of State law.” [33 U.S.C. § 1341\(d\)](#). The State asserts that the minimum stream flow requirement was imposed to ensure compliance with the state water quality standards adopted pursuant to § 303 of the Clean Water Act, [33 U.S.C. § 1313](#).

[5] We agree with the State that ensuring compliance with § 303 is a proper function of the § 401 certification. Although § 303 is not one of the statutory provisions listed in § 401(d), *713 the statute allows States to impose limitations to ensure compliance with § 301 of the Act, [33 U.S.C. § 1311](#). Section 301 in turn incorporates § 303 by reference. See

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

[33 U.S.C. § 1311\(b\)\(1\)\(C\)](#); see also [H.R.Conf.Rep. No. 95-830, p. 96](#) (1977), U.S. Code Cong. & Admin. News 1977, pp. 4326, 4471 (“Section 303 is always included by reference where section 301 is listed”). As a consequence, state water quality standards adopted pursuant to § 303 are among the “other limitations” with which a State may ensure compliance through the § 401 certification process. This interpretation is consistent with EPA’s view of the statute. See [40 CFR § 121.2\(a\)\(3\)](#) (1992); EPA, *Wetlands and 401 Certification*, *supra*. Moreover, limitations to assure compliance with state water quality standards are also permitted by § 401(d)’s reference to “any other appropriate requirement of State law.” We do not speculate on what additional state laws, if any, might be incorporated by this language.^{FN3} **1910 But at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are “appropriate” requirements of state law. Indeed, petitioners appear to agree that the State’s authority under § 401 includes limitations designed to ensure compliance with state water quality standards. Brief for Petitioners 9, 21.

^{FN3}. The dissent asserts that § 301 is concerned solely with discharges, not broader water quality standards. *Post*, at 1918, n. 2. Although § 301 does make certain discharges unlawful, see [33 U.S.C. § 1311\(a\)](#), it also contains a broad enabling provision which requires States to take certain actions, to wit: “In order to carry out the objective of this chapter [viz. the chemical, physical, and biological integrity of the Nation’s water] there shall be achieved ... not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, ... established pursuant to any State law or regulations...” [33 U.S.C. § 1311\(b\)\(1\)\(C\)](#). This provision of § 301 expressly refers to state water quality standards, and is not limited to discharges.

B

[6] Having concluded that, pursuant to § 401, States may condition certification upon any limitations necessary to ensure *714 compliance with state water quality standards or any other “appropriate requirement of State law,” we consider whether the minimum flow condition is such a limitation. Under § 303, state water quality standards must “consist of the

designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” [33 U.S.C. § 1313\(c\)\(2\)\(A\)](#). In imposing the minimum stream flow requirement, the State determined that construction and operation of the project as planned would be inconsistent with one of the designated uses of Class AA water, namely “[s]almonid [and other fish] migration, rearing, spawning, and harvesting.” App. to Pet. for Cert. 83a-84a. The designated use of the river as a fish habitat directly reflects the Clean Water Act’s goal of maintaining the “chemical, physical, and biological integrity of the Nation’s waters.” [33 U.S.C. § 1251\(a\)](#). Indeed, the Act defines pollution as “the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water.” [§ 1362\(19\)](#). Moreover, the Act expressly requires that, in adopting water quality standards, the State must take into consideration the use of waters for “propagation of fish and wildlife.” [§ 1313\(c\)\(2\)\(A\)](#).

[7] Petitioners assert, however, that § 303 requires the State to protect designated uses solely through implementation of specific “criteria.” According to petitioners, the State may not require them to operate their dam in a manner consistent with a designated “use”; instead, say petitioners, under § 303 the State may only require that the project comply with specific numerical “criteria.”

We disagree with petitioners’ interpretation of the language of § 303(c)(2)(A). Under the statute, a water quality standard must “consist of the designated uses of the navigable waters involved *and* the water quality criteria for such waters based upon such uses.” [33 U.S.C. § 1313\(c\)\(2\)\(A\)](#) (emphasis added). The text makes it plain that water quality standards contain two components. We think the language*715 of § 303 is most naturally read to require that a project be consistent with *both* components, namely, the designated use *and* the water quality criteria. Accordingly, under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.

[8] Consequently, pursuant to § 401(d) the State may require that a permit applicant comply with both the designated uses and the water quality criteria of the state standards. In granting certification pursuant to § 401(d), the State “shall set forth any ... limitations ... necessary to assure that [the applicant] will comply

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

with any ... limitations under [§ 303] ... and with any other appropriate requirement of State law.” A certification requirement that an applicant operate the project consistently with state water quality standards-*i.e.*, consistently with the designated uses of the water body and the water quality criteria-is both a “limitation” to assure “compl[iance] with ... ****1911** limitations” imposed under § 303, and an “appropriate” requirement of state law.

EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. In its regulations governing state water quality standards, EPA defines criteria as “*elements* of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use.” [40 CFR § 131.3\(b\)](#) (1993) (emphasis added). The regulations further provide that “[w]hen criteria are met, water quality will *generally* protect the designated use.” *Ibid.* (emphasis added). Thus, the EPA regulations implicitly recognize that in some circumstances, criteria alone are insufficient to protect a designated use.

[9] Petitioners also appear to argue that use requirements are too open ended, and that the Act only contemplates enforcement of the more specific and objective “criteria.” But this argument is belied by the open-ended nature of the criteria ***716** themselves. As the Solicitor General points out, even “criteria” are often expressed in broad, narrative terms, such as “there shall be no discharge of toxic pollutants in toxic amounts.” Brief for United States as *Amicus Curiae* 18. See [American Paper Institute, Inc. v. EPA](#), 996 F.2d 346, 349 (CA9 1993). In fact, under the Clean Water Act, only one class of criteria, those governing “toxic pollutants listed pursuant to [section 1317\(a\)\(1\)](#),” need be rendered in numerical form. See [33 U.S.C. § 1313\(c\)\(2\)\(B\)](#); [40 CFR § 131.11\(b\)\(2\)](#) (1993).

Washington's Class AA water quality standards are typical in that they contain several open-ended criteria which, like the use designation of the river as a fishery, must be translated into specific limitations for individual projects. For example, the standards state that “[t]oxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use.” WAC

173-201-045(1)(c)(vii) (1986). Similarly, the state standards specify that “[a]esthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.” 173-201-045(1)(c)(viii). We think petitioners' attempt to distinguish between uses and criteria loses much of its force in light of the fact that the Act permits enforcement of broad, narrative criteria based on, for example, “aesthetics.”

[10] Petitioners further argue that enforcement of water quality standards through use designations renders the water quality criteria component of the standards irrelevant. We see no anomaly, however, in the State's reliance on both use designations and criteria to protect water quality. The specific numerical limitations embodied in the criteria are a convenient enforcement mechanism for identifying minimum water conditions which will generally achieve the requisite water quality. And, in most circumstances, satisfying the criteria will, as EPA recognizes, be sufficient to maintain the ***717** designated use. See [40 CFR § 131.3\(b\)](#) (1993). Water quality standards, however, apply to an entire class of water, a class which contains numerous individual water bodies. For example, in the State of Washington, the Class AA water quality standard applies to 81 specified fresh surface waters, as well as to all “surface waters lying within the mountainous regions of the state assigned to national parks, national forests, and/or wilderness areas,” all “lakes and their feeder streams within the state,” and all “unclassified surface waters that are tributaries to Class AA waters.” WAC 173-201-070 (1986). While enforcement of criteria will in general protect the uses of these diverse waters, a complementary requirement that activities also comport with designated uses enables the States to ensure that each activity-even if not foreseen by the criteria-will be consistent with the specific uses and attributes of a particular body of water.

[11] Under petitioners' interpretation of the statute, however, if a particular criterion, such as turbidity, were missing from the list ****1912** contained in an individual state water quality standard, or even if an existing turbidity criterion were insufficient to protect a particular species of fish in a particular river, the State would nonetheless be forced to allow activities inconsistent with the existing or designated uses. We think petitioners' reading leads to an unreasonable

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

interpretation of the Act. The criteria components of state water quality standards attempt to identify, for all the water bodies in a given class, water quality requirements generally sufficient to protect designated uses. These criteria, however, cannot reasonably be expected to anticipate all the water quality issues arising from every activity that can affect the State's hundreds of individual water bodies. Requiring the States to enforce only the criteria component of their water quality standards would in essence require the States to study to a level of great specificity each individual surface water to ensure that the criteria applicable to that water are sufficiently detailed and individualized to fully protect the *718 water's designated uses. Given that there is no textual support for imposing this requirement, we are loath to attribute to Congress an intent to impose this heavy regulatory burden on the States.

The State also justified its minimum stream flow as necessary to implement the "antidegradation policy" of § 303, [33 U.S.C. § 1313\(d\)\(4\)\(B\)](#). When the Clean Water Act was enacted in 1972, the water quality standards of all 50 States had antidegradation provisions. These provisions were required by federal law. See U.S. Dept. of Interior, Federal Water Pollution Control Administration, Compendium of Department of Interior Statements on Non-degradation of Interstate Waters 1-2 (Aug. 1968); see also Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water*, 62 Iowa L.Rev. 643, 658-660 (1977). By providing in 1972 that existing state water quality standards would remain in force until revised, the Clean Water Act ensured that the States would continue their antidegradation programs. See [33 U.S.C. § 1313\(a\)](#). EPA has consistently required that revised state standards incorporate an antidegradation policy. And, in 1987, Congress explicitly recognized the existence of an "antidegradation policy established under [§ 303]." [§ 1313\(d\)\(4\)\(B\)](#).

[12] EPA has promulgated regulations implementing § 303's antidegradation policy, a phrase that is not defined elsewhere in the Act. These regulations require States to "develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy." [40 CFR § 131.12 \(1993\)](#). These "implementation methods shall, at a minimum, be consistent with the ... [e]xisting instream water uses and the level of water quality necessary to protect the

existing uses shall be maintained and protected." *Ibid.* EPA has explained that under its antidegradation regulation, "no activity is allowable ... which could partially or completely eliminate any existing use." EPA, Questions and *719 Answers on Antidegradation 3 (Aug. 1985). Thus, States must implement their antidegradation policy in a manner "consistent" with existing uses of the stream. The State of Washington's antidegradation policy in turn provides that "[e]xisting beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed." WAC 173-201-035(8)(a) (1986). The State concluded that the reduced stream flows would have just the effect prohibited by this policy. The Solicitor General, representing EPA, asserts, Brief for United States as *Amicus Curiae* 18-21, and we agree, that the State's minimum stream flow condition is a proper application of the state and federal antidegradation regulations, as it ensures that an "existing instream water us [e]" will be "maintained and protected." [40 CFR § 131.12\(a\)\(1\)](#) (1993).

[13] Petitioners also assert more generally that the Clean Water Act is only concerned with water "quality," and does not allow the regulation of water "quantity." This is an artificial distinction. In many cases, water quantity is closely related to water quality; a sufficient lowering of the **1913 water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery. In any event, there is recognition in the Clean Water Act itself that reduced stream flow, *i.e.*, diminishment of water quantity, can constitute water pollution. First, the Act's definition of pollution as "the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water" encompasses the effects of reduced water quantity. [33 U.S.C. § 1362\(19\)](#). This broad conception of pollution—one which expressly evinces Congress' concern with the physical and biological integrity of water—refutes petitioners' assertion that the Act draws a sharp distinction between the regulation of water "quantity" and water "quality." Moreover, § 304 of the Act expressly recognizes that water "pollution" may result from "changes *720 in the movement, flow, or circulation of any navigable waters ..., including changes caused by the construction of dams." [33 U.S.C. § 1314\(f\)](#). This concern with the flowage effects of dams and other diversions is also embodied in the EPA regulations, which expressly require existing dams to be operated to attain desig-

nated uses. [40 CFR § 131.10\(g\)\(4\)](#) (1992).

[14] Petitioners assert that two other provisions of the Clean Water Act, §§ 101(g) and 510(2), [33 U.S.C. §§ 1251\(g\)](#) and [1370\(2\)](#), exclude the regulation of water quantity from the coverage of the Act. Section 101(g) provides “that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter.” [33 U.S.C. § 1251\(g\)](#). Similarly, § 510(2) provides that nothing in the Act shall “be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters ... of such States.” [33 U.S.C. § 1370](#). In petitioners' view, these provisions exclude “water quantity issues from direct regulation under the federally controlled water quality standards authorized in § 303.” Brief for Petitioners 39 (emphasis deleted).

This language gives the States authority to allocate water rights; we therefore find it peculiar that petitioners argue that it prevents the State from regulating stream flow. In any event, we read these provisions more narrowly than petitioners. Sections 101(g) and 510(2) preserve the authority of each State to allocate water quantity as between users; they do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. In [California v. FERC](#), [495 U.S. 490, 498, 110 S.Ct. 2024, 2029, 109 L.Ed.2d 474 \(1990\)](#), construing an analogous provision of the Federal Power Act,^{FN4} we explained that “minimum stream *721 flow requirements neither reflect nor establish ‘proprietary rights’” to water. Cf. [First Iowa Hydro-Electric Cooperative v. FPC](#), [328 U.S. 152, 176, and n. 20, 66 S.Ct. 906, 917, and n. 20, 90 L.Ed. 1143 \(1946\)](#). Moreover, the certification itself does not purport to determine petitioners' proprietary right to the water of the Dosewallips. In fact, the certification expressly states that a “State Water Right Permit (Chapters 90.03.250 RCW and 508-12 WAC) must be obtained prior to commencing construction of the project.” App. to Pet. for Cert. 83a. The certification merely determines the nature of the use to which that proprietary right may be put under the Clean Water Act, if and when it is obtained from the State. Our view is reinforced by the legislative history of the 1977 amendment to the Clean Water Act adding § 101(g). See 3 Legislative History of the Clean Water Act of 1977 (Committee Print compiled for the Committee on Environment and Public Works by the

Library of Congress), Ser. No. 95-14, p. 532 (1978) (“The requirements [of the Act] may incidentally affect individual water rights.... **1914 It is not the purpose of this amendment to prohibit those incidental effects. It is the purpose of this amendment to insure that State allocation systems are not subverted, and that effects on individual rights, if any, are prompted by legitimate and necessary water quality considerations”).

[FN4](#). The relevant text of the Federal Power Act provides that “nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.” 41 Stat. 1077, [16 U.S.C. § 821](#).

IV

[15] Petitioners contend that we should limit the State's authority to impose minimum flow requirements because FERC has comprehensive authority to license hydroelectric projects pursuant to the FPA, [16 U.S.C. § 791a et seq.](#) In petitioners' view, the minimum flow requirement imposed here interferes with FERC's authority under the FPA.

*722 The FPA empowers FERC to issue licenses for projects “necessary or convenient ... for the development, transmission, and utilization of power across, along, from, or in any of the streams ... over which Congress has jurisdiction.” § 797(e). The FPA also requires FERC to consider a project's effect on fish and wildlife. §§ 797(e), 803(a)(1). In [California v. FERC](#), [supra](#), we held that the California Water Resources Control Board, acting pursuant to state law, could not impose a minimum stream flow which conflicted with minimum stream flows contained in a FERC license. We concluded that the FPA did not “save” to the States this authority. [Id.](#), at 498.

No such conflict with any FERC licensing activity is presented here. FERC has not yet acted on petitioners' license application, and it is possible that FERC will eventually deny petitioners' application altogether. Alternatively, it is quite possible, given that FERC is required to give equal consideration to the protection of fish habitat when deciding whether to issue a license, that any FERC license would contain

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

the same conditions as the state § 401 certification. Indeed, at oral argument the Deputy Solicitor General stated that both EPA and FERC were represented in this proceeding, and that the Government has no objection to the stream flow condition contained in the § 401 certification. Tr. of Oral Arg. 43-44.

[16] Finally, the requirement for a state certification applies not only to applications for licenses from FERC, but to all federal licenses and permits for activities which may result in a discharge into the Nation's navigable waters. For example, a permit from the Army Corps of Engineers is required for the installation of any structure in the navigable waters which may interfere with navigation, including piers, docks, and ramps. Rivers and Harbors Appropriation Act of 1899, 30 Stat. 1151, § 10, [33 U.S.C. § 403](#). Similarly, a permit must be obtained from the Army Corps of Engineers *723 for the discharge of dredged or fill material, and from the Secretary of the Interior or Agriculture for the construction of reservoirs, canals, and other water storage systems on federal land. See [33 U.S.C. §§ 1344\(a\), \(e\)](#); [43 U.S.C. § 1761](#) (1988 ed. and Supp. IV). We assume that a § 401 certification would also be required for some licenses obtained pursuant to these statutes. Because § 401's certification requirement applies to other statutes and regulatory schemes, and because any conflict with FERC's authority under the FPA is hypothetical, we are unwilling to read implied limitations into § 401. If FERC issues a license containing a stream flow condition with which petitioners disagree, they may pursue judicial remedies at that time. Cf. [Escondido Mut. Water Co. v. La Jolla Band of Mission Indians](#), [466 U.S. 765, 778, n. 20](#), [104 S.Ct. 2105, 2113, n. 20](#), [80 L.Ed.2d 753](#) (1984).

In summary, we hold that the State may include minimum stream flow requirements in a certification issued pursuant to § 401 of the Clean Water Act insofar as necessary to enforce a designated use contained in a state water quality standard. The judgment of the Supreme Court of Washington, accordingly, is affirmed.

So ordered.

Justice [STEVENS](#), concurring.

While I agree fully with the thorough analysis in the Court's opinion, I add this comment**1915 for emphasis. For judges who find it unnecessary to go

behind the statutory text to discern the intent of Congress, this is (or should be) an easy case. Not a single sentence, phrase, or word in the Clean Water Act purports to place any constraint on a State's power to regulate the quality of its own waters more stringently than federal law might require. In fact, the Act explicitly recognizes States' ability to impose stricter standards. See, e.g., § 301(b)(1)(C), [33 U.S.C. § 1311\(b\)\(1\)\(C\)](#).

*724 Justice [THOMAS](#), with whom Justice [SCALIA](#) joins, dissenting.

The Court today holds that a State, pursuant to § 401 of the Clean Water Act, may condition the certification necessary to obtain a federal license for a proposed hydroelectric project upon the maintenance of a minimum flow rate in the river to be utilized by the project. In my view, the Court makes three fundamental errors. First, it adopts an interpretation that fails adequately to harmonize the subsections of § 401. Second, it places no meaningful limitation on a State's authority under § 401 to impose conditions on certification. Third, it gives little or no consideration to the fact that its interpretation of § 401 will significantly disrupt the carefully crafted federal-state balance embodied in the Federal Power Act. Accordingly, I dissent.

I

A

Section 401(a)(1) of the Federal Water Pollution Control Act, otherwise known as the Clean Water Act (CWA or Act), [33 U.S.C. § 1251 et seq.](#), provides that “[a]ny applicant for a Federal license or permit to conduct any activity ..., which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates ... that any such discharge will comply with ... applicable provisions of [the CWA].” [33 U.S.C. § 1341\(a\)\(1\)](#). The terms of § 401(a)(1) make clear that the purpose of the certification process is to ensure that discharges from a project will meet the requirements of the CWA. Indeed, a State's authority under § 401(a)(1) is limited to certifying that “any discharge” that “may result” from “any activity,” such as petitioners' proposed hydroelectric project, will “comply” with the enumerated provisions of the CWA; if the discharge will fail to comply, the State may “den[y]” the certification. *Ibid*. In addition, under § 401(d), a State may place conditions on a *725 § 401 certification, including “effluent limitations and

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

other limitations, and monitoring requirements,” that may be necessary to ensure compliance with various provisions of the CWA and with “any other appropriate requirement of State law.” [§ 1341\(d\)](#).

The minimum stream flow condition imposed by respondents in this case has no relation to any possible “discharge” that might “result” from petitioners' proposed project. The term “discharge” is not defined in the CWA, but its plain and ordinary meaning suggests “a flowing or issuing out,” or “something that is emitted.” Webster's Ninth New Collegiate Dictionary 360 (1991). Cf. [33 U.S.C. § 1362\(16\)](#) (“The term „discharge” when used without qualification includes a discharge of a pollutant, and a discharge of pollutants”). A minimum stream flow requirement, by contrast, is a limitation on the amount of water the project can take in or divert from the river. See *ante*, at 1908. That is, a minimum stream flow requirement is a limitation on intake—the opposite of discharge. Imposition of such a requirement would thus appear to be beyond a State's authority as it is defined by § 401(a)(1).

The Court remarks that this reading of § 401(a)(1) would have “considerable force,” *ante*, at 1908, were it not for what the Court understands to be the expansive terms of § 401(d). That subsection, as set forth in [33 U.S.C. § 1341\(d\)](#), provides:

“Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that *any applicant* for a Federal license or permit **1916 will comply with any applicable effluent limitations and other limitations, under [section 1311](#) or [1312](#) of this title, standard of performance under [section 1316](#) of this title, or prohibition, effluent standard, or pretreatment standard under [section 1317](#) of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal*726 license or permit subject to the provisions of this section.” (Emphasis added).

According to the Court, the fact that § 401(d) refers to an “applicant,” rather than a “discharge,” complying with various provisions of the Act “contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a „discharge.” ” *Ante*, at 1909. In the Court's view, §

401(d)'s reference to an applicant's compliance “expands” a State's authority beyond the limits set out in § 401(a)(1), *ibid.*, thereby permitting the State in its certification process to scrutinize the applicant's proposed “activity as a whole,” not just the discharges that may result from the activity, *ante*, at 1909. The Court concludes that this broader authority allows a State to impose conditions on a § 401 certification that are unrelated to discharges. *Ante*, at 1908-1909.

While the Court's interpretation seems plausible at first glance, it ultimately must fail. If, as the Court asserts, § 401(d) permits States to impose conditions unrelated to discharges in § 401 certifications, Congress' careful focus on discharges in § 401(a)(1)—the provision that describes the scope and function of the certification process—was wasted effort. The power to set conditions that are unrelated to discharges is, of course, nothing but a conditional power to deny certification for reasons unrelated to discharges. Permitting States to impose conditions unrelated to discharges, then, effectively eliminates the constraints of § 401(a)(1).

Subsections 401(a)(1) and (d) can easily be reconciled to avoid this problem. To ascertain the nature of the conditions permissible under § 401(d), § 401 must be read as a whole. See [United Sav. Assn. of Tex. v. Timbers of Inwood Forest Associates, Ltd.](#), 484 U.S. 365, 371, 108 S.Ct. 626, 630, 98 L.Ed.2d 740 (1988) (statutory interpretation is a “holistic endeavor”). As noted above, § 401(a)(1) limits a State's authority in the certification process to addressing concerns related to discharges and to ensuring that any discharge resulting from a project will comply with specified provisions of the Act. It is reasonable *727 to infer that the conditions a State is permitted to impose on certification must relate to the very purpose the certification process is designed to serve. Thus, while § 401(d) permits a State to place conditions on a certification to ensure compliance of the “applicant,” those conditions must still be related to discharges. In my view, this interpretation best harmonizes the subsections of § 401. Indeed, any broader interpretation of § 401(d) would permit that subsection to swallow § 401(a)(1).

The text of § 401(d) similarly suggests that the conditions it authorizes must be related to discharges. The Court attaches critical weight to the fact that § 401(d) speaks of the compliance of an “applicant,” but

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

that reference, in and of itself, says little about the nature of the conditions that may be imposed under § 401(d). Rather, because § 401(d) conditions can be imposed only to ensure compliance with specified provisions of law—that is, with “applicable effluent limitations and other limitations, under [section 1311](#) or [1312](#) of this title, standard[s] of performance under [section 1316](#) of this title, ... prohibition[s], effluent standard[s], or pretreatment standard[s] under [section 1317](#) of this title, [or] ... any other appropriate requirement[s] of State law”—one should logically turn to those provisions for guidance in determining the nature, scope, and purpose of § 401(d) conditions. Each of the four identified CWA provisions describes discharge-related limitations. See [§ 1311](#) (making it unlawful to discharge any pollutant except in compliance with enumerated provisions of the Act); [§ 1312](#) (establishing effluent limitations on point source discharges); [§ 1316](#) (setting national standards of performance**1917 for the control of discharges); and [§ 1317](#) (setting pretreatment effluent standards and prohibiting the discharge of certain effluents except in compliance with standards).

The final term on the list—“appropriate requirement[s] of State law”—appears to be more general in scope. Because *728 this reference follows a list of more limited provisions that specifically address discharges, however, the principle *ejusdem generis* would suggest that the general reference to “appropriate” requirements of state law is most reasonably construed to extend only to provisions that, like the other provisions in the list, impose discharge-related restrictions. Cf. [Cleveland v. United States](#), 329 U.S. 14, 18, 67 S.Ct. 13, 15-16, 91 L.Ed. 12 (1946) (“Under the *ejusdem generis* rule of construction the general words are confined to the class and may not be used to enlarge it”); [Arcadia v. Ohio Power Co.](#), 498 U.S. 73, 84, 111 S.Ct. 415, 421-422, 112 L.Ed.2d 374 (1990). In sum, the text and structure of § 401 indicate that a State may impose under § 401(d) only those conditions that are related to discharges.

B

The Court adopts its expansive reading of § 401(d) based at least in part upon deference to the “conclusion” of the Environmental Protection Agency (EPA) that § 401(d) is not limited to requirements relating to discharges. *Ante*, at 1909. The agency regulation to which the Court defers is [40 CFR § 121.2\(a\)\(3\)](#) (1993), which provides that the certifica-

tion shall contain “[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.” *Ante*, at 1909. According to the Court, “EPA’s conclusion that *activities* -not merely discharges-must comply with state water quality standards ... is entitled to deference” under [Chevron, U.S.A. Inc. v. Natural Resources Defense Council, Inc.](#), 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). *Ante*, at 1909.

As a preliminary matter, the Court appears to resort to deference under [Chevron](#) without establishing through an initial examination of the statute that the text of the section is ambiguous. See [Chevron, supra](#), at 842-843, 104 S.Ct., at 2781-2182. More importantly, the Court invokes [Chevron](#) deference to support its interpretation even though the Government does not seek *729 deference for the EPA’s regulation in this case. ^{FNI} That the Government itself has not contended that an agency interpretation exists reconciling the scope of the conditioning authority under § 401(d) with the terms of § 401(a)(1) should suggest to the Court that there is no “agenc[y] construction” directly addressing the question. [Chevron, supra](#), at 842, 104 S.Ct., at 2781.

^{FNI} The Government, appearing as *amicus curiae* “supporting affirmance,” instead approaches the question presented by assuming, *arguendo*, that petitioners’ construction of § 401 is correct: “Even if a condition imposed under Section 401(d) were valid only if it assured that a „discharge“ will comply with the State’s water quality standards, the [minimum flow condition set by respondents] satisfies that test.” Brief for United States as *Amicus Curiae* 11.

In fact, the regulation to which the Court defers is hardly a definitive construction of the scope of § 401(d). On the contrary, the EPA’s position on the question whether conditions under § 401(d) must be related to discharges is far from clear. Indeed, the only EPA regulation that specifically addresses the “conditions” that may appear in § 401 certifications speaks exclusively in terms of limiting discharges. According to the EPA, a § 401 certification shall contain “[a] statement of *any conditions* which the certifying agency deems necessary or desirable *with respect to the discharge of the activity*.” [40 CFR § 121.2\(a\)\(4\)](#)

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

(1993) (emphases added). In my view, [§ 121.2\(a\)\(4\)](#) should, at the very least, give the Court pause before it resorts to [Chevron](#) deference in this case.

II

The Washington Supreme Court held that the State's water quality standards, promulgated**1918 pursuant to § 303 of the Act, [33 U.S.C. § 1313](#), were “appropriate” requirements of state law under § 401(d), and sustained the stream flow condition imposed by respondents as necessary to ensure compliance with a “use” of the river as specified in those standards. As an alternative to their argument that § 401(d) conditions must be discharge related, petitioners assert that *730 the state court erred when it sustained the stream flow condition under the “use” component of the State's water quality standards without reference to the corresponding “water quality criteria” contained in those standards. As explained above, petitioners' argument with regard to the scope of a State's authority to impose conditions under § 401(d) is correct. I also find petitioners' alternative argument persuasive. Not only does the Court err in rejecting that § 303 argument, in the process of doing so it essentially removes all limitations on a State's conditioning authority under § 401.

The Court states that, “at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are „appropriate” requirements of state law” under § 401(d). [Ante](#), at 1910. [FN2](#) A water quality standard promulgated pursuant to § 303 must “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.” [33 U.S.C. § 1313\(c\)\(2\)\(A\)](#). The Court asserts that this language “is most naturally read to require that a project be consistent with *both* components, namely, the designated use *and* the water quality criteria.” [Ante](#), at 1910. In the Court's view, then, the “use” of a body of water is independently enforceable through § 401(d) without reference to the corresponding criteria. *Ibid*.

[FN2](#). In the Court's view, § 303 water quality standards come into play under § 401(d) either as “appropriate” requirements of state law or through § 301 of the Act, which, according to the Court, “incorporates § 303 by reference.” [Ante](#), at 1909 (citations omitted). The Court notes that through § 303, “the statute allows States to impose limitations to

ensure compliance with § 301 of the Act.” *Ibid*. Yet § 301 makes unlawful only “the [unauthorized] *discharge* of any pollutant by any person.” [33 U.S.C. § 1311\(a\)](#) (emphasis added); cf. *supra*, at 1916. Thus, the Court's reliance on § 301 as a source of authority to impose conditions unrelated to discharges is misplaced.

The Court's reading strikes me as contrary to common sense. It is difficult to see how compliance with a “use” of a body of water could be enforced without reference to the *731 corresponding criteria. In this case, for example, the applicable “use” is contained in the following regulation: “Characteristic uses shall include, but not be limited to, ... [s]almonid migration, rearing, spawning, and harvesting.” Wash.Admin.Code (WAC) 173-201-045(1)(b)(iii) (1986). The corresponding criteria, by contrast, include measurable factors such as quantities of fecal coliform organisms and dissolved gases in the water. 173-201-045(1)(c)(i) and (ii). [FN3](#) Although the Act does not further address (at least not expressly) the link between “uses” and “criteria,” the regulations promulgated under § 303 make clear that a “use” is an aspirational goal to be attained through compliance with corresponding “criteria.” Those regulations suggest that “uses” are to be “achieved and protected,” and that “water quality criteria” are to be adopted to “protect the designated use[s].” [40 CFR §§ 131.10\(a\), 131.11\(a\)\(1\)](#) (1993).

[FN3](#). Respondents concede that petitioners' project “will likely not violate any of Washington's water quality criteria.” Brief for Respondents 24.

The problematic consequences of decoupling “uses” and “criteria” become clear once the Court's interpretation of § 303 is read in the context of § 401. In the Court's view, a State may condition the § 401 certification “upon *any limitations* necessary to ensure compliance” with the “uses of the water body.” [Ante](#), at 1909-1910 (emphasis added). Under the Court's interpretation, then, state environmental agencies may pursue, through § 401, their water goals in any way they choose; the conditions imposed on certifications need not relate to discharges, nor to water quality criteria, nor to any objective or quantifiable standard, so long as they tend to **1919 make the water more suitable for the uses the State has chosen. In short,

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

once a State is allowed to impose conditions on § 401 certifications to protect “uses” in the abstract, § 401(d) is limitless.

To illustrate, while respondents in this case focused only on the “use” of the Dosewallips River as a fish habitat, this particular river has a number of other “[c]haracteristic uses,” *732 including “[r]ecreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).” WAC 173-201-045(1)(b)(v) (1986). Under the Court’s interpretation, respondents could have imposed any number of conditions related to recreation, including conditions that have little relation to water quality. In [Town of Summersville, 60 FERC ¶ 61,291, p. 61,990 \(1992\)](#), for instance, the state agency required the applicant to “construct ... access roads and paths, low water stepping stone bridges, ... a boat launching facility ..., and a residence and storage building.” These conditions presumably would be sustained under the approach the Court adopts today.^{FN4} In the end, it is difficult to conceive of a condition that would fall outside a State’s § 401(d) authority under the Court’s approach.

^{FN4} Indeed, as the § 401 certification stated in this case, the flow levels imposed by respondents are “in excess of those required to maintain water quality in the bypass region,” App. to Pet. for Cert. 83a, and therefore conditions not related to water quality must, in the Court’s view, be permitted.

III

The Court’s interpretation of § 401 significantly disrupts the careful balance between state and federal interests that Congress struck in the Federal Power Act (FPA), [16 U.S.C. § 791a et seq. Section 4\(e\)](#) of the FPA authorizes the Federal Energy Regulatory Commission (FERC) to issue licenses for projects “necessary or convenient ... for the development, transmission, and utilization of power across, along, from, or in any of the streams ... over which Congress has jurisdiction.” [16 U.S.C. § 797\(e\)](#). In the licensing process, FERC must balance a number of considerations: “[I]n addition to the power and development purposes for which licenses are issued, [FERC] shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational*733 opportunities, and the preservation

of other aspects of environmental quality.” *Ibid.* Section 10(a) empowers FERC to impose on a license such conditions, including minimum stream flow requirements, as it deems best suited for power development and other public uses of the waters. See [16 U.S.C. § 803\(a\)](#); [California v. FERC, 495 U.S. 490, 494-495, 506, 110 S.Ct. 2024, 2027, 109 L.Ed.2d 474 \(1990\)](#).

In [California v. FERC](#), the Court emphasized FERC’s exclusive authority to set the stream flow levels to be maintained by federally licensed hydroelectric projects. California, in order “to protect [a] stream’s fish,” had imposed flow rates on a federally licensed project that were significantly higher than the flow rates established by FERC. *Id.*, at 493, 110 S.Ct., at 2027. In concluding that California lacked authority to impose such flow rates, we stated:

“As Congress directed in FPA § 10(a), FERC set the conditions of the [project] license, including the minimum stream flow, after considering which requirements would best protect wildlife and ensure that the project would be economically feasible, and thus further power development. Allowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal agency determination. FERC has indicated that the California requirements interfere with its comprehensive planning authority, and we agree that allowing California to impose the challenged requirements would be contrary to congressional intent regarding the Commission’s licensing authority and would constitute a veto of the project that was approved and licensed by **1920 FERC.” *Id.*, at 506-507, 110 S.Ct., at 2033-2034 (citations and internal quotation marks omitted).

[California v. FERC](#) reaffirmed our decision in [First Iowa Hydro-Electric Cooperative v. FPC, 328 U.S. 152, 164, 66 S.Ct. 906, 911-912, 90 L.Ed. 1143 \(1946\)](#), in which we warned against “vest[ing] in [state authorities] *734 a veto power” over federal hydroelectric projects. Such authority, we concluded, could “destroy the effectiveness” of the FPA and “subordinate to the control of the State the ,comprehensive” planning” with which the administering federal agency (at that time the Federal Power Commission) was charged. *Ibid.*

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

Today, the Court gives the States precisely the veto power over hydroelectric projects that we determined in *California v. FERC* and *First Iowa* they did not possess. As the language of § 401(d) expressly states, any condition placed in a § 401 certification, including, in the Court's view, a stream flow requirement, “shall become a condition on any Federal license or permit.” 33 U.S.C. § 1341(d) (emphasis added). Any condition imposed by a State under § 401(d) thus becomes a “ter[m] ... of the license as a matter of law,” *Department of Interior v. FERC*, 952 F.2d 538, 548 (CA10 1992) (citation and internal quotation marks omitted), regardless of whether FERC favors the limitation. Because of § 401(d)'s mandatory language, federal courts have uniformly held that FERC has no power to alter or review § 401 conditions, and that the proper forum for review of those conditions is state court.^{FN5} Section 401(d) conditions imposed by States are *735 therefore binding on FERC. Under the Court's interpretation, then, it appears that the mistake of the State in *California v. FERC* was not that it had trespassed into territory exclusively reserved to FERC; rather, it simply had not hit upon the proper device—that is, the § 401 certification—through which to achieve its objectives.

^{FN5}. See, e.g., *Keating v. FERC*, 927 F.2d 616, 622 (CA10 1991) (federal review inappropriate because a decision to grant or deny § 401 certification “presumably turns on questions of substantive state environmental law—an area that Congress expressly intended to reserve to the states and concerning which federal agencies have little competence”); *Department of Interior v. FERC*, 952 F.2d, at 548; *United States v. Marathon Development Corp.*, 867 F.2d 96, 102 (CA1 1989); *Proffitt v. Rohm & Haas*, 850 F.2d 1007, 1009 (CA3 1988). FERC has taken a similar position. See *Town of Summersville*, 60 FERC ¶ 61,291, p. 61,990 (1992) (“[S]ince pursuant to Section 401(d) ... all of the conditions in the water quality certification must become conditions in the license, review of the appropriateness of the conditions is within the purview of state courts and not the Commission. The only alternatives available to the Commission are either to issue a license with the conditions included or to deny” the application altogether); accord, *Central Maine Power Co.*,

52 FERC ¶ 61,033, pp. 61,172-61,173 (1990).

Although the Court notes in passing that “[t]he limitations included in the certification become a condition on any federal license,” *ante*, at 1907, it does not acknowledge or discuss the shift of power from FERC to the States that is accomplished by its decision. Indeed, the Court merely notes that “any conflict with FERC's authority under the FPA” in this case is “hypothetical” at this stage, *ante*, at 1914, because “FERC has not yet acted on petitioners' license application,” *ante*, at 1914. We are assured that “it is quite possible ... that any FERC license would contain the same conditions as the state § 401 certification.” *Ibid*.

The Court's observations simply miss the point. Even if FERC might have no objection to the stream flow condition established by respondents *in this case*, such a happy coincidence will likely prove to be the exception, rather than the rule. In issuing licenses, FERC must balance the Nation's power needs together with the need for energy conservation, irrigation, flood control, fish and wildlife protection, and recreation. 16 U.S.C. § 797(e). State environmental agencies, by contrast, need only consider parochial environmental interests. Cf., e.g., Wash.Rev.Code § 90.54.010(2) (1992) (goal of State's water policy is to “insure that waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington”). As a result, it is likely that conflicts will arise between a **1921 FERC-established stream flow level and a state-imposed level.

Moreover, the Court ignores the fact that its decision nullifies the congressionally mandated process for resolving such state-federal disputes when they develop. Section 10(j)(1) of the FPA, 16 U.S.C. § 803(j)(1), which was added as part *736 of the Electric Consumers Protection Act of 1986 (ECPA), 100 Stat. 1244, provides that every FERC license must include conditions to “protect, mitigate damag[e] to, and enhance” fish and wildlife, including “related spawning grounds and habitat,” and that such conditions “shall be based on recommendations” received from various agencies, including state fish and wildlife agencies. If FERC believes that a recommendation from a state agency is inconsistent with the FPA—that is, inconsistent with what FERC views as the proper

(Cite as: 511 U.S. 700, 114 S.Ct. 1900)

balance between the Nation's power needs and environmental concerns-it must "attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities" of the state agency. [§ 803\(j\)\(2\)](#). If, after such an attempt, FERC "does not adopt in whole or in part a recommendation of any [state] agency," it must publish its reasons for rejecting that recommendation. *Ibid.* After today's decision, these procedures are a dead letter with regard to stream flow levels, because a State's "recommendation" concerning stream flow "shall" be included in the license when it is imposed as a condition under § 401(d).

More fundamentally, the 1986 amendments to the FPA simply make no sense in the stream flow context if, in fact, the States already possessed the authority to establish minimum stream flow levels under § 401(d) of the CWA, which was enacted years before those amendments. Through the ECPA, Congress strengthened the role of the States in establishing FERC conditions, but it did not make that authority paramount. Indeed, although Congress could have vested in the States the final authority to set stream flow conditions, it instead left that authority with FERC. See [California v. FERC, 495 U.S., at 499, 110 S.Ct., at 2029-2030](#). As the Ninth Circuit observed in the course of rejecting California's effort to give [California v. FERC](#) a narrow reading, "[t]here would be no point in Congress requiring [FERC] to consider the state agency recommendations on environmental matters and *737 make its own decisions about which to accept, if the state agencies had the power to impose the requirements themselves." [Sayles Hydro Associates v. Maughan, 985 F.2d 451, 456 \(1993\)](#).

Given the connection between § 401 and federal hydroelectric licensing, it is remarkable that the Court does not at least attempt to fit its interpretation of § 401 into the larger statutory framework governing the licensing process. At the very least, the significant impact the Court's ruling is likely to have on that process should compel the Court to undertake a closer examination of § 401 to ensure that the result it reaches was mandated by Congress.

IV

Because the Court today fundamentally alters the federal-state balance Congress carefully crafted in the FPA, and because such a result is neither mandated nor supported by the text of § 401, I respectfully dis-

sent.

U.S.Wash.,1994.

PUD No. 1 of Jefferson County v. Washington Dept. of Ecology

511 U.S. 700, 152 P.U.R.4th 190, 114 S.Ct. 1900, 38 ERC 1593, 128 L.Ed.2d 716, 62 USLW 4408, Util. L. Rep. P 13,988, 24 Env'tl. L. Rep. 20,945

END OF DOCUMENT

From: Doug Leeper
To: [Martyn Johnson \(martynellijay@hotmail.com\)](mailto:martynellijay@hotmail.com)
Bcc: [Cara S. Martin](#); [Chris Zajac](#); [Christopher Pettit](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Doug Leeper](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen West](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Michael Molligan](#); [Mike Heyl](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Tammy Hinkle](#); [Veronica Crow](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: Response to Jan 6 E-mail to SWFWMD & Others
Date: Tuesday, February 07, 2012 9:23:00 AM

Martyn:

With this e-mail, I'd like to address the questions included in the e-mail you sent to me and several others on January 6, 2012. In this attempt to address your concerns, I have reproduced text from your e-mail below in italics and blue font and followed the excerpts with responses. Note that your full, original e-mail is reproduced at the bottom of this e-mail.

You wrote: “1. Is baseline for establishing Minimum Flow for the Homosassa River 152 cubic feet per second combined flows from the USGS gage sites Homosassa Main Spring and SE Fork of Homosassa River (Executive Summary, Draft Peer Review July 2010).

YES
NO”

Response: No – As used for development of the proposed minimum flows, ‘baseline’ simply refers to a statistical metric (typically median) characterizing conditions associated with a specific period of flow (benchmark period). For the Homosassa system, two benchmark periods, calendar year 2007 and October 18, 1995 through May 13, 2009, were used to develop minimum flow recommendations. Combined flow records for the USGS Homosassa Main Spring and SE Fork Homosassa River for each benchmark period were used to characterize baseline conditions such as the volume of salinity-based habitat associated where salinities were less than or equal to 5. The baseline conditions evaluated for each benchmark period were associated with the respective median flows, *i.e.*, 130 cfs for the 2007 benchmark period and 150 cfs for the 1995-2009 benchmark period. Because median benchmark flows were used for the analyses, it may be expected that one-half of the flow values during each benchmark period were lower than the median values. Finally, it should be noted that the 152 cfs average flow value included in the Executive Summary of the draft minimum flows report represents the average or mean combined flow for the longer benchmark period, rather than a median value.

You wrote: “2. Is it correct the position taken by SWFWMD is “available data are sufficient for establishing scientifically defensible minimum flows for the..... Homosassa River....”

Available data being from United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River (December 13, 2011 Memo and Peer Review October 2010).

YES
NO”

Response: Yes

You wrote: “3. Is the recommended minimum flows for the Homosassa River system defined as a five percent reduction from baseline flows of 152 cfs which is minimum flow 144 cfs.

Further to my comments about a five year moratorium on new groundwater withdrawals made at the Working Group meetings; there was a basis for my comment.

It is often difficult to clearly understand the bottom line. So let me try to put this simply to get Yes or No responses.

1. Is baseline for establishing Minimum Flow for the Homosassa River 152 cubic feet per second combined flows from the USGS gage sites Homosassa Main Spring and SE Fork of Homosassa River (Executive Summary, Draft Peer Review July 2010).

YES

NO

2. Is it correct the position taken by SWFWMD is “available data are sufficient for establishing scientifically defensible minimum flows for the..... Homosassa River....” Available data being from United States Geological Survey (USGS) gages in the Homosassa Main Spring run and the Southeast Fork of the Homosassa River (December 13, 2011 Memo and Peer Review October 2010).

YES

NO

3. Is the recommended minimum flows for the Homosassa River system defined as a five percent reduction from baseline flows of 152 cfs which is minimum flow 144 cfs.

YES

NO

4. Are criteria set to define when the minimum flow has been reached e.g one day below, one week below, one month below (Peer Review Oct 2010 noted agreement ‘minimum flow do not need to be evaluated seasonally’).

YES

NO

5. If the USGS daily data for combined flows Homosassa Main Spring run and the Southeast Fork of the Homosassa River for the period January 2010 thru December 2011 shows FLOW IS BELOW THE MINIMUM 144 cfs on 84% of the days for which data is available (daily data available 697 days), would you be surprised.

YES

NO

Just may be you should take a look at the data in the attached spreadsheet.

As always commentary and corrections welcome.

Martyn

Notes:

- Point 5. Additionally, for 25% of the days flow was below 20% reduction from the baseline. Less than 10% of days was discharge above the baseline of 152 cfs.
- Point 2 above, although SWFWMD may consider the calculated discharge data from the gage sites ‘scientifically defensible’ please note;
 - USGS in Atlanta have agreed to conduct a top level review of this data
 - feedback from acoustic doppler unit installed SE Fork September still awaited

From: [Mike Heyl](#)
To: [Alan Martyn Johnson](#); [Doug Leeper](#); [Al Grubman \(grubman1@gmail.com\)](#); [Bill Geiger \(bgeiger@cityofbrooksville.us\)](#); [Bill Pouder \(bill.pouder@myfwc.com\)](#); [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](#); [Brad Rimbe \(BWR.CRRC@tampabay.rr.com\)](#); [Brent Whitley \(brentwhitley@sierra-properties.com\)](#); [Brockway, Alys \(abrockway@co.hernando.fl.us\)](#); [Dennis D. Dutcher \(Dennis3ds@aol.com\)](#); [Frank DiGiovanni \(administration@inverness-fl.gov\)](#); [Greenwood, Kathleen \(Kathleen.Greenwood@dep.state.fl.us\)](#); [Helen Spive; Hilliard, Dan \(2buntings@comcast.net\)](#); [Hoehn, Ted](#); [Hope Corona \(hopecorona@tampabay.rr.com\)](#); [Jim Farley \(jfarley682@aol.com\)](#); [Katie Tripp \(ktripp@savethemanatee.org\)](#); [Norman Hopkins \(norman@amyhrf.org\)](#); [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](#); [Richard Kane \(rkane@usgs.gov\)](#); [Richard Radack \(rradack@cityofbrooksville.us\)](#); [Ron Miller \(rmille76@tampabay.rr.com\)](#); [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](#); [Sullivan, Jack \(jsullivan@carltonfields.com\)](#); [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#); [Whitey Markle \(whmarkle@gmail.com\)](#); [\(janicehowie@aol.com\)](#); [Abdon Sidibie \(asidibie@chronicle.online.com\)](#); [Alex McPherson \(aamcpherson@msn.com\)](#); [Ann - 2 Hodgson \(ahodgson@gmail.com\)](#); [Ann Hodgson \(ahodgson@audubon.org\)](#); [Bernard Berauer \(bfberauer@aol.com\)](#); [Beverly Overa \(boverly@tampabay.rr.com\)](#); [Bill Garvin \(wgarvin@tampabay.rr.com\)](#); [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](#); [Brack Barker \(brack154@msn.com\)](#); [Carl Matthai \(thebabesmimi@gmail.com\)](#); [Casey, Emily \(fcnwr@atlantic.net\)](#); [Charles Dean \(dean.charles.web@flsenate.gov\)](#); [Charles Stonerock \(katcha.stonerock3@gmail.com\)](#); [Chris Safos \(chrissafos@embarqmail.com\)](#); [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](#); [Darlene Herth \(2cetechology21@gmail.com\)](#); [Darrell Snedecor \(president@citruscountyaudubon.com\)](#); [Don Hiers \(dhiers3@gmail.com\)](#); [Douglas Dame \(doug_dame@yahoo.com\)](#); [Elaine Luther \(barneyandcap@hotmail.com\)](#); [Emily Casey \(ecasey21@hotmail.com\)](#); [Emma Knight \(eknight@wetlandolutionsinc.com\)](#); [George Harbin \(gharbin@tampabay.rr.com\)](#); [George McClog \(classof47@gmail.com\)](#); [Gorgon O'Connor \(gorgon_o@yahoo.com\)](#); [Harry Steiner \(harry109@aol.com\)](#); [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](#); [Jane Perrin \(jcsperinmd@sbcglobal.net\)](#); [Jerry Morton \(JerrMorton@aol.com\)](#); [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](#); [Jim Collins \(jimmiekey22@yahoo.com\)](#); [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](#); [Joe Calamari](#); [John Lord \(jclord109@yahoo.com\)](#); [John Mayo \(freedomway1@gmail.com\)](#); [Karen Johnstone \(kjohns213@sbcglobal.net\)](#); [Kim Caldwell \(caldwellkimberly@yahoo.com\)](#); [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](#); [Linda Pierce \(tpierce35@tampabay.rr.com\)](#); [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](#); [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](#); [Matthew Corona \(mcorona1@tampabay.rr.com\)](#); [Max Rhinesmith \(rhinesmith@webtv.net\)](#); [Amber Breland](#); [Andy Houston \(ahouston@crystalriverfl.org\)](#); [Art Yerian \(A.Yerian@dep.state.fl.us\)](#); [Ben Weiss](#); [Beth Hovinde](#); [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](#); [Courtney Edwards \(cedwards@savethemanatee.org\)](#); [Dale Jones \(Jones@MyFWC.com\)](#); [Dana Bryan \(dana.bryan@dep.state.fl.us\)](#); [Darrell Snedecor](#); [David Hamilton \(countyadministrator@hernandocounty.us\)](#); [David Hankla \(david_hankla@fws.gov\)](#); [Don Wright \(wright@sura.org\)](#); [Dusty McDevitt \(mcdevitt@usgs.gov\)](#); [Ed Call \(marvin.call@MyFWC.com\)](#); [Eric Nagid \(eric.nagid@MyFWC.com\)](#); [FFWCC MFLs Review E-Mail Address \(fwccconservationplanningservices@myfwc.com\)](#); [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](#); [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](#); [Joyce Kleen@fws.gov](#); [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](#); [Keith Ramos \(Keith.Ramos@fws.gov\)](#); [Kent Smith \(kent.smith2@myfwc.com\)](#); [Kevin Grimsley \(kgrims@usgs.gov\)](#); [Michael Lusk \(Michael_Lusk@fws.gov\)](#); [Mitchell Newberger \(mnewberger@verizon.net\)](#); [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](#); [Nicole Adimey \(Nicole_Adimey@fws.gov\)](#); [Paul Thomas \(paulw.thomas@MyFWC.com\)](#); [Ron Mezich \(ron.mezich@MyFWC.com\)](#); [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](#); [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](#); [Tracy Colson](#); [Wallace, Traci](#); [Adkins, Jim](#); [Bitter, Jim](#); [Bryant, Richard](#); [Cantero, Vince](#); [Carpenter, Paul](#); [Daniels, Chase](#); [Dueker, Duane](#); [Gramling, Hugh](#); [Harrelson, Cathy](#); [Hubbell, Pete](#); [Johnson, Eric](#); [Keim, Robert](#); [Kincaid, Todd](#); [Kline, Allen](#); [Knight, Bob](#); [Knight, Robert](#); [Knudson, Ross](#); [Overa, Tom](#); [Owen, Rick](#); [Parrow, Liz](#); [Rolf Auermann \(rauerman@tampabay.rr.com\)](#); [Rusnak, Teddi](#); [Tarochinoe, Joseph](#); [Watkins, Priscilla](#); [Watrous, Russell](#); [Wilson, Roger](#)
Cc: [Amy K. Harroun](#); [Barbara Matrone](#); [Cara S. Martin](#); [Chris Zajac](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen Lloyd](#); [Ken Weber](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Veronica Craw](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES
Date: Tuesday, February 07, 2012 12:46:38 PM

Mr. Johnson - Regarding your email of January 19, I'd like to clarify a few points for you and those on your distribution list and I have appended your email for continuity. The proposed language to amend F.A.C. 40D-8 that was cited in the District's January 19 response is over 14 months old. As stated, it was the proposed rule amendment in November 2010 and can be found on page 34 of the Governing Board Agenda package for the November 2010 meeting. (It can be found at this url <http://www.swfwmd.state.fl.us/calendar/2011/11/>.) I am not aware of the exact date, but the agenda package was made public and posted on the District's web site in mid-November 2010. The language establishing the minimum flows and levels (MFLs) as a percent of the previous day's flow that was in the draft rule amendment for the Chassahowitzka River system is not new and is included in many of the District's adopted MFLs rules (See F.A.C. 40D – 8), including Upper

Hillsborough, Upper Peace, Middle Peace, Lower Peace, Myakka, Braden (freshwater), Upper Alafia, Lower Alafia, Weeki Wachee and the Anclote rivers. I would further add that the District is in the process of evaluating minimum flow recommendations for the Chassahowitzka River system, and proposed rule amendments for the system are similarly being reviewed.

Contrary to the suppositions advanced in your e-mail, it is not the District's intent to confuse stakeholders through semantics or *"legal jargon about amending a legal definitions by rule changes"* and the motivation to establish MFLs is not to *"just keep on pumping the aquifer."* We are developing MFLs for the Chassahowitzka River system and other priority water bodies to prevent significant harm associated with further withdrawals and are endeavoring to do so in as clear a manner as possible.

In your email, you noted that the Chassahowitzka is a spring-fed river and compared that to the surface water withdrawal example that I provided. I think it may be possible that you are confusing the source of water (spring-fed vs. surface runoff systems) with the mechanism of withdrawing water. In a runoff-dominated system without a significant input from groundwater, the only mechanism for removing water is by pumping directly from the surface water. In a ground-water dominated system, water can be removed by pumping the groundwater or by pumping directly from the surface water. Examples of a surface water withdrawal from a spring-fed system are the permit held by City of Tampa to withdraw water from Sulphur Springs and a permit held by Crystal Springs Preserve LLC to withdraw water from Crystal Springs. Note that the District does not anticipate the issuance of surface water withdrawals from the Chassahowitzka River system.

We will continue to evaluate compliance with the proposed MFLs for the Chassahowitzka and Homosassa River systems by determining groundwater withdrawal impacts to springflow through the use of groundwater flow modeling and other statistical analyses. While not anticipated at this time, we would evaluate any future direct surface water withdrawal in conjunction with existing groundwater impacts to ensure compliance with the proposed MFLs once adopted. In other words, staff would evaluate the effect on springflow from a combination of a direct surface water withdrawal along with existing groundwater use so that the total impact does not exceed the allowable percentages. Compliance with minimum flows that are established for the Chassahowitzka River system will be evaluated at a minimum on an annual basis through use of the Northern District Groundwater flow model and evaluation of rainfall-flow relationships. Compliance with the minimum flows may be also be evaluated whenever a permit application that may be expected to influence flows in the system is submitted to the District.

You also mentioned "recovery plans" and "Impaired Waters list" in your email. Please note that a flow recovery plan is different from a water quality recovery plan. Neither the Chassahowitzka nor the Homosassa system are in flow recovery as defined in 373.0421 F.S., and thus no recovery plan is needed for flow. Statute 373.0421-3.(2) reads in part:

'(2) If the existing flow or level in a water body is below, or is projected to fall within 20 years below, the applicable minimum flow or level established pursuant to s. 373.042, the department or governing board, as part of the regional water supply plan described in s. 373.0361, shall expeditiously implement a recovery or prevention strategy, which

includes the development of additional water supplies or other actions, consistent with the authority granted by this chapter to:

- (a) Achieve recovery to the established minimum flow or level as soon as practicable;*
- or*
- (b) Prevent the existing flow or level from falling below the established minimum flow or level.'*

The state list of Impaired Waters relates to water quality and as you have correctly identified, the Florida Department of Environmental Protection (FDEP) has the statutory authority to regulate pollutant discharges and water quality. If necessary, FDEP will establish a Total Maximum Daily Limit for each system followed by development of a Basin Management Action Plan, which is a recovery plan for water quality analogous to a flow recovery plan.

MGH

=====

Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org

=====

<i>SWFWMD/Ecologic Evaluation</i>	<i>(7:00 am - 3:30 pm)</i>
<i>7601 U.S. Highway 301</i>	<i>1-813-985-7481 Ext 2211</i>
<i>Tampa, Fl. 33637-6759</i>	<i>1-813-987-6747 (Fax)</i>

----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing

=====

Please Note: All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Thursday, January 19, 2012 7:39 PM
To: Doug Leeper; Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley (brentwhitley@sierra-properties.com); Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen (Kathleen.Greenwood@dep.state.fl.us); Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sulllivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechnology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandssolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George

McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Jack Calbeck (calbeckj@citrus.k12.fl.us); Jane Perrin (jicsperrinmd@sbcglobal.net); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (lpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce_Kleen@fws.gov; Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Dueker, Duane; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger
Cc: Amy K. Harroun; Barbara Matrone; Cara S. Martin; Chris Zajac; Darcy A. Brune; Dave Dewitt; Gary E. Williams; Jay Yingling; Karen Lloyd; Ken Weber; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Veronica Craw; Xinjian Chen; Yassert Gonzalez
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Please note the words in Doug's e-mail I have made red lettering and yellow highlight.

If you are concerned about the future of Homosassa, Chassahowitzka, Crystal or any other spring fed river in the SWFWMD this is ESSENTIAL READING.

Baseline flows will be no more if a draft rule is approved, at least as I read this response from SWFWMD (key part copied into this message).

The gap in the quote is a graph which does not copy into the e-mail text so go to the attachment for the complete response.

Yellow highlight added.

QUOTE

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail)

about flows in the Chassahowitzka River and the application of the proposed minimum flows

and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a percentage of

flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent

of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later,

the 63 cfs flow rate is not an MFL criterion.

The percent of flow approach is easier to understand where there is a surface water withdrawal.

A draft 2010 MFL rule for the system read in part (emphasis added):

"40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). **The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent.**"

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you

evaluated, the results would appear as below. Each day is multiplied by 89% to determine how

much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a

recommended MFL, nor does it figure into the application of the MFL rule.

GRAPH GAP

In light of your comments and in rereading the Executive Summary of the November 2010 draft

report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of

the word "baseline" should be improved and clarified. I will endeavor to do so in final report.

Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted.

This value represents the median of daily flows from

1/1/1967 through 11/29/2007. Development of this data set is documented in Chapter 10.1 of

the November draft report. The data set reflects measured and estimated flows slightly

downstream of the Main spring at the present location of the USGS gage

02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than the median. In this case, the record exhibits a statistically significant declining trend that is described in section 2.4 of the November draft report, so it should come as no surprise that the majority of the flow values below the median have occurred in the more recent years. The median flow is simply the "middle point" of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka. It should be noted that ,provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in the following illustration of hypothetical response. In the case of the proposed Chassahowitzka MFL, the following metrics exhibited linear response to flow or salinity and thus are independent of the initial flow value chosen for evaluation:
UNQUOTE

This response was to an e-mail I sent indicating 46% of the days in the last two year flows into the Chassahowitzka were below the minimum flows set in the draft report. A similar e-mail sent a couple of days earlier indicated on 84% of the days in the last two years flows into the Homosassa were below the minimum flows set in the corresponding draft report.

It is worrying to contemplate the agenda are these ideas to confuse us by;
· semantics eg *(From above) If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below...*Chass is a spring fed river, or
· legal jargon about amending a legal definitions by rule changes.
Is it to just keep on pumping the aquifer?

The hypothetical fish reduction graph, if you read the attachment, is.....

Some serious common sense questions need to be answered. What is the minimum flow and what criteria say it has been reached; day, week, month? What are the recovery plans for these rivers (Chassahowitzka and SE Fork of Homosassa are on the Impaired Waters list by Department of Environmental Protection)?

Martyn

I guess this will upset a lot of people, but this needs nipping in the bud. I trust there will be a rethink of this matter and a fast correction made. I could have posted this

on the working group web site but how many would have read it.

From: Doug Leeper
To: [Martyn Johnson \(martynellijay@hotmail.com\)](mailto:Martyn.Johnson@gmail.com)
Bcc: [Cara S. Martin](#); [Chris Zajac](#); [Christopher Pettit](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Doug Leeper](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen West](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Michael Molligan](#); [Mike Heyl](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Tammy Hinkle](#); [Veronica Crow](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: E-Mail on Homosassa Specific Conductance
Date: Tuesday, February 07, 2012 1:36:12 PM
Attachments: [E-Mail from MJohnson - Specific Conductance Homosassa Main Spring 28Jan2012.pdf](#)

Martyn:

I'm writing to acknowledge that the District received your e-mail concerning specific conductance measurement in the Homosassa River system that was sent to R. Rodriguez and me on January 28, 2012.

As always, I thank you for your input and note that your comments and all other public input on the minimum flows and levels development process will be reviewed by staff and made available for consideration by the Governing Board and other persons interested in the Homosassa River system.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: [Mike Heyl](#)
To: [Doug Leeper](#)
Subject: FW: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES
Date: Tuesday, February 07, 2012 1:19:23 PM
Attachments: [image001.png](#)
[image002.png](#)

Fyi. Sounds like Nicole understands. Glad somebody understands us ☺

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Nicole_Adimey@fws.gov [mailto:Nicole_Adimey@fws.gov]
Sent: Tuesday, February 07, 2012 1:01 PM
To: Mike Heyl
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Nice response Mike!

Nicole Adimey
U.S. Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, Florida 32256-7517
904.731.3079 (direct)
904.731.3336 (main)
904.731.3045 (fax)
nicole_adimey@fws.gov
<http://www.fws.gov/northflorida>
▼ Mike Heyl <Mike.Heyl@swfwmd.state.fl.us>

Mike Heyl
<Mike.Heyl@swfwmd.state.fl.us>
02/07/2012 12:46 PM

To Alan Martyn Johnson
<martynellijay@hotmail.com>, Doug Leeper
<Doug.Leeper@swfwmd.state.fl.us>, "Al
Grubman (grubman1@gmail.com)"
<grubman1@gmail.com>, "Bill Geiger
(bgeiger@cityofbrooksville.us)"
<bgeiger@cityofbrooksville.us>, "Bill Pouder
(bill.pouder@myfwc.com)"
<bill.pouder@myfwc.com>, "Boyd Blihovde
(Boyd_Blihovde@fws.gov)"
<boyd_blihovde@fws.gov>, "Brad Rimbe
(BWR.CRRRC@tampabay.rr.com)"
<bwr.crrc@tampabay.rr.com>, "Brent Whitley
(brentwhitley@sierra-properties.com)"

<brentwhitley@sierra-properties.com>,
"Brockway, Alys
(abrockway@co.hernando.fl.us)"
<abrockway@co.hernando.fl.us>, "Dennis D.
Dutcher (Dennis3ds@aol.com)"
<dennis3ds@aol.com>, "Frank DiGiovanni
(administration@inverness-fl.gov)"
<administration@inverness-fl.gov>, "Greenwood,
Kathleen (Kathleen.Greenwood@dep.state.fl.us)"
<kathleen.greenwood@dep.state.fl.us>, Helen
Spive <manatees2@gmail.com>, "Hilliard, Dan
(2buntings@comcast.net)"
<2buntings@comcast.net>, "Hoehn, Ted"
<ted.hoehn@myfwc.com>, "Hope Corona
(hopecorona@tampabay.rr.com)"
<hopecorona@tampabay.rr.com>, "Jim Farley
(jfarley682@aol.com)" <jfarley682@aol.com>,
"Katie Tripp (ktripp@savethemanatee.org)"
<ktripp@savethemanatee.org>, "Norman Hopkins
(norman@amyhrf.org)" <norman@amyhrf.org>,
"Rebecca Bays (rebecca.bays@bocc.citrus.fl.us)"
<rebecca.bays@bocc.citrus.fl.us>, "Richard Kane
(rkane@usgs.gov)" <rkane@usgs.gov>, "Richard
Radacky (rradacky@cityofbrooksville.us)"
<rradacky@cityofbrooksville.us>, "Ron Miller
(rmille76@tampabay.rr.com)"
<rmille76@tampabay.rr.com>, "Sarah Tenison
(cityofweekiwachee@yahoo.com)"
<cityofweekiwachee@yahoo.com>, "Sullivan,
Jack (jsullivan@carltonfields.com)"
<jjsullivan@carltonfields.com>, "Voyles, Carolyn
(Carolyn.Voyles@dep.state.fl.us)"
<carolyn.voyles@dep.state.fl.us>, "Whitey
Markle (whmarkle@gmail.com)"
<whmarkle@gmail.com>,
"janicehowie@aol.com)"
<janicehowie@aol.com>, "Abdon Sidibie
(asidibie@chronicle.online.com)"
<asidibie@chronicle.online.com>, "Alex
McPherson (aamcpherson@msn.com)"
<aamcpherson@msn.com>, "Ann - 2 Hodgson
(ahodgson@gmail.com)"
<ahodgson@gmail.com>, "Ann Hodgson
(ahodgson@audubon.org)"
<ahodgson@audubon.org>, "Bernard Berauer
(bfberauer@aol.com)" <bfberauer@aol.com>,
"Beverly Overa (boverly@tampabay.rr.com)"
<boverly@tampabay.rr.com>, "Bill Garvin
(wgarvin@tampabay.rr.com)"
<wgarvin@tampabay.rr.com>, "Bob Caldwell
(Bobcaldwell51@yahoo.com)"
<bobcaldwell51@yahoo.com>, "Brack Barker
(brack154@msn.com)" <brack154@msn.com>,
"Carl Matthai (thebabesmimi@gmail.com)"
<thebabesmimi@gmail.com>, "Casey, Emily
(fcnwr@atlantic.net)" <fcnwr@atlantic.net>,
"Charles Dean (dean.charles.web@flsenate.gov)"
<dean.charles.web@flsenate.gov>, "Charles
Stonerock (katcha.stonerock3@gmail.com)"
<katcha.stonerock3@gmail.com>, "Chris Safos
(chrissafos@embarqmail.com)"
<chrissafos@embarqmail.com>, "Czerwinski,
Mike (mczerwin@tampabay.rr.com)"
<mczerwin@tampabay.rr.com>, "Darlene Herth
(2cetechnology21@gmail.com)"

<2cetechnology21@gmail.com>, "Darrell Snedecor (president@citruscountyaudubon.com)"
<president@citruscountyaudubon.com>, "Don Hiers (dhiers3@gmail.com)"
<dhiers3@gmail.com>, "Douglas Dame (doug_dame@yahoo.com)"
<doug_dame@yahoo.com>, "Elaine Luther (barneyandcap@hotmail.com)"
<barneyandcap@hotmail.com>, "Emily Casey (ecasey21@hotmail.com)"
<ecasey21@hotmail.com>, "Emma Knight (eknight@wetlandsolutionsinc.com)"
<eknight@wetlandsolutionsinc.com>, "George Harbin (gharbin@tampabay.rr.com)"
<gharbin@tampabay.rr.com>, "George McClog (classof47@gmail.com)"
<classof47@gmail.com>, "Gorgon O'Connor (gorgon_o@yahoo.com)"
<gorgon_o@yahoo.com>, "Harry Steiner (harry109@aol.com)" <harry109@aol.com>,
"Jack Calbeck (calbeckj@citrus.k12.fl.us)"
<calbeckj@citrus.k12.fl.us>, "Jane Perrin (jcsperinmd@sbcglobal.net)"
<jcsperinmd@sbcglobal.net>, "Jerry Morton (JerrMorton@aol.com)" <jerrmorton@aol.com>,
"Jessie Gourlie (gourliej@thirdplanetwind.com)"
<gourliej@thirdplanetwind.com>, "Jim Collins (jimmiekey22@yahoo.com)"
<jimmiekey22@yahoo.com>, "Jimmie Smith (Jimmie.Smith@myfloridahouse.gov)"
<jimmie.smith@myfloridahouse.gov>, Joe Calamari <jcalamari@coastal-engineering.com>,
"John Lord (jclord109@yahoo.com)"
<jclord109@yahoo.com>, "John Mayo (freedomway1@gmail.com)"
<freedomway1@gmail.com>, "Karen Johnstone (kjohns213@sbcglobal.net)"
<kjohns213@sbcglobal.net>, "Kim Caldwell (caldwell.kimberly@yahoo.com)"
<caldwell.kimberly@yahoo.com>, "Kim Dinkins (kim.dinkins@marioncountyfl.org)"
<kim.dinkins@marioncountyfl.org>, "Linda Pierce (tpierce35@tampabay.rr.com)"
<tpierce35@tampabay.rr.com>, "Linda Vanderveen (hernandoaudubon@yahoo.com)"
<hernandoaudubon@yahoo.com>, "Mary Anne Lynn (mlynn1978@tampabay.rr.com)"
<mlynn1978@tampabay.rr.com>, "Matthew Corona (mcorona1@tampabay.rr.com)"
<mcorona1@tampabay.rr.com>, "Max Rhinesmith (rhinesmith@webtv.net)"
<rhinesmith@webtv.net>, Amber Breland <amber_breland@fws.gov>, "Andy Houston (ahouston@crystalriverfl.org)"
<ahouston@crystalriverfl.org>, "Art Yerian (Al.Yerian@dep.state.fl.us)"
<art.yerian@dep.state.fl.us>, Ben Weiss <benjamin_weiss@fws.gov>, Beth Hovinde <bethse@gmail.com>, "Brad Thorpe (brad.thorpe@bocc.citrus.fl.us)"
<brad.thorpe@bocc.citrus.fl.us>, "Courtney Edwards (cedwards@savethemanatee.org)"
<cedwards@savethemanatee.org>, "Dale Jones (Jones@MyFWC.com)" <jones@myfwc.com>,

"Dana Bryan (dana.bryan@dep.state.fl.us)"
<dana.bryan@dep.state.fl.us>, Darrell Snedecor
<darrell@snedecors.com>, "David Hamilton
(countyadministrator@hernandocounty.us)"
<countyadministrator@hernandocounty.us>,
"David Hankla (david_hankla@fws.gov)"
<david_hankla@fws.gov>, "Don Wright
(wright@sura.org)" <wright@sura.org>, "Dusty
McDevitt (mcdevitt@usgs.gov)"
<mcdevitt@usgs.gov>, "Ed Call
(marvin.call@MyFWC.com)"
<marvin.call@myfwc.com>, "Eric Nagid
(eric.nagid@MyFWC.com)"
<eric.nagid@myfwc.com>, "FFWCC MFLs
Review E-Mail Address
(fwcconservationplanningservices@myfwc.com)"
<fwcconservationplanningservices@myfwc.com>,
"J. J. Kenney (jj.kenney@bocc.citrus.fl.us)"
<jj.kenney@bocc.citrus.fl.us>, "Jennene Norman-
Vacha (jnvacha@ci.brooksville.fl.us)"
<jnvacha@ci.brooksville.fl.us>,
"Joyce_Kleen@fws.gov"
<joyce_kleen@fws.gov>, "Kandi Harper
(kandi.harper@bocc.citrus.fl.us)"
<kandi.harper@bocc.citrus.fl.us>, "Keith Ramos
(Keith.Ramos@fws.gov)"
<keith.ramos@fws.gov>, "Kent Smith
(kent.smith2@myfwc.com)"
<kent.smith2@myfwc.com>, "Kevin Grimsley
(kjgrims@usgs.gov)" <kjgrims@usgs.gov>,
"Michael Lusk (Michael_Lusk@fws.gov)"
<michael_lusk@fws.gov>, "Mitchell Newberger
(mnewberger@verizon.net)"
<mnewberger@verizon.net>, "Nick Robbins
(Nick.Robbins@dep.state.fl.us)"
<nick.robbins@dep.state.fl.us>, "Nicole Adimey
(Nicole_Adimey@fws.gov)"
<nicole_adimey@fws.gov>, "Paul Thomas
(paulw.thomas@MyFWC.com)"
<paulw.thomas@myfwc.com>, "Ron Mezich
(ron.mezich@MyFWC.com)"
<ron.mezich@myfwc.com>, "Shelly Yaun
(shelly.yaun@dep.state.fl.us)"
<shelly.yaun@dep.state.fl.us>, "Toby Brewer
(Toby.Brewer@dep.state.fl.us)"
<toby.brewer@dep.state.fl.us>, Tracy Colson
<tracymanatee@centurylink.net>, "Wallace,
Traci" <traci.wallace@myfwc.com>, "Adkins,
Jim" <jadkins@hernandocounty.us>, "Bitter, Jim"
<jbitter@tampabay.rr.com>, "Bryant, Richard"
<rangerrb@bellsouth.net>, "Cantero, Vince"
<vince.cantero@bocc.citrus.fl.us>, "Carpenter,
Paul" <paul.carp@verizon.net>, "Daniels, Chase"
<chase.daniels@myfloridahouse.gov>, "Dueker,
Duane" <duanedueker@aol.com>, "Gramling,
Hugh" <hgramling@tbwg.org>, "Harrelson,
Cathy" <cathyharrelson@gmail.com>, "Hubbell,
Pete" <phubbell@wraconsultants.com>, "Johnson,
Eric" <eric.johnson@myfwc.com>, "Keim,
Robert" <rkeim@gmail.com>, "Kincaid, Todd"
<kincaid@geohydros.com>, "Kline, Allen"
<pastoralfarm@netsignia.net>, "Knight, Bob"
<bknight@wetlandsolutionsinc.com>, "Knight,
Robert" <robert.knight@bocc.citrus.fl.us>,
"Knudson, Ross" <rosssef@aol.com>, "Overa,

Tom" <tovera1@tampabay.rr.com>, "Owen,
Rick" <richard.owen@dep.state.fl.us>, "Parrow,
Liz" <eparrow@pjp2.net>, "Rolf Auermann
(rauerman@tampabay.rr.com)"
<rauerman@tampabay.rr.com>, "Rusnak, Teddi"
<tcrusnak@tampabay.rr.com>, "Tarochinoe,
Joseph" <tarkie38@yahoo.com>, "Watkins,
Priscilla" <priswat@tampabay.rr.com>, "Watrous,
Russell" <russelljwatrous@yahoo.com>,
"Wilson, Roger"
<rogerseminole@tampabay.rr.com>

cc" Amy K. Harroun"

<Amy.Harroun@swfwmd.state.fl.us>, Barbara
Matrone <Barbara.Matrone@swfwmd.state.fl.us>,
"Cara S. Martin"

<Cara.Martin@swfwmd.state.fl.us>, Chris Zajac
<Chris.Zajac@swfwmd.state.fl.us>, "Darcy A.
Brune" <Darcy.Brune@swfwmd.state.fl.us>,
Dave Dewitt <Dave.Dewitt@swfwmd.state.fl.us>,
"Gary E. Williams"

<Gary.Williams@swfwmd.state.fl.us>, Jay
Yingling <Jay.Yingling@swfwmd.state.fl.us>,
Karen Lloyd <Karen.Lloyd@swfwmd.state.fl.us>,
Ken Weber <Ken.Weber@swfwmd.state.fl.us>,
"Kenneth R. Herd"

<Ken.Herd@swfwmd.state.fl.us>, Laura
Donaldson

<Laura.Donaldson@swfwmd.state.fl.us>, Lou
Kavouras <Lou.Kavouras@swfwmd.state.fl.us>,
Mark Barcelo

<Mark.Barcelo@swfwmd.state.fl.us>, Mark
Hammond

<Mark.Hammond@swfwmd.state.fl.us>, Paul
Williams <Paul.Williams@swfwmd.state.fl.us>,
"Robyn O. Felix"

<Robyn.Felix@swfwmd.state.fl.us>, Ron Basso
<Ron.Basso@swfwmd.state.fl.us>, Sid Flannery
<Sid.Flannery@swfwmd.state.fl.us>, Veronica
Craw <Veronica.Craw@swfwmd.state.fl.us>,
Xinjian Chen

<Xinjian.Chen@swfwmd.state.fl.us>, Yassert
Gonzalez

<Yassert.Gonzalez@swfwmd.state.fl.us>

Subject:RE: Update - Chassahowitzka and Homosassa
Minimum Flows READ THE WORDS
CAREFULLY THIS IS ABOUT RULE
CHANGES

Mr. Johnson - Regarding your email of January 19, I'd like to clarify a few points for you and those on your distribution list and I have appended your email for continuity. The proposed language to amend F.A.C. 40D-8 that was cited in the District's January 19 response is over 14 months old. As stated, it was the proposed rule amendment in November 2010 and can be found on page 34 of the Governing Board Agenda package for the November 2010 meeting. (It can be found at this url <http://www.swfwmd.state.fl.us/calendar/2011/11/>.) I am not aware of the exact date, but the agenda package was made public and posted on the District's web site in mid-November 2010. The language establishing the minimum flows and levels (MFLs) as a percent of the previous day's flow that was in the draft rule amendment for the Chassahowitzka River system is not new and is included in many of the District's adopted MFLs rules (See F.A.C. 40D – 8), including Upper Hillsborough, Upper Peace, Middle Peace, Lower Peace, Myakka, Braden (freshwater), Upper Alafia, Lower Alafia, Weeki Wachee and the Anclote rivers. I would further add that the District is in the process of evaluating minimum flow recommendations for the Chassahowitzka River system, and proposed rule amendments for the system are

similarly being reviewed.

Contrary to the suppositions advanced in your e-mail, it is not the District’s intent to confuse stakeholders through semantics or “*legal jargon about amending a legal definitions by rule changes*” and the motivation to establish MFLs is not to “*just keep on pumping the aquifer.*” We are developing MFLs for the Chassahowitzka River system and other priority water bodies to prevent significant harm associated with further withdrawals and are endeavoring to do so in as clear a manner as possible.

In your email, you noted that the Chassahowitzka is a spring-fed river and compared that to the surface water withdrawal example that I provided. I think it may be possible that you are confusing the source of water (spring-fed vs. surface runoff systems) with the mechanism of withdrawing water. In a runoff-dominated system without a significant input from groundwater, the only mechanism for removing water is by pumping directly from the surface water. In a ground-water dominated system, water can be removed by pumping the groundwater or by pumping directly from the surface water. Examples of a surface water withdrawal from a spring-fed system are the permit held by City of Tampa to withdraw water from Sulphur Springs and a permit held by Crystal Springs Preserve LLC to withdraw water from Crystal Springs. Note that the District does not anticipate the issuance of surface water withdrawals from the Chassahowitzka River system.

We will continue to evaluate compliance with the proposed MFLs for the Chassahowitzka and Homosassa River systems by determining groundwater withdrawal impacts to springflow through the use of groundwater flow modeling and other statistical analyses. While not anticipated at this time, we would evaluate any future direct surface water withdrawal in conjunction with existing groundwater impacts to ensure compliance with the proposed MFLs once adopted. In other words, staff would evaluate the effect on springflow from a combination of a direct surface water withdrawal along with existing groundwater use so that the total impact does not exceed the allowable percentages. Compliance with minimum flows that are established for the Chassahowitzka River system will be evaluated at a minimum on an annual basis through use of the Northern District Groundwater flow model and evaluation of rainfall-flow relationships. Compliance with the minimum flows may be also be evaluated whenever a permit application that may be expected to influence flows in the system is submitted to the District.

You also mentioned “recovery plans” and “Impaired Waters list” in your email. Please note that a flow recovery plan is different from a water quality recovery plan. Neither the Chassahowitzka nor the Homosassa system are in flow recovery as defined in 373.0421 F.S., and thus no recovery plan is needed for flow. Statute 373.0421-3.(2) reads in part:

‘(2) If the existing flow or level in a water body is below, or is projected to fall within 20 years below, the applicable minimum flow or level established pursuant to s. 373.042, the department or governing board, as part of the regional water supply plan described in s. 373.0361, shall expeditiously implement a recovery or prevention strategy, which includes the development of additional water supplies or other actions, consistent with the authority granted by this chapter to:
(a) Achieve recovery to the established minimum flow or level as soon as practicable; or
(b) Prevent the existing flow or level from falling below the established minimum flow or level.’

The state list of Impaired Waters relates to water quality and as you have correctly identified, the Florida Department of Environmental Protection (FDEP) has the statutory authority to regulate pollutant discharges and water quality. If necessary, FDEP will establish a Total Maximum Daily Limit for each system followed by development of a Basin Management Action Plan, which is a recovery plan for water quality analogous to a flow recovery plan.

MGH

Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org

SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)

7601 U.S. Highway 301 1-813-985-7481 Ext 2211

Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)

----- Note : District Limit for Incoming Email is 5 Megabytes -----

An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>

This email consists of 100% recycled electrons. Consider the environment before printing

=====

Please Note: All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.

From: Alan Martyn Johnson [<mailto:martynellijay@hotmail.com>]

Sent: Thursday, January 19, 2012 7:39 PM

To: Doug Leeper; Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley (brentwhitley@sierra-properties.com); Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen (Kathleen.Greenwood@dep.state.fl.us); Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandsolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Jack Calbeck (calbeckj@citrus.k12.fl.us); jane Perrin (jcsperinmd@sbcglobal.net); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (tpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwcconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce Kleen@fws.gov; Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger

(mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Dueker, Duane; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger
Cc: Amy K. Harroun; Barbara Matrone; Cara S. Martin; Chris Zajac; Darcy A. Brune; Dave Dewitt; Gary E. Williams; Jay Yingling; Karen Lloyd; Ken Weber; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Veronica Craw; Xinjian Chen; Yassert Gonzalez
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Please note the words in Doug's e-mail I have made red lettering and yellow highlight.

If you are concerned about the future of Homosassa, Chassahowitzka, Crystal or any other spring fed river in the SWFWMD this is ESSENTIAL READING.

Baseline flows will be no more if a draft rule is approved, at least as I read this response from SWFWMD (key part copied into this message).

The gap in the quote is a graph which does not copy into the e-mail text so go to the attachment for the complete response.

Yellow highlight added.

QUOTE

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail) about flows in the Chassahowitzka River and the application of the proposed minimum flows

and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a percentage of

flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent

of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later,

the 63 cfs flow rate is not an MFL criterion.

The percent of flow approach is easier to understand where there is a surface water withdrawal.

A draft 2010 MFL rule for the system read in part (emphasis added):

“40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural

flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent."

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below. Each day is multiplied by 89% to determine how much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a recommended MFL, nor does it figure into the application of the MFL rule.

GRAPH GAP

In light of your comments and in rereading the Executive Summary of the November 2010 draft report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of the word "baseline" should be improved and clarified. I will endeavor to do so in final report.

Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted.

This value represents the median of daily flows from 1/1/1967 through 11/29/2007. Development of this data set is documented in Chapter 10.1 of the November draft report. The data set reflects measured and estimated flows slightly downstream of the Main spring at the present location of the USGS gage 02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than the median. In this case, the record exhibits a statistically significant declining trend that is described in section 2.4 of the November draft report, so it should come as no surprise that the majority of the flow values below the median have occurred in the more recent years. The median flow is simply the "middle point" of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka.

It should be noted that, provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in the following illustration of hypothetical response. In the case of the proposed Chassahowitzka MFL, the following metrics exhibited linear response to flow or salinity and thus are independent of the initial flow value chosen for evaluation:

UNQUOTE

This response was to an e-mail I sent indicating 46% of the days in the last two year flows into the Chassahowitzka were below the minimum flows set in the draft report. A similar e-mail sent a couple of days earlier indicated on 84% of the days in the last two years flows into the Homosassa were below the minimum flows set in the corresponding draft report.

It is worrying to contemplate the agenda are these ideas to confuse us by;

· semantics eg (*From above*) *If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below...* Chass is a spring fed river, or
· legal jargon about amending a legal definitions by rule changes.
Is it to just keep on pumping the aquifer?

The hypothetical fish reduction graph, if you read the attachment, is.....

Some serious common sense questions need to be answered. What is the minimum flow and what criteria say it has been reached; day, week, month? What are the recovery plans for these rivers (Chassahowitzka and SE Fork of Homosassa are on the Impaired Waters list by Department of Environmental Protection)?

Martyn

I guess this will upset a lot of people, but this needs nipping in the bud. I trust there will be a rethink of this matter and a fast correction made. I could have posted this on the working group web site but how many would have read it.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Mike Heyl](mailto:Mike.Heyl@swfwmd.state.fl.us)
To: [Doug Leeper](mailto:Doug.Leeper@watermatters.org)
Subject: FW: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES
Date: Tuesday, February 07, 2012 1:20:03 PM

Another !!!!

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- *Note : District Limit for Incoming Email is 5 Megabytes* -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Brent Whitley [mailto:BrentWhitley@Sierra-Properties.com]
Sent: Tuesday, February 07, 2012 1:12 PM
To: Mike Heyl
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

At some point I hope these folks conclude that your team is not dishonest. I am sure that gets old for you and I sympathize with you guys.

Brent

From: Mike Heyl [mailto:Mike.Heyl@swfwmd.state.fl.us]
Sent: Tuesday, February 07, 2012 12:47 PM
To: Alan Martyn Johnson; Doug Leeper; Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley; Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen (Kathleen.Greenwood@dep.state.fl.us); Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Carl Mattthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene

Herth (2cetechnology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandssolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Jack Calbeck (calbeckj@citrus.k12.fl.us); Jane Perrin (jcsperinmd@sbcglobal.net); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (tpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwwccconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce Kleen (joyce_kleen@fws.gov); Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Dueker, Duane; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger
Cc: Amy K. Harroun; Barbara Matrone; Cara S. Martin; Chris Zajac; Darcy A. Brune; Dave Dewitt; Gary E. Williams; Jay Yingling; Karen Lloyd; Ken Weber; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Veronica Craw; Xinjian Chen; Yassert Gonzalez
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Mr. Johnson - Regarding your email of January 19, I'd like to clarify a few points for you and those on your distribution list and I have appended your email for continuity. The proposed language to amend F.A.C. 40D-8 that was cited in the District's January 19 response is over 14 months old. As stated, it was the proposed rule amendment in November 2010 and can be found on page 34 of the Governing Board Agenda package for the November 2010 meeting. (It can be found at this url <http://www.swfwmd.state.fl.us/calendar/2011/11/>.) I am not aware of the exact date, but the agenda package was made public and posted on the District's web site in mid-November 2010. The language establishing the minimum flows and levels (MFLs) as a percent of the previous day's flow that was in the draft rule amendment for the Chassahowitzka River system is not new and is included in many of the District's adopted MFLs rules (See F.A.C. 40D – 8), including Upper Hillsborough, Upper Peace, Middle Peace, Lower Peace, Myakka, Braden (freshwater), Upper Alafia, Lower Alafia, Weeki Wachee and the Anclote rivers. I would further add that the District is in the process of evaluating minimum flow recommendations for the Chassahowitzka River system, and proposed rule amendments for the system are similarly being reviewed.

Contrary to the suppositions advanced in your e-mail, it is not the District's intent to confuse stakeholders through semantics or "legal jargon about amending a legal definitions by rule

changes” and the motivation to establish MFLs is not to “*just keep on pumping the aquifer.*” We are developing MFLs for the Chassahowitzka River system and other priority water bodies to prevent significant harm associated with further withdrawals and are endeavoring to do so in as clear a manner as possible.

In your email, you noted that the Chassahowitzka is a spring-fed river and compared that to the surface water withdrawal example that I provided. I think it may be possible that you are confusing the source of water (spring-fed vs. surface runoff systems) with the mechanism of withdrawing water. In a runoff-dominated system without a significant input from groundwater, the only mechanism for removing water is by pumping directly from the surface water. In a ground-water dominated system, water can be removed by pumping the groundwater or by pumping directly from the surface water. Examples of a surface water withdrawal from a spring-fed system are the permit held by City of Tampa to withdraw water from Sulphur Springs and a permit held by Crystal Springs Preserve LLC to withdraw water from Crystal Springs. Note that the District does not anticipate the issuance of surface water withdrawals from the Chassahowitzka River system.

We will continue to evaluate compliance with the proposed MFLs for the Chassahowitzka and Homosassa River systems by determining groundwater withdrawal impacts to springflow through the use of groundwater flow modeling and other statistical analyses. While not anticipated at this time, we would evaluate any future direct surface water withdrawal in conjunction with existing groundwater impacts to ensure compliance with the proposed MFLs once adopted. In other words, staff would evaluate the effect on springflow from a combination of a direct surface water withdrawal along with existing groundwater use so that the total impact does not exceed the allowable percentages. Compliance with minimum flows that are established for the Chassahowitzka River system will be evaluated at a minimum on an annual basis through use of the Northern District Groundwater flow model and evaluation of rainfall-flow relationships. Compliance with the minimum flows may be also be evaluated whenever a permit application that may be expected to influence flows in the system is submitted to the District.

You also mentioned “recovery plans” and “Impaired Waters list” in your email. Please note that a flow recovery plan is different from a water quality recovery plan. Neither the Chassahowitzka nor the Homosassa system are in flow recovery as defined in 373.0421 F.S., and thus no recovery plan is needed for flow. Statute 373.0421-3.(2) reads in part:

‘(2) If the existing flow or level in a water body is below, or is projected to fall within 20 years below, the applicable minimum flow or level established pursuant to s. 373.042, the department or governing board, as part of the regional water supply plan described in s. 373.0361, shall expeditiously implement a recovery or prevention strategy, which includes the development of additional water supplies or other actions, consistent with the authority granted by this chapter to:

(a) Achieve recovery to the established minimum flow or level as soon as practicable;

or

(b) Prevent the existing flow or level from falling below the established minimum flow or level.’

The state list of Impaired Waters relates to water quality and as you have correctly identified, the Florida Department of Environmental Protection (FDEP) has the statutory authority to regulate pollutant discharges and water quality. If necessary, FDEP will establish a Total Maximum Daily Limit for each system followed by development of a Basin Management Action Plan, which is a recovery plan for water quality analogous to a flow recovery plan.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Thursday, January 19, 2012 7:39 PM
To: Doug Leeper; Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley (brentwhitley@sierra-properties.com); Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen (Kathleen.Greenwood@dep.state.fl.us); Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandssolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Jack Calbeck (calbeckj@citrus.k12.fl.us); jane Perrin (jensperrinmd@sbcglobal.net); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (lpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max

Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce_Kleen@fws.gov; Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Dueker, Duane; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger
Cc: Amy K. Harroun; Barbara Matrone; Cara S. Martin; Chris Zajac; Darcy A. Brune; Dave Dewitt; Gary E. Williams; Jay Yingling; Karen Lloyd; Ken Weber; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Veronica Craw; Xinjian Chen; Yassert Gonzalez
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Please note the words in Doug's e-mail I have made red lettering and yellow highlight.

If you are concerned about the future of Homosassa, Chassahowitzka, Crystal or any other spring fed river in the SWFWMD this is ESSENTIAL READING.

Baseline flows will be no more if a draft rule is approved, at least as I read this response from SWFWMD (key part copied into this message).

The gap in the quote is a graph which does not copy into the e-mail text so go to the attachment for the complete response.

Yellow highlight added.

QUOTE

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail)

about flows in the Chassahowitzka River and the application of the proposed minimum flows

and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a

percentage of flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later, the 63 cfs flow rate is not an MFL criterion. The percent of flow approach is easier to understand where there is a surface water withdrawal.

A draft 2010 MFL rule for the system read in part (emphasis added):

"40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). **The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent.**"

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below. Each day is multiplied by 89% to determine how much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a recommended MFL, nor does it figure into the application of the MFL rule.

GRAPH GAP

In light of your comments and in rereading the Executive Summary of the November 2010 draft report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of the word "baseline" should be improved and clarified. I will endeavor to do so in final report. Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted.

This value represents the median of daily flows from 1/1/1967 through 11/29/2007. Development of this data set is documented in Chapter 10.1 of the November draft report. The data set reflects measured and estimated flows slightly downstream of the Main spring at the present location of the USGS gage 02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than the median. In this case, the record exhibits a statistically significant declining trend that is

described in section 2.4 of the November draft report, so it should come as no surprise that the majority of the flow values below the median have occurred in the more recent years. The median flow is simply the “middle point” of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka. It should be noted that ,provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in the following illustration of hypothetical response. In the case of the proposed Chassahowitzka MFL, the following metrics exhibited linear response to flow or salinity and thus are independent of the initial flow value chosen for evaluation:
UNQUOTE

This response was to an e-mail I sent indicating 46% of the days in the last two year flows into the Chassahowitzka were below the minimum flows set in the draft report. A similar e-mail sent a couple of days earlier indicated on 84% of the days in the last two years flows into the Homosassa were below the minimum flows set in the corresponding draft report.

It is worrying to contemplate the agenda are these ideas to confuse us by;

- semantics eg *(From above) If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below...Chass is a spring fed river, or*
- legal jargon about amending a legal definitions by rule changes.

Is it to just keep on pumping the aquifer?

The hypothetical fish reduction graph, if you read the attachment, is.....

Some serious common sense questions need to be answered. What is the minimum flow and what criteria say it has been reached; day, week, month? What are the recovery plans for these rivers (Chassahowitzka and SE Fork of Homosassa are on the Impaired Waters list by Department of Environmental Protection)?

Martyn

I guess this will upset a lot of people, but this needs nipping in the bud. I trust there will be a rethink of this matter and a fast correction made. I could have posted this on the working group web site but how many would have read it.

February 7, 2012

MEMORANDUM

TO: File

FROM: Douglas A. Leeper, Chief Environmental Scientist, Ecologic Evaluation Section,
Southwest Florida Water Management District

SUBJECT: Electronic mail correspondence concerning comments from Mr. Martyn Johnson
regarding specific conductance measurement in the Homosassa River system

This memorandum documents correspondence between Mr. Martyn Johnson and Mr. Doug Leeper (with the District) concerning information sent by Mr. Johnson in an e-mail to Mr. Leeper and Mr. Rodriquez with the United States Geological Survey. The information pertains to the measurement of specific conductance in the Homosassa River system. Copies of electronic mails associated with this issue are attached to this memorandum.

DAL

Attachments: A - E-Mail from Marty Johnson to R. Rodriquez and Doug Leeper, Dated January 18, 2012
B - E-Mail from Doug Leeper to Martyn Johnson, Dated February 07, 2012

Attachment A

**E-Mail and Attachments from Martyn Johnson to R. Rodriguez and Doug Leeper,
Dated January 18, 2012**

From: Alan Martyn Johnson
To: R Rodriguez; Doug Leeper
Cc: rake; Kevin J Grimsley; Ron Miller; Al Grubman; Brad Rimley; Norman Hopkins; Brent Whitley
Subject: Specific Conductance Homosassa Main Spring
Date: Saturday, January 28, 2012 9:03:41 AM
Attachments: Homosassa Springs Specific Conductance Graphs.doc
Homosassa Stage-SpecificC 30 days Jan 25.xls

Earlier this week the Homosassa State Park offered to allow me access to the park to sample water at the main spring in order to pursue/confirm my hypothesis regarding variations in the specific conductivity with the stage height.

Next time I am in Homosassa, mid February, I will agree the dates and sampling location. Presently the sampling plan is to sample hourly during park opening hours for three days (Monday Wednesday Friday) at a location as close as possible to the main vent. This should provide sufficient data to confirm the variation in specific conductance is in water emanating from the spring.

USGS are welcome to participate, or may want to pursue other plans to follow up as indicated in an e-mail last year.

The proposed sampling should confirm if the readings are the result of “stratification”; something I doubt given the flow from the main spring and the additional flow from Alligator Spring downstream of the gage site.

Background

Last August I pointed out cycling in the Specific Conductance data from the Homosassa Springs 02310678, suggesting the cycling was generally inverse to stage, that is the lower specific conductance water was discharging at higher stage. My thought was that this resulted from a change in the ratio of water flow from the three vents which combine some 30+ feet down in the main spring vent. This added to and may help explain the increasing trend for higher salinity water I noted in earlier e-mails regarding deterioration of the Homosassa River.

The responses I received were;

“When I look at the data I would say that specific conductance lags the peak gage height but is not inverse of stage. I can't say for sure why the lag but I think it is due to the hydraulics of the system. When the tide comes in some water will go into storage and this could be the reason behind the lag. You probably want to

look at the salinity changes when the tide is out and then note what kind of changes you see. I haven't really looked at this since it is outside the scope of our work orders."

"We're planning on performing a few cross-section conductance measurements to investigate this lag between the water level and conductance cycles. We'll see what those measurements reveal, but we do not believe it has anything to do with variations in flow rates between the vents. We believe this is caused by stratification of flow around the gage location."

The long term trend of increasing specific conductance was pointed out in a graph See Graph 1 in the attached word document. The graph is made difficult to read because of the high specific conductance readings associated with hurricanes. In Graph 2 I have removed the high readings that caused the scale in Graph 1 to be so large. This makes the trend easier to see.

Graph 3 in the word document shows the water levels at the Weeki Wachee Well for the years that specific conductance has been monitored at Homosassa Spring (started June 2004), when looking in more detail at the daily data it correlates with the peaks in minimum daily specific conductance occurring when the well level is lower.

Graph 4 shows the Weeki Wachee Well from 1966 when records started.

Water from the Homosassa main spring is deteriorating due to ingress of sea water most likely occurring because the hydraulic head from the aquifer is less; and so much so that this increased salinity alone may be creating conditions for the barnacle growth that local residents have seen in recent years.

In the attached Excel spreadsheet the specific conductance and stage height for the last 30 days is shown highlighted as follows;

Yellow specific conductance greater than 5400

Blue, specific conductance less than 4000

Red, high stage

Green, low stage

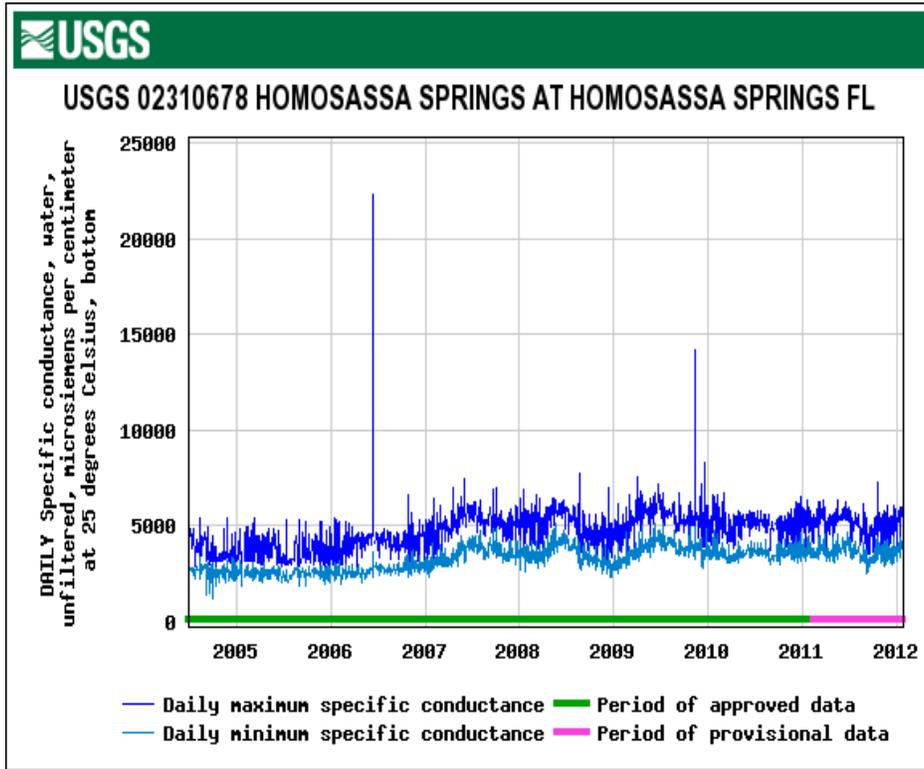
Low specific conductance is associated with high stage, unless the stage height is very low and limited/no salt water intrusion is occurring (Jan 3-5). The yellow high specific conductance occurs after stage heights have exceeded 3.5 feet and maximums occur as the stage is dropping which is indicative that the highest salinity water takes time to elute from the system. Dec 27-28 the stage height was over 4 ft. and the higher level of sea water intrusion (Spec Cond over 5000) can be seen to continue for over 12 hours. This demonstrates how sensitive the system has become.

You are welcome to make your own interpretation.

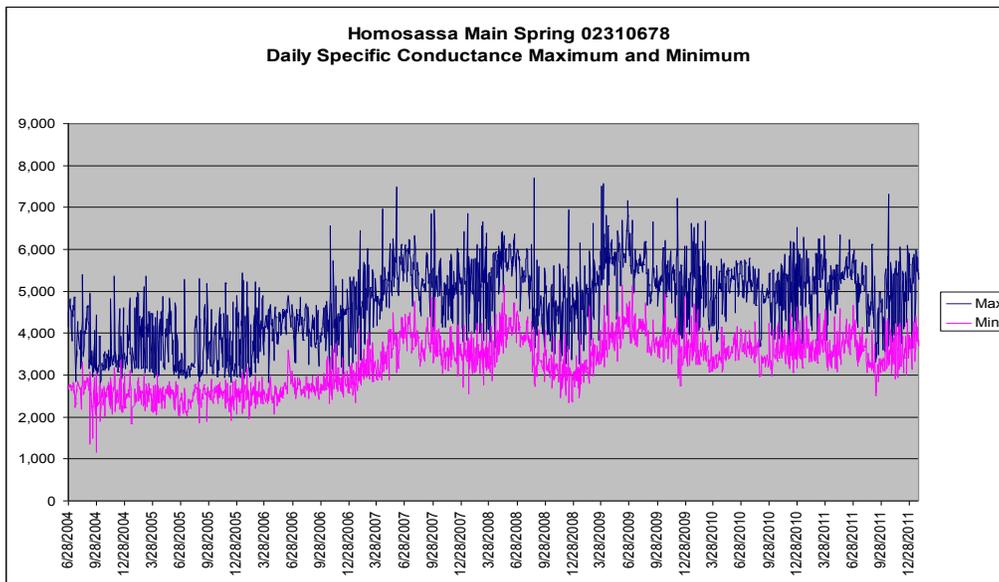
Martyn

E-Mail Attachment No. 1

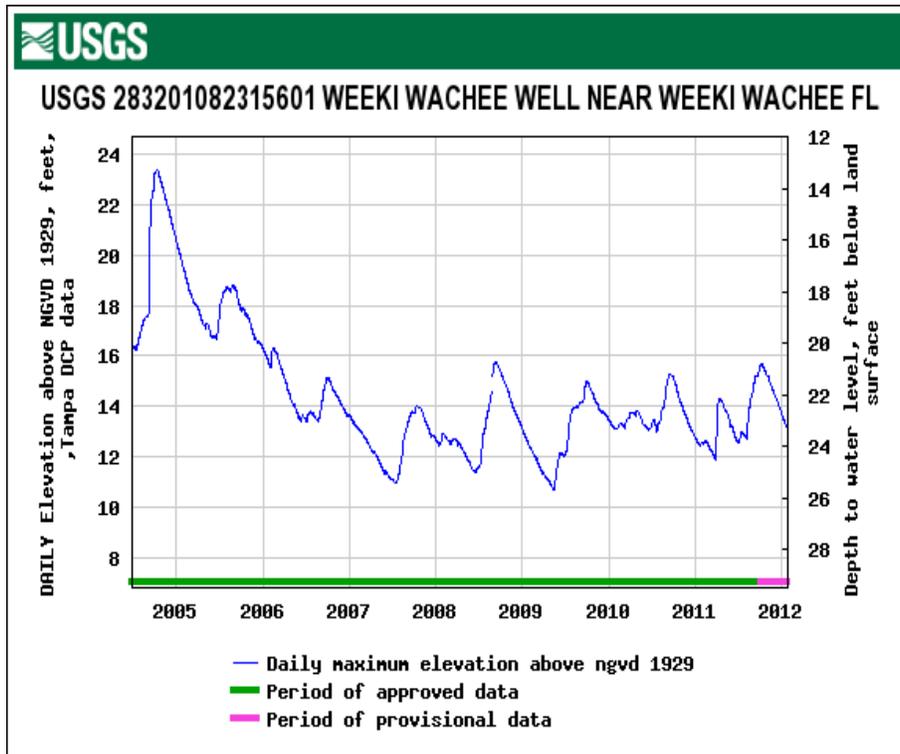
GRAPH 1



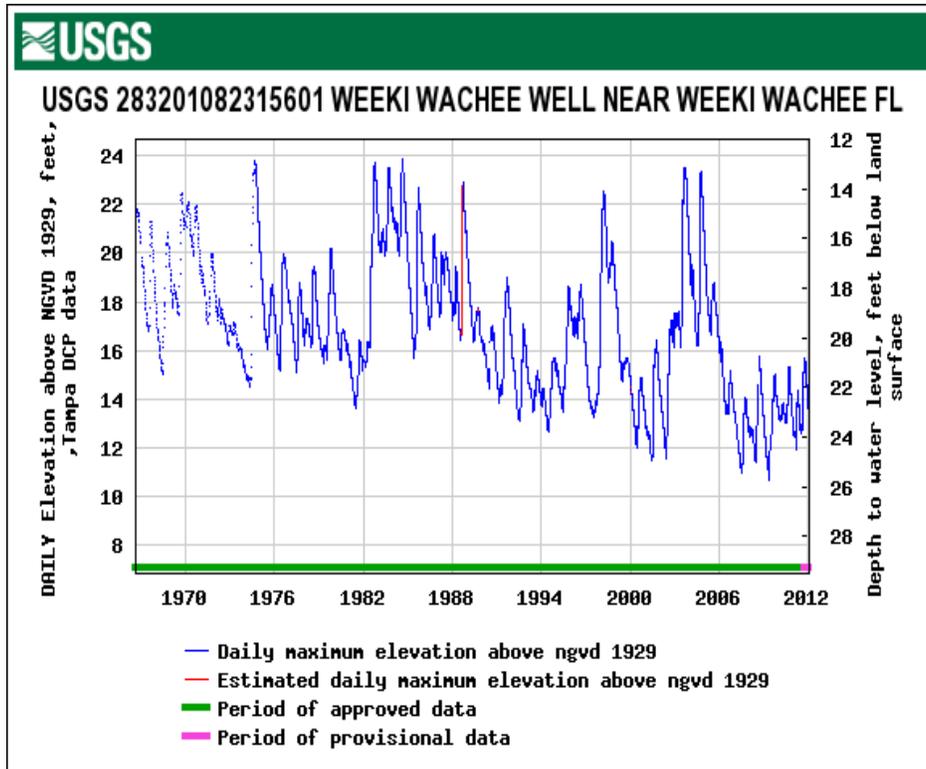
GRAPH 2



GRAPH 3



GRAPH 4



E-Mail Attachment No. 2

Date / Time	Gage height, feet,	Specif- ic conduc- tance, wat unf uS/cm @ 25 degC, bottom
12/26/2011 00:00 EST	2.85 ^P	4,390 ^P
12/26/2011 00:15 EST	2.88 ^P	4,420 ^P
12/26/2011 00:30 EST	2.91 ^P	4,360 ^P
12/26/2011 00:45 EST	2.96 ^P	4,300 ^P
12/26/2011 01:00 EST	3.00 ^P	4,270 ^P
12/26/2011 01:15 EST	3.05 ^P	4,220 ^P
12/26/2011 01:30 EST	3.11 ^P	4,210 ^P
12/26/2011 01:45 EST	3.17 ^P	4,150 ^P
12/26/2011 02:00 EST	3.23 ^P	4,110 ^P
12/26/2011 02:15 EST	3.31 ^P	4,070 ^P
12/26/2011 02:30 EST	3.37 ^P	4,060 ^P
12/26/2011 02:45 EST	3.44 ^P	4,040 ^P
12/26/2011 03:00 EST	3.51 ^P	4,020 ^P
12/26/2011 03:15 EST	3.58 ^P	4,010 ^P
12/26/2011 03:30 EST	3.64 ^P	3,990 ^P
12/26/2011 03:45 EST	3.70 ^P	3,990 ^P
12/26/2011 04:00 EST	3.75 ^P	3,990 ^P
12/26/2011 04:15 EST	3.80 ^P	4,020 ^P
12/26/2011 04:30 EST	3.84 ^P	4,070 ^P
12/26/2011 04:45 EST	3.88 ^P	4,070 ^P
12/26/2011 05:00 EST	3.88 ^P	4,160 ^P
12/26/2011 05:15 EST	3.90 ^P	4,230 ^P
12/26/2011 05:30 EST	3.93 ^P	4,250 ^P
12/26/2011 05:45 EST	3.90 ^P	4,320 ^P
12/26/2011 06:00 EST	3.88 ^P	4,370 ^P
12/26/2011 06:15 EST	3.86 ^P	4,420 ^P
12/26/2011 06:30 EST	3.83 ^P	4,600 ^P
12/26/2011 06:45 EST	3.81 ^P	4,710 ^P

12/26/2011 07:00 EST	3.79 ^P	4,750 ^P
12/26/2011 07:15 EST	3.77 ^P	4,840 ^P
12/26/2011 07:30 EST	3.75 ^P	5,000 ^P
12/26/2011 07:45 EST	3.72 ^P	5,140 ^P
12/26/2011 08:00 EST	3.70 ^P	5,110 ^P
12/26/2011 08:15 EST	3.68 ^P	5,170 ^P
12/26/2011 08:30 EST	3.64 ^P	5,270 ^P
12/26/2011 08:45 EST	3.61 ^P	5,320 ^P
12/26/2011 09:00 EST	3.58 ^P	5,350 ^P
12/26/2011 09:15 EST	3.55 ^P	5,440 ^P
12/26/2011 09:30 EST	3.51 ^P	5,520 ^P
12/26/2011 09:45 EST	3.48 ^P	5,570 ^P
12/26/2011 10:00 EST	3.45 ^P	5,510 ^P
12/26/2011 10:15 EST	3.41 ^P	5,580 ^P
12/26/2011 10:30 EST	3.38 ^P	5,610 ^P
12/26/2011 10:45 EST	3.34 ^P	5,610 ^P
12/26/2011 11:00 EST	3.31 ^P	5,610 ^P
12/26/2011 11:15 EST	3.27 ^P	5,630 ^P
12/26/2011 11:30 EST	3.22 ^P	5,640 ^P
12/26/2011 11:45 EST	3.19 ^P	5,580 ^P
12/26/2011 12:00 EST	3.14 ^P	5,570 ^P
12/26/2011 12:15 EST	3.10 ^P	5,520 ^P
12/26/2011 12:30 EST	3.07 ^P	5,460 ^P
12/26/2011 12:45 EST	3.03 ^P	5,470 ^P
12/26/2011 13:00 EST	2.99 ^P	5,370 ^P
12/26/2011 13:15 EST	2.95 ^P	5,320 ^P
12/26/2011 13:30 EST	2.91 ^P	5,270 ^P
12/26/2011 13:45 EST	2.87 ^P	5,160 ^P
12/26/2011 14:00 EST	2.82 ^P	5,080 ^P
12/26/2011 14:15 EST	2.80 ^P	5,030 ^P
12/26/2011 14:30 EST	2.77 ^P	4,980 ^P
12/26/2011 14:45 EST	2.73 ^P	4,880 ^P
12/26/2011 15:00 EST	2.70 ^P	4,810 ^P
12/26/2011 15:15 EST	2.68 ^P	4,760 ^P
12/26/2011 15:30 EST	2.65 ^P	4,670 ^P
12/26/2011 15:45 EST	2.63 ^P	4,610 ^P
12/26/2011 16:00 EST	2.63 ^P	4,590 ^P
12/26/2011 16:15 EST	2.63 ^P	4,560 ^P
12/26/2011 16:30 EST	2.63 ^P	4,530 ^P
12/26/2011 16:45 EST	2.65 ^P	4,450 ^P
12/26/2011 17:00 EST	2.69 ^P	4,400 ^P
12/26/2011 17:15 EST	2.72 ^P	4,380 ^P
12/26/2011 17:30 EST	2.75 ^P	4,330 ^P

12/26/2011 17:45 EST	2.79 ^P	4,270 ^P
12/26/2011 18:00 EST	2.81 ^P	4,170 ^P
12/26/2011 18:15 EST	2.85 ^P	4,090 ^P
12/26/2011 18:30 EST	2.88 ^P	4,050 ^P
12/26/2011 18:45 EST	2.91 ^P	4,000 ^P
12/26/2011 19:00 EST	2.93 ^P	3,990 ^P
12/26/2011 19:15 EST	2.95 ^P	3,960 ^P
12/26/2011 19:30 EST	2.95 ^P	3,970 ^P
12/26/2011 19:45 EST	2.94 ^P	3,950 ^P
12/26/2011 20:00 EST	2.92 ^P	3,970 ^P
12/26/2011 20:15 EST	2.88 ^P	3,940 ^P
12/26/2011 20:30 EST	2.86 ^P	3,990 ^P
12/26/2011 20:45 EST	2.85 ^P	4,010 ^P
12/26/2011 21:00 EST	2.84 ^P	4,080 ^P
12/26/2011 21:15 EST	2.80 ^P	4,140 ^P
12/26/2011 21:30 EST	2.78 ^P	4,190 ^P
12/26/2011 21:45 EST	2.76 ^P	4,240 ^P
12/26/2011 22:00 EST	2.74 ^P	4,270 ^P
12/26/2011 22:15 EST	2.71 ^P	4,330 ^P
12/26/2011 22:30 EST	2.69 ^P	4,320 ^P
12/26/2011 22:45 EST	2.67 ^P	4,350 ^P
12/26/2011 23:00 EST	2.64 ^P	4,390 ^P
12/26/2011 23:15 EST	2.62 ^P	4,380 ^P
12/26/2011 23:30 EST	2.60 ^P	4,430 ^P
12/26/2011 23:45 EST	2.57 ^P	4,420 ^P
12/27/2011 00:00 EST	2.55 ^P	4,400 ^P
12/27/2011 00:15 EST	2.53 ^P	4,390 ^P
12/27/2011 00:30 EST	2.52 ^P	4,350 ^P
12/27/2011 00:45 EST	2.51 ^P	4,330 ^P
12/27/2011 01:00 EST	2.53 ^P	4,270 ^P
12/27/2011 01:15 EST	2.55 ^P	4,270 ^P
12/27/2011 01:30 EST	2.59 ^P	4,210 ^P
12/27/2011 01:45 EST	2.62 ^P	4,200 ^P
12/27/2011 02:00 EST	2.66 ^P	4,140 ^P
12/27/2011 02:15 EST	2.71 ^P	4,120 ^P
12/27/2011 02:30 EST	2.75 ^P	4,040 ^P
12/27/2011 02:45 EST	2.81 ^P	4,010 ^P
12/27/2011 03:00 EST	2.88 ^P	3,930 ^P
12/27/2011 03:15 EST	2.95 ^P	3,900 ^P
12/27/2011 03:30 EST	3.03 ^P	3,870 ^P
12/27/2011 03:45 EST	3.10 ^P	3,840 ^P
12/27/2011 04:00 EST	3.19 ^P	3,810 ^P
12/27/2011 04:15 EST	3.28 ^P	3,720 ^P

12/27/2011 04:30 EST	3.37 ^P	3,710 ^P
12/27/2011 04:45 EST	3.45 ^P	3,700 ^P
12/27/2011 05:00 EST	3.54 ^P	3,650 ^P
12/27/2011 05:15 EST	3.62 ^P	3,660 ^P
12/27/2011 05:30 EST	3.67 ^P	3,650 ^P
12/27/2011 05:45 EST	3.74 ^P	3,640 ^P
12/27/2011 06:00 EST	3.79 ^P	3,680 ^P
12/27/2011 06:15 EST	3.84 ^P	3,710 ^P
12/27/2011 06:30 EST	3.88 ^P	3,750 ^P
12/27/2011 06:45 EST	3.88 ^P	3,820 ^P
12/27/2011 07:00 EST	3.92 ^P	3,910 ^P
12/27/2011 07:15 EST	3.90 ^P	3,980 ^P
12/27/2011 07:30 EST	3.91 ^P	4,100 ^P
12/27/2011 07:45 EST	3.92 ^P	4,220 ^P
12/27/2011 08:00 EST	3.88 ^P	4,360 ^P
12/27/2011 08:15 EST	3.87 ^P	4,380 ^P
12/27/2011 08:30 EST	3.84 ^P	4,580 ^P
12/27/2011 08:45 EST	3.82 ^P	4,670 ^P
12/27/2011 09:00 EST	3.80 ^P	4,710 ^P
12/27/2011 09:15 EST	3.78 ^P	4,830 ^P
12/27/2011 09:30 EST	3.75 ^P	4,910 ^P
12/27/2011 09:45 EST	3.72 ^P	5,000 ^P
12/27/2011 10:00 EST	3.70 ^P	5,190 ^P
12/27/2011 10:15 EST	3.68 ^P	5,330 ^P
12/27/2011 10:30 EST	3.66 ^P	5,320 ^P
12/27/2011 10:45 EST	3.69 ^P	5,440 ^P
12/27/2011 11:00 EST	3.63 ^P	5,550 ^P
12/27/2011 11:15 EST	3.61 ^P	5,400 ^P
12/27/2011 11:30 EST	3.58 ^P	5,540 ^P
12/27/2011 11:45 EST	3.55 ^P	5,500 ^P
12/27/2011 12:00 EST	3.52 ^P	5,560 ^P
12/27/2011 12:15 EST	3.50 ^P	5,600 ^P
12/27/2011 12:30 EST	3.47 ^P	5,620 ^P
12/27/2011 12:45 EST	3.44 ^P	5,610 ^P
12/27/2011 13:00 EST	3.42 ^P	5,610 ^P
12/27/2011 13:15 EST	3.39 ^P	5,610 ^P
12/27/2011 13:30 EST	3.36 ^P	5,630 ^P
12/27/2011 13:45 EST	3.34 ^P	5,650 ^P
12/27/2011 14:00 EST	3.32 ^P	5,600 ^P
12/27/2011 14:15 EST	3.31 ^P	5,580 ^P
12/27/2011 14:30 EST	3.31 ^P	5,530 ^P
12/27/2011 14:45 EST	3.27 ^P	5,460 ^P
12/27/2011 15:00 EST	3.29 ^P	5,430 ^P

12/27/2011 15:15 EST	3.28 ^P	5,350 ^P
12/27/2011 15:30 EST	3.35 ^P	5,280 ^P
12/27/2011 15:45 EST	3.38 ^P	5,230 ^P
12/27/2011 16:00 EST	3.43 ^P	5,200 ^P
12/27/2011 16:15 EST	3.47 ^P	5,110 ^P
12/27/2011 16:30 EST	3.50 ^P	5,070 ^P
12/27/2011 16:45 EST	3.54 ^P	5,000 ^P
12/27/2011 17:00 EST	3.59 ^P	4,920 ^P
12/27/2011 17:15 EST	3.63 ^P	4,860 ^P
12/27/2011 17:30 EST	3.66 ^P	4,810 ^P
12/27/2011 17:45 EST	3.69 ^P	4,750 ^P
12/27/2011 18:00 EST	3.74 ^P	4,730 ^P
12/27/2011 18:15 EST	3.78 ^P	4,700 ^P
12/27/2011 18:30 EST	3.81 ^P	4,690 ^P
12/27/2011 18:45 EST	3.86 ^P	4,640 ^P
12/27/2011 19:00 EST	3.90 ^P	4,680 ^P
12/27/2011 19:15 EST	3.94 ^P	4,680 ^P
12/27/2011 19:30 EST	3.98 ^P	4,740 ^P
12/27/2011 19:45 EST	4.01 ^P	4,730 ^P
12/27/2011 20:00 EST	4.04 ^P	4,800 ^P
12/27/2011 20:15 EST	4.07 ^P	4,780 ^P
12/27/2011 20:30 EST	4.10 ^P	4,840 ^P
12/27/2011 20:45 EST	4.11 ^P	4,820 ^P
12/27/2011 21:00 EST	4.13 ^P	4,860 ^P
12/27/2011 21:15 EST	4.15 ^P	4,930 ^P
12/27/2011 21:30 EST	4.15 ^P	4,900 ^P
12/27/2011 21:45 EST	4.15 ^P	4,940 ^P
12/27/2011 22:00 EST	4.13 ^P	4,920 ^P
12/27/2011 22:15 EST	4.10 ^P	4,970 ^P
12/27/2011 22:30 EST	4.10 ^P	4,950 ^P
12/27/2011 22:45 EST	4.07 ^P	4,930 ^P
12/27/2011 23:00 EST	4.05 ^P	4,990 ^P
12/27/2011 23:15 EST	4.05 ^P	5,100 ^P
12/27/2011 23:30 EST	4.04 ^P	5,100 ^P
12/27/2011 23:45 EST	4.02 ^P	5,200 ^P
12/28/2011 00:00 EST	3.97 ^P	5,210 ^P
12/28/2011 00:15 EST	3.95 ^P	5,330 ^P
12/28/2011 00:30 EST	3.93 ^P	5,340 ^P
12/28/2011 00:45 EST	3.91 ^P	5,340 ^P
12/28/2011 01:00 EST	3.88 ^P	5,520 ^P
12/28/2011 01:15 EST	3.88 ^P	5,530 ^P
12/28/2011 01:30 EST	3.84 ^P	5,690 ^P
12/28/2011 01:45 EST	3.84 ^P	5,690 ^P

12/28/2011 02:00 EST	3.83 ^P	5,760 ^P
12/28/2011 02:15 EST	3.80 ^P	5,690 ^P
12/28/2011 02:30 EST	3.82 ^P	5,830 ^P
12/28/2011 02:45 EST	3.80 ^P	5,860 ^P
12/28/2011 03:00 EST	3.81 ^P	5,860 ^P
12/28/2011 03:15 EST	3.81 ^P	5,900 ^P
12/28/2011 03:30 EST	3.80 ^P	5,880 ^P
12/28/2011 03:45 EST	3.79 ^P	5,820 ^P
12/28/2011 04:00 EST	3.81 ^P	5,720 ^P
12/28/2011 04:15 EST	3.78 ^P	5,790 ^P
12/28/2011 04:30 EST	3.78 ^P	5,720 ^P
12/28/2011 04:45 EST	3.78 ^P	5,760 ^P
12/28/2011 05:00 EST	3.76 ^P	5,760 ^P
12/28/2011 05:15 EST	3.78 ^P	5,720 ^P
12/28/2011 05:30 EST	3.77 ^P	5,780 ^P
12/28/2011 05:45 EST	3.75 ^P	5,740 ^P
12/28/2011 06:00 EST	3.75 ^P	5,660 ^P
12/28/2011 06:15 EST	3.74 ^P	5,750 ^P
12/28/2011 06:30 EST	3.70 ^P	5,760 ^P
12/28/2011 06:45 EST	3.68 ^P	5,680 ^P
12/28/2011 07:00 EST	3.68 ^P	5,710 ^P
12/28/2011 07:15 EST	3.66 ^P	5,660 ^P
12/28/2011 07:30 EST	3.64 ^P	5,740 ^P
12/28/2011 07:45 EST	3.60 ^P	5,680 ^P
12/28/2011 08:00 EST	3.59 ^P	5,770 ^P
12/28/2011 08:15 EST	3.55 ^P	5,750 ^P
12/28/2011 08:30 EST	3.53 ^P	5,780 ^P
12/28/2011 08:45 EST	3.49 ^P	5,670 ^P
12/28/2011 09:00 EST	3.46 ^P	5,710 ^P
12/28/2011 09:15 EST	3.44 ^P	5,690 ^P
12/28/2011 09:30 EST	3.40 ^P	5,730 ^P
12/28/2011 09:45 EST	3.39 ^P	5,710 ^P
12/28/2011 10:00 EST	3.35 ^P	5,660 ^P
12/28/2011 10:15 EST	3.31 ^P	5,610 ^P
12/28/2011 10:30 EST	3.28 ^P	5,610 ^P
12/28/2011 10:45 EST	3.24 ^P	5,550 ^P
12/28/2011 11:00 EST	3.21 ^P	5,520 ^P
12/28/2011 11:15 EST	3.17 ^P	5,480 ^P
12/28/2011 11:30 EST	3.14 ^P	5,420 ^P
12/28/2011 11:45 EST	3.11 ^P	5,370 ^P
12/28/2011 12:00 EST	3.07 ^P	5,300 ^P
12/28/2011 12:15 EST	3.04 ^P	5,250 ^P
12/28/2011 12:30 EST	3.00 ^P	5,190 ^P

12/28/2011 12:45 EST	2.97 ^P	5,130 ^P
12/28/2011 13:00 EST	2.93 ^P	5,030 ^P
12/28/2011 13:15 EST	2.90 ^P	4,980 ^P
12/28/2011 13:30 EST	2.86 ^P	4,910 ^P
12/28/2011 13:45 EST	2.84 ^P	4,850 ^P
12/28/2011 14:00 EST	2.82 ^P	4,800 ^P
12/28/2011 14:15 EST	2.79 ^P	4,750 ^P
12/28/2011 14:30 EST	2.76 ^P	4,680 ^P
12/28/2011 14:45 EST	2.73 ^P	4,640 ^P
12/28/2011 15:00 EST	2.70 ^P	4,550 ^P
12/28/2011 15:15 EST	2.69 ^P	4,470 ^P
12/28/2011 15:30 EST	2.66 ^P	4,480 ^P
12/28/2011 15:45 EST	2.63 ^P	4,440 ^P
12/28/2011 16:00 EST	2.61 ^P	4,400 ^P
12/28/2011 16:15 EST	2.60 ^P	4,380 ^P
12/28/2011 16:30 EST	2.57 ^P	4,320 ^P
12/28/2011 16:45 EST	2.56 ^P	4,300 ^P
12/28/2011 17:00 EST	2.56 ^P	4,250 ^P
12/28/2011 17:15 EST	2.56 ^P	4,200 ^P
12/28/2011 17:30 EST	2.59 ^P	4,200 ^P
12/28/2011 17:45 EST	2.61 ^P	4,160 ^P
12/28/2011 18:00 EST	2.64 ^P	4,090 ^P
12/28/2011 18:15 EST	2.67 ^P	4,010 ^P
12/28/2011 18:30 EST	2.70 ^P	3,920 ^P
12/28/2011 18:45 EST	2.73 ^P	3,900 ^P
12/28/2011 19:00 EST	2.76 ^P	3,850 ^P
12/28/2011 19:15 EST	2.80 ^P	3,840 ^P
12/28/2011 19:30 EST	2.83 ^P	3,790 ^P
12/28/2011 19:45 EST	2.86 ^P	3,800 ^P
12/28/2011 20:00 EST	2.90 ^P	3,760 ^P
12/28/2011 20:15 EST	2.92 ^P	3,740 ^P
12/28/2011 20:30 EST	2.93 ^P	3,710 ^P
12/28/2011 20:45 EST	2.93 ^P	3,720 ^P
12/28/2011 21:00 EST	2.93 ^P	3,690 ^P
12/28/2011 21:15 EST	2.91 ^P	3,720 ^P
12/28/2011 21:30 EST	2.89 ^P	3,710 ^P
12/28/2011 21:45 EST	2.85 ^P	3,700 ^P
12/28/2011 22:00 EST	2.84 ^P	3,740 ^P
12/28/2011 22:15 EST	2.82 ^P	3,800 ^P
12/28/2011 22:30 EST	2.80 ^P	3,840 ^P
12/28/2011 22:45 EST	2.77 ^P	3,890 ^P
12/28/2011 23:00 EST	2.77 ^P	3,920 ^P
12/28/2011 23:15 EST	2.75 ^P	3,940 ^P

12/28/2011 23:30 EST	2.72 ^P	3,980 ^P
12/28/2011 23:45 EST	2.70 ^P	3,990 ^P
12/29/2011 00:00 EST	2.68 ^P	4,010 ^P
12/29/2011 00:15 EST	2.65 ^P	3,970 ^P
12/29/2011 00:30 EST	2.63 ^P	4,030 ^P
12/29/2011 00:45 EST	2.59 ^P	4,020 ^P
12/29/2011 01:00 EST	2.59 ^P	4,010 ^P
12/29/2011 01:15 EST	2.57 ^P	3,990 ^P
12/29/2011 01:30 EST	2.56 ^P	3,990 ^P
12/29/2011 01:45 EST	2.55 ^P	4,060 ^P
12/29/2011 02:00 EST	2.54 ^P	3,970 ^P
12/29/2011 02:15 EST	2.54 ^P	4,050 ^P
12/29/2011 02:30 EST	2.56 ^P	4,020 ^P
12/29/2011 02:45 EST	2.59 ^P	4,020 ^P
12/29/2011 03:00 EST	2.63 ^P	4,010 ^P
12/29/2011 03:15 EST	2.65 ^P	4,040 ^P
12/29/2011 03:30 EST	2.68 ^P	3,980 ^P
12/29/2011 03:45 EST	2.72 ^P	3,960 ^P
12/29/2011 04:00 EST	2.75 ^P	3,840 ^P
12/29/2011 04:15 EST	2.80 ^P	3,810 ^P
12/29/2011 04:30 EST	2.86 ^P	3,850 ^P
12/29/2011 04:45 EST	2.90 ^P	3,760 ^P
12/29/2011 05:00 EST	2.96 ^P	3,710 ^P
12/29/2011 05:15 EST	3.02 ^P	3,700 ^P
12/29/2011 05:30 EST	3.07 ^P	3,690 ^P
12/29/2011 05:45 EST	3.13 ^P	3,680 ^P
12/29/2011 06:00 EST	3.19 ^P	3,680 ^P
12/29/2011 06:15 EST	3.24 ^P	3,660 ^P
12/29/2011 06:30 EST	3.30 ^P	3,640 ^P
12/29/2011 06:45 EST	3.31 ^P	3,620 ^P
12/29/2011 07:00 EST	3.36 ^P	3,640 ^P
12/29/2011 07:15 EST	3.36 ^P	3,660 ^P
12/29/2011 07:30 EST	3.39 ^P	3,670 ^P
12/29/2011 07:45 EST	3.36 ^P	3,700 ^P
12/29/2011 08:00 EST	3.35 ^P	3,740 ^P
12/29/2011 08:15 EST	3.30 ^P	3,810 ^P
12/29/2011 08:30 EST	3.28 ^P	3,840 ^P
12/29/2011 08:45 EST	3.25 ^P	3,920 ^P
12/29/2011 09:00 EST	3.23 ^P	4,060 ^P
12/29/2011 09:15 EST	3.20 ^P	4,330 ^P
12/29/2011 09:30 EST	3.18 ^P	4,390 ^P
12/29/2011 09:45 EST	3.15 ^P	4,570 ^P
12/29/2011 10:00 EST	3.12 ^P	4,700 ^P

12/29/2011 10:15 EST	3.09 ^P	4,700 ^P
12/29/2011 10:30 EST	3.08 ^P	4,860 ^P
12/29/2011 10:45 EST	3.05 ^P	4,840 ^P
12/29/2011 11:00 EST	2.99 ^P	4,870 ^P
12/29/2011 11:15 EST	2.96 ^P	4,880 ^P
12/29/2011 11:30 EST	2.93 ^P	4,920 ^P
12/29/2011 11:45 EST	2.90 ^P	4,970 ^P
12/29/2011 12:00 EST	2.87 ^P	4,900 ^P
12/29/2011 12:15 EST	2.84 ^P	4,910 ^P
12/29/2011 12:30 EST	2.81 ^P	4,860 ^P
12/29/2011 12:45 EST	2.79 ^P	4,850 ^P
12/29/2011 13:00 EST	2.76 ^P	4,790 ^P
12/29/2011 13:15 EST	2.74 ^P	4,750 ^P
12/29/2011 13:30 EST	2.71 ^P	4,690 ^P
12/29/2011 13:45 EST	2.68 ^P	4,660 ^P
12/29/2011 14:00 EST	2.66 ^P	4,600 ^P
12/29/2011 14:15 EST	2.63 ^P	4,580 ^P
12/29/2011 14:30 EST	2.60 ^P	4,520 ^P
12/29/2011 14:45 EST	2.59 ^P	4,500 ^P
12/29/2011 15:00 EST	2.56 ^P	4,430 ^P
12/29/2011 15:15 EST	2.54 ^P	4,430 ^P
12/29/2011 15:30 EST	2.52 ^P	4,390 ^P
12/29/2011 15:45 EST	2.53 ^P	4,340 ^P
12/29/2011 16:00 EST	2.52 ^P	4,300 ^P
12/29/2011 16:15 EST	2.51 ^P	4,240 ^P
12/29/2011 16:30 EST	2.51 ^P	4,230 ^P
12/29/2011 16:45 EST	2.53 ^P	4,160 ^P
12/29/2011 17:00 EST	2.57 ^P	4,120 ^P
12/29/2011 17:15 EST	2.60 ^P	4,070 ^P
12/29/2011 17:30 EST	2.62 ^P	4,040 ^P
12/29/2011 17:45 EST	2.65 ^P	3,970 ^P
12/29/2011 18:00 EST	2.68 ^P	3,940 ^P
12/29/2011 18:15 EST	2.72 ^P	3,900 ^P
12/29/2011 18:30 EST	2.76 ^P	3,870 ^P
12/29/2011 18:45 EST	2.80 ^P	3,940 ^P
12/29/2011 19:00 EST	2.85 ^P	3,880 ^P
12/29/2011 19:15 EST	2.90 ^P	3,880 ^P
12/29/2011 19:30 EST	2.95 ^P	3,850 ^P
12/29/2011 19:45 EST	3.01 ^P	3,780 ^P
12/29/2011 20:00 EST	3.05 ^P	3,820 ^P
12/29/2011 20:15 EST	3.09 ^P	3,760 ^P
12/29/2011 20:30 EST	3.13 ^P	3,730 ^P
12/29/2011 20:45 EST	3.16 ^P	3,750 ^P

12/29/2011 21:00 EST	3.18 ^P	3,730 ^P
12/29/2011 21:15 EST	3.18 ^P	3,770 ^P
12/29/2011 21:30 EST	3.18 ^P	3,770 ^P
12/29/2011 21:45 EST	3.15 ^P	3,850 ^P
12/29/2011 22:00 EST	3.11 ^P	3,870 ^P
12/29/2011 22:15 EST	3.08 ^P	3,970 ^P
12/29/2011 22:30 EST	3.06 ^P	4,020 ^P
12/29/2011 22:45 EST	3.05 ^P	4,040 ^P
12/29/2011 23:00 EST	3.01 ^P	4,220 ^P
12/29/2011 23:15 EST	2.99 ^P	4,410 ^P
12/29/2011 23:30 EST	2.97 ^P	4,560 ^P
12/29/2011 23:45 EST	2.96 ^P	4,610 ^P
12/30/2011 00:00 EST	2.91 ^P	4,680 ^P
12/30/2011 00:15 EST	2.91 ^P	4,690 ^P
12/30/2011 00:30 EST	2.87 ^P	4,750 ^P
12/30/2011 00:45 EST	2.85 ^P	4,730 ^P
12/30/2011 01:00 EST	2.81 ^P	4,790 ^P
12/30/2011 01:15 EST	2.78 ^P	4,750 ^P
12/30/2011 01:30 EST	2.78 ^P	4,740 ^P
12/30/2011 01:45 EST	2.75 ^P	4,740 ^P
12/30/2011 02:00 EST	2.70 ^P	4,700 ^P
12/30/2011 02:15 EST	2.70 ^P	4,750 ^P
12/30/2011 02:30 EST	2.68 ^P	4,720 ^P
12/30/2011 02:45 EST	2.65 ^P	4,680 ^P
12/30/2011 03:00 EST	2.64 ^P	4,650 ^P
12/30/2011 03:15 EST	2.63 ^P	4,620 ^P
12/30/2011 03:30 EST	2.63 ^P	4,620 ^P
12/30/2011 03:45 EST	2.64 ^P	4,530 ^P
12/30/2011 04:00 EST	2.66 ^P	4,460 ^P
12/30/2011 04:15 EST	2.68 ^P	4,450 ^P
12/30/2011 04:30 EST	2.71 ^P	4,400 ^P
12/30/2011 04:45 EST	2.74 ^P	4,340 ^P
12/30/2011 05:00 EST	2.78 ^P	4,260 ^P
12/30/2011 05:15 EST	2.81 ^P	4,200 ^P
12/30/2011 05:30 EST	2.85 ^P	4,100 ^P
12/30/2011 05:45 EST	2.90 ^P	4,060 ^P
12/30/2011 06:00 EST	2.94 ^P	4,010 ^P
12/30/2011 06:15 EST	3.00 ^P	3,980 ^P
12/30/2011 06:30 EST	3.05 ^P	3,920 ^P
12/30/2011 06:45 EST	3.09 ^P	3,920 ^P
12/30/2011 07:00 EST	3.14 ^P	3,900 ^P
12/30/2011 07:15 EST	3.19 ^P	3,900 ^P
12/30/2011 07:30 EST	3.23 ^P	3,900 ^P

12/30/2011 07:45 EST	3.26 ^P	3,870 ^P
12/30/2011 08:00 EST	3.29 ^P	3,910 ^P
12/30/2011 08:15 EST	3.29 ^P	3,920 ^P
12/30/2011 08:30 EST	3.27 ^P	3,950 ^P
12/30/2011 08:45 EST	3.27 ^P	4,040 ^P
12/30/2011 09:00 EST	3.23 ^P	4,110 ^P
12/30/2011 09:15 EST	3.20 ^P	4,200 ^P
12/30/2011 09:30 EST	3.18 ^P	4,390 ^P
12/30/2011 09:45 EST	3.16 ^P	4,420 ^P
12/30/2011 10:00 EST	3.14 ^P	4,510 ^P
12/30/2011 10:15 EST	3.12 ^P	4,630 ^P
12/30/2011 10:30 EST	3.09 ^P	4,690 ^P
12/30/2011 10:45 EST	3.06 ^P	4,790 ^P
12/30/2011 11:00 EST	3.04 ^P	4,840 ^P
12/30/2011 11:15 EST	3.01 ^P	4,920 ^P
12/30/2011 11:30 EST	2.98 ^P	4,930 ^P
12/30/2011 11:45 EST	2.95 ^P	4,960 ^P
12/30/2011 12:00 EST	2.92 ^P	4,990 ^P
12/30/2011 12:15 EST	2.90 ^P	5,000 ^P
12/30/2011 12:30 EST	2.86 ^P	5,010 ^P
12/30/2011 12:45 EST	2.84 ^P	5,010 ^P
12/30/2011 13:00 EST	2.80 ^P	4,970 ^P
12/30/2011 13:15 EST	2.78 ^P	4,930 ^P
12/30/2011 13:30 EST	2.76 ^P	4,940 ^P
12/30/2011 13:45 EST	2.73 ^P	4,890 ^P
12/30/2011 14:00 EST	2.71 ^P	4,870 ^P
12/30/2011 14:15 EST	2.68 ^P	4,830 ^P
12/30/2011 14:30 EST	2.67 ^P	4,760 ^P
12/30/2011 14:45 EST	2.64 ^P	4,680 ^P
12/30/2011 15:00 EST	2.65 ^P	4,670 ^P
12/30/2011 15:15 EST	2.64 ^P	4,630 ^P
12/30/2011 15:30 EST	2.62 ^P	4,580 ^P
12/30/2011 15:45 EST	2.62 ^P	4,520 ^P
12/30/2011 16:00 EST	2.62 ^P	4,470 ^P
12/30/2011 16:15 EST	2.64 ^P	4,450 ^P
12/30/2011 16:30 EST	2.68 ^P	4,430 ^P
12/30/2011 16:45 EST	2.71 ^P	4,370 ^P
12/30/2011 17:00 EST	2.74 ^P	4,310 ^P
12/30/2011 17:15 EST	2.77 ^P	4,240 ^P
12/30/2011 17:30 EST	2.80 ^P	4,200 ^P
12/30/2011 17:45 EST	2.85 ^P	4,140 ^P
12/30/2011 18:00 EST	2.90 ^P	4,110 ^P
12/30/2011 18:15 EST	2.95 ^P	4,070 ^P

12/30/2011 18:30 EST	3.01 ^P	4,070 ^P
12/30/2011 18:45 EST	3.07 ^P	4,050 ^P
12/30/2011 19:00 EST	3.12 ^P	4,000 ^P
12/30/2011 19:15 EST	3.19 ^P	3,950 ^P
12/30/2011 19:30 EST	3.24 ^P	3,930 ^P
12/30/2011 19:45 EST	3.31 ^P	3,910 ^P
12/30/2011 20:00 EST	3.36 ^P	3,940 ^P
12/30/2011 20:15 EST	3.41 ^P	3,950 ^P
12/30/2011 20:30 EST	3.45 ^P	3,940 ^P
12/30/2011 20:45 EST	3.48 ^P	3,980 ^P
12/30/2011 21:00 EST	3.48 ^P	4,010 ^P
12/30/2011 21:15 EST	3.49 ^P	4,080 ^P
12/30/2011 21:30 EST	3.48 ^P	4,170 ^P
12/30/2011 21:45 EST	3.46 ^P	4,220 ^P
12/30/2011 22:00 EST	3.43 ^P	4,370 ^P
12/30/2011 22:15 EST	3.41 ^P	4,420 ^P
12/30/2011 22:30 EST	3.41 ^P	4,570 ^P
12/30/2011 22:45 EST	3.38 ^P	4,670 ^P
12/30/2011 23:00 EST	3.34 ^P	4,800 ^P
12/30/2011 23:15 EST	3.31 ^P	4,910 ^P
12/30/2011 23:30 EST	3.28 ^P	4,910 ^P
12/30/2011 23:45 EST	3.25 ^P	5,040 ^P
12/31/2011 00:00 EST	3.22 ^P	5,150 ^P
12/31/2011 00:15 EST	3.19 ^P	5,190 ^P
12/31/2011 00:30 EST	3.16 ^P	5,260 ^P
12/31/2011 00:45 EST	3.13 ^P	5,240 ^P
12/31/2011 01:00 EST	3.09 ^P	5,310 ^P
12/31/2011 01:15 EST	3.06 ^P	5,300 ^P
12/31/2011 01:30 EST	3.05 ^P	5,280 ^P
12/31/2011 01:45 EST	3.00 ^P	5,270 ^P
12/31/2011 02:00 EST	2.97 ^P	5,280 ^P
12/31/2011 02:15 EST	2.94 ^P	5,260 ^P
12/31/2011 02:30 EST	2.90 ^P	5,290 ^P
12/31/2011 02:45 EST	2.88 ^P	5,240 ^P
12/31/2011 03:00 EST	2.85 ^P	5,170 ^P
12/31/2011 03:15 EST	2.82 ^P	5,120 ^P
12/31/2011 03:30 EST	2.80 ^P	5,090 ^P
12/31/2011 03:45 EST	2.78 ^P	5,040 ^P
12/31/2011 04:00 EST	2.77 ^P	4,960 ^P
12/31/2011 04:15 EST	2.78 ^P	4,860 ^P
12/31/2011 04:30 EST	2.79 ^P	4,800 ^P
12/31/2011 04:45 EST	2.80 ^P	4,770 ^P
12/31/2011 05:00 EST	2.84 ^P	4,700 ^P

12/31/2011 05:15 EST	2.87 ^P	4,660 ^P
12/31/2011 05:30 EST	2.90 ^P	4,570 ^P
12/31/2011 05:45 EST	2.93 ^P	4,490 ^P
12/31/2011 06:00 EST	2.97 ^P	4,410 ^P
12/31/2011 06:15 EST	3.01 ^P	4,360 ^P
12/31/2011 06:30 EST	3.05 ^P	4,320 ^P
12/31/2011 06:45 EST	3.09 ^P	4,280 ^P
12/31/2011 07:00 EST	3.13 ^P	4,240 ^P
12/31/2011 07:15 EST	3.17 ^P	4,240 ^P
12/31/2011 07:30 EST	3.19 ^P	4,190 ^P
12/31/2011 07:45 EST	3.25 ^P	4,180 ^P
12/31/2011 08:00 EST	3.25 ^P	4,180 ^P
12/31/2011 08:15 EST	3.27 ^P	4,160 ^P
12/31/2011 08:30 EST	3.27 ^P	4,170 ^P
12/31/2011 08:45 EST	3.26 ^P	4,190 ^P
12/31/2011 09:00 EST	3.23 ^P	4,230 ^P
12/31/2011 09:15 EST	3.21 ^P	4,310 ^P
12/31/2011 09:30 EST	3.18 ^P	4,380 ^P
12/31/2011 09:45 EST	3.16 ^P	4,450 ^P
12/31/2011 10:00 EST	3.14 ^P	4,580 ^P
12/31/2011 10:15 EST	3.12 ^P	4,710 ^P
12/31/2011 10:30 EST	3.09 ^P	4,780 ^P
12/31/2011 10:45 EST	3.07 ^P	4,780 ^P
12/31/2011 11:00 EST	3.05 ^P	4,840 ^P
12/31/2011 11:15 EST	3.02 ^P	4,920 ^P
12/31/2011 11:30 EST	2.99 ^P	4,980 ^P
12/31/2011 11:45 EST	2.97 ^P	4,980 ^P
12/31/2011 12:00 EST	2.94 ^P	5,020 ^P
12/31/2011 12:15 EST	2.92 ^P	4,990 ^P
12/31/2011 12:30 EST	2.89 ^P	5,000 ^P
12/31/2011 12:45 EST	2.87 ^P	5,000 ^P
12/31/2011 13:00 EST	2.84 ^P	5,000 ^P
12/31/2011 13:15 EST	2.81 ^P	4,990 ^P
12/31/2011 13:30 EST	2.79 ^P	4,950 ^P
12/31/2011 13:45 EST	2.76 ^P	4,920 ^P
12/31/2011 14:00 EST	2.73 ^P	4,880 ^P
12/31/2011 14:15 EST	2.70 ^P	4,850 ^P
12/31/2011 14:30 EST	2.68 ^P	4,840 ^P
12/31/2011 14:45 EST	2.65 ^P	4,780 ^P
12/31/2011 15:00 EST	2.63 ^P	4,730 ^P
12/31/2011 15:15 EST	2.61 ^P	4,710 ^P
12/31/2011 15:30 EST	2.59 ^P	4,650 ^P
12/31/2011 15:45 EST	2.59 ^P	4,590 ^P

12/31/2011 16:00 EST	2.58 ^P	4,570 ^P
12/31/2011 16:15 EST	2.57 ^P	4,490 ^P
12/31/2011 16:30 EST	2.58 ^P	4,470 ^P
12/31/2011 16:45 EST	2.59 ^P	4,490 ^P
12/31/2011 17:00 EST	2.62 ^P	4,410 ^P
12/31/2011 17:15 EST	2.65 ^P	4,360 ^P
12/31/2011 17:30 EST	2.67 ^P	4,270 ^P
12/31/2011 17:45 EST	2.71 ^P	4,190 ^P
12/31/2011 18:00 EST	2.73 ^P	4,180 ^P
12/31/2011 18:15 EST	2.76 ^P	4,060 ^P
12/31/2011 18:30 EST	2.81 ^P	4,080 ^P
12/31/2011 18:45 EST	2.85 ^P	4,040 ^P
12/31/2011 19:00 EST	2.90 ^P	3,990 ^P
12/31/2011 19:15 EST	2.95 ^P	3,990 ^P
12/31/2011 19:30 EST	3.01 ^P	3,970 ^P
12/31/2011 19:45 EST	3.05 ^P	3,970 ^P
12/31/2011 20:00 EST	3.11 ^P	3,930 ^P
12/31/2011 20:15 EST	3.16 ^P	3,920 ^P
12/31/2011 20:30 EST	3.22 ^P	3,900 ^P
12/31/2011 20:45 EST	3.26 ^P	3,900 ^P
12/31/2011 21:00 EST	3.29 ^P	3,890 ^P
12/31/2011 21:15 EST	3.32 ^P	3,880 ^P
12/31/2011 21:30 EST	3.34 ^P	3,910 ^P
12/31/2011 21:45 EST	3.35 ^P	3,920 ^P
12/31/2011 22:00 EST	3.32 ^P	4,010 ^P
12/31/2011 22:15 EST	3.31 ^P	4,030 ^P
12/31/2011 22:30 EST	3.27 ^P	4,130 ^P
12/31/2011 22:45 EST	3.24 ^P	4,350 ^P
12/31/2011 23:00 EST	3.22 ^P	4,410 ^P
12/31/2011 23:15 EST	3.19 ^P	4,530 ^P
12/31/2011 23:30 EST	3.17 ^P	4,600 ^P
12/31/2011 23:45 EST	3.14 ^P	4,850 ^P
01/01/2012 00:00 EST	3.12 ^P	4,800 ^P
01/01/2012 00:15 EST	3.09 ^P	4,970 ^P
01/01/2012 00:30 EST	3.06 ^P	5,000 ^P
01/01/2012 00:45 EST	3.04 ^P	5,040 ^P
01/01/2012 01:00 EST	3.01 ^P	5,000 ^P
01/01/2012 01:15 EST	2.98 ^P	5,080 ^P
01/01/2012 01:30 EST	2.95 ^P	5,080 ^P
01/01/2012 01:45 EST	2.92 ^P	5,110 ^P
01/01/2012 02:00 EST	2.89 ^P	5,050 ^P
01/01/2012 02:15 EST	2.86 ^P	5,090 ^P
01/01/2012 02:30 EST	2.83 ^P	5,050 ^P

01/01/2012 02:45 EST	2.80 ^P	5,020 ^P
01/01/2012 03:00 EST	2.77 ^P	4,930 ^P
01/01/2012 03:15 EST	2.75 ^P	4,950 ^P
01/01/2012 03:30 EST	2.72 ^P	4,910 ^P
01/01/2012 03:45 EST	2.69 ^P	4,860 ^P
01/01/2012 04:00 EST	2.67 ^P	4,790 ^P
01/01/2012 04:15 EST	2.64 ^P	4,790 ^P
01/01/2012 04:30 EST	2.63 ^P	4,720 ^P
01/01/2012 04:45 EST	2.61 ^P	4,680 ^P
01/01/2012 05:00 EST	2.59 ^P	4,660 ^P
01/01/2012 05:15 EST	2.60 ^P	4,600 ^P
01/01/2012 05:30 EST	2.59 ^P	4,560 ^P
01/01/2012 05:45 EST	2.58 ^P	4,480 ^P
01/01/2012 06:00 EST	2.61 ^P	4,460 ^P
01/01/2012 06:15 EST	2.63 ^P	4,430 ^P
01/01/2012 06:30 EST	2.65 ^P	4,350 ^P
01/01/2012 06:45 EST	2.66 ^P	4,310 ^P
01/01/2012 07:00 EST	2.71 ^P	4,230 ^P
01/01/2012 07:15 EST	2.73 ^P	4,150 ^P
01/01/2012 07:30 EST	2.76 ^P	4,070 ^P
01/01/2012 07:45 EST	2.79 ^P	4,000 ^P
01/01/2012 08:00 EST	2.83 ^P	3,980 ^P
01/01/2012 08:15 EST	2.86 ^P	3,980 ^P
01/01/2012 08:30 EST	2.90 ^P	3,980 ^P
01/01/2012 08:45 EST	2.91 ^P	3,930 ^P
01/01/2012 09:00 EST	2.96 ^P	3,930 ^P
01/01/2012 09:15 EST	2.97 ^P	3,950 ^P
01/01/2012 09:30 EST	3.00 ^P	3,950 ^P
01/01/2012 09:45 EST	3.00 ^P	3,920 ^P
01/01/2012 10:00 EST	2.97 ^P	3,960 ^P
01/01/2012 10:15 EST	2.95 ^P	3,960 ^P
01/01/2012 10:30 EST	2.93 ^P	3,990 ^P
01/01/2012 10:45 EST	2.91 ^P	4,090 ^P
01/01/2012 11:00 EST	2.89 ^P	4,110 ^P
01/01/2012 11:15 EST	2.88 ^P	4,260 ^P
01/01/2012 11:30 EST	2.86 ^P	4,350 ^P
01/01/2012 11:45 EST	2.84 ^P	4,360 ^P
01/01/2012 12:00 EST	2.82 ^P	4,420 ^P
01/01/2012 12:15 EST	2.81 ^P	4,480 ^P
01/01/2012 12:30 EST	2.79 ^P	4,530 ^P
01/01/2012 12:45 EST	2.76 ^P	4,590 ^P
01/01/2012 13:00 EST	2.74 ^P	4,600 ^P
01/01/2012 13:15 EST	2.72 ^P	4,620 ^P

01/01/2012 13:30 EST	2.69 ^P	4,660 ^P
01/01/2012 13:45 EST	2.67 ^P	4,660 ^P
01/01/2012 14:00 EST	2.66 ^P	4,690 ^P
01/01/2012 14:15 EST	2.64 ^P	4,660 ^P
01/01/2012 14:30 EST	2.62 ^P	4,660 ^P
01/01/2012 14:45 EST	2.60 ^P	4,650 ^P
01/01/2012 15:00 EST	2.57 ^P	4,610 ^P
01/01/2012 15:15 EST	2.55 ^P	4,580 ^P
01/01/2012 15:30 EST	2.55 ^P	4,590 ^P
01/01/2012 15:45 EST	2.53 ^P	4,560 ^P
01/01/2012 16:00 EST	2.52 ^P	4,530 ^P
01/01/2012 16:15 EST	2.51 ^P	4,510 ^P
01/01/2012 16:30 EST	2.50 ^P	4,460 ^P
01/01/2012 16:45 EST	2.50 ^P	4,390 ^P
01/01/2012 17:00 EST	2.50 ^P	4,370 ^P
01/01/2012 17:15 EST	2.52 ^P	4,310 ^P
01/01/2012 17:30 EST	2.54 ^P	4,260 ^P
01/01/2012 17:45 EST	2.57 ^P	4,190 ^P
01/01/2012 18:00 EST	2.59 ^P	4,140 ^P
01/01/2012 18:15 EST	2.62 ^P	4,050 ^P
01/01/2012 18:30 EST	2.64 ^P	4,020 ^P
01/01/2012 18:45 EST	2.68 ^P	4,070 ^P
01/01/2012 19:00 EST	2.72 ^P	3,970 ^P
01/01/2012 19:15 EST	2.76 ^P	3,990 ^P
01/01/2012 19:30 EST	2.80 ^P	3,930 ^P
01/01/2012 19:45 EST	2.85 ^P	3,970 ^P
01/01/2012 20:00 EST	2.89 ^P	3,950 ^P
01/01/2012 20:15 EST	2.94 ^P	3,930 ^P
01/01/2012 20:30 EST	3.00 ^P	3,880 ^P
01/01/2012 20:45 EST	3.05 ^P	3,900 ^P
01/01/2012 21:00 EST	3.10 ^P	3,880 ^P
01/01/2012 21:15 EST	3.16 ^P	3,880 ^P
01/01/2012 21:30 EST	3.21 ^P	3,870 ^P
01/01/2012 21:45 EST	3.24 ^P	3,870 ^P
01/01/2012 22:00 EST	3.27 ^P	3,880 ^P
01/01/2012 22:15 EST	3.29 ^P	3,880 ^P
01/01/2012 22:30 EST	3.27 ^P	3,970 ^P
01/01/2012 22:45 EST	3.29 ^P	4,010 ^P
01/01/2012 23:00 EST	3.25 ^P	4,040 ^P
01/01/2012 23:15 EST	3.23 ^P	4,170 ^P
01/01/2012 23:30 EST	3.21 ^P	4,270 ^P
01/01/2012 23:45 EST	3.18 ^P	4,320 ^P
01/02/2012 00:00 EST	3.17 ^P	4,510 ^P

01/02/2012 00:15 EST	3.14 ^P	4,590 ^P
01/02/2012 00:30 EST	3.12 ^P	4,720 ^P
01/02/2012 00:45 EST	3.10 ^P	4,900 ^P
01/02/2012 01:00 EST	3.08 ^P	4,850 ^P
01/02/2012 01:15 EST	3.05 ^P	4,970 ^P
01/02/2012 01:30 EST	3.02 ^P	4,930 ^P
01/02/2012 01:45 EST	3.00 ^P	4,950 ^P
01/02/2012 02:00 EST	2.97 ^P	4,960 ^P
01/02/2012 02:15 EST	2.96 ^P	5,050 ^P
01/02/2012 02:30 EST	2.91 ^P	5,060 ^P
01/02/2012 02:45 EST	2.88 ^P	5,060 ^P
01/02/2012 03:00 EST	2.85 ^P	5,000 ^P
01/02/2012 03:15 EST	2.83 ^P	5,030 ^P
01/02/2012 03:30 EST	2.80 ^P	5,010 ^P
01/02/2012 03:45 EST	2.78 ^P	4,980 ^P
01/02/2012 04:00 EST	2.78 ^P	4,970 ^P
01/02/2012 04:15 EST	2.75 ^P	4,940 ^P
01/02/2012 04:30 EST	2.73 ^P	4,880 ^P
01/02/2012 04:45 EST	2.68 ^P	4,840 ^P
01/02/2012 05:00 EST	2.66 ^P	4,770 ^P
01/02/2012 05:15 EST	2.64 ^P	4,740 ^P
01/02/2012 05:30 EST	2.62 ^P	4,700 ^P
01/02/2012 05:45 EST	2.63 ^P	4,650 ^P
01/02/2012 06:00 EST	2.61 ^P	4,610 ^P
01/02/2012 06:15 EST	2.58 ^P	4,570 ^P
01/02/2012 06:30 EST	2.56 ^P	4,540 ^P
01/02/2012 06:45 EST	2.56 ^P	4,500 ^P
01/02/2012 07:00 EST	2.55 ^P	4,460 ^P
01/02/2012 07:15 EST	2.54 ^P	4,410 ^P
01/02/2012 07:30 EST	2.54 ^P	4,360 ^P
01/02/2012 07:45 EST	2.53 ^P	4,330 ^P
01/02/2012 08:00 EST	2.52 ^P	4,290 ^P
01/02/2012 08:15 EST	2.51 ^P	4,260 ^P
01/02/2012 08:30 EST	2.50 ^P	4,170 ^P
01/02/2012 08:45 EST	2.50 ^P	4,090 ^P
01/02/2012 09:00 EST	2.49 ^P	4,130 ^P
01/02/2012 09:15 EST	2.48 ^P	4,120 ^P
01/02/2012 09:30 EST	2.47 ^P	4,090 ^P
01/02/2012 09:45 EST	2.46 ^P	4,080 ^P
01/02/2012 10:00 EST	2.43 ^P	4,060 ^P
01/02/2012 10:15 EST	2.43 ^P	4,080 ^P
01/02/2012 10:30 EST	2.40 ^P	4,100 ^P
01/02/2012 10:45 EST	2.39 ^P	4,090 ^P

01/02/2012 11:00 EST	2.37 ^P	4,060 ^P
01/02/2012 11:15 EST	2.36 ^P	4,050 ^P
01/02/2012 11:30 EST	2.35 ^P	4,070 ^P
01/02/2012 11:45 EST	2.34 ^P	4,090 ^P
01/02/2012 12:00 EST	2.33 ^P	4,100 ^P
01/02/2012 12:15 EST	2.32 ^P	4,100 ^P
01/02/2012 12:30 EST	2.31 ^P	4,130 ^P
01/02/2012 12:45 EST	2.30 ^P	4,090 ^P
01/02/2012 13:00 EST	2.30 ^P	4,090 ^P
01/02/2012 13:15 EST	2.28 ^P	4,070 ^P
01/02/2012 13:30 EST	2.28 ^P	4,080 ^P
01/02/2012 13:45 EST	2.26 ^P	4,040 ^P
01/02/2012 14:00 EST	2.25 ^P	4,070 ^P
01/02/2012 14:15 EST	2.25 ^P	4,040 ^P
01/02/2012 14:30 EST	2.22 ^P	4,050 ^P
01/02/2012 14:45 EST	2.20 ^P	4,060 ^P
01/02/2012 15:00 EST	2.20 ^P	4,050 ^P
01/02/2012 15:15 EST	2.20 ^P	4,020 ^P
01/02/2012 15:30 EST	2.19 ^P	4,020 ^P
01/02/2012 15:45 EST	2.19 ^P	4,030 ^P
01/02/2012 16:00 EST	2.20 ^P	4,020 ^P
01/02/2012 16:15 EST	2.20 ^P	4,020 ^P
01/02/2012 16:30 EST	2.20 ^P	4,030 ^P
01/02/2012 16:45 EST	2.21 ^P	3,910 ^P
01/02/2012 17:00 EST	2.24 ^P	3,940 ^P
01/02/2012 17:15 EST	2.27 ^P	3,850 ^P
01/02/2012 17:30 EST	2.28 ^P	3,860 ^P
01/02/2012 17:45 EST	2.31 ^P	3,830 ^P
01/02/2012 18:00 EST	2.33 ^P	3,840 ^P
01/02/2012 18:15 EST	2.34 ^P	3,800 ^P
01/02/2012 18:30 EST	2.37 ^P	3,750 ^P
01/02/2012 18:45 EST	2.38 ^P	3,700 ^P
01/02/2012 19:00 EST	2.41 ^P	3,710 ^P
01/02/2012 19:15 EST	2.43 ^P	3,710 ^P
01/02/2012 19:30 EST	2.46 ^P	3,730 ^P
01/02/2012 19:45 EST	2.49 ^P	3,700 ^P
01/02/2012 20:00 EST	2.53 ^P	3,650 ^P
01/02/2012 20:15 EST	2.56 ^P	3,680 ^P
01/02/2012 20:30 EST	2.60 ^P	3,630 ^P
01/02/2012 20:45 EST	2.64 ^P	3,670 ^P
01/02/2012 21:00 EST	2.68 ^P	3,620 ^P
01/02/2012 21:15 EST	2.72 ^P	3,630 ^P
01/02/2012 21:30 EST	2.76 ^P	3,630 ^P

01/02/2012 21:45 EST	2.81 ^P	3,610 ^P
01/02/2012 22:00 EST	2.84 ^P	3,680 ^P
01/02/2012 22:15 EST	2.88 ^P	3,660 ^P
01/02/2012 22:30 EST	2.93 ^P	3,670 ^P
01/02/2012 22:45 EST	2.95 ^P	3,730 ^P
01/02/2012 23:00 EST	2.98 ^P	3,760 ^P
01/02/2012 23:15 EST	3.00 ^P	3,720 ^P
01/02/2012 23:30 EST	3.00 ^P	^P
01/02/2012 23:45 EST	3.02 ^P	3,800 ^P
01/03/2012 00:00 EST	3.02 ^P	3,860 ^P
01/03/2012 00:15 EST	3.06 ^P	3,940 ^P
01/03/2012 00:30 EST	3.05 ^P	3,970 ^P
01/03/2012 00:45 EST	3.08 ^P	4,020 ^P
01/03/2012 01:00 EST	3.09 ^P	4,120 ^P
01/03/2012 01:15 EST	3.12 ^P	4,200 ^P
01/03/2012 01:30 EST	3.11 ^P	4,170 ^P
01/03/2012 01:45 EST	3.11 ^P	4,160 ^P
01/03/2012 02:00 EST	3.16 ^P	4,280 ^P
01/03/2012 02:15 EST	3.17 ^P	4,270 ^P
01/03/2012 02:30 EST	3.17 ^P	4,500 ^P
01/03/2012 02:45 EST	3.20 ^P	4,500 ^P
01/03/2012 03:00 EST	3.20 ^P	4,660 ^P
01/03/2012 03:15 EST	3.20 ^P	4,690 ^P
01/03/2012 03:30 EST	3.20 ^P	4,650 ^P
01/03/2012 03:45 EST	3.19 ^P	4,700 ^P
01/03/2012 04:00 EST	3.17 ^P	4,570 ^P
01/03/2012 04:15 EST	3.12 ^P	4,690 ^P
01/03/2012 04:30 EST	3.14 ^P	4,800 ^P
01/03/2012 04:45 EST	3.13 ^P	4,660 ^P
01/03/2012 05:00 EST	3.11 ^P	4,780 ^P
01/03/2012 05:15 EST	3.09 ^P	4,900 ^P
01/03/2012 05:30 EST	3.06 ^P	4,900 ^P
01/03/2012 05:45 EST	3.03 ^P	4,900 ^P
01/03/2012 06:00 EST	3.03 ^P	5,050 ^P
01/03/2012 06:15 EST	3.01 ^P	4,920 ^P
01/03/2012 06:30 EST	2.97 ^P	5,090 ^P
01/03/2012 06:45 EST	2.96 ^P	5,050 ^P
01/03/2012 07:00 EST	2.93 ^P	5,080 ^P
01/03/2012 07:15 EST	2.90 ^P	5,150 ^P
01/03/2012 07:30 EST	2.87 ^P	5,110 ^P
01/03/2012 07:45 EST	2.84 ^P	5,000 ^P
01/03/2012 08:00 EST	2.83 ^P	5,040 ^P
01/03/2012 08:15 EST	2.80 ^P	5,010 ^P

01/03/2012 08:30 EST	2.76 ^P	5,080 ^P
01/03/2012 08:45 EST	2.75 ^P	4,980 ^P
01/03/2012 09:00 EST	2.71 ^P	5,010 ^P
01/03/2012 09:15 EST	2.71 ^P	5,030 ^P
01/03/2012 09:30 EST	2.66 ^P	4,930 ^P
01/03/2012 09:45 EST	2.67 ^P	4,900 ^P
01/03/2012 10:00 EST	2.62 ^P	4,820 ^P
01/03/2012 10:15 EST	2.60 ^P	4,820 ^P
01/03/2012 10:30 EST	2.57 ^P	4,740 ^P
01/03/2012 10:45 EST	2.57 ^P	4,730 ^P
01/03/2012 11:00 EST	2.53 ^P	4,690 ^P
01/03/2012 11:15 EST	2.54 ^P	4,650 ^P
01/03/2012 11:30 EST	2.51 ^P	4,620 ^P
01/03/2012 11:45 EST	2.49 ^P	4,580 ^P
01/03/2012 12:00 EST	2.44 ^P	4,560 ^P
01/03/2012 12:15 EST	2.43 ^P	4,520 ^P
01/03/2012 12:30 EST	2.42 ^P	4,510 ^P
01/03/2012 12:45 EST	2.36 ^P	4,490 ^P
01/03/2012 13:00 EST	2.34 ^P	4,480 ^P
01/03/2012 13:15 EST	2.33 ^P	4,440 ^P
01/03/2012 13:30 EST	2.30 ^P	4,420 ^P
01/03/2012 13:45 EST	2.29 ^P	4,390 ^P
01/03/2012 14:00 EST	2.27 ^P	4,300 ^P
01/03/2012 14:15 EST	2.24 ^P	4,230 ^P
01/03/2012 14:30 EST	2.23 ^P	4,240 ^P
01/03/2012 14:45 EST	2.21 ^P	4,150 ^P
01/03/2012 15:00 EST	2.18 ^P	4,180 ^P
01/03/2012 15:15 EST	2.16 ^P	4,120 ^P
01/03/2012 15:30 EST	2.13 ^P	4,150 ^P
01/03/2012 15:45 EST	2.12 ^P	4,140 ^P
01/03/2012 16:00 EST	2.11 ^P	4,170 ^P
01/03/2012 16:15 EST	2.09 ^P	4,130 ^P
01/03/2012 16:30 EST	2.07 ^P	4,140 ^P
01/03/2012 16:45 EST	2.06 ^P	4,130 ^P
01/03/2012 17:00 EST	2.04 ^P	4,070 ^P
01/03/2012 17:15 EST	2.02 ^P	4,070 ^P
01/03/2012 17:30 EST	2.00 ^P	4,050 ^P
01/03/2012 17:45 EST	1.98 ^P	3,990 ^P
01/03/2012 18:00 EST	1.96 ^P	3,970 ^P
01/03/2012 18:15 EST	1.94 ^P	4,010 ^P
01/03/2012 18:30 EST	1.93 ^P	3,990 ^P
01/03/2012 18:45 EST	1.91 ^P	3,970 ^P
01/03/2012 19:00 EST	1.89 ^P	4,000 ^P

01/03/2012 19:15 EST	1.88 ^P	3,960 ^P
01/03/2012 19:30 EST	1.87 ^P	3,960 ^P
01/03/2012 19:45 EST	1.85 ^P	3,930 ^P
01/03/2012 20:00 EST	1.85 ^P	3,880 ^P
01/03/2012 20:15 EST	1.84 ^P	3,840 ^P
01/03/2012 20:30 EST	1.83 ^P	3,820 ^P
01/03/2012 20:45 EST	1.82 ^P	3,840 ^P
01/03/2012 21:00 EST	1.82 ^P	3,790 ^P
01/03/2012 21:15 EST	1.82 ^P	3,800 ^P
01/03/2012 21:30 EST	1.82 ^P	3,790 ^P
01/03/2012 21:45 EST	1.83 ^P	3,720 ^P
01/03/2012 22:00 EST	1.83 ^P	3,770 ^P
01/03/2012 22:15 EST	1.84 ^P	3,670 ^P
01/03/2012 22:30 EST	1.86 ^P	3,640 ^P
01/03/2012 22:45 EST	1.86 ^P	3,720 ^P
01/03/2012 23:00 EST	1.87 ^P	3,600 ^P
01/03/2012 23:15 EST	1.88 ^P	3,640 ^P
01/03/2012 23:30 EST	1.89 ^P	3,560 ^P
01/03/2012 23:45 EST	1.90 ^P	3,610 ^P
01/04/2012 00:00 EST	1.91 ^P	3,530 ^P
01/04/2012 00:15 EST	1.90 ^P	3,570 ^P
01/04/2012 00:30 EST	1.90 ^P	3,560 ^P
01/04/2012 00:45 EST	1.90 ^P	3,550 ^P
01/04/2012 01:00 EST	1.89 ^P	3,540 ^P
01/04/2012 01:15 EST	1.88 ^P	3,580 ^P
01/04/2012 01:30 EST	1.87 ^P	3,480 ^P
01/04/2012 01:45 EST	1.84 ^P	3,490 ^P
01/04/2012 02:00 EST	1.85 ^P	3,520 ^P
01/04/2012 02:15 EST	1.84 ^P	3,530 ^P
01/04/2012 02:30 EST	1.83 ^P	3,500 ^P
01/04/2012 02:45 EST	1.82 ^P	3,480 ^P
01/04/2012 03:00 EST	1.81 ^P	3,610 ^P
01/04/2012 03:15 EST	1.79 ^P	3,550 ^P
01/04/2012 03:30 EST	1.77 ^P	3,530 ^P
01/04/2012 03:45 EST	1.78 ^P	3,530 ^P
01/04/2012 04:00 EST	1.77 ^P	3,620 ^P
01/04/2012 04:15 EST	1.77 ^P	3,620 ^P
01/04/2012 04:30 EST	1.74 ^P	3,540 ^P
01/04/2012 04:45 EST	1.74 ^P	3,570 ^P
01/04/2012 05:00 EST	1.73 ^P	3,540 ^P
01/04/2012 05:15 EST	1.71 ^P	3,550 ^P
01/04/2012 05:30 EST	1.70 ^P	3,570 ^P
01/04/2012 05:45 EST	1.68 ^P	3,540 ^P

01/04/2012 06:00 EST	1.68 ^P	3,590 ^P
01/04/2012 06:15 EST	1.66 ^P	3,560 ^P
01/04/2012 06:30 EST	1.65 ^P	3,570 ^P
01/04/2012 06:45 EST	1.63 ^P	3,580 ^P
01/04/2012 07:00 EST	1.62 ^P	3,610 ^P
01/04/2012 07:15 EST	1.61 ^P	3,620 ^P
01/04/2012 07:30 EST	1.60 ^P	3,590 ^P
01/04/2012 07:45 EST	1.59 ^P	3,600 ^P
01/04/2012 08:00 EST	1.57 ^P	3,660 ^P
01/04/2012 08:15 EST	1.56 ^P	3,620 ^P
01/04/2012 08:30 EST	1.54 ^P	3,610 ^P
01/04/2012 08:45 EST	1.53 ^P	3,610 ^P
01/04/2012 09:00 EST	1.52 ^P	3,610 ^P
01/04/2012 09:15 EST	1.49 ^P	3,600 ^P
01/04/2012 09:30 EST	1.49 ^P	3,600 ^P
01/04/2012 09:45 EST	1.46 ^P	3,570 ^P
01/04/2012 10:00 EST	1.45 ^P	3,610 ^P
01/04/2012 10:15 EST	1.45 ^P	3,590 ^P
01/04/2012 10:30 EST	1.44 ^P	3,590 ^P
01/04/2012 10:45 EST	1.44 ^P	3,650 ^P
01/04/2012 11:00 EST	1.43 ^P	3,640 ^P
01/04/2012 11:15 EST	1.45 ^P	3,650 ^P
01/04/2012 11:30 EST	1.44 ^P	3,650 ^P
01/04/2012 11:45 EST	1.45 ^P	3,540 ^P
01/04/2012 12:00 EST	1.49 ^P	3,600 ^P
01/04/2012 12:15 EST	1.51 ^P	3,620 ^P
01/04/2012 12:30 EST	1.52 ^P	3,550 ^P
01/04/2012 12:45 EST	1.54 ^P	3,510 ^P
01/04/2012 13:00 EST	1.59 ^P	3,510 ^P
01/04/2012 13:15 EST	1.60 ^P	3,500 ^P
01/04/2012 13:30 EST	1.62 ^P	3,500 ^P
01/04/2012 13:45 EST	1.68 ^P	3,410 ^P
01/04/2012 14:00 EST	1.70 ^P	3,450 ^P
01/04/2012 14:15 EST	1.72 ^P	3,420 ^P
01/04/2012 14:30 EST	1.75 ^P	3,400 ^P
01/04/2012 14:45 EST	1.78 ^P	3,370 ^P
01/04/2012 15:00 EST	1.80 ^P	3,310 ^P
01/04/2012 15:15 EST	1.82 ^P	3,310 ^P
01/04/2012 15:30 EST	1.85 ^P	3,330 ^P
01/04/2012 15:45 EST	1.92 ^P	3,260 ^P
01/04/2012 16:00 EST	1.95 ^P	3,280 ^P
01/04/2012 16:15 EST	1.98 ^P	3,210 ^P
01/04/2012 16:30 EST	2.00 ^P	3,210 ^P

01/04/2012 16:45 EST	2.02 ^P	3,230 ^P
01/04/2012 17:00 EST	2.05 ^P	3,180 ^P
01/04/2012 17:15 EST	2.08 ^P	3,180 ^P
01/04/2012 17:30 EST	2.11 ^P	3,180 ^P
01/04/2012 17:45 EST	2.14 ^P	3,180 ^P
01/04/2012 18:00 EST	2.16 ^P	3,200 ^P
01/04/2012 18:15 EST	2.18 ^P	3,190 ^P
01/04/2012 18:30 EST	2.20 ^P	3,140 ^P
01/04/2012 18:45 EST	2.23 ^P	3,210 ^P
01/04/2012 19:00 EST	2.25 ^P	3,220 ^P
01/04/2012 19:15 EST	2.28 ^P	3,230 ^P
01/04/2012 19:30 EST	2.30 ^P	3,250 ^P
01/04/2012 19:45 EST	2.34 ^P	3,270 ^P
01/04/2012 20:00 EST	2.36 ^P	3,250 ^P
01/04/2012 20:15 EST	2.40 ^P	3,290 ^P
01/04/2012 20:30 EST	2.42 ^P	3,300 ^P
01/04/2012 20:45 EST	2.46 ^P	3,310 ^P
01/04/2012 21:00 EST	2.50 ^P	3,330 ^P
01/04/2012 21:15 EST	2.54 ^P	3,320 ^P
01/04/2012 21:30 EST	2.57 ^P	3,360 ^P
01/04/2012 21:45 EST	2.61 ^P	3,380 ^P
01/04/2012 22:00 EST	2.66 ^P	3,400 ^P
01/04/2012 22:15 EST	2.70 ^P	3,440 ^P
01/04/2012 22:30 EST	2.75 ^P	3,390 ^P
01/04/2012 22:45 EST	2.80 ^P	3,460 ^P
01/04/2012 23:00 EST	2.85 ^P	3,470 ^P
01/04/2012 23:15 EST	2.89 ^P	3,560 ^P
01/04/2012 23:30 EST	2.94 ^P	3,590 ^P
01/04/2012 23:45 EST	2.99 ^P	3,620 ^P
01/05/2012 00:00 EST	3.03 ^P	3,650 ^P
01/05/2012 00:15 EST	3.07 ^P	3,740 ^P
01/05/2012 00:30 EST	3.10 ^P	3,730 ^P
01/05/2012 00:45 EST	3.12 ^P	3,830 ^P
01/05/2012 01:00 EST	3.14 ^P	3,810 ^P
01/05/2012 01:15 EST	3.15 ^P	3,770 ^P
01/05/2012 01:30 EST	3.15 ^P	3,850 ^P
01/05/2012 01:45 EST	3.15 ^P	3,940 ^P
01/05/2012 02:00 EST	3.12 ^P	3,920 ^P
01/05/2012 02:15 EST	3.09 ^P	4,130 ^P
01/05/2012 02:30 EST	3.07 ^P	4,300 ^P
01/05/2012 02:45 EST	3.03 ^P	4,320 ^P
01/05/2012 03:00 EST	3.00 ^P	4,730 ^P
01/05/2012 03:15 EST	2.99 ^P	4,660 ^P

01/05/2012 03:30 EST	2.96 ^P	4,860 ^P
01/05/2012 03:45 EST	2.94 ^P	4,820 ^P
01/05/2012 04:00 EST	2.91 ^P	4,840 ^P
01/05/2012 04:15 EST	2.88 ^P	5,060 ^P
01/05/2012 04:30 EST	2.85 ^P	5,060 ^P
01/05/2012 04:45 EST	2.83 ^P	5,010 ^P
01/05/2012 05:00 EST	2.80 ^P	5,050 ^P
01/05/2012 05:15 EST	2.77 ^P	5,010 ^P
01/05/2012 05:30 EST	2.74 ^P	5,100 ^P
01/05/2012 05:45 EST	2.72 ^P	5,170 ^P
01/05/2012 06:00 EST	2.71 ^P	5,100 ^P
01/05/2012 06:15 EST	2.68 ^P	5,090 ^P
01/05/2012 06:30 EST	2.65 ^P	5,210 ^P
01/05/2012 06:45 EST	2.62 ^P	5,120 ^P
01/05/2012 07:00 EST	2.60 ^P	5,090 ^P
01/05/2012 07:15 EST	2.57 ^P	5,100 ^P
01/05/2012 07:30 EST	2.55 ^P	5,050 ^P
01/05/2012 07:45 EST	2.51 ^P	5,030 ^P
01/05/2012 08:00 EST	2.49 ^P	4,970 ^P
01/05/2012 08:15 EST	2.45 ^P	4,940 ^P
01/05/2012 08:30 EST	2.42 ^P	4,880 ^P
01/05/2012 08:45 EST	2.40 ^P	4,880 ^P
01/05/2012 09:00 EST	2.37 ^P	4,870 ^P
01/05/2012 09:15 EST	2.35 ^P	4,830 ^P
01/05/2012 09:30 EST	2.32 ^P	4,780 ^P
01/05/2012 09:45 EST	2.30 ^P	4,680 ^P
01/05/2012 10:00 EST	2.28 ^P	4,720 ^P
01/05/2012 10:15 EST	2.26 ^P	4,600 ^P
01/05/2012 10:30 EST	2.25 ^P	4,580 ^P
01/05/2012 10:45 EST	2.23 ^P	4,560 ^P
01/05/2012 11:00 EST	2.21 ^P	4,500 ^P
01/05/2012 11:15 EST	2.20 ^P	4,450 ^P
01/05/2012 11:30 EST	2.19 ^P	4,430 ^P
01/05/2012 11:45 EST	2.18 ^P	4,390 ^P
01/05/2012 12:00 EST	2.18 ^P	4,360 ^P
01/05/2012 12:15 EST	2.19 ^P	4,350 ^P
01/05/2012 12:30 EST	2.20 ^P	4,290 ^P
01/05/2012 12:45 EST	2.22 ^P	4,290 ^P
01/05/2012 13:00 EST	2.25 ^P	4,180 ^P
01/05/2012 13:15 EST	2.28 ^P	4,090 ^P
01/05/2012 13:30 EST	2.30 ^P	4,060 ^P
01/05/2012 13:45 EST	2.32 ^P	4,050 ^P
01/05/2012 14:00 EST	2.35 ^P	4,000 ^P

01/05/2012 14:15 EST	2.38 ^P	3,940 ^P
01/05/2012 14:30 EST	2.42 ^P	3,960 ^P
01/05/2012 14:45 EST	2.45 ^P	3,910 ^P
01/05/2012 15:00 EST	2.48 ^P	3,880 ^P
01/05/2012 15:15 EST	2.52 ^P	3,900 ^P
01/05/2012 15:30 EST	2.55 ^P	3,860 ^P
01/05/2012 15:45 EST	2.60 ^P	3,840 ^P
01/05/2012 16:00 EST	2.65 ^P	3,830 ^P
01/05/2012 16:15 EST	2.67 ^P	3,850 ^P
01/05/2012 16:30 EST	2.68 ^P	3,810 ^P
01/05/2012 16:45 EST	2.69 ^P	3,870 ^P
01/05/2012 17:00 EST	2.68 ^P	3,890 ^P
01/05/2012 17:15 EST	2.66 ^P	3,890 ^P
01/05/2012 17:30 EST	2.64 ^P	3,930 ^P
01/05/2012 17:45 EST	2.62 ^P	3,960 ^P
01/05/2012 18:00 EST	2.59 ^P	4,070 ^P
01/05/2012 18:15 EST	2.57 ^P	4,120 ^P
01/05/2012 18:30 EST	2.55 ^P	4,210 ^P
01/05/2012 18:45 EST	2.53 ^P	4,240 ^P
01/05/2012 19:00 EST	2.52 ^P	4,350 ^P
01/05/2012 19:15 EST	2.51 ^P	4,410 ^P
01/05/2012 19:30 EST	2.50 ^P	4,470 ^P
01/05/2012 19:45 EST	2.49 ^P	4,410 ^P
01/05/2012 20:00 EST	2.48 ^P	4,490 ^P
01/05/2012 20:15 EST	2.49 ^P	4,550 ^P
01/05/2012 20:30 EST	2.51 ^P	4,540 ^P
01/05/2012 20:45 EST	2.52 ^P	4,520 ^P
01/05/2012 21:00 EST	2.55 ^P	4,530 ^P
01/05/2012 21:15 EST	2.58 ^P	4,460 ^P
01/05/2012 21:30 EST	2.60 ^P	4,390 ^P
01/05/2012 21:45 EST	2.64 ^P	4,370 ^P
01/05/2012 22:00 EST	2.67 ^P	4,320 ^P
01/05/2012 22:15 EST	2.71 ^P	4,320 ^P
01/05/2012 22:30 EST	2.74 ^P	4,260 ^P
01/05/2012 22:45 EST	2.79 ^P	4,270 ^P
01/05/2012 23:00 EST	2.84 ^P	4,270 ^P
01/05/2012 23:15 EST	2.89 ^P	4,160 ^P
01/05/2012 23:30 EST	2.94 ^P	4,190 ^P
01/05/2012 23:45 EST	3.00 ^P	4,190 ^P
01/06/2012 00:00 EST	3.06 ^P	4,170 ^P
01/06/2012 00:15 EST	3.12 ^P	4,150 ^P
01/06/2012 00:30 EST	3.18 ^P	4,190 ^P
01/06/2012 00:45 EST	3.24 ^P	4,180 ^P

01/06/2012 01:00 EST	3.30 ^P	4,170 ^P
01/06/2012 01:15 EST	3.35 ^P	4,180 ^P
01/06/2012 01:30 EST	3.40 ^P	4,170 ^P
01/06/2012 01:45 EST	3.45 ^P	4,230 ^P
01/06/2012 02:00 EST	3.48 ^P	4,230 ^P
01/06/2012 02:15 EST	3.49 ^P	4,300 ^P
01/06/2012 02:30 EST	3.48 ^P	4,320 ^P
01/06/2012 02:45 EST	3.49 ^P	4,350 ^P
01/06/2012 03:00 EST	3.46 ^P	4,440 ^P
01/06/2012 03:15 EST	3.44 ^P	4,480 ^P
01/06/2012 03:30 EST	3.41 ^P	4,490 ^P
01/06/2012 03:45 EST	3.38 ^P	4,660 ^P
01/06/2012 04:00 EST	3.36 ^P	4,770 ^P
01/06/2012 04:15 EST	3.34 ^P	4,870 ^P
01/06/2012 04:30 EST	3.31 ^P	4,910 ^P
01/06/2012 04:45 EST	3.28 ^P	4,900 ^P
01/06/2012 05:00 EST	3.27 ^P	5,060 ^P
01/06/2012 05:15 EST	3.22 ^P	5,270 ^P
01/06/2012 05:30 EST	3.18 ^P	5,360 ^P
01/06/2012 05:45 EST	3.18 ^P	5,410 ^P
01/06/2012 06:00 EST	3.14 ^P	5,370 ^P
01/06/2012 06:15 EST	3.08 ^P	5,410 ^P
01/06/2012 06:30 EST	3.05 ^P	5,540 ^P
01/06/2012 06:45 EST	3.02 ^P	5,530 ^P
01/06/2012 07:00 EST	2.98 ^P	5,460 ^P
01/06/2012 07:15 EST	2.95 ^P	5,610 ^P
01/06/2012 07:30 EST	2.92 ^P	5,540 ^P
01/06/2012 07:45 EST	2.88 ^P	5,570 ^P
01/06/2012 08:00 EST	2.85 ^P	5,480 ^P
01/06/2012 08:15 EST	2.82 ^P	5,450 ^P
01/06/2012 08:30 EST	2.79 ^P	5,370 ^P
01/06/2012 08:45 EST	2.75 ^P	5,430 ^P
01/06/2012 09:00 EST	2.72 ^P	5,390 ^P
01/06/2012 09:15 EST	2.69 ^P	5,360 ^P
01/06/2012 09:30 EST	2.66 ^P	5,210 ^P
01/06/2012 09:45 EST	2.64 ^P	5,200 ^P
01/06/2012 10:00 EST	2.60 ^P	5,190 ^P
01/06/2012 10:15 EST	2.58 ^P	5,110 ^P
01/06/2012 10:30 EST	2.55 ^P	5,030 ^P
01/06/2012 10:45 EST	2.52 ^P	4,990 ^P
01/06/2012 11:00 EST	2.50 ^P	4,930 ^P
01/06/2012 11:15 EST	2.47 ^P	4,870 ^P
01/06/2012 11:30 EST	2.45 ^P	4,850 ^P

01/06/2012 11:45 EST	2.43 ^P	4,830 ^P
01/06/2012 12:00 EST	2.42 ^P	4,740 ^P
01/06/2012 12:15 EST	2.41 ^P	4,710 ^P
01/06/2012 12:30 EST	2.40 ^P	4,660 ^P
01/06/2012 12:45 EST	2.41 ^P	4,560 ^P
01/06/2012 13:00 EST	2.45 ^P	4,580 ^P
01/06/2012 13:15 EST	2.46 ^P	4,530 ^P
01/06/2012 13:30 EST	2.51 ^P	4,460 ^P
01/06/2012 13:45 EST	2.52 ^P	4,410 ^P
01/06/2012 14:00 EST	2.56 ^P	4,360 ^P
01/06/2012 14:15 EST	2.59 ^P	4,290 ^P
01/06/2012 14:30 EST	2.63 ^P	4,220 ^P
01/06/2012 14:45 EST	2.67 ^P	4,200 ^P
01/06/2012 15:00 EST	2.72 ^P	4,130 ^P
01/06/2012 15:15 EST	2.77 ^P	4,110 ^P
01/06/2012 15:30 EST	2.82 ^P	4,040 ^P
01/06/2012 15:45 EST	2.87 ^P	4,000 ^P
01/06/2012 16:00 EST	2.94 ^P	3,990 ^P
01/06/2012 16:15 EST	3.00 ^P	3,940 ^P
01/06/2012 16:30 EST	3.03 ^P	3,920 ^P
01/06/2012 16:45 EST	3.06 ^P	3,950 ^P
01/06/2012 17:00 EST	3.07 ^P	3,980 ^P
01/06/2012 17:15 EST	3.08 ^P	3,980 ^P
01/06/2012 17:30 EST	3.08 ^P	4,010 ^P
01/06/2012 17:45 EST	3.05 ^P	4,040 ^P
01/06/2012 18:00 EST	3.02 ^P	4,120 ^P
01/06/2012 18:15 EST	3.00 ^P	4,190 ^P
01/06/2012 18:30 EST	2.98 ^P	4,310 ^P
01/06/2012 18:45 EST	2.95 ^P	4,410 ^P
01/06/2012 19:00 EST	2.93 ^P	4,540 ^P
01/06/2012 19:15 EST	2.91 ^P	4,660 ^P
01/06/2012 19:30 EST	2.89 ^P	4,770 ^P
01/06/2012 19:45 EST	2.87 ^P	4,780 ^P
01/06/2012 20:00 EST	2.85 ^P	4,830 ^P
01/06/2012 20:15 EST	2.83 ^P	4,840 ^P
01/06/2012 20:30 EST	2.80 ^P	4,890 ^P
01/06/2012 20:45 EST	2.81 ^P	4,870 ^P
01/06/2012 21:00 EST	2.82 ^P	4,950 ^P
01/06/2012 21:15 EST	2.84 ^P	4,850 ^P
01/06/2012 21:30 EST	2.86 ^P	4,820 ^P
01/06/2012 21:45 EST	2.89 ^P	4,850 ^P
01/06/2012 22:00 EST	2.92 ^P	4,790 ^P
01/06/2012 22:15 EST	2.95 ^P	4,730 ^P

01/06/2012 22:30 EST	2.99 ^P	4,680 ^P
01/06/2012 22:45 EST	3.03 ^P	4,600 ^P
01/06/2012 23:00 EST	3.08 ^P	4,560 ^P
01/06/2012 23:15 EST	3.13 ^P	4,500 ^P
01/06/2012 23:30 EST	3.17 ^P	4,450 ^P
01/06/2012 23:45 EST	3.24 ^P	4,420 ^P
01/07/2012 00:00 EST	3.30 ^P	4,390 ^P
01/07/2012 00:15 EST	3.35 ^P	4,370 ^P
01/07/2012 00:30 EST	3.42 ^P	4,340 ^P
01/07/2012 00:45 EST	3.48 ^P	4,350 ^P
01/07/2012 01:00 EST	3.53 ^P	4,330 ^P
01/07/2012 01:15 EST	3.59 ^P	4,330 ^P
01/07/2012 01:30 EST	3.64 ^P	4,360 ^P
01/07/2012 01:45 EST	3.69 ^P	4,270 ^P
01/07/2012 02:00 EST	3.73 ^P	4,400 ^P
01/07/2012 02:15 EST	3.77 ^P	4,400 ^P
01/07/2012 02:30 EST	3.80 ^P	4,450 ^P
01/07/2012 02:45 EST	3.81 ^P	4,390 ^P
01/07/2012 03:00 EST	3.84 ^P	4,380 ^P
01/07/2012 03:15 EST	3.84 ^P	4,440 ^P
01/07/2012 03:30 EST	3.83 ^P	4,380 ^P
01/07/2012 03:45 EST	3.81 ^P	4,570 ^P
01/07/2012 04:00 EST	3.78 ^P	4,590 ^P
01/07/2012 04:15 EST	3.76 ^P	4,600 ^P
01/07/2012 04:30 EST	3.73 ^P	4,780 ^P
01/07/2012 04:45 EST	3.71 ^P	4,840 ^P
01/07/2012 05:00 EST	3.69 ^P	4,890 ^P
01/07/2012 05:15 EST	3.67 ^P	5,020 ^P
01/07/2012 05:30 EST	3.65 ^P	4,940 ^P
01/07/2012 05:45 EST	3.62 ^P	5,080 ^P
01/07/2012 06:00 EST	3.59 ^P	5,140 ^P
01/07/2012 06:15 EST	3.56 ^P	5,270 ^P
01/07/2012 06:30 EST	3.55 ^P	5,380 ^P
01/07/2012 06:45 EST	3.51 ^P	5,290 ^P
01/07/2012 07:00 EST	3.47 ^P	5,520 ^P
01/07/2012 07:15 EST	3.46 ^P	5,520 ^P
01/07/2012 07:30 EST	3.42 ^P	5,580 ^P
01/07/2012 07:45 EST	3.39 ^P	5,550 ^P
01/07/2012 08:00 EST	3.33 ^P	5,590 ^P
01/07/2012 08:15 EST	3.30 ^P	5,720 ^P
01/07/2012 08:30 EST	3.26 ^P	5,750 ^P
01/07/2012 08:45 EST	3.22 ^P	5,770 ^P
01/07/2012 09:00 EST	3.18 ^P	5,790 ^P

01/07/2012 09:15 EST	3.14 ^P	5,740 ^P
01/07/2012 09:30 EST	3.11 ^P	5,800 ^P
01/07/2012 09:45 EST	3.07 ^P	5,800 ^P
01/07/2012 10:00 EST	3.03 ^P	5,750 ^P
01/07/2012 10:15 EST	2.99 ^P	5,800 ^P
01/07/2012 10:30 EST	2.96 ^P	5,710 ^P
01/07/2012 10:45 EST	2.92 ^P	5,680 ^P
01/07/2012 11:00 EST	2.92 ^P	5,640 ^P
01/07/2012 11:15 EST	2.87 ^P	5,530 ^P
01/07/2012 11:30 EST	2.82 ^P	5,470 ^P
01/07/2012 11:45 EST	2.79 ^P	5,350 ^P
01/07/2012 12:00 EST	2.75 ^P	5,330 ^P
01/07/2012 12:15 EST	2.73 ^P	5,240 ^P
01/07/2012 12:30 EST	2.70 ^P	5,190 ^P
01/07/2012 12:45 EST	2.68 ^P	5,100 ^P
01/07/2012 13:00 EST	2.65 ^P	5,050 ^P
01/07/2012 13:15 EST	2.64 ^P	4,940 ^P
01/07/2012 13:30 EST	2.63 ^P	4,900 ^P
01/07/2012 13:45 EST	2.62 ^P	4,850 ^P
01/07/2012 14:00 EST	2.63 ^P	4,730 ^P
01/07/2012 14:15 EST	2.66 ^P	4,690 ^P
01/07/2012 14:30 EST	2.69 ^P	4,640 ^P
01/07/2012 14:45 EST	2.72 ^P	4,550 ^P
01/07/2012 15:00 EST	2.76 ^P	4,470 ^P
01/07/2012 15:15 EST	2.79 ^P	4,360 ^P
01/07/2012 15:30 EST	2.82 ^P	4,320 ^P
01/07/2012 15:45 EST	2.87 ^P	4,270 ^P
01/07/2012 16:00 EST	2.93 ^P	4,200 ^P
01/07/2012 16:15 EST	2.97 ^P	4,150 ^P
01/07/2012 16:30 EST	3.00 ^P	4,110 ^P
01/07/2012 16:45 EST	3.04 ^P	4,080 ^P
01/07/2012 17:00 EST	3.07 ^P	4,070 ^P
01/07/2012 17:15 EST	3.08 ^P	4,050 ^P
01/07/2012 17:30 EST	3.09 ^P	4,070 ^P
01/07/2012 17:45 EST	3.07 ^P	4,090 ^P
01/07/2012 18:00 EST	3.05 ^P	4,090 ^P
01/07/2012 18:15 EST	3.03 ^P	4,110 ^P
01/07/2012 18:30 EST	3.01 ^P	4,200 ^P
01/07/2012 18:45 EST	2.98 ^P	4,300 ^P
01/07/2012 19:00 EST	2.96 ^P	4,350 ^P
01/07/2012 19:15 EST	2.93 ^P	4,450 ^P
01/07/2012 19:30 EST	2.92 ^P	4,590 ^P
01/07/2012 19:45 EST	2.90 ^P	4,590 ^P

01/07/2012 20:00 EST	2.87 ^P	4,630 ^P
01/07/2012 20:15 EST	2.84 ^P	4,640 ^P
01/07/2012 20:30 EST	2.81 ^P	4,690 ^P
01/07/2012 20:45 EST	2.78 ^P	4,700 ^P
01/07/2012 21:00 EST	2.77 ^P	4,720 ^P
01/07/2012 21:15 EST	2.75 ^P	4,700 ^P
01/07/2012 21:30 EST	2.72 ^P	4,690 ^P
01/07/2012 21:45 EST	2.73 ^P	4,710 ^P
01/07/2012 22:00 EST	2.71 ^P	4,670 ^P
01/07/2012 22:15 EST	2.74 ^P	4,660 ^P
01/07/2012 22:30 EST	2.77 ^P	4,650 ^P
01/07/2012 22:45 EST	2.80 ^P	4,580 ^P
01/07/2012 23:00 EST	2.83 ^P	4,480 ^P
01/07/2012 23:15 EST	2.86 ^P	4,450 ^P
01/07/2012 23:30 EST	2.90 ^P	4,370 ^P
01/07/2012 23:45 EST	2.95 ^P	4,310 ^P
01/08/2012 00:00 EST	2.99 ^P	4,240 ^P
01/08/2012 00:15 EST	3.04 ^P	4,220 ^P
01/08/2012 00:30 EST	3.10 ^P	4,150 ^P
01/08/2012 00:45 EST	3.18 ^P	4,100 ^P
01/08/2012 01:00 EST	3.24 ^P	4,070 ^P
01/08/2012 01:15 EST	3.30 ^P	4,040 ^P
01/08/2012 01:30 EST	3.38 ^P	4,000 ^P
01/08/2012 01:45 EST	3.45 ^P	4,020 ^P
01/08/2012 02:00 EST	3.51 ^P	3,960 ^P
01/08/2012 02:15 EST	3.58 ^P	3,970 ^P
01/08/2012 02:30 EST	3.64 ^P	4,000 ^P
01/08/2012 02:45 EST	3.69 ^P	4,000 ^P
01/08/2012 03:00 EST	3.75 ^P	3,910 ^P
01/08/2012 03:15 EST	3.79 ^P	3,920 ^P
01/08/2012 03:30 EST	3.81 ^P	4,050 ^P
01/08/2012 03:45 EST	3.84 ^P	4,050 ^P
01/08/2012 04:00 EST	3.84 ^P	4,210 ^P
01/08/2012 04:15 EST	3.85 ^P	4,210 ^P
01/08/2012 04:30 EST	3.83 ^P	4,170 ^P
01/08/2012 04:45 EST	3.82 ^P	4,230 ^P
01/08/2012 05:00 EST	3.79 ^P	4,330 ^P
01/08/2012 05:15 EST	3.76 ^P	4,340 ^P
01/08/2012 05:30 EST	3.74 ^P	4,460 ^P
01/08/2012 05:45 EST	3.72 ^P	4,590 ^P
01/08/2012 06:00 EST	3.70 ^P	4,670 ^P
01/08/2012 06:15 EST	3.68 ^P	4,710 ^P
01/08/2012 06:30 EST	3.65 ^P	4,950 ^P

01/08/2012 06:45 EST	3.63 ^P	5,060 ^P
01/08/2012 07:00 EST	3.60 ^P	4,950 ^P
01/08/2012 07:15 EST	3.57 ^P	5,100 ^P
01/08/2012 07:30 EST	3.54 ^P	5,160 ^P
01/08/2012 07:45 EST	3.51 ^P	5,180 ^P
01/08/2012 08:00 EST	3.48 ^P	5,260 ^P
01/08/2012 08:15 EST	3.44 ^P	5,280 ^P
01/08/2012 08:30 EST	3.41 ^P	5,370 ^P
01/08/2012 08:45 EST	3.37 ^P	5,390 ^P
01/08/2012 09:00 EST	3.34 ^P	5,380 ^P
01/08/2012 09:15 EST	3.30 ^P	5,480 ^P
01/08/2012 09:30 EST	3.26 ^P	5,390 ^P
01/08/2012 09:45 EST	3.22 ^P	5,410 ^P
01/08/2012 10:00 EST	3.18 ^P	5,410 ^P
01/08/2012 10:15 EST	3.14 ^P	5,450 ^P
01/08/2012 10:30 EST	3.11 ^P	5,420 ^P
01/08/2012 10:45 EST	3.07 ^P	5,460 ^P
01/08/2012 11:00 EST	3.03 ^P	5,460 ^P
01/08/2012 11:15 EST	2.99 ^P	5,380 ^P
01/08/2012 11:30 EST	2.96 ^P	5,340 ^P
01/08/2012 11:45 EST	2.92 ^P	5,300 ^P
01/08/2012 12:00 EST	2.89 ^P	5,240 ^P
01/08/2012 12:15 EST	2.85 ^P	5,140 ^P
01/08/2012 12:30 EST	2.82 ^P	5,100 ^P
01/08/2012 12:45 EST	2.79 ^P	5,020 ^P
01/08/2012 13:00 EST	2.76 ^P	5,000 ^P
01/08/2012 13:15 EST	2.73 ^P	4,920 ^P
01/08/2012 13:30 EST	2.72 ^P	4,830 ^P
01/08/2012 13:45 EST	2.70 ^P	4,830 ^P
01/08/2012 14:00 EST	2.70 ^P	4,740 ^P
01/08/2012 14:15 EST	2.70 ^P	4,680 ^P
01/08/2012 14:30 EST	2.71 ^P	4,620 ^P
01/08/2012 14:45 EST	2.75 ^P	4,520 ^P
01/08/2012 15:00 EST	2.78 ^P	4,480 ^P
01/08/2012 15:15 EST	2.82 ^P	4,390 ^P
01/08/2012 15:30 EST	2.86 ^P	4,320 ^P
01/08/2012 15:45 EST	2.89 ^P	4,250 ^P
01/08/2012 16:00 EST	2.96 ^P	4,170 ^P
01/08/2012 16:15 EST	3.00 ^P	4,130 ^P
01/08/2012 16:30 EST	3.06 ^P	4,100 ^P
01/08/2012 16:45 EST	3.09 ^P	4,050 ^P
01/08/2012 17:00 EST	3.14 ^P	4,000 ^P
01/08/2012 17:15 EST	3.17 ^P	3,970 ^P

01/08/2012 17:30 EST	3.19 ^P	3,980 ^P
01/08/2012 17:45 EST	3.20 ^P	3,970 ^P
01/08/2012 18:00 EST	3.19 ^P	3,950 ^P
01/08/2012 18:15 EST	3.17 ^P	3,980 ^P
01/08/2012 18:30 EST	3.14 ^P	4,020 ^P
01/08/2012 18:45 EST	3.11 ^P	4,080 ^P
01/08/2012 19:00 EST	3.09 ^P	4,150 ^P
01/08/2012 19:15 EST	3.06 ^P	4,310 ^P
01/08/2012 19:30 EST	3.04 ^P	4,320 ^P
01/08/2012 19:45 EST	3.02 ^P	4,430 ^P
01/08/2012 20:00 EST	2.99 ^P	4,500 ^P
01/08/2012 20:15 EST	2.96 ^P	4,570 ^P
01/08/2012 20:30 EST	2.94 ^P	4,600 ^P
01/08/2012 20:45 EST	2.90 ^P	4,670 ^P
01/08/2012 21:00 EST	2.87 ^P	4,660 ^P
01/08/2012 21:15 EST	2.84 ^P	4,700 ^P
01/08/2012 21:30 EST	2.83 ^P	4,650 ^P
01/08/2012 21:45 EST	2.79 ^P	4,740 ^P
01/08/2012 22:00 EST	2.76 ^P	4,700 ^P
01/08/2012 22:15 EST	2.74 ^P	4,660 ^P
01/08/2012 22:30 EST	2.71 ^P	4,620 ^P
01/08/2012 22:45 EST	2.69 ^P	4,650 ^P
01/08/2012 23:00 EST	2.67 ^P	4,610 ^P
01/08/2012 23:15 EST	2.66 ^P	4,560 ^P
01/08/2012 23:30 EST	2.68 ^P	4,510 ^P
01/08/2012 23:45 EST	2.70 ^P	4,510 ^P
01/09/2012 00:00 EST	2.72 ^P	4,460 ^P
01/09/2012 00:15 EST	2.76 ^P	4,360 ^P
01/09/2012 00:30 EST	2.79 ^P	4,300 ^P
01/09/2012 00:45 EST	2.82 ^P	4,250 ^P
01/09/2012 01:00 EST	2.87 ^P	4,190 ^P
01/09/2012 01:15 EST	2.93 ^P	4,090 ^P
01/09/2012 01:30 EST	2.98 ^P	3,980 ^P
01/09/2012 01:45 EST	3.04 ^P	3,940 ^P
01/09/2012 02:00 EST	3.11 ^P	3,910 ^P
01/09/2012 02:15 EST	3.18 ^P	3,860 ^P
01/09/2012 02:30 EST	3.25 ^P	3,830 ^P
01/09/2012 02:45 EST	3.32 ^P	3,800 ^P
01/09/2012 03:00 EST	3.39 ^P	3,780 ^P
01/09/2012 03:15 EST	3.47 ^P	3,770 ^P
01/09/2012 03:30 EST	3.52 ^P	3,780 ^P
01/09/2012 03:45 EST	3.58 ^P	3,740 ^P
01/09/2012 04:00 EST	3.62 ^P	3,730 ^P

01/09/2012 04:15 EST	3.65 ^P	3,730 ^P
01/09/2012 04:30 EST	3.66 ^P	3,800 ^P
01/09/2012 04:45 EST	3.68 ^P	3,810 ^P
01/09/2012 05:00 EST	3.69 ^P	3,900 ^P
01/09/2012 05:15 EST	3.67 ^P	3,930 ^P
01/09/2012 05:30 EST	3.65 ^P	4,010 ^P
01/09/2012 05:45 EST	3.62 ^P	4,140 ^P
01/09/2012 06:00 EST	3.60 ^P	4,180 ^P
01/09/2012 06:15 EST	3.58 ^P	4,310 ^P
01/09/2012 06:30 EST	3.57 ^P	4,410 ^P
01/09/2012 06:45 EST	3.53 ^P	4,590 ^P
01/09/2012 07:00 EST	3.51 ^P	4,690 ^P
01/09/2012 07:15 EST	3.48 ^P	4,810 ^P
01/09/2012 07:30 EST	3.44 ^P	4,750 ^P
01/09/2012 07:45 EST	3.42 ^P	4,820 ^P
01/09/2012 08:00 EST	3.38 ^P	4,870 ^P
01/09/2012 08:15 EST	3.35 ^P	4,970 ^P
01/09/2012 08:30 EST	3.31 ^P	5,020 ^P
01/09/2012 08:45 EST	3.27 ^P	5,070 ^P
01/09/2012 09:00 EST	3.24 ^P	5,140 ^P
01/09/2012 09:15 EST	3.20 ^P	5,160 ^P
01/09/2012 09:30 EST	3.16 ^P	5,190 ^P
01/09/2012 09:45 EST	3.12 ^P	5,190 ^P
01/09/2012 10:00 EST	3.09 ^P	5,190 ^P
01/09/2012 10:15 EST	3.05 ^P	5,130 ^P
01/09/2012 10:30 EST	3.01 ^P	5,140 ^P
01/09/2012 10:45 EST	2.98 ^P	5,090 ^P
01/09/2012 11:00 EST	2.94 ^P	5,060 ^P
01/09/2012 11:15 EST	2.91 ^P	5,020 ^P
01/09/2012 11:30 EST	2.87 ^P	4,980 ^P
01/09/2012 11:45 EST	2.83 ^P	4,950 ^P
01/09/2012 12:00 EST	2.80 ^P	4,870 ^P
01/09/2012 12:15 EST	2.77 ^P	4,810 ^P
01/09/2012 12:30 EST	2.73 ^P	4,760 ^P
01/09/2012 12:45 EST	2.70 ^P	4,730 ^P
01/09/2012 13:00 EST	2.66 ^P	4,660 ^P
01/09/2012 13:15 EST	2.64 ^P	4,600 ^P
01/09/2012 13:30 EST	2.61 ^P	4,530 ^P
01/09/2012 13:45 EST	2.59 ^P	4,530 ^P
01/09/2012 14:00 EST	2.58 ^P	4,450 ^P
01/09/2012 14:15 EST	2.57 ^P	4,410 ^P
01/09/2012 14:30 EST	2.56 ^P	4,360 ^P
01/09/2012 14:45 EST	2.58 ^P	4,290 ^P

01/09/2012 15:00 EST	2.61 ^P	4,220 ^P
01/09/2012 15:15 EST	2.64 ^P	4,160 ^P
01/09/2012 15:30 EST	2.67 ^P	4,150 ^P
01/09/2012 15:45 EST	2.71 ^P	4,060 ^P
01/09/2012 16:00 EST	2.76 ^P	3,980 ^P
01/09/2012 16:15 EST	2.80 ^P	3,920 ^P
01/09/2012 16:30 EST	2.84 ^P	3,850 ^P
01/09/2012 16:45 EST	2.89 ^P	3,780 ^P
01/09/2012 17:00 EST	2.94 ^P	3,720 ^P
01/09/2012 17:15 EST	2.98 ^P	3,690 ^P
01/09/2012 17:30 EST	3.03 ^P	3,680 ^P
01/09/2012 17:45 EST	3.07 ^P	3,630 ^P
01/09/2012 18:00 EST	3.11 ^P	3,640 ^P
01/09/2012 18:15 EST	3.14 ^P	3,630 ^P
01/09/2012 18:30 EST	3.15 ^P	3,650 ^P
01/09/2012 18:45 EST	3.15 ^P	3,660 ^P
01/09/2012 19:00 EST	3.13 ^P	3,670 ^P
01/09/2012 19:15 EST	3.10 ^P	3,740 ^P
01/09/2012 19:30 EST	3.07 ^P	3,800 ^P
01/09/2012 19:45 EST	3.03 ^P	3,900 ^P
01/09/2012 20:00 EST	3.02 ^P	4,040 ^P
01/09/2012 20:15 EST	2.99 ^P	4,160 ^P
01/09/2012 20:30 EST	2.98 ^P	4,210 ^P
01/09/2012 20:45 EST	2.96 ^P	4,300 ^P
01/09/2012 21:00 EST	2.93 ^P	4,340 ^P
01/09/2012 21:15 EST	2.89 ^P	4,490 ^P
01/09/2012 21:30 EST	2.87 ^P	4,510 ^P
01/09/2012 21:45 EST	2.86 ^P	4,530 ^P
01/09/2012 22:00 EST	2.82 ^P	4,590 ^P
01/09/2012 22:15 EST	2.81 ^P	4,550 ^P
01/09/2012 22:30 EST	2.78 ^P	4,560 ^P
01/09/2012 22:45 EST	2.73 ^P	4,600 ^P
01/09/2012 23:00 EST	2.71 ^P	4,550 ^P
01/09/2012 23:15 EST	2.70 ^P	4,540 ^P
01/09/2012 23:30 EST	2.67 ^P	4,540 ^P
01/09/2012 23:45 EST	2.67 ^P	4,530 ^P
01/10/2012 00:00 EST	2.68 ^P	4,500 ^P
01/10/2012 00:15 EST	2.71 ^P	4,490 ^P
01/10/2012 00:30 EST	2.75 ^P	4,420 ^P
01/10/2012 00:45 EST	2.79 ^P	4,370 ^P
01/10/2012 01:00 EST	2.82 ^P	4,310 ^P
01/10/2012 01:15 EST	2.86 ^P	4,250 ^P
01/10/2012 01:30 EST	2.91 ^P	4,160 ^P

01/10/2012 01:45 EST	2.96 ^P	4,080 ^P
01/10/2012 02:00 EST	3.03 ^P	4,010 ^P
01/10/2012 02:15 EST	3.10 ^P	3,990 ^P
01/10/2012 02:30 EST	3.17 ^P	3,940 ^P
01/10/2012 02:45 EST	3.25 ^P	3,870 ^P
01/10/2012 03:00 EST	3.33 ^P	3,840 ^P
01/10/2012 03:15 EST	3.41 ^P	3,790 ^P
01/10/2012 03:30 EST	3.49 ^P	3,770 ^P
01/10/2012 03:45 EST	3.56 ^P	3,740 ^P
01/10/2012 04:00 EST	3.63 ^P	3,730 ^P
01/10/2012 04:15 EST	3.70 ^P	3,720 ^P
01/10/2012 04:30 EST	3.75 ^P	3,700 ^P
01/10/2012 04:45 EST	3.79 ^P	3,700 ^P
01/10/2012 05:00 EST	3.83 ^P	3,710 ^P
01/10/2012 05:15 EST	3.83 ^P	3,760 ^P
01/10/2012 05:30 EST	3.87 ^P	3,890 ^P
01/10/2012 05:45 EST	3.87 ^P	3,850 ^P
01/10/2012 06:00 EST	3.87 ^P	3,970 ^P
01/10/2012 06:15 EST	3.85 ^P	4,050 ^P
01/10/2012 06:30 EST	3.81 ^P	4,100 ^P
01/10/2012 06:45 EST	3.78 ^P	4,150 ^P
01/10/2012 07:00 EST	3.75 ^P	4,270 ^P
01/10/2012 07:15 EST	3.73 ^P	4,410 ^P
01/10/2012 07:30 EST	3.71 ^P	4,470 ^P
01/10/2012 07:45 EST	3.69 ^P	4,630 ^P
01/10/2012 08:00 EST	3.67 ^P	4,760 ^P
01/10/2012 08:15 EST	3.64 ^P	4,850 ^P
01/10/2012 08:30 EST	3.61 ^P	4,940 ^P
01/10/2012 08:45 EST	3.58 ^P	4,970 ^P
01/10/2012 09:00 EST	3.55 ^P	5,070 ^P
01/10/2012 09:15 EST	3.52 ^P	5,030 ^P
01/10/2012 09:30 EST	3.48 ^P	5,180 ^P
01/10/2012 09:45 EST	3.45 ^P	5,200 ^P
01/10/2012 10:00 EST	3.41 ^P	5,210 ^P
01/10/2012 10:15 EST	3.38 ^P	5,250 ^P
01/10/2012 10:30 EST	3.35 ^P	5,290 ^P
01/10/2012 10:45 EST	3.31 ^P	5,330 ^P
01/10/2012 11:00 EST	3.28 ^P	5,410 ^P
01/10/2012 11:15 EST	3.24 ^P	5,380 ^P
01/10/2012 11:30 EST	3.19 ^P	5,420 ^P
01/10/2012 11:45 EST	3.15 ^P	5,380 ^P
01/10/2012 12:00 EST	3.12 ^P	5,360 ^P
01/10/2012 12:15 EST	3.08 ^P	5,360 ^P

01/10/2012 12:30 EST	3.04 ^P	5,370 ^P
01/10/2012 12:45 EST	3.01 ^P	5,290 ^P
01/10/2012 13:00 EST	2.98 ^P	5,230 ^P
01/10/2012 13:15 EST	2.94 ^P	5,220 ^P
01/10/2012 13:30 EST	2.91 ^P	5,150 ^P
01/10/2012 13:45 EST	2.88 ^P	5,060 ^P
01/10/2012 14:00 EST	2.84 ^P	5,010 ^P
01/10/2012 14:15 EST	2.83 ^P	4,960 ^P
01/10/2012 14:30 EST	2.80 ^P	4,880 ^P
01/10/2012 14:45 EST	2.78 ^P	4,820 ^P
01/10/2012 15:00 EST	2.77 ^P	4,750 ^P
01/10/2012 15:15 EST	2.78 ^P	4,660 ^P
01/10/2012 15:30 EST	2.81 ^P	4,620 ^P
01/10/2012 15:45 EST	2.87 ^P	4,540 ^P
01/10/2012 16:00 EST	2.90 ^P	4,460 ^P
01/10/2012 16:15 EST	2.95 ^P	4,390 ^P
01/10/2012 16:30 EST	2.99 ^P	4,280 ^P
01/10/2012 16:45 EST	3.03 ^P	4,210 ^P
01/10/2012 17:00 EST	3.09 ^P	4,130 ^P
01/10/2012 17:15 EST	3.14 ^P	4,080 ^P
01/10/2012 17:30 EST	3.20 ^P	4,050 ^P
01/10/2012 17:45 EST	3.26 ^P	4,000 ^P
01/10/2012 18:00 EST	3.31 ^P	3,970 ^P
01/10/2012 18:15 EST	3.35 ^P	3,970 ^P
01/10/2012 18:30 EST	3.39 ^P	3,960 ^P
01/10/2012 18:45 EST	3.42 ^P	3,960 ^P
01/10/2012 19:00 EST	3.43 ^P	3,960 ^P
01/10/2012 19:15 EST	3.42 ^P	3,960 ^P
01/10/2012 19:30 EST	3.41 ^P	3,970 ^P
01/10/2012 19:45 EST	3.37 ^P	4,010 ^P
01/10/2012 20:00 EST	3.34 ^P	4,110 ^P
01/10/2012 20:15 EST	3.32 ^P	4,240 ^P
01/10/2012 20:30 EST	3.27 ^P	4,340 ^P
01/10/2012 20:45 EST	3.26 ^P	4,390 ^P
01/10/2012 21:00 EST	3.24 ^P	4,490 ^P
01/10/2012 21:15 EST	3.21 ^P	4,580 ^P
01/10/2012 21:30 EST	3.17 ^P	4,700 ^P
01/10/2012 21:45 EST	3.15 ^P	4,800 ^P
01/10/2012 22:00 EST	3.12 ^P	4,850 ^P
01/10/2012 22:15 EST	3.07 ^P	4,880 ^P
01/10/2012 22:30 EST	3.04 ^P	4,890 ^P
01/10/2012 22:45 EST	3.01 ^P	5,020 ^P
01/10/2012 23:00 EST	2.98 ^P	4,970 ^P

01/10/2012 23:15 EST	2.97 ^P	4,940 ^P
01/10/2012 23:30 EST	2.92 ^P	4,920 ^P
01/10/2012 23:45 EST	2.89 ^P	4,940 ^P
01/11/2012 00:00 EST	2.86 ^P	4,930 ^P
01/11/2012 00:15 EST	2.85 ^P	4,910 ^P
01/11/2012 00:30 EST	2.84 ^P	4,860 ^P
01/11/2012 00:45 EST	2.84 ^P	4,800 ^P
01/11/2012 01:00 EST	2.89 ^P	4,760 ^P
01/11/2012 01:15 EST	2.90 ^P	4,710 ^P
01/11/2012 01:30 EST	2.96 ^P	4,610 ^P
01/11/2012 01:45 EST	2.98 ^P	4,540 ^P
01/11/2012 02:00 EST	3.03 ^P	4,470 ^P
01/11/2012 02:15 EST	3.07 ^P	4,370 ^P
01/11/2012 02:30 EST	3.13 ^P	4,290 ^P
01/11/2012 02:45 EST	3.21 ^P	4,210 ^P
01/11/2012 03:00 EST	3.28 ^P	4,160 ^P
01/11/2012 03:15 EST	3.35 ^P	4,070 ^P
01/11/2012 03:30 EST	3.40 ^P	4,040 ^P
01/11/2012 03:45 EST	3.49 ^P	3,980 ^P
01/11/2012 04:00 EST	3.55 ^P	3,940 ^P
01/11/2012 04:15 EST	3.59 ^P	3,900 ^P
01/11/2012 04:30 EST	3.66 ^P	3,890 ^P
01/11/2012 04:45 EST	3.69 ^P	3,880 ^P
01/11/2012 05:00 EST	3.77 ^P	3,870 ^P
01/11/2012 05:15 EST	3.79 ^P	3,870 ^P
01/11/2012 05:30 EST	3.86 ^P	3,930 ^P
01/11/2012 05:45 EST	3.90 ^P	3,950 ^P
01/11/2012 06:00 EST	3.94 ^P	3,940 ^P
01/11/2012 06:15 EST	3.96 ^P	4,050 ^P
01/11/2012 06:30 EST	4.01 ^P	4,020 ^P
01/11/2012 06:45 EST	4.03 ^P	4,060 ^P
01/11/2012 07:00 EST	4.02 ^P	4,090 ^P
01/11/2012 07:15 EST	4.03 ^P	4,210 ^P
01/11/2012 07:30 EST	4.02 ^P	4,260 ^P
01/11/2012 07:45 EST	4.02 ^P	4,250 ^P
01/11/2012 08:00 EST	3.99 ^P	4,360 ^P
01/11/2012 08:15 EST	3.96 ^P	4,390 ^P
01/11/2012 08:30 EST	3.93 ^P	4,410 ^P
01/11/2012 08:45 EST	3.91 ^P	4,480 ^P
01/11/2012 09:00 EST	3.89 ^P	4,630 ^P
01/11/2012 09:15 EST	3.86 ^P	4,640 ^P
01/11/2012 09:30 EST	3.84 ^P	4,780 ^P
01/11/2012 09:45 EST	3.82 ^P	4,830 ^P

01/11/2012 10:00 EST	3.78 ^P	4,900 ^P
01/11/2012 10:15 EST	3.76 ^P	5,010 ^P
01/11/2012 10:30 EST	3.73 ^P	5,150 ^P
01/11/2012 10:45 EST	3.71 ^P	5,210 ^P
01/11/2012 11:00 EST	3.68 ^P	5,210 ^P
01/11/2012 11:15 EST	3.64 ^P	5,340 ^P
01/11/2012 11:30 EST	3.61 ^P	5,390 ^P
01/11/2012 11:45 EST	3.60 ^P	5,470 ^P
01/11/2012 12:00 EST	3.56 ^P	5,530 ^P
01/11/2012 12:15 EST	3.53 ^P	5,540 ^P
01/11/2012 12:30 EST	3.50 ^P	5,520 ^P
01/11/2012 12:45 EST	3.47 ^P	5,570 ^P
01/11/2012 13:00 EST	3.45 ^P	5,600 ^P
01/11/2012 13:15 EST	3.43 ^P	5,570 ^P
01/11/2012 13:30 EST	3.41 ^P	5,590 ^P
01/11/2012 13:45 EST	3.41 ^P	5,600 ^P
01/11/2012 14:00 EST	3.39 ^P	5,540 ^P
01/11/2012 14:15 EST	3.40 ^P	5,520 ^P
01/11/2012 14:30 EST	3.43 ^P	5,480 ^P
01/11/2012 14:45 EST	3.47 ^P	5,440 ^P
01/11/2012 15:00 EST	3.51 ^P	5,370 ^P
01/11/2012 15:15 EST	3.54 ^P	5,290 ^P
01/11/2012 15:30 EST	3.61 ^P	5,190 ^P
01/11/2012 15:45 EST	3.65 ^P	5,120 ^P
01/11/2012 16:00 EST	3.70 ^P	5,050 ^P
01/11/2012 16:15 EST	3.75 ^P	4,980 ^P
01/11/2012 16:30 EST	3.79 ^P	4,910 ^P
01/11/2012 16:45 EST	3.84 ^P	4,840 ^P
01/11/2012 17:00 EST	3.89 ^P	4,820 ^P
01/11/2012 17:15 EST	3.93 ^P	4,760 ^P
01/11/2012 17:30 EST	3.97 ^P	4,710 ^P
01/11/2012 17:45 EST	4.01 ^P	4,670 ^P
01/11/2012 18:00 EST	4.04 ^P	4,660 ^P
01/11/2012 18:15 EST	4.07 ^P	4,600 ^P
01/11/2012 18:30 EST	4.09 ^P	4,610 ^P
01/11/2012 18:45 EST	4.10 ^P	4,580 ^P
01/11/2012 19:00 EST	4.10 ^P	4,650 ^P
01/11/2012 19:15 EST	4.10 ^P	4,630 ^P
01/11/2012 19:30 EST	4.07 ^P	4,640 ^P
01/11/2012 19:45 EST	4.04 ^P	4,720 ^P
01/11/2012 20:00 EST	4.01 ^P	4,710 ^P
01/11/2012 20:15 EST	3.99 ^P	4,730 ^P
01/11/2012 20:30 EST	3.98 ^P	4,770 ^P

01/11/2012 20:45 EST	3.95 ^P	4,840 ^P
01/11/2012 21:00 EST	3.92 ^P	5,000 ^P
01/11/2012 21:15 EST	3.91 ^P	5,070 ^P
01/11/2012 21:30 EST	3.88 ^P	5,120 ^P
01/11/2012 21:45 EST	3.85 ^P	5,240 ^P
01/11/2012 22:00 EST	3.83 ^P	5,300 ^P
01/11/2012 22:15 EST	3.80 ^P	5,400 ^P
01/11/2012 22:30 EST	3.77 ^P	5,300 ^P
01/11/2012 22:45 EST	3.75 ^P	5,400 ^P
01/11/2012 23:00 EST	3.72 ^P	5,530 ^P
01/11/2012 23:15 EST	3.69 ^P	5,550 ^P
01/11/2012 23:30 EST	3.66 ^P	5,590 ^P
01/11/2012 23:45 EST	3.63 ^P	5,570 ^P
01/12/2012 00:00 EST	3.61 ^P	5,610 ^P
01/12/2012 00:15 EST	3.58 ^P	5,750 ^P
01/12/2012 00:30 EST	3.56 ^P	5,720 ^P
01/12/2012 00:45 EST	3.54 ^P	5,760 ^P
01/12/2012 01:00 EST	3.52 ^P	5,700 ^P
01/12/2012 01:15 EST	3.52 ^P	5,700 ^P
01/12/2012 01:30 EST	3.53 ^P	5,700 ^P
01/12/2012 01:45 EST	3.57 ^P	5,690 ^P
01/12/2012 02:00 EST	3.61 ^P	5,680 ^P
01/12/2012 02:15 EST	3.62 ^P	5,580 ^P
01/12/2012 02:30 EST	3.68 ^P	5,530 ^P
01/12/2012 02:45 EST	3.71 ^P	5,470 ^P
01/12/2012 03:00 EST	3.74 ^P	5,390 ^P
01/12/2012 03:15 EST	3.79 ^P	5,320 ^P
01/12/2012 03:30 EST	3.83 ^P	5,250 ^P
01/12/2012 03:45 EST	3.88 ^P	5,170 ^P
01/12/2012 04:00 EST	3.93 ^P	5,110 ^P
01/12/2012 04:15 EST	3.97 ^P	5,030 ^P
01/12/2012 04:30 EST	4.02 ^P	4,980 ^P
01/12/2012 04:45 EST	4.07 ^P	4,930 ^P
01/12/2012 05:00 EST	4.12 ^P	4,870 ^P
01/12/2012 05:15 EST	4.14 ^P	4,850 ^P
01/12/2012 05:30 EST	4.20 ^P	4,810 ^P
01/12/2012 05:45 EST	4.21 ^P	4,780 ^P
01/12/2012 06:00 EST	4.25 ^P	4,760 ^P
01/12/2012 06:15 EST	4.24 ^P	4,740 ^P
01/12/2012 06:30 EST	4.24 ^P	4,700 ^P
01/12/2012 06:45 EST	4.23 ^P	4,670 ^P
01/12/2012 07:00 EST	4.21 ^P	4,640 ^P
01/12/2012 07:15 EST	4.18 ^P	4,640 ^P

01/12/2012 07:30 EST	4.15 ^P	4,620 ^P
01/12/2012 07:45 EST	4.13 ^P	4,590 ^P
01/12/2012 08:00 EST	4.10 ^P	4,640 ^P
01/12/2012 08:15 EST	4.08 ^P	4,750 ^P
01/12/2012 08:30 EST	4.06 ^P	4,780 ^P
01/12/2012 08:45 EST	4.03 ^P	4,900 ^P
01/12/2012 09:00 EST	4.02 ^P	4,930 ^P
01/12/2012 09:15 EST	3.99 ^P	5,010 ^P
01/12/2012 09:30 EST	3.96 ^P	5,060 ^P
01/12/2012 09:45 EST	3.94 ^P	5,150 ^P
01/12/2012 10:00 EST	3.91 ^P	5,230 ^P
01/12/2012 10:15 EST	3.89 ^P	5,250 ^P
01/12/2012 10:30 EST	3.86 ^P	5,410 ^P
01/12/2012 10:45 EST	3.83 ^P	5,540 ^P
01/12/2012 11:00 EST	3.80 ^P	5,490 ^P
01/12/2012 11:15 EST	3.78 ^P	5,590 ^P
01/12/2012 11:30 EST	3.75 ^P	5,710 ^P
01/12/2012 11:45 EST	3.72 ^P	5,670 ^P
01/12/2012 12:00 EST	3.69 ^P	5,730 ^P
01/12/2012 12:15 EST	3.65 ^P	5,750 ^P
01/12/2012 12:30 EST	3.63 ^P	5,890 ^P
01/12/2012 12:45 EST	3.60 ^P	5,830 ^P
01/12/2012 13:00 EST	3.57 ^P	5,860 ^P
01/12/2012 13:15 EST	3.53 ^P	5,850 ^P
01/12/2012 13:30 EST	3.49 ^P	5,830 ^P
01/12/2012 13:45 EST	3.46 ^P	5,840 ^P
01/12/2012 14:00 EST	3.42 ^P	5,820 ^P
01/12/2012 14:15 EST	3.39 ^P	5,790 ^P
01/12/2012 14:30 EST	3.36 ^P	5,760 ^P
01/12/2012 14:45 EST	3.33 ^P	5,710 ^P
01/12/2012 15:00 EST	3.30 ^P	5,690 ^P
01/12/2012 15:15 EST	3.28 ^P	5,640 ^P
01/12/2012 15:30 EST	3.26 ^P	5,520 ^P
01/12/2012 15:45 EST	3.27 ^P	5,440 ^P
01/12/2012 16:00 EST	3.29 ^P	5,370 ^P
01/12/2012 16:15 EST	3.33 ^P	5,270 ^P
01/12/2012 16:30 EST	3.39 ^P	5,170 ^P
01/12/2012 16:45 EST	3.42 ^P	5,090 ^P
01/12/2012 17:00 EST	3.46 ^P	4,980 ^P
01/12/2012 17:15 EST	3.51 ^P	4,850 ^P
01/12/2012 17:30 EST	3.56 ^P	4,750 ^P
01/12/2012 17:45 EST	3.60 ^P	4,650 ^P
01/12/2012 18:00 EST	3.65 ^P	4,560 ^P

01/12/2012 18:15 EST	3.70 ^P	4,480 ^P
01/12/2012 18:30 EST	3.74 ^P	4,430 ^P
01/12/2012 18:45 EST	3.78 ^P	4,370 ^P
01/12/2012 19:00 EST	3.81 ^P	4,330 ^P
01/12/2012 19:15 EST	3.85 ^P	4,300 ^P
01/12/2012 19:30 EST	3.86 ^P	4,280 ^P
01/12/2012 19:45 EST	3.87 ^P	4,270 ^P
01/12/2012 20:00 EST	3.88 ^P	4,280 ^P
01/12/2012 20:15 EST	3.86 ^P	4,290 ^P
01/12/2012 20:30 EST	3.83 ^P	4,320 ^P
01/12/2012 20:45 EST	3.83 ^P	4,440 ^P
01/12/2012 21:00 EST	3.81 ^P	4,520 ^P
01/12/2012 21:15 EST	3.78 ^P	4,530 ^P
01/12/2012 21:30 EST	3.78 ^P	4,710 ^P
01/12/2012 21:45 EST	3.77 ^P	4,680 ^P
01/12/2012 22:00 EST	3.73 ^P	4,760 ^P
01/12/2012 22:15 EST	3.71 ^P	4,810 ^P
01/12/2012 22:30 EST	3.69 ^P	4,870 ^P
01/12/2012 22:45 EST	3.66 ^P	4,930 ^P
01/12/2012 23:00 EST	3.65 ^P	5,010 ^P
01/12/2012 23:15 EST	3.63 ^P	5,100 ^P
01/12/2012 23:30 EST	3.61 ^P	5,110 ^P
01/12/2012 23:45 EST	3.59 ^P	5,180 ^P
01/13/2012 00:00 EST	3.55 ^P	5,170 ^P
01/13/2012 00:15 EST	3.53 ^P	5,200 ^P
01/13/2012 00:30 EST	3.51 ^P	5,170 ^P
01/13/2012 00:45 EST	3.50 ^P	5,160 ^P
01/13/2012 01:00 EST	3.46 ^P	5,200 ^P
01/13/2012 01:15 EST	3.45 ^P	5,200 ^P
01/13/2012 01:30 EST	3.45 ^P	5,200 ^P
01/13/2012 01:45 EST	3.46 ^P	5,190 ^P
01/13/2012 02:00 EST	3.47 ^P	5,100 ^P
01/13/2012 02:15 EST	3.52 ^P	5,100 ^P
01/13/2012 02:30 EST	3.55 ^P	5,060 ^P
01/13/2012 02:45 EST	3.58 ^P	5,010 ^P
01/13/2012 03:00 EST	3.61 ^P	4,960 ^P
01/13/2012 03:15 EST	3.65 ^P	4,900 ^P
01/13/2012 03:30 EST	3.69 ^P	4,820 ^P
01/13/2012 03:45 EST	3.73 ^P	4,760 ^P
01/13/2012 04:00 EST	3.76 ^P	4,720 ^P
01/13/2012 04:15 EST	3.81 ^P	4,660 ^P
01/13/2012 04:30 EST	3.85 ^P	4,610 ^P
01/13/2012 04:45 EST	3.87 ^P	4,560 ^P

01/13/2012 05:00 EST	3.92 ^P	4,540 ^P
01/13/2012 05:15 EST	3.95 ^P	4,510 ^P
01/13/2012 05:30 EST	3.99 ^P	4,480 ^P
01/13/2012 05:45 EST	4.02 ^P	4,440 ^P
01/13/2012 06:00 EST	4.04 ^P	4,440 ^P
01/13/2012 06:15 EST	4.05 ^P	4,460 ^P
01/13/2012 06:30 EST	4.07 ^P	4,480 ^P
01/13/2012 06:45 EST	4.05 ^P	4,410 ^P
01/13/2012 07:00 EST	4.04 ^P	4,450 ^P
01/13/2012 07:15 EST	4.04 ^P	4,420 ^P
01/13/2012 07:30 EST	4.00 ^P	4,570 ^P
01/13/2012 07:45 EST	3.97 ^P	4,560 ^P
01/13/2012 08:00 EST	3.95 ^P	4,740 ^P
01/13/2012 08:15 EST	3.93 ^P	4,760 ^P
01/13/2012 08:30 EST	3.91 ^P	4,740 ^P
01/13/2012 08:45 EST	3.89 ^P	4,820 ^P
01/13/2012 09:00 EST	3.87 ^P	4,940 ^P
01/13/2012 09:15 EST	3.84 ^P	5,000 ^P
01/13/2012 09:30 EST	3.82 ^P	5,030 ^P
01/13/2012 09:45 EST	3.79 ^P	5,020 ^P
01/13/2012 10:00 EST	3.77 ^P	5,220 ^P
01/13/2012 10:15 EST	3.74 ^P	5,180 ^P
01/13/2012 10:30 EST	3.71 ^P	5,350 ^P
01/13/2012 10:45 EST	3.67 ^P	4,740 ^P
01/13/2012 11:00 EST	3.65 ^P	4,750 ^P
01/13/2012 11:15 EST	3.62 ^P	4,830 ^P
01/13/2012 11:30 EST	3.59 ^P	4,670 ^P
01/13/2012 11:45 EST	3.55 ^P	4,740 ^P
01/13/2012 12:00 EST	3.52 ^P	4,720 ^P
01/13/2012 12:15 EST	3.49 ^P	4,690 ^P
01/13/2012 12:30 EST	3.46 ^P	4,760 ^P
01/13/2012 12:45 EST	3.43 ^P	4,670 ^P
01/13/2012 13:00 EST	3.39 ^P	4,610 ^P
01/13/2012 13:15 EST	3.36 ^P	4,730 ^P
01/13/2012 13:30 EST	3.32 ^P	4,640 ^P
01/13/2012 13:45 EST	3.29 ^P	4,360 ^P
01/13/2012 14:00 EST	3.26 ^P	4,450 ^P
01/13/2012 14:15 EST	3.21 ^P	4,490 ^P
01/13/2012 14:30 EST	3.17 ^P	4,430 ^P
01/13/2012 14:45 EST	3.14 ^P	4,430 ^P
01/13/2012 15:00 EST	3.11 ^P	4,910 ^P
01/13/2012 15:15 EST	3.10 ^P	4,850 ^P
01/13/2012 15:30 EST	3.04 ^P	4,780 ^P

01/13/2012 15:45 EST	3.02 ^P	4,720 ^P
01/13/2012 16:00 EST	2.98 ^P	4,640 ^P
01/13/2012 16:15 EST	2.98 ^P	4,560 ^P
01/13/2012 16:30 EST	2.95 ^P	4,530 ^P
01/13/2012 16:45 EST	2.93 ^P	4,430 ^P
01/13/2012 17:00 EST	2.93 ^P	4,370 ^P
01/13/2012 17:15 EST	2.94 ^P	4,350 ^P
01/13/2012 17:30 EST	2.97 ^P	4,310 ^P
01/13/2012 17:45 EST	2.99 ^P	4,240 ^P
01/13/2012 18:00 EST	3.03 ^P	4,170 ^P
01/13/2012 18:15 EST	3.07 ^P	4,070 ^P
01/13/2012 18:30 EST	3.10 ^P	3,990 ^P
01/13/2012 18:45 EST	3.14 ^P	3,930 ^P
01/13/2012 19:00 EST	3.18 ^P	3,850 ^P
01/13/2012 19:15 EST	3.21 ^P	3,810 ^P
01/13/2012 19:30 EST	3.24 ^P	3,780 ^P
01/13/2012 19:45 EST	3.26 ^P	3,770 ^P
01/13/2012 20:00 EST	3.28 ^P	3,710 ^P
01/13/2012 20:15 EST	3.28 ^P	3,680 ^P
01/13/2012 20:30 EST	3.26 ^P	3,650 ^P
01/13/2012 20:45 EST	3.25 ^P	3,600 ^P
01/13/2012 21:00 EST	3.22 ^P	3,650 ^P
01/13/2012 21:15 EST	3.20 ^P	3,730 ^P
01/13/2012 21:30 EST	3.18 ^P	3,800 ^P
01/13/2012 21:45 EST	3.18 ^P	3,860 ^P
01/13/2012 22:00 EST	3.14 ^P	3,880 ^P
01/13/2012 22:15 EST	3.12 ^P	4,000 ^P
01/13/2012 22:30 EST	3.10 ^P	4,150 ^P
01/13/2012 22:45 EST	3.08 ^P	4,070 ^P
01/13/2012 23:00 EST	3.05 ^P	4,190 ^P
01/13/2012 23:15 EST	3.01 ^P	4,210 ^P
01/13/2012 23:30 EST	2.99 ^P	4,320 ^P
01/13/2012 23:45 EST	2.97 ^P	4,390 ^P
01/14/2012 00:00 EST	2.94 ^P	4,380 ^P
01/14/2012 00:15 EST	2.91 ^P	4,410 ^P
01/14/2012 00:30 EST	2.88 ^P	4,400 ^P
01/14/2012 00:45 EST	2.86 ^P	4,370 ^P
01/14/2012 01:00 EST	2.83 ^P	4,420 ^P
01/14/2012 01:15 EST	2.80 ^P	4,400 ^P
01/14/2012 01:30 EST	2.77 ^P	4,350 ^P
01/14/2012 01:45 EST	2.76 ^P	4,310 ^P
01/14/2012 02:00 EST	2.73 ^P	4,320 ^P
01/14/2012 02:15 EST	2.71 ^P	4,280 ^P

01/14/2012 02:30 EST	2.69 ^P	4,270 ^P
01/14/2012 02:45 EST	2.65 ^P	4,230 ^P
01/14/2012 03:00 EST	2.64 ^P	4,170 ^P
01/14/2012 03:15 EST	2.63 ^P	4,110 ^P
01/14/2012 03:30 EST	2.61 ^P	4,100 ^P
01/14/2012 03:45 EST	2.60 ^P	4,060 ^P
01/14/2012 04:00 EST	2.58 ^P	3,980 ^P
01/14/2012 04:15 EST	2.57 ^P	3,920 ^P
01/14/2012 04:30 EST	2.57 ^P	3,880 ^P
01/14/2012 04:45 EST	2.57 ^P	3,850 ^P
01/14/2012 05:00 EST	2.59 ^P	3,840 ^P
01/14/2012 05:15 EST	2.61 ^P	3,820 ^P
01/14/2012 05:30 EST	2.64 ^P	3,770 ^P
01/14/2012 05:45 EST	2.66 ^P	3,700 ^P
01/14/2012 06:00 EST	2.70 ^P	3,720 ^P
01/14/2012 06:15 EST	2.73 ^P	3,620 ^P
01/14/2012 06:30 EST	2.76 ^P	3,580 ^P
01/14/2012 06:45 EST	2.79 ^P	3,560 ^P
01/14/2012 07:00 EST	2.82 ^P	3,530 ^P
01/14/2012 07:15 EST	2.83 ^P	3,510 ^P
01/14/2012 07:30 EST	2.84 ^P	3,480 ^P
01/14/2012 07:45 EST	2.84 ^P	3,470 ^P
01/14/2012 08:00 EST	2.81 ^P	3,450 ^P
01/14/2012 08:15 EST	2.81 ^P	3,500 ^P
01/14/2012 08:30 EST	2.77 ^P	3,490 ^P
01/14/2012 08:45 EST	2.76 ^P	3,490 ^P
01/14/2012 09:00 EST	2.73 ^P	3,530 ^P
01/14/2012 09:15 EST	2.71 ^P	3,600 ^P
01/14/2012 09:30 EST	2.69 ^P	3,660 ^P
01/14/2012 09:45 EST	2.67 ^P	3,670 ^P
01/14/2012 10:00 EST	2.65 ^P	3,690 ^P
01/14/2012 10:15 EST	2.63 ^P	3,700 ^P
01/14/2012 10:30 EST	2.61 ^P	3,740 ^P
01/14/2012 10:45 EST	2.60 ^P	3,800 ^P
01/14/2012 11:00 EST	2.57 ^P	3,750 ^P
01/14/2012 11:15 EST	2.55 ^P	3,760 ^P
01/14/2012 11:30 EST	2.54 ^P	3,780 ^P
01/14/2012 11:45 EST	2.51 ^P	3,780 ^P
01/14/2012 12:00 EST	2.49 ^P	3,820 ^P
01/14/2012 12:15 EST	2.47 ^P	3,860 ^P
01/14/2012 12:30 EST	2.45 ^P	3,800 ^P
01/14/2012 12:45 EST	2.43 ^P	3,870 ^P
01/14/2012 13:00 EST	2.42 ^P	3,870 ^P

01/14/2012 13:15 EST	2.40 ^P	3,840 ^P
01/14/2012 13:30 EST	2.37 ^P	3,820 ^P
01/14/2012 13:45 EST	2.34 ^P	3,850 ^P
01/14/2012 14:00 EST	2.33 ^P	3,820 ^P
01/14/2012 14:15 EST	2.31 ^P	3,920 ^P
01/14/2012 14:30 EST	2.29 ^P	3,830 ^P
01/14/2012 14:45 EST	2.27 ^P	3,830 ^P
01/14/2012 15:00 EST	2.24 ^P	3,810 ^P
01/14/2012 15:15 EST	2.22 ^P	3,810 ^P
01/14/2012 15:30 EST	2.20 ^P	3,780 ^P
01/14/2012 15:45 EST	2.19 ^P	3,780 ^P
01/14/2012 16:00 EST	2.19 ^P	3,790 ^P
01/14/2012 16:15 EST	2.17 ^P	3,790 ^P
01/14/2012 16:30 EST	2.16 ^P	3,750 ^P
01/14/2012 16:45 EST	2.15 ^P	3,740 ^P
01/14/2012 17:00 EST	2.14 ^P	3,740 ^P
01/14/2012 17:15 EST	2.15 ^P	3,730 ^P
01/14/2012 17:30 EST	2.16 ^P	3,690 ^P
01/14/2012 17:45 EST	2.19 ^P	3,710 ^P
01/14/2012 18:00 EST	2.22 ^P	3,660 ^P
01/14/2012 18:15 EST	2.25 ^P	3,620 ^P
01/14/2012 18:30 EST	2.27 ^P	3,610 ^P
01/14/2012 18:45 EST	2.30 ^P	3,550 ^P
01/14/2012 19:00 EST	2.32 ^P	3,560 ^P
01/14/2012 19:15 EST	2.36 ^P	3,510 ^P
01/14/2012 19:30 EST	2.39 ^P	3,480 ^P
01/14/2012 19:45 EST	2.42 ^P	3,490 ^P
01/14/2012 20:00 EST	2.46 ^P	3,430 ^P
01/14/2012 20:15 EST	2.51 ^P	3,410 ^P
01/14/2012 20:30 EST	2.54 ^P	3,390 ^P
01/14/2012 20:45 EST	2.58 ^P	3,380 ^P
01/14/2012 21:00 EST	2.61 ^P	3,370 ^P
01/14/2012 21:15 EST	2.63 ^P	3,380 ^P
01/14/2012 21:30 EST	2.63 ^P	3,330 ^P
01/14/2012 21:45 EST	2.64 ^P	3,370 ^P
01/14/2012 22:00 EST	2.63 ^P	3,340 ^P
01/14/2012 22:15 EST	2.62 ^P	3,410 ^P
01/14/2012 22:30 EST	2.59 ^P	3,390 ^P
01/14/2012 22:45 EST	2.57 ^P	3,410 ^P
01/14/2012 23:00 EST	2.56 ^P	3,470 ^P
01/14/2012 23:15 EST	2.54 ^P	3,500 ^P
01/14/2012 23:30 EST	2.53 ^P	3,590 ^P
01/14/2012 23:45 EST	2.50 ^P	3,610 ^P

01/15/2012 00:00 EST	2.49 ^P	3,690 ^P
01/15/2012 00:15 EST	2.47 ^P	3,730 ^P
01/15/2012 00:30 EST	2.44 ^P	3,760 ^P
01/15/2012 00:45 EST	2.44 ^P	3,820 ^P
01/15/2012 01:00 EST	2.40 ^P	3,790 ^P
01/15/2012 01:15 EST	2.38 ^P	3,810 ^P
01/15/2012 01:30 EST	2.36 ^P	3,880 ^P
01/15/2012 01:45 EST	2.35 ^P	3,860 ^P
01/15/2012 02:00 EST	2.33 ^P	3,920 ^P
01/15/2012 02:15 EST	2.30 ^P	3,910 ^P
01/15/2012 02:30 EST	2.30 ^P	3,890 ^P
01/15/2012 02:45 EST	2.26 ^P	3,890 ^P
01/15/2012 03:00 EST	2.25 ^P	3,930 ^P
01/15/2012 03:15 EST	2.22 ^P	3,900 ^P
01/15/2012 03:30 EST	2.20 ^P	3,920 ^P
01/15/2012 03:45 EST	2.20 ^P	3,980 ^P
01/15/2012 04:00 EST	2.18 ^P	3,930 ^P
01/15/2012 04:15 EST	2.17 ^P	3,930 ^P
01/15/2012 04:30 EST	2.16 ^P	3,980 ^P
01/15/2012 04:45 EST	2.15 ^P	3,960 ^P
01/15/2012 05:00 EST	2.13 ^P	3,920 ^P
01/15/2012 05:15 EST	2.15 ^P	3,940 ^P
01/15/2012 05:30 EST	2.15 ^P	3,900 ^P
01/15/2012 05:45 EST	2.19 ^P	3,930 ^P
01/15/2012 06:00 EST	2.21 ^P	3,880 ^P
01/15/2012 06:15 EST	2.24 ^P	3,790 ^P
01/15/2012 06:30 EST	2.27 ^P	3,800 ^P
01/15/2012 06:45 EST	2.29 ^P	3,730 ^P
01/15/2012 07:00 EST	2.32 ^P	3,730 ^P
01/15/2012 07:15 EST	2.35 ^P	3,650 ^P
01/15/2012 07:30 EST	2.38 ^P	3,640 ^P
01/15/2012 07:45 EST	2.42 ^P	3,610 ^P
01/15/2012 08:00 EST	2.45 ^P	3,590 ^P
01/15/2012 08:15 EST	2.47 ^P	3,580 ^P
01/15/2012 08:30 EST	2.52 ^P	3,570 ^P
01/15/2012 08:45 EST	2.53 ^P	3,610 ^P
01/15/2012 09:00 EST	2.56 ^P	3,530 ^P
01/15/2012 09:15 EST	2.59 ^P	3,550 ^P
01/15/2012 09:30 EST	2.59 ^P	3,560 ^P
01/15/2012 09:45 EST	2.59 ^P	3,550 ^P
01/15/2012 10:00 EST	2.58 ^P	3,570 ^P
01/15/2012 10:15 EST	2.57 ^P	3,640 ^P
01/15/2012 10:30 EST	2.55 ^P	3,640 ^P

01/15/2012 10:45 EST	2.53 ^P	3,680 ^P
01/15/2012 11:00 EST	2.52 ^P	3,730 ^P
01/15/2012 11:15 EST	2.51 ^P	3,770 ^P
01/15/2012 11:30 EST	2.50 ^P	3,870 ^P
01/15/2012 11:45 EST	2.48 ^P	3,880 ^P
01/15/2012 12:00 EST	2.47 ^P	3,930 ^P
01/15/2012 12:15 EST	2.45 ^P	3,990 ^P
01/15/2012 12:30 EST	2.43 ^P	3,960 ^P
01/15/2012 12:45 EST	2.41 ^P	3,980 ^P
01/15/2012 13:00 EST	2.39 ^P	4,050 ^P
01/15/2012 13:15 EST	2.37 ^P	4,060 ^P
01/15/2012 13:30 EST	2.36 ^P	4,080 ^P
01/15/2012 13:45 EST	2.33 ^P	4,100 ^P
01/15/2012 14:00 EST	2.32 ^P	4,090 ^P
01/15/2012 14:15 EST	2.30 ^P	4,140 ^P
01/15/2012 14:30 EST	2.28 ^P	4,110 ^P
01/15/2012 14:45 EST	2.26 ^P	4,150 ^P
01/15/2012 15:00 EST	2.24 ^P	4,150 ^P
01/15/2012 15:15 EST	2.22 ^P	4,150 ^P
01/15/2012 15:30 EST	2.21 ^P	4,110 ^P
01/15/2012 15:45 EST	2.19 ^P	4,140 ^P
01/15/2012 16:00 EST	2.19 ^P	4,130 ^P
01/15/2012 16:15 EST	2.18 ^P	4,150 ^P
01/15/2012 16:30 EST	2.17 ^P	4,160 ^P
01/15/2012 16:45 EST	2.17 ^P	4,100 ^P
01/15/2012 17:00 EST	2.17 ^P	4,150 ^P
01/15/2012 17:15 EST	2.18 ^P	4,080 ^P
01/15/2012 17:30 EST	2.20 ^P	4,120 ^P
01/15/2012 17:45 EST	2.23 ^P	4,060 ^P
01/15/2012 18:00 EST	2.26 ^P	4,060 ^P
01/15/2012 18:15 EST	2.29 ^P	4,030 ^P
01/15/2012 18:30 EST	2.31 ^P	4,010 ^P
01/15/2012 18:45 EST	2.34 ^P	3,980 ^P
01/15/2012 19:00 EST	2.37 ^P	4,020 ^P
01/15/2012 19:15 EST	2.40 ^P	4,020 ^P
01/15/2012 19:30 EST	2.44 ^P	3,980 ^P
01/15/2012 19:45 EST	2.49 ^P	3,930 ^P
01/15/2012 20:00 EST	2.54 ^P	3,900 ^P
01/15/2012 20:15 EST	2.58 ^P	3,860 ^P
01/15/2012 20:30 EST	2.64 ^P	3,870 ^P
01/15/2012 20:45 EST	2.69 ^P	3,820 ^P
01/15/2012 21:00 EST	2.73 ^P	3,810 ^P
01/15/2012 21:15 EST	2.78 ^P	3,790 ^P

01/15/2012 21:30 EST	2.82 ^P	3,790 ^P
01/15/2012 21:45 EST	2.85 ^P	3,800 ^P
01/15/2012 22:00 EST	2.88 ^P	3,810 ^P
01/15/2012 22:15 EST	2.89 ^P	3,800 ^P
01/15/2012 22:30 EST	2.89 ^P	3,850 ^P
01/15/2012 22:45 EST	2.88 ^P	3,880 ^P
01/15/2012 23:00 EST	2.85 ^P	3,940 ^P
01/15/2012 23:15 EST	2.82 ^P	4,040 ^P
01/15/2012 23:30 EST	2.78 ^P	4,070 ^P
01/15/2012 23:45 EST	2.78 ^P	4,220 ^P
01/16/2012 00:00 EST	2.75 ^P	4,250 ^P
01/16/2012 00:15 EST	2.74 ^P	4,260 ^P
01/16/2012 00:30 EST	2.70 ^P	4,430 ^P
01/16/2012 00:45 EST	2.68 ^P	4,520 ^P
01/16/2012 01:00 EST	2.67 ^P	4,560 ^P
01/16/2012 01:15 EST	2.64 ^P	4,710 ^P
01/16/2012 01:30 EST	2.62 ^P	4,710 ^P
01/16/2012 01:45 EST	2.60 ^P	4,750 ^P
01/16/2012 02:00 EST	2.57 ^P	4,790 ^P
01/16/2012 02:15 EST	2.55 ^P	4,820 ^P
01/16/2012 02:30 EST	2.54 ^P	4,850 ^P
01/16/2012 02:45 EST	2.50 ^P	4,810 ^P
01/16/2012 03:00 EST	2.47 ^P	4,760 ^P
01/16/2012 03:15 EST	2.44 ^P	4,830 ^P
01/16/2012 03:30 EST	2.43 ^P	4,760 ^P
01/16/2012 03:45 EST	2.40 ^P	4,780 ^P
01/16/2012 04:00 EST	2.38 ^P	4,740 ^P
01/16/2012 04:15 EST	2.38 ^P	4,730 ^P
01/16/2012 04:30 EST	2.34 ^P	4,730 ^P
01/16/2012 04:45 EST	2.31 ^P	4,660 ^P
01/16/2012 05:00 EST	2.30 ^P	4,650 ^P
01/16/2012 05:15 EST	2.26 ^P	4,590 ^P
01/16/2012 05:30 EST	2.24 ^P	4,570 ^P
01/16/2012 05:45 EST	2.22 ^P	4,590 ^P
01/16/2012 06:00 EST	2.21 ^P	4,510 ^P
01/16/2012 06:15 EST	2.18 ^P	4,450 ^P
01/16/2012 06:30 EST	2.16 ^P	4,430 ^P
01/16/2012 06:45 EST	2.14 ^P	4,340 ^P
01/16/2012 07:00 EST	2.12 ^P	4,340 ^P
01/16/2012 07:15 EST	2.11 ^P	4,330 ^P
01/16/2012 07:30 EST	2.10 ^P	4,310 ^P
01/16/2012 07:45 EST	2.10 ^P	4,320 ^P
01/16/2012 08:00 EST	2.10 ^P	4,230 ^P

01/16/2012 08:15 EST	2.10 ^P	4,330 ^P
01/16/2012 08:30 EST	2.10 ^P	4,250 ^P
01/16/2012 08:45 EST	2.10 ^P	4,190 ^P
01/16/2012 09:00 EST	2.12 ^P	4,150 ^P
01/16/2012 09:15 EST	2.13 ^P	4,120 ^P
01/16/2012 09:30 EST	2.13 ^P	4,190 ^P
01/16/2012 09:45 EST	2.14 ^P	4,140 ^P
01/16/2012 10:00 EST	2.15 ^P	4,100 ^P
01/16/2012 10:15 EST	2.15 ^P	4,070 ^P
01/16/2012 10:30 EST	2.15 ^P	4,070 ^P
01/16/2012 10:45 EST	2.15 ^P	4,040 ^P
01/16/2012 11:00 EST	2.13 ^P	4,010 ^P
01/16/2012 11:15 EST	2.11 ^P	4,020 ^P
01/16/2012 11:30 EST	2.10 ^P	4,000 ^P
01/16/2012 11:45 EST	2.08 ^P	4,020 ^P
01/16/2012 12:00 EST	2.06 ^P	4,040 ^P
01/16/2012 12:15 EST	2.05 ^P	4,060 ^P
01/16/2012 12:30 EST	2.04 ^P	4,060 ^P
01/16/2012 12:45 EST	2.03 ^P	4,100 ^P
01/16/2012 13:00 EST	2.01 ^P	4,100 ^P
01/16/2012 13:15 EST	2.00 ^P	4,090 ^P
01/16/2012 13:30 EST	1.98 ^P	4,030 ^P
01/16/2012 13:45 EST	1.97 ^P	4,080 ^P
01/16/2012 14:00 EST	1.96 ^P	4,080 ^P
01/16/2012 14:15 EST	1.94 ^P	4,100 ^P
01/16/2012 14:30 EST	1.93 ^P	4,090 ^P
01/16/2012 14:45 EST	1.93 ^P	4,060 ^P
01/16/2012 15:00 EST	1.91 ^P	3,980 ^P
01/16/2012 15:15 EST	1.90 ^P	4,020 ^P
01/16/2012 15:30 EST	1.88 ^P	3,990 ^P
01/16/2012 15:45 EST	1.88 ^P	3,990 ^P
01/16/2012 16:00 EST	1.89 ^P	4,030 ^P
01/16/2012 16:15 EST	1.90 ^P	4,030 ^P
01/16/2012 16:30 EST	1.90 ^P	3,970 ^P
01/16/2012 16:45 EST	1.93 ^P	4,000 ^P
01/16/2012 17:00 EST	1.96 ^P	3,960 ^P
01/16/2012 17:15 EST	1.98 ^P	3,970 ^P
01/16/2012 17:30 EST	2.01 ^P	3,900 ^P
01/16/2012 17:45 EST	2.03 ^P	3,870 ^P
01/16/2012 18:00 EST	2.06 ^P	3,860 ^P
01/16/2012 18:15 EST	2.10 ^P	3,850 ^P
01/16/2012 18:30 EST	2.13 ^P	3,850 ^P
01/16/2012 18:45 EST	2.16 ^P	3,780 ^P

01/16/2012 19:00 EST	2.21 ^P	3,830 ^P
01/16/2012 19:15 EST	2.25 ^P	3,770 ^P
01/16/2012 19:30 EST	2.30 ^P	3,750 ^P
01/16/2012 19:45 EST	2.36 ^P	3,760 ^P
01/16/2012 20:00 EST	2.41 ^P	3,760 ^P
01/16/2012 20:15 EST	2.48 ^P	3,760 ^P
01/16/2012 20:30 EST	2.55 ^P	3,740 ^P
01/16/2012 20:45 EST	2.61 ^P	3,710 ^P
01/16/2012 21:00 EST	2.69 ^P	3,710 ^P
01/16/2012 21:15 EST	2.75 ^P	3,720 ^P
01/16/2012 21:30 EST	2.82 ^P	3,690 ^P
01/16/2012 21:45 EST	2.90 ^P	3,660 ^P
01/16/2012 22:00 EST	2.96 ^P	3,690 ^P
01/16/2012 22:15 EST	3.01 ^P	3,730 ^P
01/16/2012 22:30 EST	3.06 ^P	3,730 ^P
01/16/2012 22:45 EST	3.08 ^P	3,760 ^P
01/16/2012 23:00 EST	3.10 ^P	3,850 ^P
01/16/2012 23:15 EST	3.10 ^P	3,860 ^P
01/16/2012 23:30 EST	3.09 ^P	3,960 ^P
01/16/2012 23:45 EST	3.07 ^P	4,040 ^P
01/17/2012 00:00 EST	3.04 ^P	4,050 ^P
01/17/2012 00:15 EST	3.01 ^P	4,150 ^P
01/17/2012 00:30 EST	2.98 ^P	4,270 ^P
01/17/2012 00:45 EST	2.94 ^P	4,530 ^P
01/17/2012 01:00 EST	2.92 ^P	4,590 ^P
01/17/2012 01:15 EST	2.91 ^P	4,820 ^P
01/17/2012 01:30 EST	2.89 ^P	4,750 ^P
01/17/2012 01:45 EST	2.85 ^P	5,070 ^P
01/17/2012 02:00 EST	2.82 ^P	5,120 ^P
01/17/2012 02:15 EST	2.80 ^P	5,100 ^P
01/17/2012 02:30 EST	2.77 ^P	5,150 ^P
01/17/2012 02:45 EST	2.75 ^P	5,280 ^P
01/17/2012 03:00 EST	2.72 ^P	5,260 ^P
01/17/2012 03:15 EST	2.71 ^P	5,280 ^P
01/17/2012 03:30 EST	2.67 ^P	5,190 ^P
01/17/2012 03:45 EST	2.64 ^P	5,270 ^P
01/17/2012 04:00 EST	2.63 ^P	5,330 ^P
01/17/2012 04:15 EST	2.61 ^P	5,190 ^P
01/17/2012 04:30 EST	2.56 ^P	5,250 ^P
01/17/2012 04:45 EST	2.54 ^P	5,160 ^P
01/17/2012 05:00 EST	2.52 ^P	5,150 ^P
01/17/2012 05:15 EST	2.48 ^P	5,160 ^P
01/17/2012 05:30 EST	2.48 ^P	5,090 ^P

01/17/2012 05:45 EST	2.44 ^P	5,070 ^P
01/17/2012 06:00 EST	2.41 ^P	5,020 ^P
01/17/2012 06:15 EST	2.38 ^P	5,020 ^P
01/17/2012 06:30 EST	2.39 ^P	4,970 ^P
01/17/2012 06:45 EST	2.36 ^P	4,940 ^P
01/17/2012 07:00 EST	2.33 ^P	4,890 ^P
01/17/2012 07:15 EST	2.31 ^P	4,810 ^P
01/17/2012 07:30 EST	2.29 ^P	4,850 ^P
01/17/2012 07:45 EST	2.27 ^P	4,720 ^P
01/17/2012 08:00 EST	2.27 ^P	4,740 ^P
01/17/2012 08:15 EST	2.25 ^P	4,720 ^P
01/17/2012 08:30 EST	2.25 ^P	4,660 ^P
01/17/2012 08:45 EST	2.26 ^P	4,670 ^P
01/17/2012 09:00 EST	2.28 ^P	4,600 ^P
01/17/2012 09:15 EST	2.30 ^P	4,610 ^P
01/17/2012 09:30 EST	2.34 ^P	4,510 ^P
01/17/2012 09:45 EST	2.36 ^P	4,450 ^P
01/17/2012 10:00 EST	2.38 ^P	4,350 ^P
01/17/2012 10:15 EST	2.42 ^P	4,260 ^P
01/17/2012 10:30 EST	2.43 ^P	4,220 ^P
01/17/2012 10:45 EST	2.46 ^P	4,210 ^P
01/17/2012 11:00 EST	2.50 ^P	4,190 ^P
01/17/2012 11:15 EST	2.54 ^P	4,140 ^P
01/17/2012 11:30 EST	2.59 ^P	4,150 ^P
01/17/2012 11:45 EST	2.62 ^P	4,120 ^P
01/17/2012 12:00 EST	2.67 ^P	4,080 ^P
01/17/2012 12:15 EST	2.69 ^P	4,120 ^P
01/17/2012 12:30 EST	2.72 ^P	4,130 ^P
01/17/2012 12:45 EST	2.75 ^P	4,120 ^P
01/17/2012 13:00 EST	2.77 ^P	4,110 ^P
01/17/2012 13:15 EST	2.76 ^P	4,160 ^P
01/17/2012 13:30 EST	2.75 ^P	4,210 ^P
01/17/2012 13:45 EST	2.75 ^P	4,250 ^P
01/17/2012 14:00 EST	2.73 ^P	4,330 ^P
01/17/2012 14:15 EST	2.72 ^P	4,410 ^P
01/17/2012 14:30 EST	2.69 ^P	4,510 ^P
01/17/2012 14:45 EST	2.69 ^P	4,560 ^P
01/17/2012 15:00 EST	2.66 ^P	4,600 ^P
01/17/2012 15:15 EST	2.65 ^P	4,610 ^P
01/17/2012 15:30 EST	2.64 ^P	4,740 ^P
01/17/2012 15:45 EST	2.62 ^P	4,800 ^P
01/17/2012 16:00 EST	2.62 ^P	4,870 ^P
01/17/2012 16:15 EST	2.62 ^P	4,830 ^P

01/17/2012 16:30 EST	2.61 ^P	4,830 ^P
01/17/2012 16:45 EST	2.62 ^P	4,840 ^P
01/17/2012 17:00 EST	2.64 ^P	4,870 ^P
01/17/2012 17:15 EST	2.65 ^P	4,830 ^P
01/17/2012 17:30 EST	2.67 ^P	4,850 ^P
01/17/2012 17:45 EST	2.69 ^P	4,830 ^P
01/17/2012 18:00 EST	2.72 ^P	4,840 ^P
01/17/2012 18:15 EST	2.74 ^P	4,780 ^P
01/17/2012 18:30 EST	2.78 ^P	4,780 ^P
01/17/2012 18:45 EST	2.82 ^P	4,760 ^P
01/17/2012 19:00 EST	2.86 ^P	4,730 ^P
01/17/2012 19:15 EST	2.90 ^P	4,690 ^P
01/17/2012 19:30 EST	2.95 ^P	4,670 ^P
01/17/2012 19:45 EST	3.00 ^P	4,640 ^P
01/17/2012 20:00 EST	3.05 ^P	4,640 ^P
01/17/2012 20:15 EST	3.11 ^P	4,600 ^P
01/17/2012 20:30 EST	3.17 ^P	4,630 ^P
01/17/2012 20:45 EST	3.23 ^P	4,580 ^P
01/17/2012 21:00 EST	3.30 ^P	4,570 ^P
01/17/2012 21:15 EST	3.36 ^P	4,570 ^P
01/17/2012 21:30 EST	3.42 ^P	4,600 ^P
01/17/2012 21:45 EST	3.48 ^P	4,610 ^P
01/17/2012 22:00 EST	3.53 ^P	4,560 ^P
01/17/2012 22:15 EST	3.57 ^P	4,590 ^P
01/17/2012 22:30 EST	3.61 ^P	4,570 ^P
01/17/2012 22:45 EST	3.63 ^P	4,630 ^P
01/17/2012 23:00 EST	3.65 ^P	4,570 ^P
01/17/2012 23:15 EST	3.67 ^P	4,630 ^P
01/17/2012 23:30 EST	3.65 ^P	4,760 ^P
01/17/2012 23:45 EST	3.64 ^P	4,710 ^P
01/18/2012 00:00 EST	3.63 ^P	4,810 ^P
01/18/2012 00:15 EST	3.60 ^P	4,880 ^P
01/18/2012 00:30 EST	3.58 ^P	4,960 ^P
01/18/2012 00:45 EST	3.56 ^P	4,980 ^P
01/18/2012 01:00 EST	3.54 ^P	5,130 ^P
01/18/2012 01:15 EST	3.52 ^P	5,250 ^P
01/18/2012 01:30 EST	3.49 ^P	5,280 ^P
01/18/2012 01:45 EST	3.47 ^P	5,400 ^P
01/18/2012 02:00 EST	3.44 ^P	5,540 ^P
01/18/2012 02:15 EST	3.41 ^P	5,600 ^P
01/18/2012 02:30 EST	3.38 ^P	5,620 ^P
01/18/2012 02:45 EST	3.34 ^P	5,760 ^P
01/18/2012 03:00 EST	3.31 ^P	5,810 ^P

01/18/2012 03:15 EST	3.28 ^P	5,770 ^P
01/18/2012 03:30 EST	3.25 ^P	5,830 ^P
01/18/2012 03:45 EST	3.21 ^P	5,870 ^P
01/18/2012 04:00 EST	3.17 ^P	5,920 ^P
01/18/2012 04:15 EST	3.14 ^P	5,920 ^P
01/18/2012 04:30 EST	3.10 ^P	5,910 ^P
01/18/2012 04:45 EST	3.06 ^P	5,860 ^P
01/18/2012 05:00 EST	3.03 ^P	5,980 ^P
01/18/2012 05:15 EST	2.99 ^P	5,900 ^P
01/18/2012 05:30 EST	2.97 ^P	5,900 ^P
01/18/2012 05:45 EST	2.92 ^P	5,870 ^P
01/18/2012 06:00 EST	2.89 ^P	5,840 ^P
01/18/2012 06:15 EST	2.87 ^P	5,850 ^P
01/18/2012 06:30 EST	2.82 ^P	5,790 ^P
01/18/2012 06:45 EST	2.79 ^P	5,720 ^P
01/18/2012 07:00 EST	2.75 ^P	5,690 ^P
01/18/2012 07:15 EST	2.72 ^P	5,600 ^P
01/18/2012 07:30 EST	2.69 ^P	5,530 ^P
01/18/2012 07:45 EST	2.66 ^P	5,470 ^P
01/18/2012 08:00 EST	2.63 ^P	5,430 ^P
01/18/2012 08:15 EST	2.61 ^P	5,390 ^P
01/18/2012 08:30 EST	2.58 ^P	5,350 ^P
01/18/2012 08:45 EST	2.56 ^P	5,230 ^P
01/18/2012 09:00 EST	2.53 ^P	5,220 ^P
01/18/2012 09:15 EST	2.52 ^P	5,160 ^P
01/18/2012 09:30 EST	2.50 ^P	5,100 ^P
01/18/2012 09:45 EST	2.50 ^P	5,050 ^P
01/18/2012 10:00 EST	2.50 ^P	4,990 ^P
01/18/2012 10:15 EST	2.51 ^P	4,900 ^P
01/18/2012 10:30 EST	2.52 ^P	4,830 ^P
01/18/2012 10:45 EST	2.55 ^P	4,790 ^P
01/18/2012 11:00 EST	2.58 ^P	4,740 ^P
01/18/2012 11:15 EST	2.61 ^P	4,680 ^P
01/18/2012 11:30 EST	2.64 ^P	4,600 ^P
01/18/2012 11:45 EST	2.67 ^P	4,600 ^P
01/18/2012 12:00 EST	2.70 ^P	4,570 ^P
01/18/2012 12:15 EST	2.73 ^P	4,490 ^P
01/18/2012 12:30 EST	2.77 ^P	4,460 ^P
01/18/2012 12:45 EST	2.81 ^P	4,470 ^P
01/18/2012 13:00 EST	2.84 ^P	4,440 ^P
01/18/2012 13:15 EST	2.89 ^P	4,390 ^P
01/18/2012 13:30 EST	2.89 ^P	4,410 ^P
01/18/2012 13:45 EST	2.91 ^P	4,410 ^P

01/18/2012 14:00 EST	2.94 ^P	4,400 ^P
01/18/2012 14:15 EST	2.93 ^P	4,440 ^P
01/18/2012 14:30 EST	2.95 ^P	4,460 ^P
01/18/2012 14:45 EST	2.92 ^P	4,450 ^P
01/18/2012 15:00 EST	2.92 ^P	4,550 ^P
01/18/2012 15:15 EST	2.93 ^P	4,580 ^P
01/18/2012 15:30 EST	2.92 ^P	4,640 ^P
01/18/2012 15:45 EST	2.93 ^P	4,670 ^P
01/18/2012 16:00 EST	2.89 ^P	4,690 ^P
01/18/2012 16:15 EST	2.86 ^P	4,770 ^P
01/18/2012 16:30 EST	2.84 ^P	4,770 ^P
01/18/2012 16:45 EST	2.83 ^P	4,820 ^P
01/18/2012 17:00 EST	2.84 ^P	4,860 ^P
01/18/2012 17:15 EST	2.82 ^P	4,860 ^P
01/18/2012 17:30 EST	2.85 ^P	4,860 ^P
01/18/2012 17:45 EST	2.85 ^P	4,880 ^P
01/18/2012 18:00 EST	2.85 ^P	4,870 ^P
01/18/2012 18:15 EST	2.88 ^P	4,850 ^P
01/18/2012 18:30 EST	2.90 ^P	4,820 ^P
01/18/2012 18:45 EST	2.93 ^P	4,790 ^P
01/18/2012 19:00 EST	2.98 ^P	4,760 ^P
01/18/2012 19:15 EST	3.01 ^P	4,730 ^P
01/18/2012 19:30 EST	3.03 ^P	4,650 ^P
01/18/2012 19:45 EST	3.08 ^P	4,630 ^P
01/18/2012 20:00 EST	3.12 ^P	4,590 ^P
01/18/2012 20:15 EST	3.17 ^P	4,540 ^P
01/18/2012 20:30 EST	3.21 ^P	4,560 ^P
01/18/2012 20:45 EST	3.25 ^P	4,520 ^P
01/18/2012 21:00 EST	3.32 ^P	4,490 ^P
01/18/2012 21:15 EST	3.38 ^P	4,460 ^P
01/18/2012 21:30 EST	3.45 ^P	4,480 ^P
01/18/2012 21:45 EST	3.50 ^P	4,470 ^P
01/18/2012 22:00 EST	3.55 ^P	4,470 ^P
01/18/2012 22:15 EST	3.59 ^P	4,490 ^P
01/18/2012 22:30 EST	3.63 ^P	4,460 ^P
01/18/2012 22:45 EST	3.69 ^P	4,460 ^P
01/18/2012 23:00 EST	3.73 ^P	4,470 ^P
01/18/2012 23:15 EST	3.78 ^P	4,510 ^P
01/18/2012 23:30 EST	3.80 ^P	4,460 ^P
01/18/2012 23:45 EST	3.82 ^P	4,480 ^P
01/19/2012 00:00 EST	3.84 ^P	4,540 ^P
01/19/2012 00:15 EST	3.84 ^P	4,610 ^P
01/19/2012 00:30 EST	3.85 ^P	4,690 ^P

01/19/2012 00:45 EST	3.82 ^P	4,660 ^P
01/19/2012 01:00 EST	3.81 ^P	4,800 ^P
01/19/2012 01:15 EST	3.78 ^P	4,780 ^P
01/19/2012 01:30 EST	3.76 ^P	4,950 ^P
01/19/2012 01:45 EST	3.76 ^P	4,910 ^P
01/19/2012 02:00 EST	3.72 ^P	4,990 ^P
01/19/2012 02:15 EST	3.70 ^P	5,100 ^P
01/19/2012 02:30 EST	3.68 ^P	5,180 ^P
01/19/2012 02:45 EST	3.65 ^P	5,120 ^P
01/19/2012 03:00 EST	3.62 ^P	5,400 ^P
01/19/2012 03:15 EST	3.59 ^P	5,400 ^P
01/19/2012 03:30 EST	3.56 ^P	5,450 ^P
01/19/2012 03:45 EST	3.53 ^P	5,570 ^P
01/19/2012 04:00 EST	3.51 ^P	5,510 ^P
01/19/2012 04:15 EST	3.49 ^P	5,630 ^P
01/19/2012 04:30 EST	3.44 ^P	5,720 ^P
01/19/2012 04:45 EST	3.42 ^P	5,830 ^P
01/19/2012 05:00 EST	3.37 ^P	5,750 ^P
01/19/2012 05:15 EST	3.34 ^P	5,810 ^P
01/19/2012 05:30 EST	3.30 ^P	5,850 ^P
01/19/2012 05:45 EST	3.26 ^P	5,840 ^P
01/19/2012 06:00 EST	3.24 ^P	5,840 ^P
01/19/2012 06:15 EST	3.18 ^P	5,910 ^P
01/19/2012 06:30 EST	3.14 ^P	5,930 ^P
01/19/2012 06:45 EST	3.10 ^P	5,780 ^P
01/19/2012 07:00 EST	3.06 ^P	5,830 ^P
01/19/2012 07:15 EST	3.03 ^P	5,790 ^P
01/19/2012 07:30 EST	2.99 ^P	5,750 ^P
01/19/2012 07:45 EST	2.95 ^P	5,660 ^P
01/19/2012 08:00 EST	2.91 ^P	5,670 ^P
01/19/2012 08:15 EST	2.87 ^P	5,630 ^P
01/19/2012 08:30 EST	2.85 ^P	5,560 ^P
01/19/2012 08:45 EST	2.80 ^P	5,470 ^P
01/19/2012 09:00 EST	2.76 ^P	5,420 ^P
01/19/2012 09:15 EST	2.73 ^P	5,370 ^P
01/19/2012 09:30 EST	2.69 ^P	5,220 ^P
01/19/2012 09:45 EST	2.66 ^P	5,250 ^P
01/19/2012 10:00 EST	2.62 ^P	5,180 ^P
01/19/2012 10:15 EST	2.59 ^P	5,100 ^P
01/19/2012 10:30 EST	2.56 ^P	5,080 ^P
01/19/2012 10:45 EST	2.53 ^P	5,010 ^P
01/19/2012 11:00 EST	2.51 ^P	4,950 ^P
01/19/2012 11:15 EST	2.48 ^P	4,880 ^P

01/19/2012 11:30 EST	2.46 ^P	4,850 ^P
01/19/2012 11:45 EST	2.43 ^P	4,750 ^P
01/19/2012 12:00 EST	2.41 ^P	4,720 ^P
01/19/2012 12:15 EST	2.39 ^P	4,670 ^P
01/19/2012 12:30 EST	2.38 ^P	4,630 ^P
01/19/2012 12:45 EST	2.36 ^P	4,610 ^P
01/19/2012 13:00 EST	2.36 ^P	4,530 ^P
01/19/2012 13:15 EST	2.35 ^P	4,470 ^P
01/19/2012 13:30 EST	2.36 ^P	4,450 ^P
01/19/2012 13:45 EST	2.38 ^P	4,390 ^P
01/19/2012 14:00 EST	2.40 ^P	4,360 ^P
01/19/2012 14:15 EST	2.43 ^P	4,250 ^P
01/19/2012 14:30 EST	2.45 ^P	4,180 ^P
01/19/2012 14:45 EST	2.47 ^P	4,160 ^P
01/19/2012 15:00 EST	2.49 ^P	4,150 ^P
01/19/2012 15:15 EST	2.52 ^P	4,080 ^P
01/19/2012 15:30 EST	2.53 ^P	4,060 ^P
01/19/2012 15:45 EST	2.56 ^P	4,010 ^P
01/19/2012 16:00 EST	2.59 ^P	3,970 ^P
01/19/2012 16:15 EST	2.60 ^P	3,940 ^P
01/19/2012 16:30 EST	2.61 ^P	3,980 ^P
01/19/2012 16:45 EST	2.61 ^P	3,890 ^P
01/19/2012 17:00 EST	2.60 ^P	3,940 ^P
01/19/2012 17:15 EST	2.59 ^P	3,960 ^P
01/19/2012 17:30 EST	2.58 ^P	3,990 ^P
01/19/2012 17:45 EST	2.56 ^P	4,000 ^P
01/19/2012 18:00 EST	2.55 ^P	3,980 ^P
01/19/2012 18:15 EST	2.53 ^P	4,010 ^P
01/19/2012 18:30 EST	2.52 ^P	4,030 ^P
01/19/2012 18:45 EST	2.51 ^P	4,100 ^P
01/19/2012 19:00 EST	2.51 ^P	4,080 ^P
01/19/2012 19:15 EST	2.53 ^P	4,140 ^P
01/19/2012 19:30 EST	2.55 ^P	4,140 ^P
01/19/2012 19:45 EST	2.58 ^P	4,140 ^P
01/19/2012 20:00 EST	2.60 ^P	4,100 ^P
01/19/2012 20:15 EST	2.63 ^P	4,100 ^P
01/19/2012 20:30 EST	2.66 ^P	4,040 ^P
01/19/2012 20:45 EST	2.69 ^P	4,020 ^P
01/19/2012 21:00 EST	2.73 ^P	3,990 ^P
01/19/2012 21:15 EST	2.77 ^P	4,010 ^P
01/19/2012 21:30 EST	2.81 ^P	3,950 ^P
01/19/2012 21:45 EST	2.86 ^P	3,990 ^P
01/19/2012 22:00 EST	2.91 ^P	3,990 ^P

01/19/2012 22:15 EST	2.97 ^P	3,940 ^P
01/19/2012 22:30 EST	3.03 ^P	3,900 ^P
01/19/2012 22:45 EST	3.09 ^P	3,900 ^P
01/19/2012 23:00 EST	3.16 ^P	3,890 ^P
01/19/2012 23:15 EST	3.22 ^P	3,870 ^P
01/19/2012 23:30 EST	3.28 ^P	3,880 ^P
01/19/2012 23:45 EST	3.34 ^P	3,890 ^P
01/20/2012 00:00 EST	3.40 ^P	3,900 ^P
01/20/2012 00:15 EST	3.46 ^P	3,900 ^P
01/20/2012 00:30 EST	3.50 ^P	3,920 ^P
01/20/2012 00:45 EST	3.53 ^P	3,960 ^P
01/20/2012 01:00 EST	3.54 ^P	4,030 ^P
01/20/2012 01:15 EST	3.55 ^P	4,060 ^P
01/20/2012 01:30 EST	3.58 ^P	4,160 ^P
01/20/2012 01:45 EST	3.58 ^P	4,140 ^P
01/20/2012 02:00 EST	3.54 ^P	4,340 ^P
01/20/2012 02:15 EST	3.52 ^P	4,360 ^P
01/20/2012 02:30 EST	3.50 ^P	4,560 ^P
01/20/2012 02:45 EST	3.48 ^P	4,650 ^P
01/20/2012 03:00 EST	3.47 ^P	4,780 ^P
01/20/2012 03:15 EST	3.43 ^P	4,840 ^P
01/20/2012 03:30 EST	3.40 ^P	4,830 ^P
01/20/2012 03:45 EST	3.38 ^P	5,080 ^P
01/20/2012 04:00 EST	3.36 ^P	5,020 ^P
01/20/2012 04:15 EST	3.31 ^P	5,140 ^P
01/20/2012 04:30 EST	3.28 ^P	5,280 ^P
01/20/2012 04:45 EST	3.25 ^P	5,300 ^P
01/20/2012 05:00 EST	3.22 ^P	5,380 ^P
01/20/2012 05:15 EST	3.18 ^P	5,320 ^P
01/20/2012 05:30 EST	3.15 ^P	5,410 ^P
01/20/2012 05:45 EST	3.11 ^P	5,400 ^P
01/20/2012 06:00 EST	3.07 ^P	5,390 ^P
01/20/2012 06:15 EST	3.04 ^P	5,450 ^P
01/20/2012 06:30 EST	3.01 ^P	5,470 ^P
01/20/2012 06:45 EST	2.97 ^P	5,410 ^P
01/20/2012 07:00 EST	2.93 ^P	5,400 ^P
01/20/2012 07:15 EST	2.90 ^P	5,360 ^P
01/20/2012 07:30 EST	2.87 ^P	5,290 ^P
01/20/2012 07:45 EST	2.83 ^P	5,250 ^P
01/20/2012 08:00 EST	2.79 ^P	5,260 ^P
01/20/2012 08:15 EST	2.76 ^P	5,200 ^P
01/20/2012 08:30 EST	2.73 ^P	5,070 ^P
01/20/2012 08:45 EST	2.70 ^P	5,140 ^P

01/20/2012 09:00 EST	2.67 ^P	5,010 ^P
01/20/2012 09:15 EST	2.64 ^P	4,950 ^P
01/20/2012 09:30 EST	2.60 ^P	4,920 ^P
01/20/2012 09:45 EST	2.58 ^P	4,820 ^P
01/20/2012 10:00 EST	2.55 ^P	4,820 ^P
01/20/2012 10:15 EST	2.51 ^P	4,780 ^P
01/20/2012 10:30 EST	2.49 ^P	4,740 ^P
01/20/2012 10:45 EST	2.46 ^P	4,650 ^P
01/20/2012 11:00 EST	2.43 ^P	4,640 ^P
01/20/2012 11:15 EST	2.40 ^P	4,580 ^P
01/20/2012 11:30 EST	2.38 ^P	4,550 ^P
01/20/2012 11:45 EST	2.36 ^P	4,530 ^P
01/20/2012 12:00 EST	2.34 ^P	4,510 ^P
01/20/2012 12:15 EST	2.32 ^P	4,470 ^P
01/20/2012 12:30 EST	2.32 ^P	4,450 ^P
01/20/2012 12:45 EST	2.33 ^P	4,400 ^P
01/20/2012 13:00 EST	2.34 ^P	4,350 ^P
01/20/2012 13:15 EST	2.37 ^P	4,300 ^P
01/20/2012 13:30 EST	2.42 ^P	4,220 ^P
01/20/2012 13:45 EST	2.47 ^P	4,200 ^P
01/20/2012 14:00 EST	2.50 ^P	4,180 ^P
01/20/2012 14:15 EST	2.54 ^P	4,080 ^P
01/20/2012 14:30 EST	2.58 ^P	4,020 ^P
01/20/2012 14:45 EST	2.61 ^P	3,960 ^P
01/20/2012 15:00 EST	2.65 ^P	3,950 ^P
01/20/2012 15:15 EST	2.71 ^P	3,890 ^P
01/20/2012 15:30 EST	2.74 ^P	3,860 ^P
01/20/2012 15:45 EST	2.82 ^P	3,840 ^P
01/20/2012 16:00 EST	2.87 ^P	3,860 ^P
01/20/2012 16:15 EST	2.92 ^P	3,830 ^P
01/20/2012 16:30 EST	2.96 ^P	3,820 ^P
01/20/2012 16:45 EST	2.99 ^P	3,810 ^P
01/20/2012 17:00 EST	3.02 ^P	3,810 ^P
01/20/2012 17:15 EST	3.03 ^P	3,840 ^P
01/20/2012 17:30 EST	3.03 ^P	3,850 ^P
01/20/2012 17:45 EST	3.01 ^P	3,880 ^P
01/20/2012 18:00 EST	2.99 ^P	3,890 ^P
01/20/2012 18:15 EST	2.96 ^P	3,980 ^P
01/20/2012 18:30 EST	2.93 ^P	4,100 ^P
01/20/2012 18:45 EST	2.90 ^P	4,140 ^P
01/20/2012 19:00 EST	2.89 ^P	4,200 ^P
01/20/2012 19:15 EST	2.87 ^P	4,340 ^P
01/20/2012 19:30 EST	2.85 ^P	4,470 ^P

01/20/2012 19:45 EST	2.84 ^P	4,550 ^P
01/20/2012 20:00 EST	2.82 ^P	4,580 ^P
01/20/2012 20:15 EST	2.81 ^P	4,650 ^P
01/20/2012 20:30 EST	2.81 ^P	4,660 ^P
01/20/2012 20:45 EST	2.82 ^P	4,680 ^P
01/20/2012 21:00 EST	2.85 ^P	4,720 ^P
01/20/2012 21:15 EST	2.88 ^P	4,740 ^P
01/20/2012 21:30 EST	2.92 ^P	4,670 ^P
01/20/2012 21:45 EST	2.95 ^P	4,650 ^P
01/20/2012 22:00 EST	2.98 ^P	4,590 ^P
01/20/2012 22:15 EST	3.03 ^P	4,540 ^P
01/20/2012 22:30 EST	3.07 ^P	4,510 ^P
01/20/2012 22:45 EST	3.12 ^P	4,470 ^P
01/20/2012 23:00 EST	3.18 ^P	4,430 ^P
01/20/2012 23:15 EST	3.24 ^P	4,410 ^P
01/20/2012 23:30 EST	3.30 ^P	4,380 ^P
01/20/2012 23:45 EST	3.35 ^P	4,340 ^P
01/21/2012 00:00 EST	3.42 ^P	4,350 ^P
01/21/2012 00:15 EST	3.47 ^P	4,360 ^P
01/21/2012 00:30 EST	3.53 ^P	4,320 ^P
01/21/2012 00:45 EST	3.59 ^P	4,330 ^P
01/21/2012 01:00 EST	3.64 ^P	4,310 ^P
01/21/2012 01:15 EST	3.69 ^P	4,320 ^P
01/21/2012 01:30 EST	3.75 ^P	4,310 ^P
01/21/2012 01:45 EST	3.79 ^P	4,370 ^P
01/21/2012 02:00 EST	3.81 ^P	4,360 ^P
01/21/2012 02:15 EST	3.85 ^P	4,360 ^P
01/21/2012 02:30 EST	3.86 ^P	4,450 ^P
01/21/2012 02:45 EST	3.87 ^P	4,440 ^P
01/21/2012 03:00 EST	3.87 ^P	4,490 ^P
01/21/2012 03:15 EST	3.86 ^P	4,520 ^P
01/21/2012 03:30 EST	3.84 ^P	4,580 ^P
01/21/2012 03:45 EST	3.81 ^P	4,620 ^P
01/21/2012 04:00 EST	3.78 ^P	4,660 ^P
01/21/2012 04:15 EST	3.76 ^P	4,760 ^P
01/21/2012 04:30 EST	3.74 ^P	4,810 ^P
01/21/2012 04:45 EST	3.72 ^P	5,030 ^P
01/21/2012 05:00 EST	3.70 ^P	5,060 ^P
01/21/2012 05:15 EST	3.67 ^P	5,130 ^P
01/21/2012 05:30 EST	3.65 ^P	5,220 ^P
01/21/2012 05:45 EST	3.62 ^P	5,310 ^P
01/21/2012 06:00 EST	3.59 ^P	5,340 ^P
01/21/2012 06:15 EST	3.56 ^P	5,440 ^P

01/21/2012 06:30 EST	3.53 ^P	5,430 ^P
01/21/2012 06:45 EST	3.50 ^P	5,530 ^P
01/21/2012 07:00 EST	3.46 ^P	5,550 ^P
01/21/2012 07:15 EST	3.43 ^P	5,580 ^P
01/21/2012 07:30 EST	3.39 ^P	5,670 ^P
01/21/2012 07:45 EST	3.36 ^P	5,700 ^P
01/21/2012 08:00 EST	3.32 ^P	5,750 ^P
01/21/2012 08:15 EST	3.28 ^P	5,830 ^P
01/21/2012 08:30 EST	3.25 ^P	5,820 ^P
01/21/2012 08:45 EST	3.21 ^P	5,790 ^P
01/21/2012 09:00 EST	3.17 ^P	5,830 ^P
01/21/2012 09:15 EST	3.14 ^P	5,800 ^P
01/21/2012 09:30 EST	3.09 ^P	5,810 ^P
01/21/2012 09:45 EST	3.05 ^P	5,780 ^P
01/21/2012 10:00 EST	3.01 ^P	5,700 ^P
01/21/2012 10:15 EST	2.98 ^P	5,690 ^P
01/21/2012 10:30 EST	2.94 ^P	5,630 ^P
01/21/2012 10:45 EST	2.91 ^P	5,580 ^P
01/21/2012 11:00 EST	2.88 ^P	5,520 ^P
01/21/2012 11:15 EST	2.84 ^P	5,420 ^P
01/21/2012 11:30 EST	2.80 ^P	5,380 ^P
01/21/2012 11:45 EST	2.76 ^P	5,320 ^P
01/21/2012 12:00 EST	2.75 ^P	5,250 ^P
01/21/2012 12:15 EST	2.72 ^P	5,210 ^P
01/21/2012 12:30 EST	2.71 ^P	5,110 ^P
01/21/2012 12:45 EST	2.68 ^P	5,060 ^P
01/21/2012 13:00 EST	2.66 ^P	4,970 ^P
01/21/2012 13:15 EST	2.67 ^P	4,930 ^P
01/21/2012 13:30 EST	2.65 ^P	4,880 ^P
01/21/2012 13:45 EST	2.68 ^P	4,820 ^P
01/21/2012 14:00 EST	2.71 ^P	4,730 ^P
01/21/2012 14:15 EST	2.74 ^P	4,640 ^P
01/21/2012 14:30 EST	2.77 ^P	4,630 ^P
01/21/2012 14:45 EST	2.82 ^P	4,510 ^P
01/21/2012 15:00 EST	2.85 ^P	4,460 ^P
01/21/2012 15:15 EST	2.90 ^P	4,410 ^P
01/21/2012 15:30 EST	2.93 ^P	4,320 ^P
01/21/2012 15:45 EST	2.98 ^P	4,290 ^P
01/21/2012 16:00 EST	3.01 ^P	4,240 ^P
01/21/2012 16:15 EST	3.07 ^P	4,240 ^P
01/21/2012 16:30 EST	3.12 ^P	4,210 ^P
01/21/2012 16:45 EST	3.16 ^P	4,190 ^P
01/21/2012 17:00 EST	3.19 ^P	4,170 ^P

01/21/2012 17:15 EST	3.20 ^P	4,200 ^P
01/21/2012 17:30 EST	3.20 ^P	4,200 ^P
01/21/2012 17:45 EST	3.20 ^P	4,200 ^P
01/21/2012 18:00 EST	3.18 ^P	4,280 ^P
01/21/2012 18:15 EST	3.14 ^P	4,270 ^P
01/21/2012 18:30 EST	3.11 ^P	4,350 ^P
01/21/2012 18:45 EST	3.08 ^P	4,420 ^P
01/21/2012 19:00 EST	3.07 ^P	4,470 ^P
01/21/2012 19:15 EST	3.04 ^P	4,580 ^P
01/21/2012 19:30 EST	3.02 ^P	4,710 ^P
01/21/2012 19:45 EST	3.00 ^P	4,730 ^P
01/21/2012 20:00 EST	2.97 ^P	4,810 ^P
01/21/2012 20:15 EST	2.94 ^P	4,890 ^P
01/21/2012 20:30 EST	2.92 ^P	4,880 ^P
01/21/2012 20:45 EST	2.88 ^P	4,970 ^P
01/21/2012 21:00 EST	2.84 ^P	4,900 ^P
01/21/2012 21:15 EST	2.82 ^P	4,970 ^P
01/21/2012 21:30 EST	2.80 ^P	4,990 ^P
01/21/2012 21:45 EST	2.81 ^P	4,920 ^P
01/21/2012 22:00 EST	2.82 ^P	4,910 ^P
01/21/2012 22:15 EST	2.82 ^P	4,840 ^P
01/21/2012 22:30 EST	2.85 ^P	4,840 ^P
01/21/2012 22:45 EST	2.88 ^P	4,820 ^P
01/21/2012 23:00 EST	2.92 ^P	4,760 ^P
01/21/2012 23:15 EST	2.96 ^P	4,650 ^P
01/21/2012 23:30 EST	2.99 ^P	4,580 ^P
01/21/2012 23:45 EST	3.04 ^P	4,510 ^P
01/22/2012 00:00 EST	3.10 ^P	4,450 ^P
01/22/2012 00:15 EST	3.15 ^P	4,380 ^P
01/22/2012 00:30 EST	3.23 ^P	4,320 ^P
01/22/2012 00:45 EST	3.30 ^P	4,260 ^P
01/22/2012 01:00 EST	3.36 ^P	4,240 ^P
01/22/2012 01:15 EST	3.43 ^P	4,190 ^P
01/22/2012 01:30 EST	3.50 ^P	4,160 ^P
01/22/2012 01:45 EST	3.57 ^P	4,150 ^P
01/22/2012 02:00 EST	3.63 ^P	4,140 ^P
01/22/2012 02:15 EST	3.70 ^P	4,140 ^P
01/22/2012 02:30 EST	3.76 ^P	4,110 ^P
01/22/2012 02:45 EST	3.82 ^P	4,100 ^P
01/22/2012 03:00 EST	3.87 ^P	4,100 ^P
01/22/2012 03:15 EST	3.90 ^P	4,160 ^P
01/22/2012 03:30 EST	3.93 ^P	4,180 ^P
01/22/2012 03:45 EST	3.95 ^P	4,220 ^P

01/22/2012 04:00 EST	3.95 ^P	4,250 ^P
01/22/2012 04:15 EST	3.95 ^P	4,320 ^P
01/22/2012 04:30 EST	3.96 ^P	4,370 ^P
01/22/2012 04:45 EST	3.95 ^P	4,480 ^P
01/22/2012 05:00 EST	3.92 ^P	4,420 ^P
01/22/2012 05:15 EST	3.90 ^P	4,500 ^P
01/22/2012 05:30 EST	3.85 ^P	4,530 ^P
01/22/2012 05:45 EST	3.83 ^P	4,670 ^P
01/22/2012 06:00 EST	3.81 ^P	4,850 ^P
01/22/2012 06:15 EST	3.79 ^P	4,810 ^P
01/22/2012 06:30 EST	3.76 ^P	4,930 ^P
01/22/2012 06:45 EST	3.74 ^P	5,130 ^P
01/22/2012 07:00 EST	3.72 ^P	5,060 ^P
01/22/2012 07:15 EST	3.68 ^P	5,180 ^P
01/22/2012 07:30 EST	3.66 ^P	5,280 ^P
01/22/2012 07:45 EST	3.62 ^P	5,320 ^P
01/22/2012 08:00 EST	3.59 ^P	5,270 ^P
01/22/2012 08:15 EST	3.57 ^P	5,380 ^P
01/22/2012 08:30 EST	3.53 ^P	5,440 ^P
01/22/2012 08:45 EST	3.50 ^P	5,550 ^P
01/22/2012 09:00 EST	3.46 ^P	5,610 ^P
01/22/2012 09:15 EST	3.43 ^P	5,690 ^P
01/22/2012 09:30 EST	3.40 ^P	5,700 ^P
01/22/2012 09:45 EST	3.36 ^P	5,770 ^P
01/22/2012 10:00 EST	3.32 ^P	5,730 ^P
01/22/2012 10:15 EST	3.29 ^P	5,680 ^P
01/22/2012 10:30 EST	3.25 ^P	5,710 ^P
01/22/2012 10:45 EST	3.21 ^P	5,700 ^P
01/22/2012 11:00 EST	3.17 ^P	5,740 ^P
01/22/2012 11:15 EST	3.14 ^P	5,670 ^P
01/22/2012 11:30 EST	3.10 ^P	5,680 ^P
01/22/2012 11:45 EST	3.06 ^P	5,650 ^P
01/22/2012 12:00 EST	3.02 ^P	5,580 ^P
01/22/2012 12:15 EST	2.98 ^P	5,530 ^P
01/22/2012 12:30 EST	2.96 ^P	5,500 ^P
01/22/2012 12:45 EST	2.92 ^P	5,440 ^P
01/22/2012 13:00 EST	2.89 ^P	5,390 ^P
01/22/2012 13:15 EST	2.86 ^P	5,300 ^P
01/22/2012 13:30 EST	2.83 ^P	5,260 ^P
01/22/2012 13:45 EST	2.81 ^P	5,190 ^P
01/22/2012 14:00 EST	2.79 ^P	5,070 ^P
01/22/2012 14:15 EST	2.78 ^P	4,990 ^P
01/22/2012 14:30 EST	2.82 ^P	4,940 ^P

01/22/2012 14:45 EST	2.84 ^P	4,910 ^P
01/22/2012 15:00 EST	2.87 ^P	4,840 ^P
01/22/2012 15:15 EST	2.91 ^P	4,740 ^P
01/22/2012 15:30 EST	2.94 ^P	4,640 ^P
01/22/2012 15:45 EST	2.98 ^P	4,600 ^P
01/22/2012 16:00 EST	3.01 ^P	4,510 ^P
01/22/2012 16:15 EST	3.05 ^P	4,460 ^P
01/22/2012 16:30 EST	3.10 ^P	4,390 ^P
01/22/2012 16:45 EST	3.14 ^P	4,320 ^P
01/22/2012 17:00 EST	3.17 ^P	4,310 ^P
01/22/2012 17:15 EST	3.20 ^P	4,280 ^P
01/22/2012 17:30 EST	3.22 ^P	4,260 ^P
01/22/2012 17:45 EST	3.22 ^P	4,250 ^P
01/22/2012 18:00 EST	3.20 ^P	4,230 ^P
01/22/2012 18:15 EST	3.17 ^P	4,260 ^P
01/22/2012 18:30 EST	3.14 ^P	4,270 ^P
01/22/2012 18:45 EST	3.12 ^P	4,330 ^P
01/22/2012 19:00 EST	3.09 ^P	4,440 ^P
01/22/2012 19:15 EST	3.07 ^P	4,490 ^P
01/22/2012 19:30 EST	3.05 ^P	4,600 ^P
01/22/2012 19:45 EST	3.02 ^P	4,660 ^P
01/22/2012 20:00 EST	2.99 ^P	4,720 ^P
01/22/2012 20:15 EST	2.97 ^P	4,760 ^P
01/22/2012 20:30 EST	2.94 ^P	4,780 ^P
01/22/2012 20:45 EST	2.90 ^P	4,830 ^P
01/22/2012 21:00 EST	2.87 ^P	4,840 ^P
01/22/2012 21:15 EST	2.86 ^P	4,850 ^P
01/22/2012 21:30 EST	2.81 ^P	4,830 ^P
01/22/2012 21:45 EST	2.79 ^P	4,840 ^P
01/22/2012 22:00 EST	2.78 ^P	4,840 ^P
01/22/2012 22:15 EST	2.74 ^P	4,810 ^P
01/22/2012 22:30 EST	2.71 ^P	4,800 ^P
01/22/2012 22:45 EST	2.71 ^P	4,780 ^P
01/22/2012 23:00 EST	2.68 ^P	4,730 ^P
01/22/2012 23:15 EST	2.70 ^P	4,680 ^P
01/22/2012 23:30 EST	2.72 ^P	4,690 ^P
01/22/2012 23:45 EST	2.75 ^P	4,650 ^P
01/23/2012 00:00 EST	2.78 ^P	4,580 ^P
01/23/2012 00:15 EST	2.82 ^P	4,540 ^P
01/23/2012 00:30 EST	2.86 ^P	4,450 ^P
01/23/2012 00:45 EST	2.90 ^P	4,380 ^P
01/23/2012 01:00 EST	2.95 ^P	4,300 ^P
01/23/2012 01:15 EST	3.01 ^P	4,250 ^P

01/23/2012 01:30 EST	3.08 ^P	4,160 ^P
01/23/2012 01:45 EST	3.15 ^P	4,120 ^P
01/23/2012 02:00 EST	3.23 ^P	4,040 ^P
01/23/2012 02:15 EST	3.30 ^P	4,020 ^P
01/23/2012 02:30 EST	3.38 ^P	3,980 ^P
01/23/2012 02:45 EST	3.46 ^P	3,930 ^P
01/23/2012 03:00 EST	3.54 ^P	3,920 ^P
01/23/2012 03:15 EST	3.61 ^P	3,900 ^P
01/23/2012 03:30 EST	3.67 ^P	3,880 ^P
01/23/2012 03:45 EST	3.72 ^P	3,880 ^P
01/23/2012 04:00 EST	3.77 ^P	3,880 ^P
01/23/2012 04:15 EST	3.80 ^P	3,850 ^P
01/23/2012 04:30 EST	3.83 ^P	3,940 ^P
01/23/2012 04:45 EST	3.83 ^P	3,960 ^P
01/23/2012 05:00 EST	3.82 ^P	4,050 ^P
01/23/2012 05:15 EST	3.81 ^P	4,090 ^P
01/23/2012 05:30 EST	3.79 ^P	4,190 ^P
01/23/2012 05:45 EST	3.76 ^P	4,280 ^P
01/23/2012 06:00 EST	3.74 ^P	4,340 ^P
01/23/2012 06:15 EST	3.72 ^P	4,570 ^P
01/23/2012 06:30 EST	3.69 ^P	4,620 ^P
01/23/2012 06:45 EST	3.68 ^P	4,710 ^P
01/23/2012 07:00 EST	3.65 ^P	4,800 ^P
01/23/2012 07:15 EST	3.63 ^P	4,870 ^P
01/23/2012 07:30 EST	3.62 ^P	4,990 ^P
01/23/2012 07:45 EST	3.58 ^P	5,130 ^P
01/23/2012 08:00 EST	3.55 ^P	5,110 ^P
01/23/2012 08:15 EST	3.52 ^P	5,210 ^P
01/23/2012 08:30 EST	3.48 ^P	5,320 ^P
01/23/2012 08:45 EST	3.45 ^P	5,350 ^P
01/23/2012 09:00 EST	3.42 ^P	5,390 ^P
01/23/2012 09:15 EST	3.38 ^P	5,450 ^P
01/23/2012 09:30 EST	3.34 ^P	5,460 ^P
01/23/2012 09:45 EST	3.31 ^P	5,470 ^P
01/23/2012 10:00 EST	3.27 ^P	5,460 ^P
01/23/2012 10:15 EST	3.23 ^P	5,470 ^P
01/23/2012 10:30 EST	3.19 ^P	5,420 ^P
01/23/2012 10:45 EST	3.15 ^P	5,420 ^P
01/23/2012 11:00 EST	3.12 ^P	5,460 ^P
01/23/2012 11:15 EST	3.07 ^P	5,450 ^P
01/23/2012 11:30 EST	3.03 ^P	5,420 ^P
01/23/2012 11:45 EST	3.00 ^P	5,370 ^P
01/23/2012 12:00 EST	2.96 ^P	5,340 ^P

01/23/2012 12:15 EST	2.93 ^P	5,240 ^P
01/23/2012 12:30 EST	2.89 ^P	5,190 ^P
01/23/2012 12:45 EST	2.86 ^P	5,150 ^P
01/23/2012 13:00 EST	2.84 ^P	5,130 ^P
01/23/2012 13:15 EST	2.82 ^P	5,040 ^P
01/23/2012 13:30 EST	2.79 ^P	4,990 ^P
01/23/2012 13:45 EST	2.76 ^P	4,900 ^P
01/23/2012 14:00 EST	2.76 ^P	4,860 ^P
01/23/2012 14:15 EST	2.74 ^P	4,770 ^P
01/23/2012 14:30 EST	2.75 ^P	4,730 ^P
01/23/2012 14:45 EST	2.80 ^P	4,660 ^P
01/23/2012 15:00 EST	2.83 ^P	4,590 ^P
01/23/2012 15:15 EST	2.85 ^P	4,530 ^P
01/23/2012 15:30 EST	2.90 ^P	4,460 ^P
01/23/2012 15:45 EST	2.93 ^P	4,390 ^P
01/23/2012 16:00 EST	2.99 ^P	4,310 ^P
01/23/2012 16:15 EST	3.04 ^P	4,240 ^P
01/23/2012 16:30 EST	3.08 ^P	4,200 ^P
01/23/2012 16:45 EST	3.14 ^P	4,150 ^P
01/23/2012 17:00 EST	3.19 ^P	4,120 ^P
01/23/2012 17:15 EST	3.23 ^P	4,100 ^P
01/23/2012 17:30 EST	3.27 ^P	4,080 ^P
01/23/2012 17:45 EST	3.29 ^P	4,060 ^P
01/23/2012 18:00 EST	3.29 ^P	4,070 ^P
01/23/2012 18:15 EST	3.30 ^P	4,060 ^P
01/23/2012 18:30 EST	3.27 ^P	4,060 ^P
01/23/2012 18:45 EST	3.25 ^P	4,120 ^P
01/23/2012 19:00 EST	3.22 ^P	4,180 ^P
01/23/2012 19:15 EST	3.19 ^P	4,320 ^P
01/23/2012 19:30 EST	3.17 ^P	4,400 ^P
01/23/2012 19:45 EST	3.14 ^P	4,450 ^P
01/23/2012 20:00 EST	3.12 ^P	4,550 ^P
01/23/2012 20:15 EST	3.09 ^P	4,710 ^P
01/23/2012 20:30 EST	3.07 ^P	4,730 ^P
01/23/2012 20:45 EST	3.04 ^P	4,790 ^P
01/23/2012 21:00 EST	3.01 ^P	4,830 ^P
01/23/2012 21:15 EST	2.98 ^P	4,890 ^P
01/23/2012 21:30 EST	2.95 ^P	4,880 ^P
01/23/2012 21:45 EST	2.92 ^P	4,930 ^P
01/23/2012 22:00 EST	2.89 ^P	4,880 ^P
01/23/2012 22:15 EST	2.86 ^P	4,890 ^P
01/23/2012 22:30 EST	2.83 ^P	4,860 ^P
01/23/2012 22:45 EST	2.80 ^P	4,920 ^P

01/23/2012 23:00 EST	2.78 ^P	4,890 ^P
01/23/2012 23:15 EST	2.73 ^P	4,860 ^P
01/23/2012 23:30 EST	2.71 ^P	4,800 ^P
01/23/2012 23:45 EST	2.70 ^P	4,760 ^P
01/24/2012 00:00 EST	2.70 ^P	4,740 ^P
01/24/2012 00:15 EST	2.70 ^P	4,670 ^P
01/24/2012 00:30 EST	2.72 ^P	4,650 ^P
01/24/2012 00:45 EST	2.75 ^P	4,600 ^P
01/24/2012 01:00 EST	2.79 ^P	4,520 ^P
01/24/2012 01:15 EST	2.83 ^P	4,440 ^P
01/24/2012 01:30 EST	2.87 ^P	4,360 ^P
01/24/2012 01:45 EST	2.92 ^P	4,320 ^P
01/24/2012 02:00 EST	2.97 ^P	4,200 ^P
01/24/2012 02:15 EST	3.03 ^P	4,170 ^P
01/24/2012 02:30 EST	3.10 ^P	4,090 ^P
01/24/2012 02:45 EST	3.17 ^P	4,080 ^P
01/24/2012 03:00 EST	3.25 ^P	4,040 ^P
01/24/2012 03:15 EST	3.33 ^P	3,990 ^P
01/24/2012 03:30 EST	3.41 ^P	3,950 ^P
01/24/2012 03:45 EST	3.49 ^P	3,920 ^P
01/24/2012 04:00 EST	3.56 ^P	3,870 ^P
01/24/2012 04:15 EST	3.62 ^P	3,850 ^P
01/24/2012 04:30 EST	3.68 ^P	3,830 ^P
01/24/2012 04:45 EST	3.72 ^P	3,820 ^P
01/24/2012 05:00 EST	3.76 ^P	3,850 ^P
01/24/2012 05:15 EST	3.79 ^P	3,830 ^P
01/24/2012 05:30 EST	3.81 ^P	3,850 ^P
01/24/2012 05:45 EST	3.81 ^P	3,990 ^P
01/24/2012 06:00 EST	3.80 ^P	4,020 ^P
01/24/2012 06:15 EST	3.77 ^P	4,080 ^P
01/24/2012 06:30 EST	3.75 ^P	4,240 ^P
01/24/2012 06:45 EST	3.71 ^P	4,330 ^P
01/24/2012 07:00 EST	3.69 ^P	4,430 ^P
01/24/2012 07:15 EST	3.67 ^P	4,500 ^P
01/24/2012 07:30 EST	3.67 ^P	4,650 ^P
01/24/2012 07:45 EST	3.63 ^P	4,770 ^P
01/24/2012 08:00 EST	3.61 ^P	5,000 ^P
01/24/2012 08:15 EST	3.57 ^P	4,980 ^P
01/24/2012 08:30 EST	3.57 ^P	5,030 ^P
01/24/2012 08:45 EST	3.52 ^P	5,130 ^P
01/24/2012 09:00 EST	3.49 ^P	5,220 ^P
01/24/2012 09:15 EST	3.45 ^P	5,220 ^P
01/24/2012 09:30 EST	3.42 ^P	5,360 ^P

01/24/2012 09:45 EST	3.39 ^P	5,350 ^P
01/24/2012 10:00 EST	3.35 ^P	5,430 ^P
01/24/2012 10:15 EST	3.32 ^P	5,350 ^P
01/24/2012 10:30 EST	3.28 ^P	5,370 ^P
01/24/2012 10:45 EST	3.24 ^P	5,530 ^P
01/24/2012 11:00 EST	3.20 ^P	5,480 ^P
01/24/2012 11:15 EST	3.17 ^P	5,480 ^P
01/24/2012 11:30 EST	3.13 ^P	5,440 ^P
01/24/2012 11:45 EST	3.09 ^P	5,450 ^P
01/24/2012 12:00 EST	3.06 ^P	5,430 ^P
01/24/2012 12:15 EST	3.03 ^P	5,390 ^P
01/24/2012 12:30 EST	2.99 ^P	5,360 ^P
01/24/2012 12:45 EST	2.95 ^P	5,290 ^P
01/24/2012 13:00 EST	2.92 ^P	5,240 ^P
01/24/2012 13:15 EST	2.90 ^P	5,220 ^P
01/24/2012 13:30 EST	2.86 ^P	5,130 ^P
01/24/2012 13:45 EST	2.82 ^P	5,080 ^P
01/24/2012 14:00 EST	2.80 ^P	4,980 ^P
01/24/2012 14:15 EST	2.76 ^P	4,950 ^P
01/24/2012 14:30 EST	2.77 ^P	4,910 ^P
01/24/2012 14:45 EST	2.74 ^P	4,830 ^P
01/24/2012 15:00 EST	2.74 ^P	4,740 ^P
01/24/2012 15:15 EST	2.75 ^P	4,670 ^P
01/24/2012 15:30 EST	2.79 ^P	4,630 ^P
01/24/2012 15:45 EST	2.85 ^P	4,550 ^P
01/24/2012 16:00 EST	2.89 ^P	4,470 ^P
01/24/2012 16:15 EST	2.94 ^P	4,410 ^P
01/24/2012 16:30 EST	2.98 ^P	4,310 ^P
01/24/2012 16:45 EST	3.02 ^P	4,240 ^P
01/24/2012 17:00 EST	3.07 ^P	4,170 ^P
01/24/2012 17:15 EST	3.11 ^P	4,120 ^P
01/24/2012 17:30 EST	3.17 ^P	4,100 ^P
01/24/2012 17:45 EST	3.21 ^P	4,060 ^P
01/24/2012 18:00 EST	3.24 ^P	4,070 ^P
01/24/2012 18:15 EST	3.27 ^P	4,040 ^P
01/24/2012 18:30 EST	3.28 ^P	4,020 ^P
01/24/2012 18:45 EST	3.28 ^P	4,060 ^P
01/24/2012 19:00 EST	3.26 ^P	4,070 ^P
01/24/2012 19:15 EST	3.23 ^P	4,100 ^P
01/24/2012 19:30 EST	3.19 ^P	4,160 ^P
01/24/2012 19:45 EST	3.17 ^P	4,240 ^P
01/24/2012 20:00 EST	3.14 ^P	4,350 ^P
01/24/2012 20:15 EST	3.12 ^P	4,430 ^P

01/24/2012 20:30 EST	3.09 ^P	4,470 ^P
01/24/2012 20:45 EST	3.07 ^P	4,610 ^P
01/24/2012 21:00 EST	3.04 ^P	4,760 ^P
01/24/2012 21:15 EST	3.01 ^P	4,760 ^P
01/24/2012 21:30 EST	2.98 ^P	4,800 ^P
01/24/2012 21:45 EST	2.96 ^P	4,860 ^P
01/24/2012 22:00 EST	2.93 ^P	4,900 ^P
01/24/2012 22:15 EST	2.89 ^P	4,860 ^P
01/24/2012 22:30 EST	2.86 ^P	4,900 ^P
01/24/2012 22:45 EST	2.82 ^P	4,900 ^P
01/24/2012 23:00 EST	2.79 ^P	4,910 ^P
01/24/2012 23:15 EST	2.77 ^P	4,870 ^P
01/24/2012 23:30 EST	2.73 ^P	4,850 ^P
01/24/2012 23:45 EST	2.71 ^P	4,840 ^P
01/25/2012 00:00 EST	2.68 ^P	4,790 ^P
01/25/2012 00:15 EST	2.65 ^P	4,760 ^P
01/25/2012 00:30 EST	2.63 ^P	4,740 ^P
01/25/2012 00:45 EST	2.61 ^P	4,670 ^P
01/25/2012 01:00 EST	2.60 ^P	4,670 ^P
01/25/2012 01:15 EST	2.59 ^P	4,630 ^P
01/25/2012 01:30 EST	2.63 ^P	4,510 ^P
01/25/2012 01:45 EST	2.66 ^P	4,500 ^P
01/25/2012 02:00 EST	2.70 ^P	4,430 ^P
01/25/2012 02:15 EST	2.74 ^P	4,400 ^P
01/25/2012 02:30 EST	2.78 ^P	4,340 ^P
01/25/2012 02:45 EST	2.83 ^P	4,260 ^P
01/25/2012 03:00 EST	2.88 ^P	4,160 ^P
01/25/2012 03:15 EST	2.94 ^P	4,080 ^P
01/25/2012 03:30 EST	3.01 ^P	4,010 ^P
01/25/2012 03:45 EST	3.08 ^P	3,990 ^P
01/25/2012 04:00 EST	3.16 ^P	3,940 ^P
01/25/2012 04:15 EST	3.23 ^P	3,860 ^P
01/25/2012 04:30 EST	3.30 ^P	3,810 ^P
01/25/2012 04:45 EST	3.37 ^P	3,750 ^P
01/25/2012 05:00 EST	3.44 ^P	3,700 ^P
01/25/2012 05:15 EST	3.49 ^P	3,690 ^P
01/25/2012 05:30 EST	3.54 ^P	3,690 ^P
01/25/2012 05:45 EST	3.57 ^P	3,710 ^P
01/25/2012 06:00 EST	3.58 ^P	3,730 ^P
01/25/2012 06:15 EST	3.58 ^P	3,790 ^P
01/25/2012 06:30 EST	3.56 ^P	^P

Attachment B

E-Mail from Doug Leeper to Martyn Johnson, Dated February 7, 2012

From: Doug Leeper
To: Martyn Johnson (martynelljay@hotmail.com)
Bcc: Cara S. Martin; Chris Zajac; Christopher Pettit; Darcy A. Brune; Dave Dewitt; Doug Leeper; Gary E. Williams; Jay Yingling; Karen West; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Michael Molligan; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Tammy Hinkle; Veronica Crow; Xinjian Chen; Yassert Gonzalez
Subject: E-Mail on Homosassa Specific Conductance
Date: Tuesday, February 07, 2012 1:36:12 PM
Attachments: E-Mail from MJohnson - Specific Conductance Homosassa Main Spring 28jan2012.pdf

Martyn:

I'm writing to acknowledge that the District received your e-mail concerning specific conductance measurement in the Homosassa River system that was sent to R. Rodriguez and me on January 28, 2012.

As always, I thank you for your input and note that your comments and all other public input on the minimum flows and levels development process will be reviewed by staff and made available for consideration by the Governing Board and other persons interested in the Homosassa River system.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: [Mike Heyl](#)
To: [Doug Leeper](#)
Subject: FW: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES
Date: Tuesday, February 07, 2012 2:27:12 PM

Fyi.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- *Note : District Limit for Incoming Email is 5 Megabytes* -----
An ftp site is available for larger attachments : http://ftp.swfwmd.state.fl.us/
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Brad Rimbey@CRRC [mailto:BWR.CRRC@tampabay.rr.com]
Sent: Tuesday, February 07, 2012 2:23 PM
To: Mike Heyl
Subject: Re: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Hi Mike,

Thanks again for your patience on all of this.

Brad

----- Original Message -----

From: [Mike Heyl](#)
To: [Alan Martyn Johnson](#) ; [Doug Leeper](#) ; [Al Grubman \(grubman1@gmail.com\)](#) ; [Bill Geiger \(bgeiger@cityofbrooksville.us\)](#) ; [Bill Pouder \(bill.pouder@myfwc.com\)](#) ; [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](#) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](#) ; [Brent Whitley \(brentwhitley@sierra-properties.com\)](#) ; [Brockway, Alys \(abrockway@co.hernando.fl.us\)](#) ; [Dennis D. Dutcher \(Dennis3ds@aol.com\)](#) ; [Frank DiGiovanni \(administration@inverness-fl.gov\)](#) ; [Greenwood, Kathleen \(Kathleen.Greenwood@dep.state.fl.us\)](#) ; [Helen Spive](#) ; [Hilliard, Dan \(2buntings@comcast.net\)](#) ; [Hoehn, Ted](#) ; [Hope Corona \(hopecorona@tampabay.rr.com\)](#) ; [Jim Farley \(jfarley682@aol.com\)](#) ; [Katie Tripp \(ktripp@savethemanatee.org\)](#) ; [Norman Hopkins \(norman@amyhrf.org\)](#) ; [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](#) ; [Richard Kane \(rkane@usgs.gov\)](#) ; [Richard Radacky \(rradacky@cityofbrooksville.us\)](#) ; [Ron Miller \(rmille76@tampabay.rr.com\)](#) ; [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](#) ; [Sullivan, Jack \(jsullivan@carltonfields.com\)](#) ; [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#) ; [Whitey Markle \(whmarkle@gmail.com\)](#) ; [\(janicehowie@aol.com\)](#) ; [Abdon Sidibie \(asidibie@chronicle.online.com\)](#) ; [Alex McPherson \(aamcpherson@msn.com\)](#) ; [Ann - 2 Hodgson \(ahodgson@gmail.com\)](#) ; [Ann Hodgson \(ahodgson@audubon.org\)](#) ; [Bernard Berauer \(bfberauer@aol.com\)](#) ; [Beverly Overa \(boverly@tampabay.rr.com\)](#) ; [Bill Garvin \(wgarvin@tampabay.rr.com\)](#) ; [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](#) ; [Brack Barker \(brack154@msn.com\)](#) ; [Carl Matthai](#)

(thebabesmimi@gmail.com) ; [Casey.Emily\(fcnwr@atlantic.net\)](mailto:Casey.Emily(fcnwr@atlantic.net)) ; [Charles Dean\(dean.charles.web@flsenate.gov\)](mailto:CharlesDean(dean.charles.web@flsenate.gov)) ; [Charles Stonerock\(katcha.stonerock3@gmail.com\)](mailto:CharlesStonerock(katcha.stonerock3@gmail.com)) ; [Chris Safos\(chrissafos@embarqmail.com\)](mailto:ChrisSafos(chrissafos@embarqmail.com)) ; [Czerwinski. Mike\(mczerwin@tampabay.rr.com\)](mailto:Czerwinski.Mike(mczerwin@tampabay.rr.com)) ; [Darlene Herth\(2cetechology21@gmail.com\)](mailto:DarleneHerth(2cetechology21@gmail.com)) ; [Darrell Snedecor\(president@citruscountyaudubon.com\)](mailto:DarrellSnedecor(president@citruscountyaudubon.com)) ; [Don Hiers\(dhiers3@gmail.com\)](mailto:DonHiers(dhiers3@gmail.com)) ; [Douglas Dame\(doug_dame@yahoo.com\)](mailto:DouglasDame(doug_dame@yahoo.com)) ; [Elaine Luther\(barneyandcap@hotmail.com\)](mailto:ElaineLuther(barneyandcap@hotmail.com)) ; [Emily Casey\(ecasey21@hotmail.com\)](mailto:EmilyCasey(ecasey21@hotmail.com)) ; [Emma Knight\(eknight@wetlandsolutionsinc.com\)](mailto:EmmaKnight(eknight@wetlandsolutionsinc.com)) ; [George Harbin\(gharbin@tampabay.rr.com\)](mailto:GeorgeHarbin(gharbin@tampabay.rr.com)) ; [George McClog\(classof47@gmail.com\)](mailto:GeorgeMcClog(classof47@gmail.com)) ; [Gorgon O'Connor\(gorgon_o@yahoo.com\)](mailto:GorgonO'Connor(gorgon_o@yahoo.com)) ; [Harry Steiner\(harry109@aol.com\)](mailto:HarrySteiner(harry109@aol.com)) ; [Jack Calbeck\(calbeckj@citrus.k12.fl.us\)](mailto:JackCalbeck(calbeckj@citrus.k12.fl.us)) ; [jane Perrin\(jcsperrinmd@sbcglobal.net\)](mailto:janePerrin(jcsperrinmd@sbcglobal.net)) ; [Jerry Morton\(JerrMorton@aol.com\)](mailto:JerryMorton(JerrMorton@aol.com)) ; [Jessie Gourlie\(gourliej@thirdplanetwind.com\)](mailto:JessieGourlie(gourliej@thirdplanetwind.com)) ; [Jim Collins\(jimmiekey22@yahoo.com\)](mailto:JimCollins(jimmiekey22@yahoo.com)) ; [Jimmie Smith\(Jimmie.Smith@myfloridahouse.gov\)](mailto:JimmieSmith(Jimmie.Smith@myfloridahouse.gov)) ; [Joe Calamari](mailto:JoeCalamari) ; [John Lord\(jclord109@yahoo.com\)](mailto:JohnLord(jclord109@yahoo.com)) ; [John Mayo\(freedomway1@gmail.com\)](mailto:JohnMayo(freedomway1@gmail.com)) ; [Karen Johnstone\(kjohns213@sbcglobal.net\)](mailto:KarenJohnstone(kjohns213@sbcglobal.net)) ; [Kim Caldwell\(caldwell.kimberly@yahoo.com\)](mailto:KimCaldwell(caldwell.kimberly@yahoo.com)) ; [Kim Dinkins\(kim.dinkins@marioncountyfl.org\)](mailto:KimDinkins(kim.dinkins@marioncountyfl.org)) ; [Linda Pierce\(tpierce35@tampabay.rr.com\)](mailto:LindaPierce(tpierce35@tampabay.rr.com)) ; [Linda Vanderveen\(hernandoaudubon@yahoo.com\)](mailto:LindaVanderveen(hernandoaudubon@yahoo.com)) ; [Mary Anne Lynn\(mlynn1978@tampabay.rr.com\)](mailto:MaryAnneLynn(mlynn1978@tampabay.rr.com)) ; [Matthew Corona\(mcorona1@tampabay.rr.com\)](mailto:MatthewCorona(mcorona1@tampabay.rr.com)) ; [Max Rhinesmith\(rhinesmith@webtv.net\)](mailto:MaxRhinesmith(rhinesmith@webtv.net)) ; [Amber Breland](mailto:AmberBreland) ; [Andy Houston\(ahouston@crystalriverfl.org\)](mailto:AndyHouston(ahouston@crystalriverfl.org)) ; [Art Yerian\(AI.Yerian@dep.state.fl.us\)](mailto:ArtYerian(AI.Yerian@dep.state.fl.us)) ; [Ben Weiss](mailto:BenWeiss) ; [Beth Hovinde](mailto:BethHovinde) ; [Brad Thorpe\(brad.thorpe@bocc.citrus.fl.us\)](mailto:BradThorpe(brad.thorpe@bocc.citrus.fl.us)) ; [Courtney Edwards\(cedwards@savethemanatee.org\)](mailto:CourtneyEdwards(cedwards@savethemanatee.org)) ; [Dale Jones\(Jones@MyFWC.com\)](mailto:DaleJones(Jones@MyFWC.com)) ; [Dana Bryan\(dana.bryan@dep.state.fl.us\)](mailto:DanaBryan(dana.bryan@dep.state.fl.us)) ; [Darrell Snedecor](mailto:DarrellSnedecor) ; [David Hamilton\(countyadministrator@hernandocounty.us\)](mailto:DavidHamilton(countyadministrator@hernandocounty.us)) ; [David Hankla\(david_hankla@fws.gov\)](mailto:DavidHankla(david_hankla@fws.gov)) ; [Don Wright\(wright@sura.org\)](mailto:DonWright(wright@sura.org)) ; [Dusty McDevitt\(mcdevitt@usgs.gov\)](mailto:DustyMcDevitt(mcdevitt@usgs.gov)) ; [Ed Call\(marvin.call@MyFWC.com\)](mailto:EdCall(marvin.call@MyFWC.com)) ; [Eric Nagid\(eric.nagid@MyFWC.com\)](mailto:EricNagid(eric.nagid@MyFWC.com)) ; [FFWCC MFLs Review E-Mail Address\(fwcconservationplanningservices@myfwc.com\)](mailto:FFWCCMFLsReviewE-MailAddress(fwcconservationplanningservices@myfwc.com)) ; [J. J. Kenney\(jj.kenney@bocc.citrus.fl.us\)](mailto:J.J.Kenney(jj.kenney@bocc.citrus.fl.us)) ; [Jennene Norman-Vacha\(jnvacha@ci.brooksville.fl.us\)](mailto:JenneneNorman-Vacha(jnvacha@ci.brooksville.fl.us)) ; [Joyce Kleen@fws.gov](mailto:JoyceKleen@fws.gov) ; [Kandi Harper\(kandi.harper@bocc.citrus.fl.us\)](mailto:KandiHarper(kandi.harper@bocc.citrus.fl.us)) ; [Keith Ramos\(Keith.Ramos@fws.gov\)](mailto:KeithRamos(Keith.Ramos@fws.gov)) ; [Kent Smith\(kent.smith2@myfwc.com\)](mailto:KentSmith(kent.smith2@myfwc.com)) ; [Kevin Grimsley\(kjgrims@usgs.gov\)](mailto:KevinGrimsley(kjgrims@usgs.gov)) ; [Michael Lusk\(Michael_Lusk@fws.gov\)](mailto:MichaelLusk(Michael_Lusk@fws.gov)) ; [Mitchell Newberger\(mnewberger@verizon.net\)](mailto:MitchellNewberger(mnewberger@verizon.net)) ; [Nick Robbins\(Nick.Robbins@dep.state.fl.us\)](mailto:NickRobbins(Nick.Robbins@dep.state.fl.us)) ; [Nicole Adimey\(Nicole_Adimey@fws.gov\)](mailto:NicoleAdimey(Nicole_Adimey@fws.gov)) ; [Paul Thomas\(paulw.thomas@MyFWC.com\)](mailto:PaulThomas(paulw.thomas@MyFWC.com)) ; [Ron Mezich\(ron.mezich@MyFWC.com\)](mailto:RonMezich(ron.mezich@MyFWC.com)) ; [Shelly Yaun\(shelly.yaun@dep.state.fl.us\)](mailto:ShellyYaun(shelly.yaun@dep.state.fl.us)) ; [Toby Brewer\(Toby.Brewer@dep.state.fl.us\)](mailto:TobyBrewer(Toby.Brewer@dep.state.fl.us)) ; [Tracy Colson](mailto:TracyColson) ; [Wallace Traci](mailto:WallaceTraci) ; [Adkins Jim](mailto:AdkinsJim) ; [Bitter Jim](mailto:BitterJim) ; [Bryant Richard](mailto:BryantRichard) ; [Cantero Vince](mailto:CanteroVince) ; [Carpenter Paul](mailto:CarpenterPaul) ; [Daniels Chase](mailto:DanielsChase) ; [Dueker Duane](mailto:DuekerDuane) ; [Gramling Hugh](mailto:GramlingHugh) ; [Harrelson Cathy](mailto:HarrelsonCathy) ; [Hubbell Pete](mailto:HubbellPete) ; [Johnson Eric](mailto:JohnsonEric) ; [Keim Robert](mailto:KeimRobert) ; [Kincaid Todd](mailto:KincaidTodd) ; [Kline Allen](mailto:KlineAllen) ; [Knight Bob](mailto:KnightBob) ; [Knight Robert](mailto:KnightRobert) ; [Knudson Ross](mailto:KnudsonRoss) ; [Overa Tom](mailto:OveraTom) ; [Owen Rick](mailto:OwenRick) ; [Parrow Liz](mailto:ParrowLiz) ; [Rolf Auermann\(rauerman@tampabay.rr.com\)](mailto:RolfAuermann(rauerman@tampabay.rr.com)) ; [Rusnak Teddi](mailto:RusnakTeddi) ; [Tarochinoe Joseph](mailto:TarochinoeJoseph) ; [Watkins Priscilla](mailto:WatkinsPriscilla) ; [Watrous Russell](mailto:WatrousRussell) ; [Wilson Roger](mailto:WilsonRoger)

Cc: [Amy K. Harroun](mailto:AmyK.Harroun) ; [Barbara Matrone](mailto:BarbaraMatrone) ; [Cara S. Martin](mailto:CaraS.Martin) ; [Chris Zajac](mailto:ChrisZajac) ; [Darcy A. Brune](mailto:DarcyA.Brune) ; [Dave Dewitt](mailto:DaveDewitt) ; [Gary E. Williams](mailto:GaryE.Williams) ; [Jay Yingling](mailto:JayYingling) ; [Karen Lloyd](mailto:KarenLloyd) ; [Ken Weber](mailto:KenWeber) ; [Kenneth R. Herd](mailto:KennethR.Herd) ; [Laura Donaldson](mailto:LauraDonaldson) ; [Lou Kavouras](mailto:LouKavouras) ; [Mark Barcelo](mailto:MarkBarcelo) ; [Mark Hammond](mailto:MarkHammond) ; [Paul Williams](mailto:PaulWilliams) ; [Robyn O. Felix](mailto:RobynO.Felix) ; [Ron Basso](mailto:RonBasso) ; [Sid Flannery](mailto:SidFlannery) ; [Veronica Craw](mailto:VeronicaCraw) ; [Xinjian Chen](mailto:XinjianChen) ; [Yassert Gonzalez](mailto:YassertGonzalez)

Sent: Tuesday, February 07, 2012 12:46 PM

Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Mr. Johnson - Regarding your email of January 19, I'd like to clarify a few points for you and those on your distribution list and I have appended your email for continuity. The proposed language to amend F.A.C. 40D-8 that was cited in the District's January 19 response is over 14 months old. As stated, it was the proposed rule amendment in November 2010 and can be found on page 34 of the Governing Board Agenda package for the November 2010 meeting. (It can be found at this url <http://www.swfwmd.state.fl.us/calendar/2011/11/>.) I am not aware of the exact date, but the agenda package was made public and posted on the District's web site in mid-November 2010. The language establishing the minimum flows and levels (MFLs) as a percent of the previous day's flow that was in the draft rule amendment for the Chassahowitzka River system is not new and is included in many of the District's adopted MFLs rules (See F.A.C. 40D –

8), including Upper Hillsborough, Upper Peace, Middle Peace, Lower Peace, Myakka, Braden (freshwater), Upper Alafia, Lower Alafia, Weeki Wachee and the Anclote rivers. I would further add that the District is in the process of evaluating minimum flow recommendations for the Chassahowitzka River system, and proposed rule amendments for the system are similarly being reviewed.

Contrary to the suppositions advanced in your e-mail, it is not the District's intent to confuse stakeholders through semantics or "*legal jargon about amending a legal definitions by rule changes*" and the motivation to establish MFLs is not to "*just keep on pumping the aquifer.*" We are developing MFLs for the Chassahowitzka River system and other priority water bodies to prevent significant harm associated with further withdrawals and are endeavoring to do so in as clear a manner as possible.

In your email, you noted that the Chassahowitzka is a spring-fed river and compared that to the surface water withdrawal example that I provided. I think it may be possible that you are confusing the source of water (spring-fed vs. surface runoff systems) with the mechanism of withdrawing water. In a runoff-dominated system without a significant input from groundwater, the only mechanism for removing water is by pumping directly from the surface water. In a ground-water dominated system, water can be removed by pumping the groundwater or by pumping directly from the surface water. Examples of a surface water withdrawal from a spring-fed system are the permit held by City of Tampa to withdraw water from Sulphur Springs and a permit held by Crystal Springs Preserve LLC to withdraw water from Crystal Springs. Note that the District does not anticipate the issuance of surface water withdrawals from the Chassahowitzka River system.

We will continue to evaluate compliance with the proposed MFLs for the Chassahowitzka and Homosassa River systems by determining groundwater withdrawal impacts to springflow through the use of groundwater flow modeling and other statistical analyses. While not anticipated at this time, we would evaluate any future direct surface water withdrawal in conjunction with existing groundwater impacts to ensure compliance with the proposed MFLs once adopted. In other words, staff would evaluate the effect on springflow from a combination of a direct surface water withdrawal along with existing groundwater use so that the total impact does not exceed the allowable percentages. Compliance with minimum flows that are established for the Chassahowitzka River system will be evaluated at a minimum on an annual basis through use of the Northern District Groundwater flow model and evaluation of rainfall-flow relationships. Compliance with the minimum flows may be also be evaluated whenever a permit application that may be expected to influence flows in the system is submitted to the District.

You also mentioned "recovery plans" and "Impaired Waters list" in your email. Please note that a flow recovery plan is different from a water quality recovery plan. Neither the Chassahowitzka nor the Homosassa system are in flow recovery as defined in 373.0421 F.S., and thus no recovery plan is needed for flow. Statute 373.0421-3.(2) reads in part:

'(2) If the existing flow or level in a water body is below, or is projected to fall within 20 years below, the applicable minimum flow or level established pursuant to s. 373.042,

the department or governing board, as part of the regional water supply plan described in s. 373.0361, shall expeditiously implement a recovery or prevention strategy, which includes the development of additional water supplies or other actions, consistent with the authority granted by this chapter to:

(a) Achieve recovery to the established minimum flow or level as soon as practicable; or

(b) Prevent the existing flow or level from falling below the established minimum flow or level.'

The state list of Impaired Waters relates to water quality and as you have correctly identified, the Florida Department of Environmental Protection (FDEP) has the statutory authority to regulate pollutant discharges and water quality. If necessary, FDEP will establish a Total Maximum Daily Limit for each system followed by development of a Basin Management Action Plan, which is a recovery plan for water quality analogous to a flow recovery plan.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
SWFWMD/Ecologic Evaluation (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Thursday, January 19, 2012 7:39 PM
To: Doug Leeper; Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley (brentwhitley@sierra-properties.com); Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen (Kathleen.Greenwood@dep.state.fl.us); Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechnology21@gmail.com); Darrell

Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandsolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Jack Calbeck (calbeckj@citrus.k12.fl.us); Jane Perrin (jcsperinmd@sbcglobal.net); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Lord (jlord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (tpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce Kleen (fws.gov); Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Dueker, Duane; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger
Cc: Amy K. Harroun; Barbara Matrone; Cara S. Martin; Chris Zajac; Darcy A. Brune; Dave Dewitt; Gary E. Williams; Jay Yingling; Karen Lloyd; Ken Weber; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Veronica Crow; Xinjian Chen; Yassert Gonzalez
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows READ THE WORDS CAREFULLY THIS IS ABOUT RULE CHANGES

Please note the words in Doug's e-mail I have made red lettering and yellow highlight.

If you are concerned about the future of Homosassa, Chassahowitzka, Crystal or any other spring fed river in the SWFWMD this is ESSENTIAL READING.

Baseline flows will be no more if a draft rule is approved, at least as I read this response from SWFWMD (key part copied into this message).

The gap in the quote is a graph which does not copy into the e-mail text so go to the attachment for the complete response.

Yellow highlight added.

QUOTE

Dear Mr. Johnson –

Doug Leeper has asked that I respond to your recent comments (January 12, 2012 e-mail)

about flows in the Chassahowitzka River and the application of the proposed minimum flows

and levels (MFL) for the river system. The proposed Chassahowitzka MFL is a percentage of

flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent

of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later,

the 63 cfs flow rate is not an MFL criterion.

The percent of flow approach is easier to understand where there is a surface water withdrawal.

A draft 2010 MFL rule for the system read in part (emphasis added):

“40D-8.041 Minimum Flows

(1) – (15) No change.

(16) Minimum Flows for the Chassahowitzka River System.

(b) Minimum Flow for the Chassahowitzka River System is 89% of the natural flow as measured at the United States Geological Survey (USGS) Gage Chassahowitzka River near Homosassa (Gage No. 02310650). **The minimum flow at any point below this Gage is based on the previous day's natural flow at that point minus 11 percent.**”

If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you

evaluated, the results would appear as below. Each day is multiplied by 89% to determine how

much flow must remain. The 63 cfs is not identified in the proposed 2010 rule and, is not a

recommended MFL, nor does it figure into the application of the MFL rule.

GRAPH GAP

In light of your comments and in rereading the Executive Summary of the November 2010 draft

report on proposed MFL for the Chassahowitzka River system, I do agree that the meaning of

the word “baseline” should be improved and clarified. I will endeavor to do so in final report.

Some discussion about the origin and application of the 63 cfs in evaluating the Chassahowitzka MFL is warranted.

This value represents the median of daily flows from

1/1/1967 through 11/29/2007. Development of this data set is documented in

Chapter 10.1 of the November draft report. The data set reflects measured and estimated flows slightly downstream of the Main spring at the present location of the USGS gage 02310650. These flows do not include contributions from Crab Creek and other sources further downstream.

By definition, half of the daily values are greater than the median value and half are less than the median. In this case, the record exhibits a statistically significant declining trend that is described in section 2.4 of the November draft report, so it should come as no surprise that the majority of the flow values below the median have occurred in the more recent years. The median flow is simply the "middle point" of a collection of flows, and was simply chosen to represent typical flows in the Chassahowitzka. It should be noted that ,provided the flow used in the MFL evaluation is within the range of observed flows, linear responses to flow are unaffected by the initial choice of flow as shown in the following illustration of hypothetical response. In the case of the proposed Chassahowitzka MFL, the following metrics exhibited linear response to flow or salinity and thus are independent of the initial flow value chosen for evaluation:
UNQUOTE

This response was to an e-mail I sent indicating 46% of the days in the last two year flows into the Chassahowitzka were below the minimum flows set in the draft report. A similar e-mail sent a couple of days earlier indicated on 84% of the days in the last two years flows into the Homosassa were below the minimum flows set in the corresponding draft report.

It is worrying to contemplate the agenda are these ideas to confuse us by;

- semantics eg *(From above) If this rule were applied to a surface water withdrawal over the 2010 and 2011 flows that you evaluated, the results would appear as below...Chass is a spring fed river, or*
- legal jargon about amending a legal definitions by rule changes.

Is it to just keep on pumping the aquifer?

The hypothetical fish reduction graph, if you read the attachment, is.....

Some serious common sense questions need to be answered. What is the minimum flow and what criteria say it has been reached; day, week, month? What are the recovery plans for these rivers (Chassahowitzka and SE Fork of Homosassa are on the Impaired Waters list by Department of Environmental Protection)?

Martyn

I guess this will upset a lot of people, but this needs nipping in the bud. I trust there will be a rethink of this matter and a fast correction made. I could have posted this on the working group web site but how many would have read it.

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2109/4778 - Release Date: 01/31/12

Internal Virus Database is out of date.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [Mike Heyl](#); [Doug Leeper](#)
Cc: [Kevin J. Grimsley](#); [R Rodriguez](#); [Al Grubman](#); [Ron Miller](#); [Brad Rimley](#); [Norman Hopkins](#); [Ron Basso](#); [Brent Whitley](#)
Subject: Rule 40D-8.041
Date: Friday, February 03, 2012 7:46:47 AM
Attachments: [Mike HeylFeb 2 Note.doc](#)

According to the Proposed Rule 40D-8.041 for the Weeki Wachee River, the discharge at Gage Site 02310525 on January 31 was 113 cfs.

The USGS web site reports for this site is 137 cfs.

Confusing?

If you read the attached note to Mike Heyl you will probably understand what lead me to this. Mike comment, in his Jan 19 e-mail attachment, about Rule 40D-8.041 regarding the Chassahowitzka; so I started looking into this.

Possibly someone can clarify this mismatch for me, and some others who may find this confusing.

Martyn

P.S. I am still trying to understand if 'natural flow' for the Weeki Wachee River includes, or does not include, the anthropogenic impact, about 17 cfs or about 10% . To be clear that is 'pumpage', or put another way the amount of water mankind is sucking out of the aquifer near Weeki Wachee.

From: [Alan Martyn Johnson](#)
To: [Doug Leeper](#); [Mike Heyl](#)
Subject: Homosassa Chassahowitzka MFL"s you Feb 6, 2012 e-mails
Date: Wednesday, February 08, 2012 8:08:20 AM

Doug and Mike,

Thank you both for taking the time yesterday to respond to my e-mails of January 6 and 19.

To be fair I probably should take some time to digest, but there are some fundamental points that cross my mind immediately.

1. To determine Significant Harm do we not need a baseline?

I thought the basis of setting minimum flows was to identify what reduction in inflow spring water would result in the river system deteriorating to a point that significant harm (change) has occurred. By some convention it has been accepted this is, condition X deteriorates to $X - 15\%$. The condition X using a logical approach needs to be set; it can not be a variable. Considering, salinity, the volumes of various ranges of salinity in the river system are set at some point in time. I thought that is what all those studies were for; to determine the salinity profile (at that time). Then by determining, to the best scientific ability, what flow reduction of 'good quality' spring water inflow would result in the profile deteriorating by 15% volume, area or other appropriate measure. If the inflow reduces below that point I do not think Mother Nature has a control line in her program that says spring water inflow has dropped so invoke seawater inflow control. Seawater inflow will replace the loss of spring water inflow in both the Homosassa and Chassahowitzka. There has to be a baseline. Some would argue the baseline was when "Outstanding Florida Water" was pronounced.

2. I have looked at the Rule 40D-8.041 for Weeki Wachee and it (at least the version I looked at and commented on in a recent e-mail) references flows to a specific gage site, not the Northern District Model. Just quickly looked at Hillsborough, it references Morris Bridge gage and appears to be a strongly tidally influenced site...but that was a quick look.

So this latest concept/wording, using NDM, looks like an attempt to avoid the baseline concept because there is already knocking at that door.

3. Think you have clarified that 'natural flow' is; pumpage plus the flow/discharge from the spring as measured by USGS. This 'natural flow' can be related to the 'baseline' in 1 above. In both the Homosassa and Chassahowitzka pumpage/groundwater withdrawals/human impact were considered as insignificant in assessing the MFL in the draft reports.

I am pleased that it has been seen fit to focus more on how much is being sucked out of the aquifer. This will help us realize it is a significant factor. But, I am curious how pumpage will be used to assess each of the rivers individually. How is pumpage (will have to add that word to my dictionary) in one basin related to pumpage in an adjacent basin. Will pumpage be combined between basins? That can of worms needs opening, can't have it both ways. The level in Weeki Wachee Well is used as the major predictor of calculated discharge into each of the rivers in the area. Groundwater withdrawals for WWachee (about 10% of discharge, as I recall, based on 2006 data in the 2008 report) surely influenced WW Well levels and consequentially Homosassa

and Chass discharge. It was the flow into these rivers at the time the studies were done that created the conditions found during the studies. And the inflow reductions MFL's, for 15% deterioration to cause significant harm, were based on those inflows.

4. Groundwater withdrawals can not be changed with change of rainfall.
The continued increase in groundwater withdrawals needs to be a focus now. It is political thin ice to revoke water use permits. Yes, I know they have to be renewed every five or ten years, but the politics of not renewing are enormous. The politics of water savings/use reduction plans are fragile and these are often voluntary programs to avoid the politics of enforcement. If I recall correctly in one of the draft reports it mentioned that MFL's are as much political as scientific (my words from memory). How true that is, and the legal jargon plays well with that tune.
5. Given the method of assessment you suggest, use of the Northern District Model; is it not already used to 'model' the future? It has been quoted as predicting flows for future scenarios, those pumping versus no pumping discharge changes. Does it not already include rainfall modeling? No doubt it can be refined by adding actual data each year, but is it not a predictive tool rather than a record book?
Just worries me the assumptions the NDM uses. A number of times I have questioned the assumptions. The one that comes to mind immediately is, Table 2-4 (if memory serves) in the Homosassa draft report, where the various springs SEFork all have the same discharge, but not supported by a shred of empirical data.

Just some initial comments, I will take the time to digest your responses further.

While I am on the issue of model validity, I will try to pull together my notes/comments about the Chassahowitzka hydrodynamic model that I have recently been looking at.

And, from a tax payer concerned about the future of these and other rivers, SWFWMD and DEP need to start working together on the basis that;

Prevention Is Better Than Cure.

I appreciate that the science of understanding these rivers and spring flows is complex, breakpoints thresholds guaranteed numbers are not Mother Natures forte, and that your task is a difficult one. Hope my outside critic helps you focus and is not a distraction from your efforts to protect Florida's Outstanding Waters while trying to meet the water requirements of the population and industry.

Martyn

From: [Alan Martyn Johnson](#)
To: [Mike Heyl](#); [Doug Leeper](#)
Cc: [Brad Rimley](#); [Al Grubman](#); [Ron Miller](#); [Brent Whitley](#); [Norman Hopkins](#)
Subject: Chassahowitzka Hydrodynamic Modelling Accuracy
Date: Wednesday, February 08, 2012 9:25:51 AM

Mike/Doug,

Those teasers on the radio/tv that keep you waiting are annoying. I did not want to be accused of the same so here is the concern with the Chassahowitzka model I mentioned earlier. I will address this to Mike as I believe he was more involved with his project.

Mike,

You will recall the spreadsheet attachment to my January 12 e-mail. It shows the Chassahowitzka daily discharges for 2010 and 2011.

Brad Rimley added to the spreadsheet to see how the equation shown in the Chass draft report, for filling the data gaps in the 1999-2006 USGS data set, compares to USGS data. The results show equation;

$$Q = 23.672 + 2.765 * wwwl - 3.813 * GHmax$$

gives calculated discharge, during the 2010-2011 period, about 5% lower than the USGS figures. Differences range from 33% lower to 31% higher; these did coincide with unusual USGS figures that may be the result of the 24.84 hour tidal cycle effect in the daily data.

Following up on this I have noticed that the data set (November 2006 thru February 2007) used to calibrate the Chassahowitzka hydrodynamic model (Dynamic Solutions April 17, 2009) contains about 80% 'in-fill' data for main spring inflow.

Using calibration data that exhibits spring discharge lower than 'actual' (USGS calculated discharge) would appear to have an effect on the accuracy of the model outputs. Additionally, the analysis period selected, 2004 / 2005 / 2006, contains over 15% fill-in data both calculated and interpolated (second half 2006).

Would appreciate any thoughts and comments you may have regarding this.

Martyn

To help you understand how I arrived at this point my notes below may be useful. They are notes and if something is not clear please ask.

In the Draft Report/Appendices the equation was used to fill the 157 data gaps in the 1999-November 2007 USGS discharge records (March 19, 2010 memo). Checked the USGS record to find where all these gaps were (4% did not seem like a lot, but I looked). Found one rather large gap that caught my attention, June 16, 2006 thru Feb 14, 2007 (thanks to hurricane Alberto, a 240 day gap some days no gage height max would be interpolated, gage height recording resumed October)). Recalling that the calibration period for the modeling

was Nov 2006 thru Feb 2007, focused on this timeframe. Just over 90 days were lacking reported daily discharge data in the calibration period.

It appears that the calibration of the hydrodynamic model has been done with a data set that included a lot of 'fill-in data' (94 of the 120 day period are 'fill-in data' and it may be all but 14 days are... the USGS data contains some single day results randomly scattered thru the period which may have been considered invalid).

Page 22 of the Draft report it states;

"The selected model simulation period was from November 1, 2006 to February 28, 2007. During this 4-month period there existed the best available overlap of the flow, temperature, salinity and meteorology data for both boundary conditions and for calibration comparison data. This period corresponded to a relatively low spring discharge period."

On page 40 of the Dynamic Solutions April 17, 2009 report it states;

"The average flow for the entire calibration period was 52.6 cfs (1.49 m³/s) compared to an average of the average monthly flows of 64.3 cfs (1.82 m³/s) for the same four months from the long term record."

This difference, almost 20%, appears more than due to equation. 64.3 cfs results from Weeki Wachee level having historic levels up to 22-23 ft.. Have not seen above at 16 feet since March 2006. Nov 06 – Feb 07 WWlevel 14.56 to 12.85 ft.. Checked differences with available USGS discharges before and after the June '06-Feb '07 gap above; differences averaged about 8% due to the use of the equation.

That led to question the validity of the hydrodynamic models calibration.

Salinity

In the Dynamic Solutions report page 29;

"4.4.2 Salinity Calibration

Figures 4-9 through 4-11 show the salinity calibration results for Stations 02310673 and 02310663."

Nowhere in that section of the report does it mention how spring inflow water factors into the calibration. May be it is just an omission in writing the report. Was it daily high, daily low (there is no daily mean reported for the Chass Main 02310650, at least on the web site)? Crab, Potter etc in Table 3-3 combined flow of 86 cfs (from 1988-1989 when Weeki Wachee was 4+ feet higher than Nov '06 – Feb '07). The 86 cfs appears to have been used from the reference to Table3-3 on page 24.

In Figure 7-4 the low discharge figures for second half of 2006 (calculated from equation/interpolation) may be partly responsible for the apparent loss of volume of 0-2 ppt water. I say partly because we know that the daily high specific conductance of the inflow water at the main spring rose noticeably in 2006 from those reported in 2005. Comes back to which specific conductance data for main spring was converted to ppt as no daily mean reported by USGS.

Temperature

Main spring temperature gets early mention in Figure 4.4 as part of the boundary description, but is not mentioned in calibration page 31:

“4.4.3 Water Temperature Calibration

Figures 4-12 through 4-14 show the temperature results for calibration Stations 02310673 and 02310663. The temperature calibration reproduced the cycles of cold fronts moving through the area, producing cooling followed by warming trends.”

Same point as with salinity for Crab, Potter etc, no mention of temperature used.

Calibration statistics only go downstream of Gage Site 02310663.

Upstream is shown in Figure 6-4 (Jan 7, 2007), 6-5 (Jan 7, 2002) and 6-8 (Jan 8, 2002).

These do not defining manatee refuge volume with decreasing inflow of spring water. Given the conclusion that Chassahowitzka River is not a good manatee refuge because of depth, possibly the temperature issue became mute for the report other than page 84;

“However, from a review of the data it appears that there may be narrow deep channels that are not well resolved in the data and in the model in the upper reaches of the Chassahowitzka.”

Flow

“5.3 Flow

For the flow component, the Chassahowitzka Main gage (USGS 02310650) was used. A relationship between the daily flows (Flow_02310650 in cfs) and the water levels in the Weeki Wachee well (WW_WL in feet) (see Fig 1-1 for the well’s location) was conducted. Figure 5-7 shows the data and the regression. The resulting predictor equation was:
$$\text{Flow}_{02310650} = 12.4276 + 2.92446 * \text{WW_WL}.$$

More regression analysis producing more synthesized data, resulting in discharge back to 1966 Figure 5.8, and in Section 7.2 as determinate there is no seasonal salinity impact allowing the salinity impact analysis to be done on entire years 2004, 2005 and 2006. Over half of 2006 was that low cfs calculated data (see date range above).

Crab, Potter, Baird, Betejey Blue in Table 3.3 total 86 cfs presumed to be used as constant in calibration. Earlier note about date of these discharge in salinity.

On page 1;

“With an average spring discharge of about 106 ft³/s (3 m³/s) (see Section 5.3), the daily inflows only makes up about 8% of the Chassahowitzka’s volume.”

Do not find 106 cfs in Section 5.3 which is regression analysis back tracking to 1966. Origin of the 106 cfs not found.

Section 4.5 it is not clear what freshwater flow is (half and double freshwater flow); Is it just Chass main or also Crab, Potter etc?

Table 4-6 every one of the Min and Max occurrence dates are calculated numbers from the fill-in equation, or the back to 1966 equation.

From: Doug Leeper
To: [Greenwood, Kathleen; Llewellyn, Janet \(Janet.Llewellyn@dep.state.fl.us\)](mailto:Greenwood_Kathleen; Llewellyn_Janet (Janet.Llewellyn@dep.state.fl.us))
Subject: Links to CWA-flows web pages
Date: Thursday, February 09, 2012 9:24:00 AM

Kathleen & Janet:

See additional information regarding CWA/flows on the web page links provided by Gary Williams.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gary E. Williams
Sent: Wednesday, February 08, 2012 11:46 AM
To: Doug Leeper; Mike Heyl; Veronica Crow; Christopher Pettit; Karen West; Laura Donaldson
Subject: RE: Flow Background

Some additional information regarding flow protection and the CWA: There was a workshop at the 2011 Instream Flow Council Conference entitled, "Flow Protection through Federal Water Quality Law and Regulation." Here is a link to the workshop page:

<http://www.instreamflowcouncil.org/flow2011/workshops/policy>

and here is a link to some of the materials (links at bottom of page) that were presented during the workshop:

<http://www.americanrivers.org/our-work/water-supply/storage-flows/protecting-flow-with-the.html>

Gary E. Williams, PhD
Natural Systems and Restoration Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604
Ph. (352) 796-7211 x4286

NOTE: Remainder of e-mail string deleted by DLeeper, 09feb2012

From: [Mike Heyl](#)
To: [Alan Martyn Johnson](#)
Cc: [Kevin J. Grimsley](#); [Al Grubman](#); [Ron Miller](#); [Brad Rimley](#); [Norman Hopkins](#); [Ron Basso](#); [Brent Whitley](#); [Doug Leeper](#)
Subject: RE: Rule 40D-8.041
Date: Thursday, February 09, 2012 11:44:19 AM

Mr. Johnson –

In response to your Feb 3 inquiry :

As in the case of the Chassahowitzka evaluation, we wanted a consistent long-term estimate of daily flow for the MFL evaluation of the Weeki Wachee River system. The USGS reported daily discharge from 1964 – 1966 at a site approximately 1.6 km upstream of the current site that you cited. Daily discharge records at the 02310525 site began in 1993, leaving a lengthy gap between 1966 and 1999. In order to hind-cast flows, a series regressions were developed using five year blocks of manual USGS measurements reported by Knochenmus and Yobbi (USGS Water Resources Investigation Report 01-04230). The reason for evaluating five-year blocks was to make certain that no major changes in the slope of the relationships between discharge and well water level had occurred over the period of evaluations. In karst systems, it is possible to have underground conduits collapse, open, or expand resulting in changes in spring discharge without commensurate change in climate or withdrawals and it was necessary to verify a consistent relationship between river flows and water levels in the Weeki Wachee well. As you cited in your attached commentary, the USGS equation 3 found in Table 1 of Knochenmus and Yobbi (2001) using 1966 – 1998 results would produce a different answer for flow than the USGS equation 4 derived from 1997-1998 results. For example, if water level in the Weeki Wachee Well were 16 feet, equation 3 would predict a flow of 150.7 cfs, while the USGS equation 4 would predict 159.4 cfs. (For comparison, the equation derived for the MFL evaluation would predict a discharge of 150.6 cfs and is essentially USGS equation number 3 derived from 205 observations instead of 207 observations. Two of the observations were flagged as ‘outliers’ by the statistical software I was using at the time.)

No pattern in the slopes was apparent for the regressions developed using the five-year blocks, and a single regression using all but two observations was ultimately chosen to represent the entire period. As you noted in your attachment, details of the derivation are described in section 2.3.1 of the October 2008 Weeki Wachee River System Recommended Minimum Flows and Levels report that can be found on the District’s website. Estimates of anthropogenic impacts and flow corrections are described in section 2.5 and subsections. All of the subsequent analyses incorporated an adjustment for anthropogenic impacts as described in the report. Since impacts were greater in the recent record than in the early data, the adjustment was derived from the more recent data and the ‘baseline’ chosen represented the 1984 – 2004 flows, with the pumpage impacts added back into the record (See Figure 2-17 and discussion in section 2.5.4 of the Weeki Wachee minimum flows report).

I do not know what discharge regression USGS is currently using, but, as you pointed out, it does not agree with the discharge calculated for the Weeki Wachee MFL determination. This is simply because the USGS is using a different (and most likely an updated) equation. Recognizing the

difference and the potential for confusion, it became necessary to include the equation used for the MFL determination in the rule. However, the rule references the USGS gage as a location, but does not state that the measured flow at that location agree with the flow estimate by the MFL flow regression. The MFL flow regression was used to establish a historical flow record, which was then statistically analyzed to obtain the expected flow values give in Table 8-18 in the rule.

Staff recognizes the potential for confusion concerning the MFL rule for the Weeki Wachee River system and intends to address this issue again when the MFL is re-evaluated.

With regard to your question concerning the term “natural flow” in the MFL rule for the Weeki Wachee River system, ‘natural’ flow is the flow that would exist in the absence of water withdrawals. I would also add, as a point of clarification, the Weeki Wachee MFL language and all other language found in 40D-8 F.A.C. are adopted rules and are no longer ‘proposed’.

As described in prior correspondence, the median flow of the baseline period is not a criterion of the MFL. The MFL is based on a percentage of natural flow. Within the Weeki Wachee MFL document, the word ‘baseline’ is used 27 times in the context of flows, (plural), conditions (plural) or when referencing a period of time encompassing multiple days of flow. The term ‘baseline’ is not, nor was it ever intended to be fixed threshold of flow representing the Weeki Wachee minimum flow.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- *Note : District Limit for Incoming Email is 5 Megabytes* -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Friday, February 03, 2012 7:47 AM
To: Mike Heyl; Doug Leeper
Cc: Kevin J Grimsley; R Rodriguez; Al Grubman; Ron Miller; Brad Rimley; Norman Hopkins; Ron Basso; Brent Whitley
Subject: Rule 40D-8.041

According to the Proposed Rule 40D-8.041 for the Weeki Wachee River, the discharge at Gage Site 02310525 on January 31 was 113 cfs.

The USGS web site reports for this site is 137 cfs.

Confusing?

If you read the attached note to Mike Heyl you will probably understand what lead me to this. Mike comment, in his Jan 19 e-mail attachment, about Rule 40D-8.041 regarding the Chassahowitzka; so I started looking into this.

Possibly someone can clarify this mismatch for me, and some others who may find this confusing.

Martyn

P.S. I am still trying to understand if 'natural flow' for the Weeki Wachee River includes, or does not include, the anthropogenic impact, about 17 cfs or about 10% . To be clear that is 'pumpage', or put another way the amount of water mankind is sucking out of the aquifer near Weeki Wachee.

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Mike Heyl](#)
Cc: [Ron Basso](#); [Doug Leeper](#)
Subject: Re: Rule 40D-8.041
Date: Thursday, February 09, 2012 5:18:47 PM

Hi Mike. On a related topic, could you check with Ron Basso regarding the email that I sent to him on Jan 26? (I copied you and Doug on this too) I sent Ron a follow-up "bump" on Feb 5 but still no response. Is Ron on vacation, swamped with work, or totally stumped by my email? My question to Ron seems pretty fundamental to the work you and Doug are doing on the Chaz and Homosassa MFLs. Brad

----- Original Message -----

From: [Mike Heyl](#)
To: [Alan Martyn Johnson](#)
Cc: [Kevin J Grimsley](#) ; [Al Grubman](#) ; [Ron Miller](#) ; [Brad Rimley](#) ; [Norman Hopkins](#) ; [Ron Basso](#) ; [Brent Whitley](#) ; [Doug Leeper](#)
Sent: Thursday, February 09, 2012 11:44 AM
Subject: RE: Rule 40D-8.041

Mr. Johnson –

In response to your Feb 3 inquiry :

As in the case of the Chassahowitzka evaluation, we wanted a consistent long-term estimate of daily flow for the MFL evaluation of the Weeki Wachee River system. The USGS reported daily discharge from 1964 – 1966 at a site approximately 1.6 km upstream of the current site that you cited. Daily discharge records at the 02310525 site began in 1993, leaving a lengthy gap between 1966 and 1999. In order to hind-cast flows, a series regressions were developed using five year blocks of manual USGS measurements reported by Knochenmus and Yobbi (USGS Water Resources Investigation Report 01-04230). The reason for evaluating five-year blocks was to make certain that no major changes in the slope of the relationships between discharge and well water level had occurred over the period of evaluations. In karst systems, it is possible to have underground conduits collapse, open, or expand resulting in changes in spring discharge without commensurate change in climate or withdrawals and it was necessary to verify a consistent relationship between river flows and water levels in the Weeki Wachee well. As you cited in your attached commentary, the USGS equation 3 found in Table 1 of Knochenmus and Yobbi (2001) using 1966 – 1998 results would produce a different answer for flow than the USGS equation 4 derived from 1997-1998 results. For example, if water level in the Weeki Wachee Well were 16 feet, equation 3 would predict a flow of 150.7 cfs, while the USGS equation 4 would predict 159.4 cfs. (For comparison, the equation derived for the MFL evaluation would predict a discharge of 150.6 cfs and is essentially USGS equation number 3 derived from 205 observations instead of 207 observations. Two of the observations were flagged as ‘outliers’ by the statistical software I was using at the time.)

No pattern in the slopes was apparent for the regressions developed using the five-year blocks, and a single regression using all but two observations was ultimately chosen to represent the entire period. As you noted in your attachment, details of the derivation are described in section 2.3.1 of the October 2008 Weeki Wachee River System Recommended Minimum Flows and Levels report that can be found on the District’s website. Estimates of anthropogenic impacts

and flow corrections are described in section 2.5 and subsections. All of the subsequent analyses incorporated an adjustment for anthropogenic impacts as described in the report. Since impacts were greater in the recent record than in the early data, the adjustment was derived from the more recent data and the 'baseline' chosen represented the 1984 – 2004 flows, with the pumpage impacts added back into the record (See Figure 2-17 and discussion in section 2.5.4 of the Weeki Wachee minimum flows report).

I do not know what discharge regression USGS is currently using, but, as you pointed out, it does not agree with the discharge calculated for the Weeki Wachee MFL determination. This is simply because the USGS is using a different (and most likely an updated) equation. Recognizing the difference and the potential for confusion, it became necessary to include the equation used for the MFL determination in the rule. However, the rule references the USGS gage as a location, but does not state that the measured flow at that location agree with the flow estimate by the MFL flow regression. The MFL flow regression was used to establish a historical flow record, which was then statistically analyzed to obtain the expected flow values give in Table 8-18 in the rule.

Staff recognizes the potential for confusion concerning the MFL rule for the Weeki Wachee River system and intends to address this issue again when the MFL is re-evaluated.

With regard to your question concerning the term "natural flow" in the MFL rule for the Weeki Wachee River system, 'natural' flow is the flow that would exist in the absence of water withdrawals. I would also add, as a point of clarification, the Weeki Wachee MFL language and all other language found in 40D-8 F.A.C. are adopted rules and are no longer 'proposed'.

As described in prior correspondence, the median flow of the baseline period is not a criterion of the MFL. The MFL is based on a percentage of natural flow. Within the Weeki Wachee MFL document, the word 'baseline' is used 27 times in the context of flows, (plural), conditions (plural) or when referencing a period of time encompassing multiple days of flow. The term 'baseline' is not, nor was it ever intended to be fixed threshold of flow representing the Weeki Wachee minimum flow.

MGH

=====

Michael G. Heyl - Chief Environmental Scientist

Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org

=====

Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)

7601 U.S. Highway 301 1-813-985-7481 Ext 2211

Tampa, Fl. 33637-6759 1-813-987-6747

(Fax)

----- Note : District Limit for Incoming Email is 5 Megabytes -----

An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>

This email consists of 100% recycled electrons. Consider the environment before printing

=====

Please Note: *All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.*

From: Alan Martyn Johnson [mailto:martynelijay@hotmail.com]
Sent: Friday, February 03, 2012 7:47 AM
To: Mike Heyl; Doug Leeper
Cc: Kevin J Grimsley; R Rodriguez; Al Grubman; Ron Miller; Brad Rimley; Norman Hopkins; Ron Basso; Brent Whitley
Subject: Rule 40D-8.041

According to the Proposed Rule 40D-8.041 for the Weeki Wachee River, the discharge at Gage Site 02310525 on January 31 was **113 cfs**.

The USGS web site reports for this site is **137 cfs**.

Confusing?

If you read the attached note to Mike Heyl you will probably understand what led me to this. Mike's comment, in his Jan 19 e-mail attachment, about Rule 40D-8.041 regarding the Chassahowitzka; so I started looking into this.

Possibly someone can clarify this mismatch for me, and some others who may find this confusing.

Martyn

P.S. I am still trying to understand if 'natural flow' for the Weeki Wachee River includes, or does not include, the anthropogenic impact, about 17 cfs or about 10%. To be clear that is 'pumpage', or put another way the amount of water mankind is sucking out of the aquifer near Weeki Wachee.

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2112/4795 - Release Date: 02/07/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [Mike Heyl](#)
Cc: [Kevin J. Grimsley](#); [Brad Rimbey](#); [Norman Hopkins](#); [Ron Basso](#); [Brent Whitley](#); [Doug Leeper](#); [Al Grubman](#); [Ron Miller](#)
Subject: RE: Rule 40D-8.041
Date: Friday, February 10, 2012 7:43:47 AM

Mike,
Thanks for your response to my February 3 e-mail.

You spent along time clarifying that your regression analysis and Knochenmus and Yobbi's regression analysis of the 207 field measurements yielded essentially the same equation. Great, I am pleased to know that mathematics still holds true and statistical analysis pulled two out layers. The table in my e-mail essentially confirmed this agreement.

When hind casting Field Measurements after 10/29/1998, potentially at least 50 data points, were not regressed to determine any possible changes due to all the valid reasons you mention for change in flow/discharge not directly related to Weeki Wachee Well level.

Y & K used data 8/15/1966 thru 10/29/1998; I can only assume they used that 1966 cut off date was to assure consistency/eliminate any influence re the earlier location 1.6 km upstream. Field Measurements, about 300 of them before 1966, date back to 1917.

But, when considering the tables in my e-mail you appear to miss the point that the relationship between more recent field measurements and the presently used USGS 'equation' (which SWFWMD are not appraised of is) favors the accuracy of the unknown USGS equation.

That to me is troubling;

1. In that you guys are operating in separate bunkers, and
2. In that SWFWMD equation (Rule 40D) does not match as well as the USGS presently used equation, with field measurements. AND YOU SAY "This is simply because the USGS is using a different (and most likely an updated) equation."

Speechless.

As I have other things to do today let me quickly move on to 'natural flow'.

You say "The MFL is based on a percentage of natural flow."

Assume the 'natural flow' to be 200 cfs and the anthropogenic impact is 10% or 20cfs. The discharge into the river 'controlling' the ecological conditions (temp, salinity etc) is 180 cfs a drop of 10%. If, anthropogenic impacts increase to 20% or 40 cfs, the discharge into the river is 160 cfs. The natural flow has not changed, but a further 10+% of the discharge controlling the ecology of the river has been lost.

Table 8-18 may be a way to attempt to address this, but it is derived, I think, from the hind cast natural flow data.

Finally, I stand by my point about semantics. Baseline sometimes means baseline(the word) is X and sometimes baseline(the term) is Y.

Martyn

From: Mike.Heyl@swfwmd.state.fl.us
To: martynellijay@hotmail.com
CC: kjgrims@usgs.gov; grubman1@gmail.com; rmille76@tampabay.rr.com; bwr.crrc@tampabay.rr.com; norman@amyhrf.org; Ron.Basso@swfwmd.state.fl.us; brentwhitley@sierra-properties.com; Doug.Leeper@swfwmd.state.fl.us
Date: Thu, 9 Feb 2012 11:44:16 -0500
Subject: RE: Rule 40D-8.041

Mr. Johnson –

In response to your Feb 3 inquiry :

As in the case of the Chassahowitzka evaluation, we wanted a consistent long-term estimate of daily flow for the MFL evaluation of the Weeki Wachee River system. The USGS reported daily discharge from 1964 – 1966 at a site approximately 1.6 km upstream of the current site that you cited. Daily discharge records at the 02310525 site began in 1993, leaving a lengthy gap between 1966 and 1999. In order to hind-cast flows, a series regressions were developed using five year blocks of manual USGS measurements reported by Knochenmus and Yobbi (USGS Water Resources Investigation Report 01-04230). The reason for evaluating five-year blocks was to make certain that no major changes in the slope of the relationships between discharge and well water level had occurred over the period of evaluations. In karst systems, it is possible to have underground conduits collapse, open, or expand resulting in changes in spring discharge without commensurate change in climate or withdrawals and it was necessary to verify a consistent relationship between river flows and water levels in the Weeki Wachee well. As you cited in your attached commentary, the USGS equation 3 found in Table 1 of Knochenmus and Yobbi (2001) using 1966 – 1998 results would produce a different answer for flow than the USGS equation 4 derived from 1997-1998 results. For example, if water level in the Weeki Wachee Well were 16 feet, equation 3 would predict a flow of 150.7 cfs, while the USGS equation 4 would predict 159.4 cfs. (For comparison, the equation derived for the MFL evaluation would predict a discharge of 150.6 cfs and is essentially USGS equation number 3 derived from 205 observations instead of 207 observations. Two of the observations were flagged as ‘outliers’ by the statistical software I was using at the time.)

No pattern in the slopes was apparent for the regressions developed using the five-year blocks, and a single regression using all but two observations was ultimately chosen to represent the entire period. As you noted in your attachment, details of the derivation are described in section 2.3.1 of the October 2008 Weeki Wachee River System Recommended Minimum Flows and Levels report that can be found on the District’s website. Estimates of anthropogenic impacts and flow corrections are described in section 2.5 and subsections. All of the subsequent analyses incorporated an adjustment for anthropogenic impacts as described in the report. Since impacts were greater in the recent record than in the early data, the adjustment was derived from the more recent data and the ‘baseline’ chosen represented the 1984 – 2004 flows, with the pumpage impacts added back into the record (See Figure 2-17 and discussion in section 2.5.4 of the Weeki Wachee minimum flows report).

I do not know what discharge regression USGS is currently using, but, as you pointed out, it does not agree with the discharge calculated for the Weeki Wachee MFL determination. This is simply because the USGS is using a different (and most likely an updated) equation. Recognizing the difference and the potential for confusion, it became necessary to include the equation used for the MFL determination in the rule. However, the rule references the USGS gage as a location, but does not state that the measured flow at that location agree with the flow estimate by the MFL flow regression. The MFL flow regression was used to establish a historical flow record, which was then statistically analyzed to obtain the expected flow values give in Table 8-18 in the rule.

Staff recognizes the potential for confusion concerning the MFL rule for the Weeki Wachee River system and intends to address this issue again when the MFL is re-evaluated.

With regard to your question concerning the term “natural flow” in the MFL rule for the Weeki Wachee River system, ‘natural’ flow is the flow that would exist in the absence of water withdrawals. I would also add, as a point of clarification, the Weeki Wachee MFL language and all other language found in 40D-8 F.A.C. are adopted rules and are no longer ‘proposed’.

As described in prior correspondence, the median flow of the baseline period is not a criterion of the MFL. The MFL is based on a percentage of natural flow. Within the Weeki Wachee MFL document, the word ‘baseline’ is used 27 times in the context of flows, (plural), conditions (plural) or when referencing a period of time encompassing multiple days of flow. The term ‘baseline’ is not, nor was it ever intended to be fixed threshold of flow representing the Weeki Wachee minimum flow.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Friday, February 03, 2012 7:47 AM
To: Mike Heyl; Doug Leeper
Cc: Kevin J Grimsley; R Rodriguez; Al Grubman; Ron Miller; Brad Rimley; Norman Hopkins; Ron Basso; Brent Whitley
Subject: Rule 40D-8.041

According to the Proposed Rule 40D-8.041 for the Weeki Wachee River, the discharge at Gage Site 02310525on January 31 was 113 cfs.

The USGS web site reports for this site is 137 cfs.

Confusing?

If you read the attached note to Mike Heyl you will probably understand what lead me to this. Mike comment, in his Jan 19 e-mail attachment, about Rule 40D-8.041 regarding the Chassahowitzka; so I started looking into this.

Possibly someone can clarify this mismatch for me, and some others who may find this confusing.

Martyn

P.S. I am still trying to understand if 'natural flow' for the Weeki Wachee River includes, or does not include, the anthropogenic impact, about 17 cfs or about 10% . To be clear that is 'pumpage', or put another way the amount of water mankind is sucking out of the aquifer near Weeki Wachee.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Ron Basso](#)
To: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC); [Mike Heyl](#)
Cc: [Doug Leeper](#)
Subject: RE: Rule 40D-8.041
Date: Friday, February 10, 2012 8:24:03 AM

Brad:

Did you not get my response to your email on Jan 26th? Or is there something in my response that needs further clarification?

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Brad Rimbey@CRRC [mailto:BWR.CRRC@tampabay.rr.com]
Sent: Thursday, February 09, 2012 5:19 PM
To: Mike Heyl
Cc: Ron Basso; Doug Leeper
Subject: Re: Rule 40D-8.041

Hi Mike. On a related topic, could you check with Ron Basso regarding the email that I sent to him on Jan 26? (I copied you and Doug on this too) I sent Ron a follow-up "bump" on Feb 5 but still no response. Is Ron on vacation, swamped with work, or totally stumped by my email? My question to Ron seems pretty fundamental to the work you and Doug are doing on the Chaz and Homosassa MFLs. Brad

----- Original Message -----

From: [Mike Heyl](#)
To: [Alan Martyn Johnson](#)
Cc: [Kevin J Grimsley](#) ; [Al Grubman](#) ; [Ron Miller](#) ; [Brad Rimley](#) ; [Norman Hopkins](#) ; [Ron Basso](#) ; [Brent Whitley](#) ; [Doug Leeper](#)
Sent: Thursday, February 09, 2012 11:44 AM
Subject: RE: Rule 40D-8.041

Mr. Johnson –

In response to your Feb 3 inquiry :

As in the case of the Chassahowitzka evaluation, we wanted a consistent long-term estimate of daily flow for the MFL evaluation of the Weeki Wachee River system. The USGS reported daily discharge from 1964 – 1966 at a site approximately 1.6 km upstream of the current site that you cited. Daily discharge records at the 02310525 site began in 1993, leaving a lengthy gap between 1966 and 1999. In order to hind-cast flows, a series regressions were developed using five year blocks of manual USGS measurements reported by Knochenmus and Yobbi (USGS Water

Resources Investigation Report 01-04230). The reason for evaluating five-year blocks was to make certain that no major changes in the slope of the relationships between discharge and well water level had occurred over the period of evaluations. In karst systems, it is possible to have underground conduits collapse, open, or expand resulting in changes in spring discharge without commensurate change in climate or withdrawals and it was necessary to verify a consistent relationship between river flows and water levels in the Weeki Wachee well. As you cited in your attached commentary, the USGS equation 3 found in Table 1 of Knochenmus and Yobbi (2001) using 1966 – 1998 results would produce a different answer for flow than the USGS equation 4 derived from 1997-1998 results. For example, if water level in the Weeki Wachee Well were 16 feet, equation 3 would predict a flow of 150.7 cfs, while the USGS equation 4 would predict 159.4 cfs. (For comparison, the equation derived for the MFL evaluation would predict a discharge of 150.6 cfs and is essentially USGS equation number 3 derived from 205 observations instead of 207 observations. Two of the observations were flagged as ‘outliers’ by the statistical software I was using at the time.)

No pattern in the slopes was apparent for the regressions developed using the five-year blocks, and a single regression using all but two observations was ultimately chosen to represent the entire period. As you noted in your attachment, details of the derivation are described in section 2.3.1 of the October 2008 Weeki Wachee River System Recommended Minimum Flows and Levels report that can be found on the District’s website. Estimates of anthropogenic impacts and flow corrections are described in section 2.5 and subsections. All of the subsequent analyses incorporated an adjustment for anthropogenic impacts as described in the report. Since impacts were greater in the recent record than in the early data, the adjustment was derived from the more recent data and the ‘baseline’ chosen represented the 1984 – 2004 flows, with the pumpage impacts added back into the record (See Figure 2-17 and discussion in section 2.5.4 of the Weeki Wachee minimum flows report).

I do not know what discharge regression USGS is currently using, but, as you pointed out, it does not agree with the discharge calculated for the Weeki Wachee MFL determination. This is simply because the USGS is using a different (and most likely an updated) equation. Recognizing the difference and the potential for confusion, it became necessary to include the equation used for the MFL determination in the rule. However, the rule references the USGS gage as a location, but does not state that the measured flow at that location agree with the flow estimate by the MFL flow regression. The MFL flow regression was used to establish a historical flow record, which was then statistically analyzed to obtain the expected flow values give in Table 8-18 in the rule.

Staff recognizes the potential for confusion concerning the MFL rule for the Weeki Wachee River system and intends to address this issue again when the MFL is re-evaluated.

With regard to your question concerning the term “natural flow” in the MFL rule for the Weeki Wachee River system, ‘natural’ flow is the flow that would exist in the absence of water withdrawals. I would also add, as a point of clarification, the Weeki Wachee MFL language and all other language found in 40D-8 F.A.C. are adopted rules and are no longer ‘proposed’.

As described in prior correspondence, the median flow of the baseline period is not a criterion of

the MFL. The MFL is based on a percentage of natural flow. Within the Weeki Wachee MFL document, the word 'baseline' is used 27 times in the context of flows, (plural), conditions (plural) or when referencing a period of time encompassing multiple days of flow. The term 'baseline' is not, nor was it ever intended to be fixed threshold of flow representing the Weeki Wachee minimum flow.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747

(Fax)

----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing

=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Friday, February 03, 2012 7:47 AM
To: Mike Heyl; Doug Leeper
Cc: Kevin J Grimsley; R Rodriguez; Al Grubman; Ron Miller; Brad Rimley; Norman Hopkins;
Ron Basso; Brent Whitley
Subject: Rule 40D-8.041

According to the Proposed Rule 40D-8.041 for the Weeki Wachee River, the discharge at Gage Site 02310525 on January 31 was 113 cfs.

The USGS web site reports for this site is 137 cfs.

Confusing?

If you read the attached note to Mike Heyl you will probably understand what lead me to this. Mike comment, in his Jan 19 e-mail attachment, about Rule 40D-8.041 regarding the Chassahowitzka; so I started looking into this.

Possibly someone can clarify this mismatch for me, and some others who may find this confusing.

Martyn

P.S. I am still trying to understand if 'natural flow' for the Weeki Wachee River includes, or does not include, the anthropogenic impact, about 17 cfs or about 10% . To be clear that is 'pumpage', or put another way the amount of water mankind is sucking out of the aquifer near Weeki Wachee.

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2112/4795 - Release Date: 02/07/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Brent Whitley](#); [Mickey Newberger](#); [Ron Miller](#); [Martyn Johnson](#); [Norman Hopkins](#); [Dan Hilliard](#); [Al Grubman](#); [Todd Kincaid](#); BKnight@FloridaSpringsInstitute.org
Cc: [Ron Basso](#); [Mike Heyl](#); [Doug Leeper](#)
Subject: Fw: Springs Coast MFL Question
Date: Friday, February 10, 2012 11:02:01 AM
Attachments: [NDIST_Hydro.ppt](#)

All,

I am forwarding Ron Basso's response to my Jan 26 email. I did not receive Ron's response until today when he resent it at my request. It appears no one who was copied on Ron's response received it either. Never trust technology ;-).

Brad

From: Ron Basso
Sent: Thursday, January 26, 2012 4:25 PM
To: 'Brad [Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)'
Cc: Brent Whitley; Mickey Newberger; Ron Miller; Martyn Johnson; Norman Hopkins; Dan Hilliard; Al Grubman; Todd Kincaid; BKnight@FloridaSpringsInstitute.org
Subject: RE: Springs Coast MFL Question

Brad:

You are correct that due to the close proximity of Chassahowitzka and Homosassa Spring groups (about 5 miles apart), it is very unlikely that groundwater withdrawals could impact Chassahowitzka spring flows by 11% without triggering the 5% allowable reduction at Homosassa Springs – so that the smaller allowable flow would limit groundwater withdrawals in the immediate area.

The Weeki Wachee Deep well is used by the USGS to calculate flows based on statistical relationships between measured flow at each spring and the well water level. The USGS probably uses this well because it reflects the fluctuations of the Upper Floridan aquifer near the springs coast region and has a long and continuous record. As I've stated before, it's really the Floridan aquifer groundwater basin (the Northern West-Central Florida Groundwater Basin) that defines the geology of the region and where the withdrawals may directly impact spring flows. This is much larger than the individual springsheds that typically serve to identify where groundwater contaminants may eventually make their way into individual springs.

The allowable MFL springflow reduction at Weeki Wachee spring is 10%. Current groundwater withdrawal impacts are near 9%. I am not sure I understand your question about equilibrium between the Chassahowitzka and Weeki Wachee springsheds. Weeki Wachee spring is located about 13.5 miles south of Chassahowitzka springs or more than twice the distance between Homosassa and Chassahowitzka springs. Distance from the spring and magnitude of the withdrawal plays a major role in predicted springflow impacts. The reason impacts are so large to Weeki Wachee is that there are two major public supply wellfields located relatively close to the spring. Hernando County utilities wellfield in Spring Hill withdraws about 20 mgd on average

immediately southeast of the spring. The Cross Bar wellfield, located in northern Pasco County, has historically withdrawn close to 30 mgd until recently. Both of these wellfields have impacted flow conditions at Weeki Wachee. That's 50 mgd just for these two facilities – *almost twice the withdrawals from all users in Citrus County today.*

The other thing to note is that the Floridan aquifer is largely unconfined in the springs coast region. The clay confining unit is thin and discontinuous due to the active karst geology in the region. Aquifer storage is 100 to 1000 times greater in unconfined than in confined aquifers. In this type of system, the effect of groundwater withdrawals is more localized – cones of depression do not spread out large distances like in well-confined aquifers such as we have in the southern part of our District. The attached graphic from the USGS illustrates this effect.

I hope this addresses the questions in your email. Please contact me for any additional clarification.

Ron Basso, P.G.
Senior Professional Geologist
Hydrologic Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

From: Brad Rimbey@CRRC [mailto:BWR.CRRC@tampabay.rr.com]

Sent: Thursday, January 26, 2012 12:58 PM

To: Ron Basso

Cc: Brent Whitley; Mickey Newberger; Ron Miller; Martyn Johnson; Norman Hopkins; Dan Hilliard; Al Grubman; Todd Kincaid; BKnight@FloridaSpringsInstitute.org

Subject: Springs Coast MFL Question

Hi Ron,

On July 8, 2011, Ron Miller emailed a list of questions to you regarding the Homosassa MFL. On July 13, 2011, you replied to Mr. Miller's email with the attached M\$ Word document. In response to Mr. Miller's question "What happens to the Homosassa Springs when the Chassahowitzka is drawn down by 11%?", you replied "Since the allowable flow has been proposed at five percent for Homosassa Spring it is likely that this will limit groundwater withdrawals in the area so impacts to the Chassahowitzka will never reach 11%."

I understood your response to be an acknowledgment of the interconnection between the Homosassa and Chassahowitzka springheds and that drawing down Chassahowitzka by 11% would result in greater than a 5% draw down of Homosassa. Please correct me if I am mistaken. Since the USGS Weeki Wachee well level is being used in the USGS regression equations to calculate flow for both Chassahowitzka and Homosassa, both rivers are obviously connected to Weeki Wachee's springshed

too.

The Weeki Wachee MFL has already been adopted at 90% of the natural flow. SWFWMD's baseline flow for the Weeki Wachee MFL evaluation was 162 cfs. The **Scientific Peer Review of the Proposed Minimum Flows and Levels for the Weeki Wachee River System** dated July 31, 2008 indicates that existing human usage is presently at or near the 10% **recommended limit** so little or no additional flow reductions should be allowed from groundwater use
http://www.swfwmd.state.fl.us/projects/mfl/reports/weeki_wachee_mfl_with_peer_review.pdf .

As you know, Weeki Wachee's springshed is directly adjacent and to and south of Chassahowitzka's springshed. As Weeki Wachee's groundwater supply is reduced, it seems that some of Chassahowitzka's historic groundwater supply would flow south until a state of quasi-equilibrium is reached. Assuming you agree, do you know how long it would take for a state of quasi-equilibrium to be achieved between the Weeki Wachee and Chassahowitzka springsheds?

In your Technical Memorandum dated December 1, 2008
http://www.swfwmd.state.fl.us/projects/mfl/reports/Chass_Appendices-section2.pdf , you indicated the NDM "projected reduction to Chassahowitzka Springs discharge due to current groundwater withdrawals of 0.7 cfs or about one percent of mean annual spring flow." SWFWMD's baseline flow for the Chassahowitzka MFL evaluation was 63 cfs. If groundwater use has already reduced Weeki Wachee's 162 cfs baseline flow by nearly 10%, how can Chassahowitzka's 63 cfs baseline flow have been reduced by less than 1%? Even if we ignore the impact of groundwater pumping within Chassahowitzka's springshed, it seems that feeding the sizeable deficit created by groundwater pumping in Weeki Wachee's springshed would account for more than a 1% flow reduction in the relatively tiny Chassahowitzka.

As always, I look forward to your response.

Brad W. Rimbey, P.E.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2112/4795 - Release Date: 02/07/12

From: Doug Leeper
To: ["Alan Martyn Johnson"](#)
Cc: [Mike Heyl](#)
Bcc: [Cara S. Martin](#); [Chris Zajac](#); [Christopher Pettit](#); [Darcy A. Brune](#); [Dave Dewitt](#); [Doug Leeper](#); [Gary E. Williams](#); [Jay Yingling](#); [Karen West](#); [Kenneth R. Herd](#); [Laura Donaldson](#); [Lou Kavouras](#); [Mark Barcelo](#); [Mark Hammond](#); [Michael Molligan](#); [Paul Williams](#); [Robyn O. Felix](#); [Ron Basso](#); [Sid Flannery](#); [Tammy Hinkle](#); [Veronica Craw](#); [Xinjian Chen](#); [Yassert Gonzalez](#)
Subject: RE: Homosassa Chassahowitzka MFL"s you Feb 6, 2012 e-mails
Date: Monday, February 13, 2012 1:40:00 PM

Martyn:

Attached are responses to questions raised in the first of the e-mails you sent to Mike Heyl and me on February 8, 2012. I've reproduced portions of your e-mail below and provided responses. Your full e-mail is also incorporated in this e-mail.

You wrote:

1. To determine Significant Harm do we not need a baseline?

I thought the basis of setting minimum flows was to identify what reduction in inflow spring water would result in the river system deteriorating to a point that significant harm (change) has occurred. By some convention it has been accepted this is, condition X deteriorates to X – 15%. The condition X using a logical approach needs to be set; it can not be a variable. Considering, salinity, the volumes of various ranges of salinity in the river system are set at some point in time. I thought that is what all those studies were for; to determine the salinity profile (at that time). Then by determining, to the best scientific ability, what flow reduction of 'good quality' spring water inflow would result in the profile deteriorating by 15% volume, area or other appropriate measure. If the inflow reduces below that point I do not think Mother Nature has a control line in her program that says spring water inflow has dropped so invoke seawater inflow control. Seawater inflow will replace the loss of spring water inflow in both the Homosassa and Chassahowitzka. There has to be a baseline. Some would argue the baseline was when "Outstanding Florida Water" was pronounced.

Response: Staff believes that baseline conditions have been identified in the draft reports the District has prepared concerning minimum flows development for the Chassahowitzka and Homosassa River systems. Further, we hope that the explanations concerning baseline conditions that Mike Heyl and I have included in recent e-mails have helped clarify this issue. Our intent was to communicate that for minimum flows development, baseline conditions are a standardized reference point from which flow reductions may be evaluated for a wide variety of habitat and ecological metrics, and to also note that baseline conditions are not a minimum flows criterion.

You wrote:

2. I have looked at the Rule 40D-8.041 for Weeki Wachee and it (at least the version I looked at and commented on in a recent e-mail) references flows to a specific gage site, not the Northern District Model. Just quickly looked at Hillsborough, it references Morris Bridge gage and appears to be a strongly tidally influenced site...but that was a quick look. So this latest concept/wording, using NDM, looks like an attempt to avoid the baseline concept because there is already knocking at that door.

Response: The District always identifies a baseline condition when developing minimum flows and levels on priority water bodies, and has done so for the work supporting minimum flows development for the Chassahowitzka and Homosassa River systems. With regard to the rule you cited concerning minimum flows for the upper Hillsborough River, please note that there are no tidal effects on the upper portion of the river, as the river has, for the most part, been impounded since the late 1800s (there were a few periods during the past 100-plus years when the river was free-flowing following collapse or destruction of then-existing dams). Minimum flows for the highly altered lower river, which is tidally influenced, have also been incorporated into District rules. The minimum flows for the lower river are associated with measured flows at a gage in the upper portion of the river. This association is used to determine minimum flow requirements downstream from the City of Tampa Dam, based on flows that are delivered to the impounded river segment. I would also add that numerical models and other statistical analyses are always used to determine withdrawal impacts to systems prior to the setting of minimum flows and also afterward to evaluate compliance with the adopted rule.

You wrote:

3. Think you have clarified that 'natural flow' is; pumpage plus the flow/discharge from the spring as measured by USGS. This 'natural flow' can be related to the 'baseline' in 1 above. In both the Homosassa and Chassahowitzka pumpage/groundwater withdrawals/human impact were considered as insignificant in assessing the MFL in the draft reports.

I am pleased that it has been seen fit to focus more on how much is being sucked out of the aquifer. This will help us realize it is a significant factor. But, I am curious how pumpage will be used to assess each of the rivers individually. How is pumpage (will have to add that word to my dictionary) in one basin related to pumpage in an adjacent basin. Will pumpage be combined between basins? That can of worms needs opening, can't have it both ways. The level in Weeki Wachee Well is used as the major predictor of calculated discharge into each of the rivers in the area. Groundwater withdrawals for WWachee (about 10% of discharge, as I recall, based on 2006 data in the 2008 report) surely influenced WW Well levels and consequentially Homosassa and Chass discharge. It was the flow into these rivers at the time the studies were done that created the conditions found during the studies. And the inflow reductions MFL's, for 15% deterioration to cause significant harm, were based on those inflows.

Response: Evaluations of existing and future water withdrawal impacts using the Northern District groundwater flow model are conducted to evaluate potential withdrawal-related impacts to all spring/river systems within the model domain. Withdrawals are modeled in a cumulative manner. That is to say, all withdrawals throughout the model domain are used to assess the impact at each spring. The model predicts that withdrawals cause a larger impact at Weeki Wachee spring because of the location of two major public supply wellfields in close proximity to the spring (see Ron Basso's email dated January 26th to Brad Rimbey and copied to you for a more detailed explanation).

You wrote:

4. Groundwater withdrawals can not be changed with change of rainfall. The continued increase in groundwater withdrawals needs to be a focus now. It is political thin ice to revoke water use permits. Yes, I know they have to be renewed

every five or ten years, but the politics of not renewing are enormous. The politics of water savings/use reduction plans are fragile and these are often voluntary programs to avoid the politics of enforcement. If I recall correctly in one of the draft reports it mentioned that MFL's are as much political as scientific (my words from memory). How true that is, and the legal jargon plays well with that tune.

Response: Development of minimum flows and levels is a science-based process with a significant policy component. District staff develops minimum flow and level recommendations using the best information available. The flow or level recommendations are subjected to independent, scientific review by a panel of scientists, and the findings of the peer-review panel are to be given significant weight by the District Governing Board when the Board considers establishing minimum flows or levels. Exclusions and considerations relevant to the establishment of minimum flows and levels that are to be considered by the Board are provided in State Law pertaining to minimum flows and levels, and address things such as existing structural alterations that affect the hydrology of the water body under consideration for minimum flow or level development, and indicate that recovery of some water bodies may not be economically or technically feasible.

I would like to take this opportunity to emphasize that development of minimum flows and levels is only one of the tools used to evaluate groundwater withdrawal impacts to natural systems. The District implements a number of environmental rules included in Chapter 40D-2. F.A.C. when evaluating the issuance or renewal of water use permits. The District also evaluates future water demand and the sources to meet that demand every five years as part of the state-mandated regional water supply planning process. We also fund non-regulatory projects such as developing water conservation plans for public supply utilities and expanding the use of reclaimed water for irrigation throughout the District. With regard to water conservation, all public supply utilities are required to meet a per capita rate of 150 gallons per day per person for their service area by 2018 in the Northern District region.

You wrote:

5. Given the method of assessment you suggest, use of the Northern District Model; is it not already used to 'model' the future? It has been quoted as predicting flows for future scenarios, those pumping versus no pumping discharge changes. Does it not already include rainfall modeling? No doubt it can be refined by adding actual data each year, but is it not a predictive tool rather than a record book?

Just worries me the assumptions the NDM uses. A number of times I have questioned the assumptions. The one that comes to mind immediately is, Table 2-4 (if memory serves) in the Homosassa draft report, where the various springs SEFork all have the same discharge, but not supported by a shred of empirical data.

Response: The Northern District model can be used in a predictive or retrospective manner by including current, past, and future withdrawal values. Statistical models that relate historical spring discharge to, for example, historical rainfall, can be used for evaluating current expectations for discharge based on local rainfall conditions. Expected discharge values can be compared to measured discharge to determine whether existing flows correspond with expectations associated with current rainfall. With regard to assumptions used for development of the Northern District model (and all other models) we continue to make the best possible judgments given current limitations of data. During model calibration period for the Northern District model, many of the

observed values of discharge for the smaller springs simulated in the model are estimates based on a 2002 United States Geological Survey report entitled *Simulation of Ground-Water Flow in the Intermediate and Floridan Aquifer Systems in Peninsular Florida* that was authored by Nicasio Sepulveda. Unfortunately, many of these smaller springs are not gauged and therefore have no measured flow record available. While recognizing the difficulties this presents, we do the best we can with the data available. We feel it's best to simulate them in the model rather than excluding them altogether.

Thanks for your input. As you know, your comments and all other public input on the minimum flows and levels development process will be reviewed by staff and made available for consideration by the Governing Board and other persons interested in the Homosassa River system.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Alan Martyn Johnson [mailto:martynellijay@hotmail.com]
Sent: Wednesday, February 08, 2012 8:08 AM
To: Doug Leeper; Mike Heyl
Subject: Homosassa Chassahowitzka MFL's you Feb 6, 2012 e-mails

Doug and Mike,
Thank you both for taking the time yesterday to respond to my e-mails of January 6 and 19.

To be fair I probably should take some time to digest, but there are some fundamental points that cross my mind immediately.

2. To determine Significant Harm do we not need a baseline?

I thought the basis of setting minimum flows was to identify what reduction in inflow spring water would result in the river system deteriorating to a point that significant harm (change) has occurred. By some convention it has been accepted this is, condition X deteriorates to X – 15%. The condition X using a logical approach needs to be set; it can not be a variable. Considering, salinity, the volumes of various ranges of salinity in the river system are set at some point in time. I thought that is what all those studies were for; to determine the salinity profile (at that time). Then by determining, to the best scientific ability, what flow reduction of 'good quality' spring water inflow would result in the profile deteriorating by 15% volume, area or other appropriate measure. If the inflow reduces below that point I do not think Mother Nature has a control line in her program that says spring water inflow has dropped so invoke seawater inflow control. Seawater inflow will replace

the loss of spring water inflow in both the Homosassa and Chassahowitzka. There has to be a baseline. Some would argue the baseline was when “Outstanding Florida Water” was pronounced.

6. I have looked at the Rule 40D-8.041 for Weeki Wachee and it (at least the version I looked at and commented on in a recent e-mail) references flows to a specific gage site, not the Northern District Model. Just quickly looked at Hillsborough, it references Morris Bridge gage and appears to be a strongly tidally influenced site...but that was a quick look.

So this latest concept/wording, using NDM, looks like an attempt to avoid the baseline concept because there is already knocking at that door.

7. Think you have clarified that ‘natural flow’ is; pumpage plus the flow/discharge from the spring as measured by USGS. This 'natural flow' can be related to the 'baseline' in 1 above. In both the Homosassa and Chassahowitzka pumpage/groundwater withdrawals/human impact were considered as insignificant in assessing the MFL in the draft reports.

I am pleased that it has been seen fit to focus more on how much is being sucked out of the aquifer. This will help us realize it is a significant factor. But, I am curious how pumpage will be used to assess each of the rivers individually. How is pumpage (will have to add that word to my dictionary) in one basin related to pumpage in an adjacent basin. Will pumpage be combined between basins? That can of worms needs opening, can't have it both ways. The level in Weeki Wachee Well is used as the major predictor of calculated discharge into each of the rivers in the area. Groundwater withdrawals for WWachee (about 10% of discharge, as I recall, based on 2006 data in the 2008 report) surely influenced WW Well levels and consequentially Homosassa and Chass discharge. It was the flow into these rivers at the time the studies were done that created the conditions found during the studies. And the inflow reductions MFL's, for 15% deterioration to cause significant harm, were based on those inflows.

8. Groundwater withdrawals can not be changed with change of rainfall.

The continued increase in groundwater withdrawals needs to be a focus now. It is political thin ice to revoke water use permits. Yes, I know they have to be renewed every five or ten years, but the politics of not renewing are enormous. The politics of water savings/use reduction plans are fragile and these are often voluntary programs to avoid the politics of enforcement. If I recall correctly in one of the draft reports it mentioned that MFL's are as much political as scientific (my words from memory). How true that is, and the legal jargon plays well with that tune.

9. Given the method of assessment you suggest, use of the Northern District Model; is it not already used to ‘model’ the future? It has been quoted as predicting flows for future scenarios, those pumping versus no pumping discharge changes. Does it not already include rainfall modeling? No doubt it can be refined by adding actual data each year, but is it not a predictive tool rather than a record book?

Just worries me the assumptions the NDM uses. A number of times I have questioned the assumptions. The one that comes to mind immediately is, Table 2-4 (if memory

serves) in the Homosassa draft report, where the various springs SEFork all have the same discharge, but not supported by a shred of empirical data.

Just some initial comments, I will take the time to digest your responses further.

While I am on the issue of model validity, I will try to pull together my notes/comments about the Chassahowitzka hydrodynamic model that I have recently been looking at.

And, from a tax payer concerned about the future of these and other rivers, SWFWMD and DEP need to start working together on the basis that;

Prevention Is Better Than Cure.

I appreciate that the science of understanding these rivers and spring flows is complex, breakpoints thresholds guaranteed numbers are not Mother Natures forte, and that your task is a difficult one. Hope my outside critic helps you focus and is not a distraction from your efforts to protect Florida's Outstanding Waters while trying to meet the water requirements of the population and industry.

Martyn

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Al Kline](#); [Ron Miller](#); [Mike Heyl](#); [Martyn Johnson](#); [Mickey Newberger](#); [Doug Leeper](#); [Ron Basso](#); [Al Grubman](#); [Norman Hopkins](#); [Brent Whitley](#); Dana.Bryan@dep.state.fl.us; Rebecca.Bays@bocc.citrus.fl.us; [Kevin J. Grimsley](#); [Cara S. Martin](#); [Dan Hilliard](#)
Subject: Re: Freedom of Information Act Public Records Request
Date: Monday, February 13, 2012 9:31:11 PM
Attachments: [AR-M455U_20120212_122229.pdf](#)

It appears the Freedom of Information Act is still alive and well. It also appears that USGS does not change these equations very often. So long as there are no major changes in the karst geology which feeds our Springs Coast rivers, this is expected. See the attached response from USGS. Brad

----- Original Message -----

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: djnewman@usgs.gov
Cc: [Dan Hilliard](#) ; [Cara S. Martin](#) ; [Kevin J. Grimsley](#) ; Rebecca.Bays@bocc.citrus.fl.us ; Dana.Bryan@dep.state.fl.us ; [Brent Whitley](#) ; [Norman Hopkins](#) ; [Al Grubman](#) ; [Ron Basso](#) ; [Doug Leeper](#) ; [Mickey Newberger](#) ; [Martyn Johnson](#) ; Mike.Heyl@swfwmd.state.fl.us
Sent: Thursday, January 19, 2012 4:35 PM
Subject: Freedom of Information Act Public Records Request

David J. Newman
USGS FOIA Officer
12201 Sunrise Valley Drive
Mail Stop 807
Reston, VA 20192

RE: Freedom of Information Act - Public Records Request

Dear Mr. Newman,

Pursuant to the Federal Freedom of Information Act and Florida Public Records Statute (Chapter 119 F.S.), please provide me with following public records or information.

- 1) The USGS regression equations which are currently (as of January 19, 2012) being used to predict the discharge at the following USGS stations
 - a) USGS 02310525 WEEKI WACHEE RIVER NEAR BROOKSVILLE FL
 - b) USGS 02310545 WEEKI WACHEE RIVER NR WEEKI WACHEE SPRINGS FL
 - c) USGS 02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA FL
 - d) USGS 02310663 CHASSAHOWITZKA RIVER NEAR CHASSAHOWITZKA FL
 - e) USGS 02310673 CHASSAHOWITZKA R AT DOG ISL NR
 - f) USGS 02310674 CHASSAHOWITZKA R AT MOUTH NR CHASSAHOWITZKA FL
 - g) USGS 02310675 HIDDEN RIVER NEAR HOMOSASSA FL
 - h) USGS 02310678 HOMOSASSA SPRINGS AT HOMOSASSA SPRINGS FL
 - i) USGS 02310688 SE FORK HOMOSASSA SPRING AT HOMOSASSA SPRINGS FL
 - j) USGS 02310700 HOMOSASSA R AT HOMOSASSA FL
 - k) USGS 02310742 CRYSTAL RIVER AT MOUTH OF KINGS BAY FL
 - l) USGS 02310747 CRYSTAL RIVER AT BAGLEY COVE NEAR CRYSTAL RIVER FL
 - m) USGS 02310752 SALT RIVER NEAR CRYSTAL RIVER FL
- 2) The data range to which each of these equations is applicable (i.e. the beginning and ending date for the applicable data set from each USGS station)
- 3) A brief description of the variables used in each of the requested regression equations.

Please note that the Florida Public Records statute was referenced in this request because the monitoring for all of the recorded data in this request was cooperatively funded by a Florida state agency (SWFWMD).

Thank you in advance for assistance.

Brad W. Rimbey, P.E.



United States Department of the Interior

U. S. GEOLOGICAL SURVEY
BOX 25046 MS 406
Denver Federal Center
Denver, Colorado 80225

February 13, 2012

Mr. Brad W. Rimbey, P.E.
10028 S. Riviera Pt
Homosassa, FL 34448-5311
Transmitted via Electronic & U.S. Mail
Re: U.S. Geological Survey (USGS) FOIA Tracking # USGS-2012-00039

Dear Mr. Rimbey:

The following response is being provided pursuant to your electronic Freedom of Information Request (FOIA) dated January 19, 2012 and received in our office on January 19, 2012. The USGS has assigned an individualized tracking number of USGS-2012-00039. Please reference this number on any future correspondence regarding this request.

Your request was for:

- 1) The USGS regression equations which are currently (as of January 19, 2012) being used to predict the discharge at the following USGS stations
 - a) USGS 02310525 WEEKI WACHEE RIVER NEAR BROOKSVILLE FL
 - b) USGS 02310545 WEEKI WACHEE RIVER NR WEEKI WACHEE SPRINGS FL
 - c) USGS 02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA FL
 - d) USGS 02310663 CHASSAHOWITZKA RIVER NEAR CHASSAHOWITZKA FL
 - e) USGS 02310673 CHASSAHOWITZKA R AT DOG ISL NR
 - f) USGS 02310674 CHASSAHOWITZKA R AT MOUTH NR CHASSAHOWITZKA FL
 - g) USGS 02310675 HIDDEN RIVER NEAR HOMOSASSA FL
 - h) USGS 02310678 HOMOSASSA SPRINGS AT HOMOSASSA SPRINGS FL
 - i) USGS 02310688 SE FORK HOMOSASSA SPRING AT HOMOSASSA SPRINGS FL
 - j) USGS 02310700 HOMOSASSA R AT HOMOSASSA FL
 - k) USGS 02310742 CRYSTAL RIVER AT MOUTH OF KINGS BAY FL
 - l) USGS 02310747 CRYSTAL RIVER AT BAGLEY COVE NEAR CRYSTAL RIVER FL
 - m) USGS 02310752 SALT RIVER NEAR CRYSTAL RIVER FL
- 2) The data range to which each of these equations is applicable (i.e. the beginning and ending date for the applicable data set from each USGS station)
- 3) A brief description of the variables used in each of the requested regression equations.

USGS Information Provided

The USGS is providing the following information in response to your request: See Attachment #1. Total of 3 pages providing all information requested.

If you consider this response to be a denial of your request under 43 CFR 2.28 (a) (2), you may file an appeal by writing to:

Freedom of Information Act Appeals Officer
U.S. Department of the Interior
Office of the Solicitor, Division of General Law
1849 C Street, NW
MS-6556
Washington, D.C. 20240

Your appeal must be received no later than 30 workdays after the date of this letter. The appeal should be marked, both on the envelope and the face of the appeal letter, with the words "FREEDOM OF INFORMATION APPEAL." Your appeal should be accompanied by a copy of your original request and this letter, along with any information you have which leads you to believe that responsive records do in fact exist, including where they might be found, if the location is known to you.

Also, as part of the 2007 OPEN Government Act FOIA amendments, the Office of Government Information Services (OGIS) was created to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a nonexclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation.

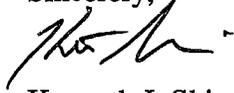
You may contact OGIS in any of the following ways:

Office of Government Information Services (OGIS)
National Archives and Records Administration
Room 2510
8601 Adelphia Road
College Park, Maryland 20740-6001

Email: ogist@nara.gov
Phone: 301 837-1996
Fax: 301 837-0348
Toll-free: 1-877-684-6448

If you have any questions concerning your request, please contact me either by electronic mail kskipper@usgs.gov or by phone (303) 236-1477.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Skipper", written over a horizontal line.

Kenneth J. Skipper, P.G.
U.S. Geological Survey
Water Resources Mission Area, National FOIA Liaison

Attachment 1: 3 pages

ATTACHMENT 1

Response to FOIA Request 2012-00039

All equations are subject to change at any time and should not be considered valid outside the range of dates provided.

1. USGS 02310525 WEEKI WACHEE RIVER NEAR BROOKSVILLE FL
 - a. $Q = (11.5498 * \text{well}) - 13.0295$
 - i. Well = the water level from station 283201082315601 Weeki Wachee Well nr Weeki Wachee
 - b. October 2004 to January 2012

2. USGS 02310545 WEEKI WACHEE RIVER NEAR WEEKI WACHEE SPRINGS FL
 - a. Mean Channel Velocity (feet per second) = $(0.930 * \text{Index Velocity}) - 0.003$
 - i. Index Velocity = reading from velocity meter at gage
 - b. The area is computed from a lookup table and not an equation

<u>Gage Height (ft)</u>	<u>Area (ft²)</u>	<u>Gage Height (ft)</u>	<u>Area (ft²)</u>	<u>Gage Height (ft)</u>	<u>Area (ft²)</u>
-1.00	102	1.00	186	3.00	293
-0.90	105	1.10	191	3.10	298
-0.80	109	1.20	196	3.20	304
-0.70	113	1.30	201	3.30	309
-0.60	117	1.40	206	3.40	315
-0.50	120	1.50	211	3.50	320
-0.40	124	1.60	217	3.60	326
-0.30	128	1.70	222	3.70	331
-0.20	132	1.80	227	3.80	337
-0.10	136	1.90	232	3.90	342
0.00	140	2.00	238	4.00	348
0.10	144	2.10	243	4.10	353
0.20	149	2.20	249	4.20	359
0.30	153	2.30	254	4.30	364
0.40	157	2.40	260	4.40	370
0.50	162	2.50	265	4.50	375
0.60	167	2.60	271	4.60	381
0.70	171	2.70	276	4.70	386
0.80	176	2.80	282	4.80	392
0.90	181	2.90	287	4.90	397

- c. $Q = \text{Mean Channel velocity from (a.) times the area from (b.)}$
- d. July 2004 to January 2012

3. USGS 02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA FL
 - a. $Q=31.3378-(6.1376*gh)+2.4394*well-905.3087*delrate$
 - i. GH = the local water level at the gage
 - ii. Well = the water level from station 283201082315601 Weeki Wachee Well nr Weeki Wachee
 - iii. Delrate = the rate of change of the water level at the gage
 - b. October 2002 to January 2012

4. USGS 02310663 CHASSAHOWITZKA RIVER NEAR CHASSAHOWITZKA FL
 - a. Mean Channel Velocity (feet per second) = $(0.815 * \text{Index Velocity}) + 0.009$
 - i. Index Velocity = reading from velocity meter at gage
 - b. Cross-sectional Area (ft^2) = $6.1219*GH^2+329.75*GH+1428.6$
 - i. GH = the local water level at the gage
 - c. Q = Mean Channel velocity from (a.) times the area from (b.)
 - d. May 2003 to January 2012

5. USGS 02310673 CHASSAHOWITZKA RIVER AT DOG ISLAND NEAR CHASSAHOWITZKA FL
 - a. The USGS does not compute discharge at this station.

6. USGS 02310674 CHASSAHOWITZKA RIVER AT MOUTH NEAR CHASSAHOWITZKA FL
 - a. The USGS does not compute discharge at this station.

7. USGS 02310675 HIDDEN RIVER NEAR HOMOSASSA FL
 - a. $Q = 0.209003 * \text{Exp}(0.941453 * \text{Well})$
 - i. Well = the water level from station 28455108234530 Homosassa Well #3
 - b. October 2003 to January 2012

8. USGS 02310678 HOMOSASSA SPRINGS AT HOMOSASSA SPRINGS FL
 - a. $Q=90.8162-(20.3771*GH)+(3.823*Well)$
 - i. GH = the local water level at the gage
 - ii. Well = the water level from station 283201082315601 Weeki Wachee Well nr Weeki Wachee
 - b. October 2002 to January 2012

9. USGS 02310688 SE FORK HOMOSASSA SPRING AT HOMOSASSA SPRINGS FL
 - a. $Q = 18.63-10.31*GH -418.14*delrate+3.31*well$
 - i. GH = the local water level at the gage
 - ii. Well = the water level from station 283201082315601 Weeki Wachee Well nr Weeki Wachee
 - iii. Delrate = the rate of change of the water level at the gage
 - b. October 2002 to January 2012

10. USGS 02310700 HOMOSASSA RIVER AT HOMOSASSA FL

- a. Mean Channel Velocity (feet per second) =
 $(0.90193 * Ivel + 0.121382 * Ivel^2 + 0.0453745 * GH + 0.00902154)$
 - i. Ivel = reading from velocity meter at gage
 - ii. GH = the local water level at the gage
- b. Cross-sectional Area (ft²) = $0.9749 * GH^2 + 214.94 * GH + 1806.4$
 - i. GH = the local water level at the gage
- c. Q = Mean Channel velocity from (a.) times the area from (b.)
- d. May 2004 to January 2012

11. USGS 02310742 CRYSTAL RIVER AT MOUTH OF KINGS BAY FL

- a. The USGS does not compute discharge at this station.

12. USGS 02310747 CRYSTAL RIVER AT BAGLEY COVE NEAR CRYSTAL RIVER FL

- a. Mean Channel Velocity (ft/s) = $1.2104 * \text{Index Velocity} + 0.1562$
 - i. Index Velocity = reading from velocity meter at gage
- b. Cross-sectional Area (ft²) = $0.5779 * GH^2 + 527.2 * GH - 1895.9$
 - i. GH = the local water level at the gage
- c. Q = Mean Channel velocity from (a.) times the area from (b.)
- d. October 2002 to January 2012

13. USGS 02310752 SALT RIVER NEAR CRYSTAL RIVER FL

- a. The USGS does not compute discharge at this station.

From: [Jos Tar](#)
To: [Doug Leeper](#)
Subject: Re: request for meeting with District staff
Date: Friday, February 17, 2012 7:29:33 AM

Doug: thank you again for setting up our meeting thursday AM--hope that we will be better to serve you and your associates in the near future ,thanks again jct-----352 382 2357--feel free to call me anytime---

From: Doug Leeper <Doug.Leeper@swfwmd.state.fl.us>
To: "tarkie38@yahoo.com" <tarkie38@yahoo.com>
Sent: Tuesday, February 14, 2012 7:36 AM
Subject: FW: request for meeting with District staff

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Doug Leeper
Sent: Monday, February 13, 2012 9:01 AM
To: 'Jos Tar'
Subject: RE: request for meeting with District staff

Mr. Tar:

I'm afraid that the planned meeting time will no longer work for all of the staff that will be meeting with you. Would it be possible to meet on either February 17 or February 21?

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Jos Tar [<mailto:tarkie38@yahoo.com>]
Sent: Sunday, February 12, 2012 12:49 PM
To: Doug Leeper
Subject: Fw: request for meeting with District staff

Doug: would like to set up meeting thursday, at 0900 hrs,let me know if possible,thank you again for your help Doug.-----I remain

----- Forwarded Message -----

From: Doug Leeper <Doug.Leeper@swfwmd.state.fl.us>
To: Jos Tar <tarkie38@yahoo.com>
Cc: Veronica Craw <Veronica.Craw@swfwmd.state.fl.us>; Nam Q. Nguyen <Nam.Nguyen@swfwmd.state.fl.us>; Ronald J. Ferris <Ron.Ferris@swfwmd.state.fl.us>
Sent: Thursday, February 9, 2012 8:11 AM
Subject: RE: request for meeting with District staff

Mr. Tar:

District staff that will participate in the meeting you requested are currently available for the following dates/times:

Monday, Feb 13, 9-10 am
Thursday, Feb 16, 9-10 am
Friday, Feb 17, 1-2 pm
Tuesday, Feb 21, 11-12 am

Please let me know as soon as you can whether any of these dates will work for you, as staff members schedules tend to fill up pretty quickly.

Thanks,

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Jos Tar [mailto:tarkie38@yahoo.com]
Sent: Tuesday, February 07, 2012 7:13 PM
To: Doug Leeper
Subject: Fw: request for meeting with District staff

dear doug: I am ready to set up a meeting , please advise me when we can set it up? thank you again for your help in this matter, I remain jct. -----date needed-----

----- Forwarded Message -----

From: Doug Leeper <Doug.Leeper@swfwmd.state.fl.us>
To: Jos Tar <tarkie38@yahoo.com>
Sent: Thursday, January 26, 2012 5:05 PM
Subject: RE: request for meeting with District staff

Mr. Tar:

Thanks for the quick response. When you are ready to schedule a meeting, please contact me with some potential dates and we will try to accommodate your schedule.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Jos Tar [mailto:tarkie38@yahoo.com]
Sent: Thursday, January 26, 2012 4:55 PM
To: Doug Leeper
Subject: Re: request for meeting with District staff

Doug: the issues ,time permitting A,uses of fresh water,B storage of fresh water .C cleaning all canals in Chas.D last but not lest; converting salt water to drinkable.as we know,Water is at a critical state---I am wait for my hydraulic and civil engineer,to be able to assist me at the meeting, for questions that I can"t answer---I remain jct-----I will give you notice, when we get our ducks in a row
Thank you Doug for your help--- bgsf

From: Doug Leeper <Doug.Leeper@swfwmd.state.fl.us>
To: Jos Tar <tarkie38@yahoo.com>
Sent: Thursday, January 26, 2012 4:23 PM
Subject: Re: request for meeting with District staff

Mr. Tar:

Thanks again for your interest in the development of minimum flows for the Chassahowitzka River system. I will be happy to arrange for a meeting with you here at the Brooksville Office of the Southwest Florida Water Management District. To be sure that I get the "right" people at the meeting I would appreciate your calling or e-mailing me to remind me of the issues you would like to discuss. I seem to recall that you are interested in speaking with staff about a dredging plan and potential uses of the freshwater flowing in the river system.

I look forward to hearing from you again.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street

Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [Al Grubman](#); [Ron Miller](#); [Norman Hopkins](#); [Brent Whitley](#); [Dan Hillard](#); [Dana Bryan](#); [Doug Leeper](#); [Mike Heyl](#); [Kevin J. Grimsley](#); [R. Rodriguez](#)
Subject: Follow up FOIA Equations response
Date: Thursday, February 16, 2012 8:26:14 AM
Attachments: [Chassahowitzka River Gage 02310663 Verification FOIA Equation.xls](#)

Following up on yesterdays e-mail regarding the equations. Brad made a good point about not looking at data after the date of his request in case there is a change. To that end I have added the data (blue) from October 18, 2011 on the spreadsheet I shared yesterday. I did download the whole 120 days data, but thought that was a little much to share yesterday to make the point.

For Chassahowitzka main spring I had plugged the equation into August 25, 2011 which is what resulted in the original question. The equation matches the calculated discharge on USGS web site.

As promised I have looked at Bagley Cove Crystal River. Even looking at the equation yesterday I had concerns, sure enough it does not match. I even tried using the stream level instead of gage height. The stage area may well be the 1895.9 sq.ft. and the 527.2ft. may be the channel width, but with gage heights typically around 12 ft something is not right in this equation.

Yesterday one of my readers asked if I was now agreeing that the discharge data is correct.

Let me be clear in case my wording yesterday was not. The equations for the three Homosassa sites and Chassahowitzka main spring are the equations USGS uses to calculate the discharge. That does not mean these calculated discharges are TRUE.

Let me first take the SE Fork; the calculated discharge when considered over a tidal cycle indicates much larger changes of level in the roughly 3 acre pool upstream of the gage site than actually occur. My speculation is that the discharge as cfs is much more consistent than the calculated discharge data implies. To support this speculation, I have measured stream velocities many times, using oranges passing under the Fishbowl Bridge . The whole purpose of the velocity meter at this location is to better understand this. I have recently had conversations with manufacturers of acoustic velocity meters in order to better understand why after over 5 months we still await even preliminary data.

Homosassa River Macrae's; I still have major concerns that the squaring of negative velocity reading ($0.121382 * I_{vel} * I_{vel}$) in the equation results in a bias in the calculation of inflow versus outflow.

Homosassa Main Springs; in my opinion this is closest to the truth, , but there are still occasions when the field measurements differ by more than 10%.

Chassahowitzka main spring; I have some concern that the large multiplier applied to the stage change, the 905.3087, the factor resulting in negative flow is rather high. Brad Rimbey and myself have been trying to determine the open water area upstream of the gage site to do a similar calculation to what I did for SE Fork. The canals are reasonably easy to estimate, the problem is trying to get a number for the area 'upstream' of Bubba/Seven Sisters Springs. I intend in the next few weeks to get a better handle on whether or not there are any upstream

flows i.e. past Bubba Spring.

Let me be clear, none of this is easy simple science. USGS and SWFWMD are trying to understand these springs, but sometimes it is necessary to step back from the computers, regression analyses and models and ask the folks what they see. Those folks that have seen the Homosassa and Chassahowitzka Rivers deteriorate, they are the test of whether or not the computer simulation is meaningful. My timing of floating oranges may not be as accurate as an acoustic velocity meter, if it is located correctly and the equations used to translate what it sees as stream velocity to cfs are correct, but the oranges have no way to go other than with the flow!!.

Have a great day.

Martyn.

From: [Alan Martyn Johnson](#)
To: [Al Grubman](#); [Ron Miller](#); [Norman Hopkins](#); [Brent Whitley](#); [Dan Hillard](#); [Dana Bryan](#); [Brad Rimbe](#)
Cc: [Doug Leeper](#); [Mike Heyl](#); [Kevin J Grimsley](#)
Subject: Follow up to another question
Date: Friday, February 17, 2012 7:57:10 AM
Attachments: [Stage Change Factor and relevance Feb 17.xls](#)

Yesterday I had another reader ask if I could further explain the point about the 905.3087 factor, as it was not clear.

Let me try and I have copied others who may be interested, or can correct me.

The 905.3087 is applied to the change in stage height over a 15 minute interval eg if the stage height is 1.00 ft and 15 minutes later the stage height is 1.05 ft. the change is 0.05. The 0.05 multiplied by 905.3087 is 45.3. This 45.3 is subtracted from the other components of the equation to get cfs.

If the stage had changed from 1.00 ft to 0.95 ft the change would be -0.05 and in the same way the -45.3 would be added (- 45.3 is +) to the other components of the equation.

In the attached spreadsheet (Stage Change Factor) I have some additional figures that help show this for various stage height changes and two different levels for Weeki Wachee Well.

Additionally, I have included a sheet January 17-Feb 14 which shows the negative flow intervals (highlighted yellow) and the high tide at both gage sites in red font. The really interesting part of the data set is how the specific conductance peaks after flow becomes positive (calculated flow that is). I had looked at this data before, but can not find my original spreadsheet (thought was August last year). Anyway, this was the basis of my suggesting that the high specific conductance possibly is indicative of seawater ingress into the aquifer rather than true reverse flow in the river. The changes are very fast increase in spec cond and I still can't see where all that reverse flow water goes...the springs do not just stop flowing.

Over the next couple of weeks I hope to be out in my kayak enjoying the nature and doing a little testing of my own.

Questions and comments always welcome...as are other interpretations of the data.

Martyn

From: [Alan Martyn Johnson](#)
To: [Doug Leeper](#); [Mike Heyl](#)
Cc: [Al Grubman](#); [Ron Miller](#); [Brad Rimbey](#); [Brent Whitley](#); [Norman Hopkins](#); [Dana Bryan](#)
Date: Friday, February 17, 2012 8:23:34 AM

Doug and Mike,

As I have said before I appreciate the time you have both taken to answer my questions. The trouble is I, and others, are having difficulty understanding your answers. So let me try to take it in small steps starting with the Homosassa.

Trust you do not find my use of colors too much; it is a means of clarifying source differences and connecting a common theme.

Homosassa River.

I asked if the baseline flow is 152 cfs.

Your answer was NO.

From your February 7 e-mail;

“Response: No – As used for development of the proposed minimum flow, ‘baseline’ simply refers to a statistical metric (typically median) characterizing conditions associated with a specific period of flow (benchmark period).”

The Homosassa Draft Report stated in the Executive Summary;

“...has averaged 152 cubic feet per second (cfs) for the period from 1995 through 2009.”

Our difficulty with this answer is, you never stated the flow (cfs) the five percent reduction is applied to in order to define a minimum flow (cfs).

Again from the Executive Summary;

“Based on review of resource and habitat-based criteria, the recommended minimum flow for the Homosassa River system are defined as a five percent reduction from baseline flow.”

So, what is the flow from which the five percent reduction is the minimum flow?

The Executive Summary in the draft report clearly states the withdrawals are “insignificant” and “minimal”, so let’s not go there until we clearly define the flow. This references the response to my question/your response;

3. Is the recommended minimum flows for the Homosassa River system defined as a five percent reduction from baseline flows of 152 cfs which is minimum flow 144 cfs.

“Response: No -- The recommended minimum flow for the Homosassa River system are an allowable percentage of flow reduction from the natural flow condition, which is defined as the flow that would exist in the absence of water withdrawals.”

My purpose in highlighting yellow and green is to recognize that you talk about flow. Is

this just a language style to combine the 'main springs flow' and the 'SE Fork flow', or is there more than one figure from which the five percent reduction is applied to in order to define the minimum flow? It may also be language style because you deal with many of the other rivers such as those Mike listed in his e-mail, where there are different flows for different seasons.

I trust this helps us get numerical answers to what many of us consider a simple and basic question.

What is the minimum flow, in cfs, for the Homosassa River?

Martyn

P.S.

From the Peer Review October 17, 2010 page 8;

“**Question 5** - Was the data collection approach adequate to determine the past and present natural resources on the river system? **Yes**, with respect to flow, this approach is quite adequate to conclude that present-day spring and river discharges can be considered **baseline or natural flows** [also, please see response to the next question concerning water quality]. The approach assumed that present-day flow records were representative of past, or baseline, conditions based largely on the determination using a numerical groundwater flow (Basso 2010) that groundwater pumping in the Northern District of SWFWMD has reduced historical spring flows in the Homosassa River system by an insignificant amount (approximately 1 percent).”

From: [Alan Martyn Johnson](#)
To: [Doug Leeper](#); [Kevin J. Grimsley](#)
Cc: [Norman Hopkins](#)
Subject: FW: Crystal River Spring Discharge
Date: Friday, February 17, 2012 8:46:27 AM

Doug and Kevin,

You may recall this e-mail from Kevin confirming an earlier one from Doug that the Crystal River Bagley Cove data was being reviewed/revise

Presumably this review/revision has been completed as the P's have changed to A's in the records.

Was anything significant found as a result of the review? And was the data revised, which I interpret as changed?

You may recall I had expressed concern that the data indicated a significant decline in flow thru the past 10 year period.

Is my concern still justified or was the data on which I based my concern inaccurate?

I did note Kevin's point about the hurricanes, Frances and Alberto.

Martyn

To: martynellijay@hotmail.com
CC: brentwhitley@sierra-properties.com; doug.leeper@swfwmd.state.fl.us; rkane@usgs.gov; rrodrigu@usgs.gov
Subject: RE: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 30 Sep 2011 11:29:49 -0400

Martyn,

We're not aware of any dredging in the area either and our measurements haven't shown any significant changes in the cross-section. The flow in '04 - '05 was higher than normal due to the hurricanes those years, so some decrease from then would be expected.

The discharge data at 02310747 is provisional because we are in the process of revising it. We hope to complete that process and set the data to approved within the next month. The tidal filtered discharge will be available at that time.

Kevin Grimsley, P.E.
Supervisory Hydrologist
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: [Kevin J. Grimsley](mailto:Kevin.J.Grimmsley@usgs.gov)
To: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov)
Cc: [Doug Leeper](mailto:Doug.Leeper@usgs.gov); [Norman Hopkins](mailto:Norman.Hopkins@usgs.gov)
Subject: Re: FW: Crystal River Spring Discharge
Date: Friday, February 17, 2012 1:08:11 PM

Martyn,

The discharge records for the Bagley Cove station have been revised as described in our Annual Data Report - <http://wdr.water.usgs.gov/wy2011/pdfs/02310747.2011.pdf>

The data were revised to eliminate inconsistencies between the 3 or 4 different equations that had been used over that time period. The revised records use a single, consistent equation from October, 2002 to present.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>
Cc: Norman Hopkins <norman@amyhrf.org>
Date: 02/17/2012 08:47 AM
Subject: FW: Crystal River Spring Discharge

Doug and Kevin,

You may recall this e-mail from Kevin confirming an earlier one from Doug that the Crystal River Bagley Cove data was being reviewed/revised.

Presumably this review/revision has been completed as the P's have changed to A's in the records.

Was anything significant found as a result of the review? And was the data revised, which I interpret as changed?

You may recall I had expressed concern that the data indicated a significant decline in flow thru the past 10 year period.

Is my concern still justified or was the data on which I based my concern inaccurate?

I did note Kevin's point about the hurricanes, Frances and Alberto.

Martyn

To: martynellijay@hotmail.com
CC: brentwhitley@sierra-properties.com; doug.leeper@swfwmd.state.fl.us; rkane@usgs.gov;
rrodrigu@usgs.gov
Subject: RE: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 30 Sep 2011 11:29:49 -0400

Martyn,

We're not aware of any dredging in the area either and our measurements haven't shown any significant changes in the cross-section. The flow in '04 - '05 was higher than normal due to the hurricanes those years, so some decrease from then would be expected.

The discharge data at 02310747 is provisional because we are in the process of revising it. We hope to complete that process and set the data to approved within the next month. The tidal filtered discharge will be available at that time.

Kevin Grimsley, P.E.
Supervisory Hydrologist
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)
To: [Kevin J. Grimsley](mailto:Kevin.J.Grimley)
Cc: [Doug Leeper](mailto:Doug.Leeper); [Norman Hopkins](mailto:Norman.Hopkins)
Subject: RE: Crystal River Spring Discharge
Date: Saturday, February 18, 2012 7:30:42 AM

Kevin,

Thanks. Appreciate the prompt reply and directing us to the report.

Godin filter approach does not appear to do a very good job. Do know if there is any work being done to report/analysis data for tidal rivers on the 24.84 hour tidal cycle? If there is not, it may be worth your considering the merits of this, and if you see merits spearheading some work...could be a feather in your cap, but if you do not see it that way, no problem...just a thought.

And sorry to trouble you with another question, but is there a reason the water year for USGS runs October-September?

Noticed earlier in the year your new title. Trust this was a promotion and a position you are enjoying. Congratulations.

Martyn

To: martynellijay@hotmail.com
CC: doug.leeper@swfwmd.state.fl.us; norman@amyhrf.org
Subject: Re: FW: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 17 Feb 2012 13:08:04 -0500

Martyn,

The discharge records for the Bagley Cove station have been revised as described in our Annual Data Report - <http://wdr.water.usgs.gov/wy2011/pdfs/02310747.2011.pdf>

The data were revised to eliminate inconsistencies between the 3 or 4 different equations that had been used over that time period. The revised records use a single, consistent equation from October, 2002 to present.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>
Cc: Norman Hopkins <norman@amyhrf.org>
Date: 02/17/2012 08:47 AM
Subject: FW: Crystal River Spring Discharge

Doug and Kevin,

You may recall this e-mail from Kevin confirming an earlier one from Doug that the Crystal River Bagley Cove data was being reviewed/revise

Presumably this review/revision has been completed as the P's have changed to A's in the records.

Was anything significant found as a result of the review? And was the data revised, which I interpret as changed?

You may recall I had expressed concern that the data indicated a significant decline in flow thru the past 10 year period.

Is my concern still justified or was the data on which I based my concern inaccurate?

I did note Kevin's point about the hurricanes, Frances and Alberto.

Martyn

To: martynellijay@hotmail.com
CC: brentwhitley@sierra-properties.com; doug.leeper@swfwmd.state.fl.us; rkane@usgs.gov; rrodrigu@usgs.gov
Subject: RE: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 30 Sep 2011 11:29:49 -0400

Martyn,

We're not aware of any dredging in the area either and our measurements haven't shown any significant changes in the cross-section. The flow in '04 - '05 was higher than normal due to the hurricanes those years, so some decrease from then would be expected.

The discharge data at 02310747 is provisional because we are in the process of revising it. We hope to complete that process and set the data to approved within the next month. The tidal filtered discharge will be available at that time.

Kevin Grimsley, P.E.
Supervisory Hydrologist
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: [Kevin J. Grimsley](mailto:Kevin.J.Grimmsley@usgs.gov)
To: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson@usgs.gov)
Cc: [Doug Leeper](mailto:Doug.Leeper@usgs.gov); [Norman Hopkins](mailto:Norman.Hopkins@usgs.gov)
Subject: Re: Crystal River Spring Discharge
Date: Saturday, February 18, 2012 1:31:43 PM

Martyn,

I disagree, the Godin filter is working exactly as it is intended. I'm not sure of the reasons behind how the water year is defined. It has changed a couple of times in the past, but I think the primary reason is that it matches the federal fiscal calendar.

Thanks, I am enjoying the new position and all of the new challenges it brings.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Feb 18, 2012, at 7:30 AM, "Alan Martyn Johnson" <martynellijay@hotmail.com> wrote:

Kevin,

Thanks. Appreciate the prompt reply and directing us to the report.

Godin filter approach does not appear to do a very good job. Do know if there is any work being done to report/analysis data for tidal rivers on the 24.84 hour tidal cycle? If there is not, it may be worth your considering the merits of this, and if you see merits spearheading some work...could be a feather in your cap, but if you do not see it that way, no problem...just a thought.

And sorry to trouble you with another question, but is there a reason the water year for USGS runs October-September?

Noticed earlier in the year your new title. Trust this was a promotion and a position you are enjoying. Congratulations.

Martyn

To: martynellijay@hotmail.com
CC: doug.leeper@swfwmd.state.fl.us; norman@amyhrf.org
Subject: Re: FW: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 17 Feb 2012 13:08:04 -0500

Martyn,

The discharge records for the Bagley Cove station have been revised as described in our Annual Data Report - <http://wdr.water.usgs.gov/wy2011/pdfs/02310747.2011.pdf>

The data were revised to eliminate inconsistencies between the 3 or 4 different equations that had been used over that time period. The revised records use a single, consistent equation from October, 2002 to present.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Doug Leeper <doug.leeper@swfwmd.state.fl.us>, Kevin J Grimsley <kjgrims@usgs.gov>
Cc: Norman Hopkins <norman@amyhrf.org>
Date: 02/17/2012 08:47 AM
Subject: FW: Crystal River Spring Discharge

Doug and Kevin,
You may recall this e-mail from Kevin confirming an earlier one from Doug that the Crystal River Bagley Cove data was being reviewed/revised. Presumably this review/revision has been completed as the P's have changed to A's in the records.

Was anything significant found as a result of the review? And was the data revised, which I interpret as changed?

You may recall I had expressed concern that the data indicated a significant decline in flow thru the past 10 year period. Is my concern still justified or was the data on which I based my concern inaccurate?

I did note Kevin's point about the hurricanes, Frances and Alberto.

Martyn

To: martynellijay@hotmail.com
CC: brentwhitley@sierra-properties.com; doug.leeper@swfwmd.state.fl.us;
rkane@usgs.gov; rrodrigu@usgs.gov

Subject: RE: Crystal River Spring Discharge
From: kjgrims@usgs.gov
Date: Fri, 30 Sep 2011 11:29:49 -0400

Martyn,

We're not aware of any dredging in the area either and our measurements haven't shown any significant changes in the cross-section. The flow in '04 - '05 was higher than normal due to the hurricanes those years, so some decrease from then would be expected.

The discharge data at 02310747 is provisional because we are in the process of revising it. We hope to complete that process and set the data to approved within the next month. The tidal filtered discharge will be available at that time.

Kevin Grimsley, P.E.
Supervisory Hydrologist
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: [Ron Miller](#)
To: [Undisclosed Recipient](#)
Subject: Becky Ayech presentation on Toxic Algae
Date: Wednesday, March 07, 2012 3:12:43 PM
Attachments: [Toxic Algae Presentation by Becky Ayech 3-15-2012.doc](#)

Hi All,

I hope you can attend this interesting presentation by Becky Ayech on the toxic algae in our waterways.

Please Post and circulate this invitation to to all.

Thank you,
Ron Miller

**The Homosassa River Alliance
Invites You to an Evening with**

Becky Ayech

Consultant with the

Florida Water Coalition

THURSDAY, MARCH 15, 2012

7:00 P.M. in the FLORIDA ROOM

At the

ELLIE SCHILLER HOMOSASSA SPRINGS WILDLIFE STATE PARK

Learn the causes of toxic algae outbreaks, how it affects wildlife and recreational users and how each of us can act as individuals to support limits on the pollution and the polluters who foul Florida's vital water resources!

Free and open to the public.

Food Donations Gratefully Accepted for We Care Food Pantry

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Doug Leeper](mailto:Doug.Leeper)
Subject: Re: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Tuesday, March 06, 2012 2:13:46 PM

Hi Doug.

February has come and gone and we are still waiting for the revised reports on the Springs Coast MFL's. I saw Mark Hammond at the Feb 28 SWFWMD GB meeting and asked him when we might expect to see the revised reports. Mark indicated you were currently tied up on something else with an inflexible deadline so he was not sure when you would get back to the Springs Coast MFL reports. Can you give us an updated prognostication as to when we might expect to see the revised reports? Thanks.

Brad Rimbey

----- Original Message -----

From: [Doug Leeper](mailto:Doug.Leeper)
To: [Al Grubman \(grubman1@gmail.com\)](mailto:Al.Grubman1@gmail.com) ; [Bill Geiger \(bgeiger@cityofbrooksville.us\)](mailto:bgeiger@cityofbrooksville.us) ; [Bill Pouder \(bill.pouder@myfwc.com\)](mailto:Bill.Pouder@myfwc.com) ; [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](mailto:Boyd.Blihovde@fws.gov) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](mailto:Brad.Rimbey@tampabay.rr.com) ; [Brent Whitley \(brentwhitley@sierra-properties.com\)](mailto:brentwhitley@sierra-properties.com) ; [Brockway, Alys \(abrockway@co.hernando.fl.us\)](mailto:Alys.abrockway@co.hernando.fl.us) ; [Dennis D. Dutcher \(Dennis3ds@aol.com\)](mailto:Dennis3ds@aol.com) ; [Frank DiGiovanni \(administration@inverness-fl.gov\)](mailto:Frank.DiGiovanni@inverness-fl.gov) ; [Greenwood, Kathleen \(Kathleen.Greenwood@dep.state.fl.us\)](mailto:Kathleen.Greenwood@dep.state.fl.us) ; [Helen Spive](mailto:Helen.Spive) ; [Hilliard, Dan \(2buntings@comcast.net\)](mailto:2buntings@comcast.net) ; [Hoehn, Ted](mailto:Hoehn.Ted) ; [Hope Corona \(hopecorona@tampabay.rr.com\)](mailto:HopeCorona@tampabay.rr.com) ; [Jim Farley \(jfarley682@aol.com\)](mailto:jfarley682@aol.com) ; [Katie Tripp \(katripp@savethemanatee.org\)](mailto:katripp@savethemanatee.org) ; [Norman Hopkins \(norman@amyhrf.org\)](mailto:norman@amyhrf.org) ; [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](mailto:rebecca.bays@bocc.citrus.fl.us) ; [Richard Kane \(rkane@usgs.gov\)](mailto:rkane@usgs.gov) ; [Richard Radacky \(rradacky@cityofbrooksville.us\)](mailto:rradacky@cityofbrooksville.us) ; [Ron Miller \(rmille76@tampabay.rr.com\)](mailto:rmille76@tampabay.rr.com) ; [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](mailto:sarah.tenison@cityofweekiwachee@yahoo.com) ; [Sullivan, Jack \(jsullivan@carltonfields.com\)](mailto:jsullivan@carltonfields.com) ; [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](mailto:Carolyn.Voyles@dep.state.fl.us) ; [Whitey Markle \(whmarkle@gmail.com\)](mailto:whmarkle@gmail.com) ; janicehowie@aol.com ; [Abdon Sidibie \(asidibie@chronicle.online.com\)](mailto:asidibie@chronicle.online.com) ; [Alex McPherson \(aamcpherson@msn.com\)](mailto:aamcpherson@msn.com) ; [Ann - 2 Hodgson \(ahodgson@gmail.com\)](mailto:Ann-2.Hodgson@gmail.com) ; [Ann Hodgson \(ahodgson@audubon.org\)](mailto:ahodgson@audubon.org) ; [Bernard Berauer \(bfberauer@aol.com\)](mailto:bfberauer@aol.com) ; [Beverly Overa \(boverly@tampabay.rr.com\)](mailto:boverly@tampabay.rr.com) ; [Bill Garvin \(wgarvin@tampabay.rr.com\)](mailto:wgarvin@tampabay.rr.com) ; [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](mailto:Bobcaldwell51@yahoo.com) ; [Brack Barker \(brack154@msn.com\)](mailto:brack.barker@msn.com) ; [Carl Matthai \(thebabesmimi@gmail.com\)](mailto:thebabesmimi@gmail.com) ; [Casey, Emily \(fcnwr@atlantic.net\)](mailto:fcnwr@atlantic.net) ; [Charles Dean \(dean.charles.web@flsenate.gov\)](mailto:dean.charles.web@flsenate.gov) ; [Charles Stonerock \(katcha.stonerock3@gmail.com\)](mailto:katcha.stonerock3@gmail.com) ; [Chris Safos \(chrissafos@embarqmail.com\)](mailto:chrissafos@embarqmail.com) ; [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](mailto:mczerwin@tampabay.rr.com) ; [Darlene Herth \(2cetechology21@gmail.com\)](mailto:2cetechology21@gmail.com) ; [Darrell Snedecor \(president@citruscountyaudubon.com\)](mailto:darrell.snedecor@citruscountyaudubon.com) ; [Don Hiers \(dhiers3@gmail.com\)](mailto:dhiers3@gmail.com) ; [Douglas Dame \(doug_dame@yahoo.com\)](mailto:doug_dame@yahoo.com) ; [Elaine Luther \(barneyandcap@hotmail.com\)](mailto:barneyandcap@hotmail.com) ; [Emily Casey \(ecasey21@hotmail.com\)](mailto:eknight@wetlandsolutionsinc.com) ; [Emma Knight \(eknight@wetlandsolutionsinc.com\)](mailto:emma.knight@wetlandsolutionsinc.com) ; [George Harbin \(gharbin@tampabay.rr.com\)](mailto:gharbin@tampabay.rr.com) ; [George McClog \(classof47@gmail.com\)](mailto:classof47@gmail.com) ; [Gorgon O'Connor \(gorgon_o@yahoo.com\)](mailto:gorgon_o@yahoo.com) ; [Harry Steiner \(harry109@aol.com\)](mailto:harry109@aol.com) ; [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](mailto:calbeckj@citrus.k12.fl.us) ; [jane Perrin \(jcsperrinmd@sbcglobal.net\)](mailto:jcsperrinmd@sbcglobal.net) ; [Jerry Morton \(JerrMorton@aol.com\)](mailto:jerrmorton@aol.com) ; [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](mailto:gourliej@thirdplanetwind.com) ; [Jim Collins \(jimmiekey22@yahoo.com\)](mailto:jimcollins@jimmiekey22@yahoo.com) ; [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](mailto:jimmie.smith@myfloridahouse.gov) ; [Joe Calamari](mailto:joecalamari) ; [John Lord \(jlclord109@yahoo.com\)](mailto:jlclord109@yahoo.com) ; [John Mayo \(freedomway1@gmail.com\)](mailto:freedomway1@gmail.com) ; [Karen Johnstone \(kjohns213@sbcglobal.net\)](mailto:kjohns213@sbcglobal.net) ; [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](mailto:caldwell.kimberly@yahoo.com) ; [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](mailto:kim.dinkins@marioncountyfl.org) ; [Linda Pierce \(tpierce35@tampabay.rr.com\)](mailto:tpierce35@tampabay.rr.com) ; [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](mailto:hernandoaudubon@yahoo.com) ; [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](mailto:mlynn1978@tampabay.rr.com) ; [Matthew Corona \(mcorona1@tampabay.rr.com\)](mailto:mcorona1@tampabay.rr.com) ; [Max Rhinesmith \(rhinesmith@webtv.net\)](mailto:rhinesmith@webtv.net) ; [Amber Breland](mailto:Amber.Breland) ; [Andy Houston \(ahouston@crystalriverfl.org\)](mailto:ahouston@crystalriverfl.org) ; [Art Yerian \(Al.Yerian@dep.state.fl.us\)](mailto:Al.Yerian@dep.state.fl.us) ; [Ben Weiss](mailto:Ben.Weiss) ; [Beth Hovinde](mailto:beth.hovinde) ; [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](mailto:brad.thorpe@bocc.citrus.fl.us) ; [Courtney Edwards \(cedwards@savethemanatee.org\)](mailto:cedwards@savethemanatee.org) ; [Dale Jones \(Jones@MyFWC.com\)](mailto:jones@MyFWC.com) ; [Dana Bryan \(dana.bryan@dep.state.fl.us\)](mailto:dana.bryan@dep.state.fl.us) ; [Darrell Snedecor](mailto:Darrell.Snedecor) ; [David Hamilton \(countyadministrator@hernandocounty.us\)](mailto:David.Hamilton) ; [David Hankla \(david_hankla@fws.gov\)](mailto:david_hankla@fws.gov) ; [Don Wright](mailto:Don.Wright)

wright@sura.org) ; [Dusty McDevitt \(mcdevitt@usgs.gov\)](mailto:Dusty_McDevitt@usgs.gov) ; [Ed Call \(marvin.call@MyFWC.com\)](mailto:Ed_Call@MyFWC.com) ; [Eric Nagid \(eric.nagid@MyFWC.com\)](mailto:Eric_Nagid@MyFWC.com) ; [FFWCC MFLs Review E-Mail Address \(fwcconservationplanningservices@myfwc.com\)](mailto:FFWCC_MFLs_Review_E-Mail_Address@myfwc.com) ; [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](mailto:J._J._Kenney@bocc.citrus.fl.us) ; [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](mailto:Jennene_Norman-Vacha@ci.brooksville.fl.us) ; [Joyce Kleen@fws.gov](mailto:Joyce_Kleen@fws.gov) ; [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](mailto:Kandi_Harper@bocc.citrus.fl.us) ; [Keith Ramos \(Keith.Ramos@fws.gov\)](mailto:Keith_Ramos@fws.gov) ; [Kent Smith \(kent.smith2@myfwc.com\)](mailto:Kent_Smith@myfwc.com) ; [Kevin Grimsley \(kjgrims@usgs.gov\)](mailto:Kevin_Grimsley@usgs.gov) ; [Michael Lusk \(Michael_Lusk@fws.gov\)](mailto:Michael_Lusk@fws.gov) ; [Mitchell Newberger \(mnewberger@verizon.net\)](mailto:mnewberger@verizon.net) ; [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](mailto:Nick_Robbins@dep.state.fl.us) ; [Nicole Adimey \(Nicole_Adimey@fws.gov\)](mailto:Nicole_Adimey@fws.gov) ; [Paul Thomas \(paulw.thomas@MyFWC.com\)](mailto:paulw.thomas@MyFWC.com) ; [Ron Mezich \(ron.mezich@MyFWC.com\)](mailto:Ron_Mezich@MyFWC.com) ; [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](mailto:Shelly_Yaun@dep.state.fl.us) ; [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](mailto:Toby_Brewer@dep.state.fl.us) ; [Tracy Colson](mailto:Tracy_Colson) ; [Wallace Traci](mailto:Wallace_Traci) ; [Adkins Jim](mailto:Adkins_Jim) ; [Bitter Jim](mailto:Bitter_Jim) ; [Bryant Richard](mailto:Bryant_Richard) ; [Cantero Vince](mailto:Cantero_Vince) ; [Carpenter Paul](mailto:Carpenter_Paul) ; [Daniels Chase](mailto:Daniels_Chase) ; [Dueker Duane](mailto:Dueker_Duane) ; [Gramling Hugh](mailto:Gramling_Hugh) ; [Harrelson Cathy](mailto:Harrelson_Cathy) ; [Hubbell Pete](mailto:Hubbell_Pete) ; [Johnson Eric](mailto:Johnson_Eric) ; [Johnson Martyn](mailto:Johnson_Martyn) ; [Keim Robert](mailto:Keim_Robert) ; [Kincaid Todd](mailto:Kincaid_Todd) ; [Kline Allen](mailto:Kline_Allen) ; [Knight Bob](mailto:Knight_Bob) ; [Knight Robert](mailto:Knight_Robert) ; [Knudson Ross](mailto:Knudson_Ross) ; [Overa Tom](mailto:Overa_Tom) ; [Owen Rick](mailto:Owen_Rick) ; [Parrow Liz](mailto:Parrow_Liz) ; [Rolf Auermann \(rauerman@tampabay.rr.com\)](mailto:Rolf_Auermann@tampabay.rr.com) ; [Rusnak Teddi](mailto:Rusnak_Teddi) ; [Tarochinoe Joseph](mailto:Tarochinoe_Joseph) ; [Watkins Priscilla](mailto:Watkins_Priscilla) ; [Watrous Russell](mailto:Watrous_Russell) ; [Wilson Roger](mailto:Wilson_Roger)

Cc: [Amy K. Harroun](mailto:Amy_K_Harroun) ; [Barbara Matrone](mailto:Barbara_Matrone) ; [Cara S. Martin](mailto:Cara_S_Martin) ; [Chris Zajac](mailto:Chris_Zajac) ; [Darcy A. Brune](mailto:Darcy_A_Brune) ; [Dave Dewitt](mailto:Dave_Dewitt) ; [Doug Leeper](mailto:Doug_Leeper) ; [Gary E. Williams](mailto:Gary_E_Williams) ; [Jay Yingling](mailto:Jay_Yingling) ; [Karen Lloyd](mailto:Karen_Lloyd) ; [Ken Weber](mailto:Ken_Weber) ; [Kenneth R. Herd](mailto:Kenneth_R_Herd) ; [Laura Donaldson](mailto:Laura_Donaldson) ; [Lou Kavouras](mailto:Lou_Kavouras) ; [Mark Barcelo](mailto:Mark_Barcelo) ; [Mark Hammond](mailto:Mark_Hammond) ; [Mike Heyl](mailto:Mike_Heyl) ; [Paul Williams](mailto:Paul_Williams) ; [Robyn O. Felix](mailto:Robyn_O_Felix) ; [Ron Basso](mailto:Ron_Basso) ; [Sid Flannery](mailto:Sid_Flannery) ; [Veronica Craw](mailto:Veronica_Craw) ; [Xinjian Chen](mailto:Xinjian_Chen) ; [Yassert Gonzalez](mailto:Yassert_Gonzalez)

Sent: Friday, January 13, 2012 3:55 PM

Subject: Update - Chassahowitzka and Homosassa Minimum Flows

Greetings:

I'm writing to provide an update on the status of minimum flows development for the Chassahowitzka and Homosassa River systems by the Southwest Florida Water Management District. The District would like to make it as convenient as possible for the stakeholders to review final reports and attend the Governing Board meeting where the information will be presented. To provide staff the necessary time to consider public concerns, complete revisions, and provide stakeholders an opportunity to review the revised reports, District staff will not be presenting the proposed minimum flows rule amendments to the District Governing Board until April.

The revised reports are expected to be ready for public review by the end of February. District staff expects to have the final reports ready for the rule amendments presentation, which is planned for April 24, 2012 at the Governing Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for development of minimum flows for the Chassahowitzka and Homosassa River systems, or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272

352-754-6885 (Fax)

doug.leeper@watermatters.org

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Voyles, Carolyn](#)
To: [Doug Leeper](#)
Subject: Status of Chassahowitzka MFL
Date: Monday, March 12, 2012 11:57:58 AM

What's the current status of the Chassahowitzka MFL? Inquiring people want to know. 😊

Carolyn Voyles
(850) 245-3150

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. [DEP Customer Survey](#).

From: [Richard L Kane](#)
To: [Doug Leeper](#)
Cc: [Richard L Kane](#); [Kevin J Grimsley](#)
Subject: Fw: Florida Coastal Springs Streamflow
Date: Tuesday, March 13, 2012 9:59:39 AM
Attachments: [Weaver_Memorandum_3.2.2012.pdf](#)

Doug this is the results of the outside review requested by Mr. Johnson. Feel free to give ma and Kevin a call if you have any questions. In response to recommendation 1, we plan on bring Dan Yobbi back this spring/summer to assist us in update the regression equations.

Richard L. Kane
Associate Center Director for Data
U. S. Geological Survey
Florida Water Science Center
10500 University Center Dr., Suite 215
Tampa, Fl. 33612
rkane@usgs.gov
(813-498-5057)
FAX (813-498-5001)
Cell 813-918-1275

----- Forwarded by Richard L Kane/WRD/USGS/DOI on 03/13/2012 09:55 AM -----

From: Rafael W Rodriguez/WRD/USGS/DOI
To: Kevin J Grimsley/WRD/USGS/DOI@USGS
Cc: Richard L Kane/WRD/USGS/DOI@USGS
Date: 03/13/2012 09:47 AM
Subject: Fw: Florida Coastal Springs Streamflow

FYI
w

Rafael W. Rodriguez
Director
USGS Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
Phone: (813) 498-5024
Cell: (813) 463-3660
Fax: (813) 498-5003
rrodrigu@usgs.gov
<http://fl.water.usgs.gov>

----- Forwarded by Rafael W Rodriguez/WRD/USGS/DOI on 03/13/2012 09:45 AM -----

From: Jess D Weaver/WRD/USGS/DOI
To: martynellijay@hotmail.com
Cc: jdweaver@gsvaresh01.er.usgs.gov, Vic Hines/DO/USGS/DOI@USGS, Rafael W Rodriguez/WRD/USGS/DOI@USGS
Date: 03/13/2012 09:39 AM
Subject: Florida Coastal Springs Streamflow

Mr. Johnson,

Following my last correspondence with you Oct. 26, I requested an outside review of Florida coastal springs streamflow stations and the work being done by the USGS Florida Water Science Center. That review, taken on by representatives from the USGS Office of Surface Water, Office of Groundwater, and the National Research Program, is now complete. The team focused on two main topics: handling of tides and calculations of record at stations with regression-based rating curves. Their report is attached for your reference, but the bottom line is the reviewers expressed confidence in the work being done by the Florida Water Science Center, and I share their confidence.

I hope the results of this thorough review answer the questions you had and close out this issue.

Jess D. Weaver

Jess D. Weaver
Regional Executive, Southeastern Region
U.S. Geological Survey
3850 Holcomb Bridge Road, Suite 160
Norcross, Georgia 30092-2202
(770) 409-7701
Cell: (678) 523-6030
Fax: (770) 409-7725
jdweaver@usgs.gov

Memorandum

To: Jess Weaver, Regional Executive, Southeast Area

From: Harry Jenter, Assistant Chief, National Research Program, Eastern Branch
Thomas Reilly, Hydrologist, Office of Groundwater
Julie Kiang, Hydrologist, Office of Surface Water

Cc: Pierre Glynn, Chief, National Research Program, Eastern Branch
Robert Mason, Acting Chief, Office of Surface Water
William Cunningham, Acting Chief, Office of Ground Water
Rafael W. Rodriguez, Director, Florida WSC

Date: March 2, 2012

Re: Review of Florida coastal springs streamflow stations

We have completed the requested review of streamflow discharge stations operated by the Florida WSC in the coastal springs area of southwest Florida. Many of the rivers in this area originate at springs. USGS monitors flow just downstream from the springs as well as further downstream in a number of river reaches strongly affected by tides. Thomas Reilly, Harry Jenter, and Julie Kiang reviewed materials provided by the Florida WSC on the questions raised by local stakeholders about the methods used to estimate discharge at these stations. Harry Jenter and Julie Kiang conducted a site visit from January 22-24. We visited 6 streamgages in the area and spent 1.5 days reviewing the streamflow records in the office. Kevin Grimsley accompanied us in the field for part of this visit, and answered numerous questions while in the office.

We found no major problems with the operation of gages or the calculation of streamflow records. The WSC is following standard USGS protocol when applicable, and has made reasonable adaptations to established methods to handle the unique conditions found at the springs. Our review centered around two main topics: handling of tides and calculation of record at stations with regression-based rating curves. Key findings and a few recommendations are provided below.

Handling of Tides

The stations under review typically have measurable and significant tidal flow. A tidal signal is prominent in both the water level and flow records. Records were reviewed with respect to their reasonableness in the context of tidal theory. All were found to be reasonable and explainable.

It is important to note that many of the tidal records are asymmetric over a single tidal cycle (i.e. the flow behaves differently on the incoming tide than it does on the outgoing tide), which adds complexity to the mathematical relationship between discharge and measured stage or measured velocity at a single point. Nonetheless, this asymmetry is likely real, natural and explainable. Generally, riverine tidal records are symmetric only in long, straight reaches with smoothly-varying, deep, symmetric cross-sections. Variability in channel curvature and width, introduction of man-made structures, as well as uneven, shallow cross-channel depth profiles can introduce significant asymmetry in the tidal record. Measurements in shallow areas away from the middle of the channel also can increase the likelihood of asymmetry in the records. Finally, if the channel being measured is part of an inter-connected network of channels, the likelihood of an asymmetric tidal record is increased.

Recommendations

1. We do not see any opportunities to adjust instrument locations in order to reduce significantly the tidal asymmetry in the records at the stations reviewed. However, as future efforts are made to map flow in the springs and associated rivers, it may be helpful to seek opportunities to locate gages where asymmetry in the flow is low. This may reduce the complexity of equations relating point measurements to channel discharge at those locations. Accurately documenting any flow asymmetry likely will require collecting measurements over the duration of at least one full tidal cycle.

Calculation of record at stations with regression-based rating curves

Four of the stations reviewed utilize specially derived regression equations to estimate flow downstream from springs. These regression equations were originally developed by Knochemus and Yobbi (WRIR 2001-4230). The explanatory variables include stage, regional groundwater level, and rate of change in stage. The choice of explanatory variables is reasonable as each variable was shown to be statistically significant and there is a physical reason each variable would be related to the rate of discharge from the groundwater aquifer into the springs system. The rate of change of stage is acting as a surrogate for flow velocity in the channel.

Recommendations

1. While measurements were seen to generally compare well to the rating curve, we recommend that the equations be updated. Some sites have not been updated recently, and several years of additional data are now available, including a period of particularly high groundwater levels in Water Years 2004-2005. When evaluating the new equations, particular attention should be given to whether they improve results for the 2004-2005 period.

2. At the resolution of USGS water level measurements (0.01 foot resolution collected at 15 minute intervals), the measured stage can change in a manner that is often not smooth and sometimes abrupt. This variability can be even more pronounced for the “rate of change in stage” variable that is calculated from the stage record. Consequently, discharges calculated using rate of change in stage in the rating equation can also show similar variability. A mathematical smoothing can be applied either to the stage record, the rate of change in stage, or to the discharge record to make the results more easily understandable. If funding and site conditions allow, using an index velocity measurement in place of the rate of change in stage variable would be preferred.

3. While Knochenmus and Yobbi’s original equations were documented in report WRIR 2001-4230, the newer regression equations that are currently in use are not as well documented. Additional documentation of the data and methods used in developing new regression equations should be included in the station files. Knochenmus and Yobbi explained the hydrology and the assumptions upon which the equations were based. As these equations and assumptions change over time, it is necessary to provide adequate information documenting these changes. Julie Kiang will provide additional suggestions to the FL WSC on what to include in future documentation.

4. Where funding allows, and where the physical characteristics of the site allow, the WSC is installing instrumentation to test index velocity ratings. These efforts may improve the discharge estimates at these stations and should continue, when possible.

From: [Lisa-Perras Gordon](#)
To: [Doug Leeper](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Tuesday, March 13, 2012 10:34:21 AM

Hey there Doug,

I wanted to check in with you regarding the MFL for Chassahowitzka. It's my understanding that there is a planned revision. Do you have a proposed date when that revision will be released for review? As you may imagine from the strong public interest, we continue to get inquiries regarding this MFL.

Thanks so much,

Lisa

Lisa Perras Gordon, Environmental Scientist
Water Quality Planning Branch
Water Protection Division
U.S. Environmental Protection Agency
Atlanta, Georgia
(404) 562-9317

From: [Kevin J. Grimsley](#)
To: [Doug Leeper](#)
Cc: [Gary E. Williams](#); [Granville Kinsman](#); ([KHackett@JanickiEnvironmental.com](#)); [Mike Heyl](#); [Richard L Kane](#); [Ron Basso](#); [Sid Flannery](#); [Steve Desmith](#); [Xinjian Chen](#)
Subject: RE: Florida Coastal Springs Streamflow
Date: Tuesday, March 13, 2012 10:35:28 AM

All of the spring-related gages from Weeki Wachee up to Crystal River were evaluated, including the velocity gages further downstream.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Doug Leeper <Doug.Leeper@swfwmd.state.fl.us>
To: Richard L Kane <rkane@usgs.gov>
Cc: "Kevin Grimsley (kjgrims@usgs.gov)" <kjgrims@usgs.gov>, Mike Heyl <Mike.Heyl@swfwmd.state.fl.us>, Sid Flannery <Sid.Flannery@swfwmd.state.fl.us>, Xinjian Chen <Xinjian.Chen@swfwmd.state.fl.us>, Ron Basso <Ron.Basso@swfwmd.state.fl.us>, Granville Kinsman <Granville.Kinsman@swfwmd.state.fl.us>, "KHackett@JanickiEnvironmental.com" <KHackett@JanickiEnvironmental.com>, "Gary E. Williams" <Gary.Williams@swfwmd.state.fl.us>, Steve Desmith <Steve.Desmith@swfwmd.state.fl.us>
Date: 03/13/2012 10:28 AM
Subject: RE: Florida Coastal Springs Streamflow

Thanks Richard -- Appears to be a positive, helpful review. I'm curious about which gages were evaluated.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Richard L Kane [<mailto:rkane@usgs.gov>]
Sent: Tuesday, March 13, 2012 10:04 AM
To: Doug Leeper
Cc: Kevin J Grimsley; Richard L Kane
Subject: Fw: Florida Coastal Springs Streamflow [disregard previous and use this on]

Doug this is the results of the outside review requested by Mr. Johnson. Feel free to give and Kevin a

call if you have any questions. In response to recommendation 1, we plan on bringing Dan Yobbi back this spring/summer to assist us in updating the regression equations.

Richard L. Kane
Associate Center Director for Data
U. S. Geological Survey
Florida Water Science Center
10500 University Center Dr., Suite 215
Tampa, Fl. 33612
rkane@usgs.gov
(813-498-5057)
FAX (813-498-5001)
Cell 813-918-1275

----- Forwarded by Richard L Kane WRD/USGS/DOI on 03/13/2012 10:02 AM -----

From: Rafael W Rodriguez/WRD/USGS/DOI
To: Kevin J Grimsley/WRD/USGS/DOI@USGS
Cc: Richard L Kane/WRD/USGS/DOI@USGS
Date: 03/13/2012 09:47 AM
Subject: Fw: Florida Coastal Springs Streamflow

FYI
w

Rafael W. Rodriguez
Director
USGS Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
Phone: (813) 498-5024
Cell: (813) 463-3660
Fax: (813) 498-5003
rrodrigu@usgs.gov
<http://fl.water.usgs.gov>

----- Forwarded by Rafael W Rodriguez/WRD/USGS/DOI on 03/13/2012 09:45 AM -----

From: Jess D Weaver/WRD/USGS/DOI
To: martynellijay@hotmail.com
Cc: jdweaver@gsvaresh01.er.usgs.gov, Vic Hines/DO/USGS/DOI@USGS, Rafael W Rodriguez/WRD/USGS/DOI@USGS
Date: 03/13/2012 09:39 AM
Subject: Florida Coastal Springs Streamflow

Mr. Johnson,

Following my last correspondence with you Oct. 26, I requested an outside review of Florida coastal springs streamflow stations and the work being done by the USGS Florida Water Science Center. That review, taken on by representatives from the USGS Office of Surface Water, Office of Groundwater, and the National Research Program, is now complete. The team focused on two main topics: handling of tides and calculations of record at stations with regression-based rating curves. Their report is attached for your reference, but the bottom line is the reviewers expressed confidence in the work being done by the Florida Water Science Center, and I share their confidence.

I hope the results of this thorough review answer the questions you had and close out this issue.

Jess D. Weaver

Jess D. Weaver
Regional Executive, Southeastern Region
U.S. Geological Survey
3850 Holcomb Bridge Road, Suite 160
Norcross, Georgia 30092-2202
(770) 409-7701
Cell: (678) 523-6030
Fax: (770) 409-7725
jdweaver@usgs.gov

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Mark Hammond](#)
To: [Doug Leeper](#); [Mike Heyl](#)
Cc: [Ron Basso](#); [Jerry Mallams](#); [Kenneth R. Herd](#)
Subject: Fwd: U.S. EPA opens dialogue with Florida DEP and SWFWMD ref.Chassahowitzka MFL
Date: Friday, March 09, 2012 2:29:10 PM

Sent from my iPad

Begin forwarded message:

From: Laura Donaldson <Laura.Donaldson@swfwmd.state.fl.us>
Date: March 6, 2012 12:44:25 PM EST
To: Mark Hammond <Mark.Hammond@swfwmd.state.fl.us>
Cc: Karen West <Karen.West@swfwmd.state.fl.us>, Christopher Pettit <Christopher.Pettit@swfwmd.state.fl.us>
Subject: FW: U.S. EPA opens dialogue with Florida DEP and SWFWMD ref.Chassahowitzka MFL

FYI.

-----Original message-----

From: "Mitchell A. Newberger" <mnewberger@verizon.net>
To: Allan Himes <Allan@ahellectrical.net>, ANTHONY P TRIPOLINO <aptripolino@yahoo.com>, Barry Bishop <Barry_bishop@glic.com>, Bob Carey <ajourney@tampabay.rr.com>, 'Brad Rimbey' <BWR.CRRC@tampabay.rr.com>, Brent Whitley <BrentWhitley@Sierra-Properties.com>, Chuck Holden <HoldenChuck@Gmail.com>, Dale Griffin <dgriffin@usgs.gov>, David Strickland <DSTRICKLAND18@tampabay.rr.com>, 'debbie craig' <craigdeborah8@gmail.com>, Eddie Jones <sjones9@tampabay.rr.com>, 'Edith Stewart' <Estewart@tampabay.rr.com>, Gene Long <eugenelong@verizon.net>, George McElvy <classof47@Gmail.com>, Jack Calbeck <JCalbeck1@embarqmail.com>, 'jane shaw' <jlshaw@cox.net>, Jeff Hardeman <jhardeman@sprint.blackberry.net>, Jerry Stanley <ghstanley3@verizon.net>, Lou Buttitta <lbuttitta@tampabay.rr.com>, Pete Walker <bettepetewalker@gmail.com>, Peter Hubbell <p Hubbell@wraconsultants.com>, Rebecca Bays <REBECCA.BAYS@BOCC.CITRUS.FL.US>, Richard Bryant <rangerb@bellsouth.net>, "sjigman1234@aol.com" <sjigman1234@aol.com>, "stanley_k@sao13th.com" <stanley_k@sao13th.com>, Sylvio Polo <olop65@tampabay.rr.com>, 'Tom Greenhalgh' <Tom.Greenhalgh@dep.state.fl.us>, TOMMY MORGAN <TMORGAN@WTMMANAGEMENT.COM>, Tony D'Aquila <adaquila@tampabay.rr.com>
Cc: Hugh Gramling <hgramling@tbwg.org>, David Guest <dguest@earthjustice.org>, Ron Weaver <rweaver@stearnswweaver.com>, "charles.fletcher@gray-robinson.com" <charles.fletcher@gray-robinson.com>, "Lisa-perez Gordon (gordon.lisa-perras@epa.gov)" <Lisa-perez Gordon (gordon.lisa-perras@epa.gov)>, Susan Hansen <Hansen.Susan@epamail.epa.gov>
Sent: Wed, Feb 29, 2012 21:23:26 GMT+00:00
Subject: U.S. EPA opens dialogue with Florida DEP and SWFWMD ref.Chassahowitzka MFL

In December 2011, the EPA Atlanta advised me they were opening a dialogue with SWFWMD and the Fla. DEP on Chassahowitzka regarding MFL's (minimum flows and levels)

I was advised that this was the 1st time such action had been taken in Florida. I did not inform anyone because I was not sure what was happening. Still not sure!

On February 25, 2012 after a number of phone calls to EPA legal wondering what was going on; (they have had my argument and complaint from the U.S. Attorney since May or so of 2011), I received a letter .

I have attached below a copy for your review and suggest you forward same to anyone who is concerned about the destruction of the nature coast spring origin rivers that are tidal, navigable, and flow into the Gulf of Mexico.

EPA assures me in the letter that CWA concerns will be addressed when the new MFL is complete, however any MFL that results in a quantifiable reduction of flow in the Chassahowitzka River results in a manmade, man induced change in the physical, chemical, biological and radiological makeup of the river which is pollution.

The CWA (Federal Clean Water Act) clearly prohibits any partial degradation but requires that the state restore and maintain. The U.S. Congress is very clear on the issue of Water Quality Standards as is the U.S. Supreme Court. I believe the percentage of withdrawal (kill) must be zero or it becomes a violation of the plain text and original understanding of the CWA and the 1987 Anti-Degradation Amendment to the CWA.

SWFMD must turn to De-Sal and Reservoirs in these instances.

Sooner or later someone will have to provide an answer to the continuing question. "What statutory or case law exempts SWFWMD from the CWA when conducting activities(withdrawals) that result in the partial degradation and pollution of the Chassahowitzka River"?

One would think that a SWFWMD board member would be concerned as to whether or not staff is taking them outside the law and ask for the exemption authority to be provided, particularly when state law is subordinate to federal law and Federal law provides both civil and criminal penalties for CWA violations. It appears quite clear that there is no exemption! If there is an exemption or the CWA is inapplicable, SWFWMD or EPA should present the authority and my argument may be over.

We can only hope that the EPA will do their duty and not require us to consider relief in the Federal Courts under the Citizen Suit Provision of the CWA.

I am hopeful that the EPA will enforce the law not interpret it. The interpretation issue has been addressed by the U.S. Supreme Court in *Rapanos V. United States* 547 U.S. 715(2006) where the court said:

Congress takes no governmental action except by legislation. What the dissent refers to as "Congress' deliberate acquiescence" should more appropriately be called Congress's failure to express any opinion. We have no idea whether the Members' failure to act in 1977 was attributable to their belief that the Corps' regulations were correct, or rather to their belief that the courts would eliminate any excesses, or indeed simply to their unwillingness to confront the environmental lobby. To be sure, we have sometimes relied on congressional acquiescence when there is evidence that Congress considered and rejected the "precise issue" presented before the Court, [Bob Jones Univ. v. United States](#), 461 U. S. 574, 600 (1983) (emphasis added). However, "[a]bsent such *overwhelming evidence* of acquiescence, we are loath to replace the plain text and original understanding of a statute with an amended agency interpretation." *SWANCC*, *supra*, at 169-170, n. 5 (emphasis added)

Will keep you posted.

Mitchell A. Newberger
820 Newberger Road

Lutz, Florida 33549
Phone: (813) 949-1078
Cell: (813) 310-4147

P.S. A note of irony: Yesterday, February 28, 2012 the Tampa Bay Times reports that Hernando county(Chassahowitzka Springshed) and Citrus County (Chassahowitzka River Spring and River origin) are being put on residential water restrictions. Residential wells apparently are not included in SWFWMD'S proposed rule that will withdraw 33 million gallons a day for primarily commercial use under the rule if adopted. In other words the springshed that forms the Chassahowitzka River is already so low residential restrictions are in place and according to SWFWMD they are only withdrawing .7 of one percent (750,000) gallons per day out of Chassahowitzka and they are going for 33 million from the Chassahowitzka none of which includes residential wells! HELLO!



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

FEB 23 2012

Mr. Mitchell A. Newberger
820 Newberger Road
Lutz, Florida 33549

Dear Mr. Newberger:

Thank you for your patience as we continue to review your concerns regarding the Minimum Flows and Levels (MFL) being set on the Chassahowitzka River. We have discussed this issue with both the Southwest Florida Water Management District (SWFWMD) and the Florida Department of Environmental Protection (FDEP).

It is our understanding that the SWFWMD is revising the proposed MFL for Chassahowitzka River based on concerns expressed at the public hearings, and that the new MFL is scheduled to be released at the end of February. Once it is released, we will follow-up with FDEP to ensure that any Clean Water Act concerns are addressed.

We will contact you after the review of the new MFL is complete. If you have any questions prior to that time, please contact Lisa Perras Gordon of my staff at 404-562-9317 or gordon.lisa-perras@epa.gov.

Again, thank you for your patience.

Sincerely,

Joanne Benante, Chief
Water Quality Planning Branch
Water Protection Division

From: Doug Leeper
To: "[Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)"
Cc: [Mark Hammond](#); [Mike Heyl](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Thursday, March 15, 2012 12:02:00 PM

Hi Brad:

Sorry for taking so long to respond to your inquiry about the revised Chassahowitzka and Homosassa MFLs reports.

Although we anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have updated reports for the systems ready for public review by the end of April or early in May. Providing stakeholders like you with time to review the updated reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

As always, feel free to contact me if you have any questions concerning the updated schedule for development of minimum flows for the Chassahowitzka and Homosassa River systems, or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Brad Rimbey@CRRC [mailto:BWR.CRRC@tampabay.rr.com]
Sent: Wednesday, March 14, 2012 2:00 PM
To: Doug Leeper
Cc: Mark Hammond; Mike Heyl
Subject: Fw: Update - Chassahowitzka and Homosassa Minimum Flows

Doug - Status? Brad

----- Original Message -----

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Doug Leeper](#)
Sent: Tuesday, March 06, 2012 3:13 PM
Subject: Re: Update - Chassahowitzka and Homosassa Minimum Flows

Hi Doug.

February has come and gone and we are still waiting for the revised reports on the Springs Coast MFL's. I saw Mark Hammond at the Feb 28 SWFWMD GB meeting and asked him when we might expect to see the revised reports. Mark indicated you were currently tied up on something else with an inflexible deadline so he was not sure when you would get back to the Springs Coast MFL reports. Can you give us an updated prognostication as to when we might expect to see the revised reports? Thanks.

Brad Rimbey

----- Original Message -----

From: [Doug Leeper](#)

To: [Al Grubman \(grubman1@gmail.com\)](#) ; [Bill Geiger \(bgeiger@cityofbrooksville.us\)](#) ; [Bill Pouder \(bill.pouder@myfwc.com\)](#) ; [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](#) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](#) ; [Brent Whitley \(brentwhitley@sierra-properties.com\)](#) ; [Brockway Alys \(abrockway@co.hernando.fl.us\)](#) ; [Dennis D. Dutcher \(Dennis3ds@aol.com\)](#) ; [Frank DiGiovanni \(administration@inverness-fl.gov\)](#) ; [Greenwood, Kathleen \(Kathleen.Greenwood@dep.state.fl.us\)](#) ; [Helen Spive](#) ; [Hilliard, Dan \(2buntings@comcast.net\)](#) ; [Hoehn, Ted](#) ; [Hope Corona \(hopecorona@tampabay.rr.com\)](#) ; [Jim Farley \(jfarley682@aol.com\)](#) ; [Katie Tripp \(ktripp@savethemanatee.org\)](#) ; [Norman Hopkins \(norman@amyhrf.org\)](#) ; [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](#) ; [Richard Kane \(rkane@usgs.gov\)](#) ; [Richard Radacky \(rradacky@cityofbrooksville.us\)](#) ; [Ron Miller \(rmille76@tampabay.rr.com\)](#) ; [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](#) ; [Sullivan, Jack \(jsullivan@carltonfields.com\)](#) ; [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#) ; [Whitey Markle \(whmarkle@gmail.com\)](#) ; [\(janicehowie@aol.com\)](#) ; [Abdon Sidibie \(asidibie@chronicle.online.com\)](#) ; [Alex McPherson \(aamcpherson@msn.com\)](#) ; [Ann - 2 Hodgson \(ahodgson@gmail.com\)](#) ; [Ann Hodgson \(ahodgson@audubon.org\)](#) ; [Bernard Berauer \(bfberauer@aol.com\)](#) ; [Beverly Overa \(boverly@tampabay.rr.com\)](#) ; [Bill Garvin \(wgarvin@tampabay.rr.com\)](#) ; [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](#) ; [Brack Barker \(brack154@msn.com\)](#) ; [Carl Matthai \(thebabesmimi@gmail.com\)](#) ; [Casey, Emily \(fcnwr@atlantic.net\)](#) ; [Charles Dean \(dean.charles.web@flsenate.gov\)](#) ; [Charles Stonerock \(katcha.stonerock3@gmail.com\)](#) ; [Chris Safos \(chrissafos@embarqmail.com\)](#) ; [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](#) ; [Darlene Herth \(2cetechnology21@gmail.com\)](#) ; [Darrell Snedecor \(president@citruscountyaudubon.com\)](#) ; [Don Hiers \(dhiers3@gmail.com\)](#) ; [Douglas Dame \(doug_dame@yahoo.com\)](#) ; [Elaine Luther \(barneyandcap@hotmail.com\)](#) ; [Emily Casey \(ecasey21@hotmail.com\)](#) ; [Emma Knight \(eknight@wetlandsolutionsinc.com\)](#) ; [George Harbin \(gharbin@tampabay.rr.com\)](#) ; [George McClog \(classof47@gmail.com\)](#) ; [Gorgon O'Connor \(gorgon_o@yahoo.com\)](#) ; [Harry Steiner \(harry109@aol.com\)](#) ; [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](#) ; [jane Perrin \(jcsperinmd@sbcglobal.net\)](#) ; [Jerry Morton \(JerrMorton@aol.com\)](#) ; [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](#) ; [Jim Collins \(jimmiekey22@yahoo.com\)](#) ; [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](#) ; [Joe Calamari](#) ; [John Lord \(jclord109@yahoo.com\)](#) ; [John Mayo \(freedomway1@gmail.com\)](#) ; [Karen Johnstone \(kjohns213@sbcglobal.net\)](#) ; [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](#) ; [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](#) ; [Linda Pierce \(tpierce35@tampabay.rr.com\)](#) ; [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](#) ; [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](#) ; [Matthew Corona \(mcorona1@tampabay.rr.com\)](#) ; [Max Rhinesmith \(rhinesmith@webtv.net\)](#) ; [Amber Breland](#) ; [Andy Houston \(ahouston@crystalriverfl.org\)](#) ; [Art Yerian \(Al.Yerian@dep.state.fl.us\)](#) ; [Ben Weiss](#) ; [Beth Hovinde](#) ; [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](#) ; [Courtney Edwards \(cedwards@savethemanatee.org\)](#) ; [Dale Jones \(Jones@MyFWC.com\)](#) ; [Dana Bryan \(dana.bryan@dep.state.fl.us\)](#) ; [Darrell Snedecor](#) ; [David Hamilton \(countyadministrator@hernandocounty.us\)](#) ; [David Hankla \(david_hankla@fws.gov\)](#) ; [Don Wright \(wright@sura.org\)](#) ; [Dusty McDevitt \(mcdevitt@usgs.gov\)](#) ; [Ed Call \(marvin.call@MyFWC.com\)](#) ; [Eric Nagid \(eric.nagid@MyFWC.com\)](#) ; [FFWCC MFLs Review E-Mail Address \(fwccconservationplanningservices@myfwc.com\)](#) ; [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](#) ; [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](#) ; [Joyce Kleen@fws.gov](#) ; [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](#) ; [Keith Ramos \(Keith.Ramos@fws.gov\)](#) ; [Kent Smith](#)

(kent.smith2@myfwc.com) ; [Kevin Grimsley \(kjgrims@usgs.gov\)](mailto:Kevin.Grimley@usgs.gov) ; [Michael Lusk \(Michael_Lusk@fws.gov\)](mailto:Michael.Lusk@fws.gov) ; [Mitchell Newberger \(mnewberger@verizon.net\)](mailto:Mitchell.Newberger@verizon.net) ; [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](mailto:Nick.Robbins@dep.state.fl.us) ; [Nicole Adimey \(Nicole_Adimey@fws.gov\)](mailto:Nicole.Adimey@fws.gov) ; [Paul Thomas \(paulw.thomas@MyFWC.com\)](mailto:Paul.Thomas@MyFWC.com) ; [Ron Mezich \(ron.mezich@MyFWC.com\)](mailto:Ron.Mezich@MyFWC.com) ; [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](mailto:Shelly.Yaun@dep.state.fl.us) ; [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](mailto:Toby.Brewer@dep.state.fl.us) ; [Tracy Colson](#) ; [Wallace, Traci](#) ; [Adkins, Jim](#) ; [Bitter, Jim](#) ; [Bryant, Richard](#) ; [Cantero, Vince](#) ; [Carpenter, Paul](#) ; [Daniels, Chase](#) ; [Dueker, Duane](#) ; [Gramling, Hugh](#) ; [Harrelson, Cathy](#) ; [Hubbell, Pete](#) ; [Johnson, Eric](#) ; [Johnson, Martyn](#) ; [Keim, Robert](#) ; [Kincaid, Todd](#) ; [Kline, Allen](#) ; [Knight, Bob](#) ; [Knight, Robert](#) ; [Knudson, Ross](#) ; [Overa, Tom](#) ; [Owen, Rick](#) ; [Parrow, Liz](#) ; [Rolf Auermann \(rauerman@tampabay.rr.com\)](mailto:Rolf.Auermann@tampabay.rr.com) ; [Rusnak, Teddi](#) ; [Tarochinoe, Joseph](#) ; [Watkins, Priscilla](#) ; [Watrous, Russell](#) ; [Wilson, Roger](#)

Cc: [Amy K. Harroun](#) ; [Barbara Matrone](#) ; [Cara S. Martin](#) ; [Chris Zajac](#) ; [Darcy A. Brune](#) ; [Dave Dewitt](#) ; [Doug Leeper](#) ; [Gary E. Williams](#) ; [Jay Yingling](#) ; [Karen Lloyd](#) ; [Ken Weber](#) ; [Kenneth R. Herd](#) ; [Laura Donaldson](#) ; [Lou Kavouras](#) ; [Mark Barcelo](#) ; [Mark Hammond](#) ; [Mike Heyl](#) ; [Paul Williams](#) ; [Robyn O. Felix](#) ; [Ron Basso](#) ; [Sid Flannery](#) ; [Veronica Crow](#) ; [Xinjian Chen](#) ; [Yassert Gonzalez](#)

Sent: Friday, January 13, 2012 3:55 PM

Subject: Update - Chassahowitzka and Homosassa Minimum Flows

Greetings:

I'm writing to provide an update on the status of minimum flows development for the Chassahowitzka and Homosassa River systems by the Southwest Florida Water Management District. The District would like to make it as convenient as possible for the stakeholders to review final reports and attend the Governing Board meeting where the information will be presented. To provide staff the necessary time to consider public concerns, complete revisions, and provide stakeholders an opportunity to review the revised reports, District staff will not be presenting the proposed minimum flows rule amendments to the District Governing Board until April.

The revised reports are expected to be ready for public review by the end of February. District staff expects to have the final reports ready for the rule amendments presentation, which is planned for April 24, 2012 at the Governing Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for development of minimum flows for the Chassahowitzka and Homosassa River systems, or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1901 / Virus Database: 2109/4737 - Release Date: 01/11/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: Doug Leeper
To: "[Lisa-Perras Gordon](#)"
Bcc: [Mike Heyl](#); [Veronica Crow](#); [Jerry Mallams](#); [Kenneth R. Herd](#); [Eric DeHaven](#); [Mark Hammond](#); [Laura Donaldson](#); [Christopher Pettit](#); [Gary E. Williams](#); [Llewellyn, Janet \(Janet.Llewellyn@dep.state.fl.us\)](#); [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#); [Darcy A. Brune](#)
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows
Date: Thursday, March 15, 2012 12:15:00 PM

Hi Lisa:

I'm writing to provide an update on the development of updated reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District for the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have updated reports for the systems ready for public review by the end of April or early in May. Providing stakeholders with time to review the updated reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please let me know if you have any questions concerning this updated schedule.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Lisa-Perras Gordon [<mailto:Gordon.Lisa-Perras@epamail.epa.gov>]
Sent: Tuesday, March 13, 2012 10:34 AM
To: Doug Leeper
Subject: RE: Update - Chassahowitzka and Homosassa Minimum Flows

Hey there Doug,

I wanted to check in with you regarding the MFL for Chassahowitzka. It's my understanding that there is a planned revision. Do you have a proposed date when that revision will be released for review? As you may imagine from the strong public interest, we continue to get inquiries regarding this MFL.

Thanks so much,

Lisa

Lisa Perras Gordon, Environmental Scientist
Water Quality Planning Branch
Water Protection Division
U.S. Environmental Protection Agency
Atlanta, Georgia
(404) 562-9317

From: Doug Leeper
To: [Al Grubman \(grubman1@gmail.com\)](mailto:grubman1@gmail.com); [Bill Geiger \(bgeiger@cityofbrooksville.us\)](mailto:bgeiger@cityofbrooksville.us); [Bill Pouder \(bill.pouder@myfwc.com\)](mailto:bill.pouder@myfwc.com); [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](mailto:Boyd_Blihovde@fws.gov); [Brad Rimbey \(BWR.CRRRC@tampabay.rr.com\)](mailto:Brad.Rimbey@BWR.CRRRC@tampabay.rr.com); [Brent Whitley \(brentwhitley@sierra-properties.com\)](mailto:brentwhitley@sierra-properties.com); [Brockway, Alys \(abrockway@co.hernando.fl.us\)](mailto:Alys@brockway.com); [Dennis D. Dutcher \(Dennis3ds@aol.com\)](mailto:Dennis3ds@aol.com); [Frank DiGiovanni \(administration@inverness-fl.gov\)](mailto:administration@inverness-fl.gov); [Greenwood, Kathleen; "Helen Spive"; Hilliard, Dan \(2buntings@comcast.net\)](mailto:Helen.Spive@hilliard.com); [Hoehn, Ted; Hope Corona \(hopecorona@tampabay.rr.com\)](mailto:Hoehn.Ted@hopecorona.com); [Jim Farley \(jfarley682@aol.com\)](mailto:jfarley682@aol.com); [Katie Tripp \(ktripp@savethemanatee.org\)](mailto:ktripp@savethemanatee.org); [Norman Hopkins \(norman@amyhrf.org\)](mailto:normanhopkins@normanamyhrf.org); [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](mailto:rebecca.bays@bocc.citrus.fl.us); [Richard Kane \(rkane@usgs.gov\)](mailto:rkane@usgs.gov); [Richard Radack \(rradack@cityofbrooksville.us\)](mailto:Richard.Radack@cityofbrooksville.us); [Ron Miller \(rmille76@tampabay.rr.com\)](mailto:rmille76@tampabay.rr.com); [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](mailto:sarah.tenison@cityofweekiwachee@yahoo.com); [Sullivan, Jack \(jsullivan@carltonfields.com\)](mailto:jsullivan@carltonfields.com); [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](mailto:Voyles.Carolyn@Carolyn.Voyles@dep.state.fl.us); [Whitey Markle \(whmarkle@gmail.com\)](mailto:whmarkle@gmail.com); [Janice Howie \(janicehowie@aol.com\)](mailto:janicehowie@aol.com); [Abdon Sidibie \(asidibie@chronicle.online.com\)](mailto:Abdon.Sidibie@chronicle.online.com); [Alex McPherson \(aamcpherson@msn.com\)](mailto:aamcpherson@msn.com); [Ann - 2 Hodgson \(ahodgson@gmail.com\)](mailto:Ann-2.Hodgson@ahodgson@gmail.com); [Ann Hodgson \(ahodgson@audubon.org\)](mailto:ahodgson@audubon.org); [Bernard Berauer \(bfberauer@aol.com\)](mailto:bfberauer@aol.com); [Beverly Overa \(boverly@tampabay.rr.com\)](mailto:boverly@tampabay.rr.com); [Bill Garvin \(wgarvin@tampabay.rr.com\)](mailto:wgarvin@tampabay.rr.com); [Bob Caldwell \(BobCaldwell51@yahoo.com\)](mailto:Bob.Caldwell@BobCaldwell51@yahoo.com); [Brack Barker \(brack154@msn.com\)](mailto:brack154@msn.com); [Brad Rimbey \(BWR.CRRRC@tampabay.rr.com\)](mailto:Brad.Rimbey@BWR.CRRRC@tampabay.rr.com); [Carl Matthai \(thebabesmimi@gmail.com\)](mailto:Carl.Matthai@thebabesmimi@gmail.com); [Casey, Emily \(fcnwr@atlantic.net\)](mailto:Casey.Emily@fcnwr.atlantic.net); [Charles Dean \(dean.charles.web@flsenate.gov\)](mailto:dean.charles.web@flsenate.gov); [Charles Stonerock \(katcha.stonerock3@gmail.com\)](mailto:katcha.stonerock3@gmail.com); [Chris Safos \(chrisfafos@embargo.com\)](mailto:chrisfafos@embargo.com); [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](mailto:mczerwin@tampabay.rr.com); [Darlene Herth \(2cetechology21@gmail.com\)](mailto:Darlene.Herth@2cetechology21@gmail.com); [Darrell Snedecor \(president@citruscountyaudubon.com\)](mailto:president@citruscountyaudubon.com); [Don Hiers \(dhiers3@gmail.com\)](mailto:Don.Hiers@dhiers3@gmail.com); [Douglas Dame \(doug_dame@yahoo.com\)](mailto:doug_dame@yahoo.com); [Elaine Luther \(barneyandcpc@hotmail.com\)](mailto:Elaine.Luther@barneyandcpc@hotmail.com); [Emily Casey \(ecasey21@hotmail.com\)](mailto:ecasey21@hotmail.com); [Emma Knight \(eknight@wetlandsolutionsinc.com\)](mailto:eknight@wetlandsolutionsinc.com); [George Harbin \(gharbin@tampabay.rr.com\)](mailto:George.Harbin@gharbin@tampabay.rr.com); [George McClog \(classof47@gmail.com\)](mailto:Gorgon.O'Connor@gorgon.o@yahoo.com); [Harry Steiner \(harry109@aol.com\)](mailto:Gorgon O'Connor (gorgon.o@yahoo.com); <a href=); ["Helen Spivey"; Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](mailto:Helen.Spivey@calbeckj@citrus.k12.fl.us); [Jane Perrin \(jcsperinmd@sbcglobal.net\)](mailto:jane.perrin@jcsperinmd@sbcglobal.net); [Janet Garvin \(wgarvin@tampabay.rr.com\)](mailto:Janet.Garvin@wgarvin@tampabay.rr.com); [Jerry Morton \(JerrMorton@aol.com\)](mailto:Jerr.Morton@JerrMorton@aol.com); [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](mailto:gourliej@thirdplanetwind.com); [Jim Collins \(jimmiekey22@yahoo.com\)](mailto:Jim.Collins@jimmiekey22@yahoo.com); [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](mailto:Jimmie.Smith@myfloridahouse.gov); [Joe Calamari; John Howie \(janicehowie@aol.com\)](mailto:Joe.Calamari@john.howie@janicehowie@aol.com); [John Lord \(jclord109@yahoo.com\)](mailto:John.Lord@jclord109@yahoo.com); [John Mayo \(freedomway1@gmail.com\)](mailto:John.Mayo@freedomway1@gmail.com); [Karen Johnstone \(kjohns213@sbcglobal.net\)](mailto:karen.johnstone@kjohns213@sbcglobal.net); [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](mailto:kim.caldwell@kimberly@yahoo.com); [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](mailto:Kim.Dinkins@kim.dinkins@marioncountyfl.org); [Linda Pierce \(tpierce35@tampabay.rr.com\)](mailto:tpierce35@tampabay.rr.com); [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](mailto:Linda.Vanderveen@hernandoaudubon@yahoo.com); [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](mailto:mlynn1978@tampabay.rr.com); [Matthew Corona \(mcorona1@tampabay.rr.com\)](mailto:Matthew.Corona@mcorona1@tampabay.rr.com); [Max Rhinesmith \(rhinesmith@webtv.net\)](mailto:rhinesmith@webtv.net); ["Amber Breland"; Andy Houston \(ahouston@crystalriverfl.org\)](mailto:Amber.Breland@andy.houston@ahouston@crystalriverfl.org); [Art Yerian \(Al.Yerian@dep.state.fl.us\)](mailto:Al.Yerian@dep.state.fl.us); ["Ben Weiss"; Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](mailto:Ben.Weiss@ben.thorpe@brad.thorpe@bocc.citrus.fl.us); [Courtney Edwards \(cedwards@savethemanatee.org\)](mailto:cedwards@savethemanatee.org); [Dale Jones \(Jones@MyFWC.com\)](mailto:Dale.Jones@Jones@MyFWC.com); [Dana Bryan \(dana.bryan@dep.state.fl.us\)](mailto:dana.bryan@dep.state.fl.us); ["Darrell Snedecor"; David Hamilton \(countyadministrator@hernandocounty.us\)](mailto:Darrell.Snedecor@David.Hamilton@countyadministrator@hernandocounty.us); [David Hankla \(david_hankla@fws.gov\)](mailto:david.hankla@fws.gov); [Don Wright \(wright@sura.org\)](mailto:Don.Wright@wright@sura.org); [Dusty McDevitt \(mcdevitt@usgs.gov\)](mailto:mcdevitt@usgs.gov); [Ed Call \(marvin.call@MyFWC.com\)](mailto:marvin.call@MyFWC.com); [Eric Nagid \(eric.nagid@MyFWC.com\)](mailto:eric.nagid@eric.nagid@MyFWC.com); [FFWCC MFLs Review E-Mail Address \(fwccconservationplanningservices@myfwc.com\)](mailto:ffwcc.mfls.review@fwccconservationplanningservices@myfwc.com); [J. J. Kenney \(fj.kennedy@bocc.citrus.fl.us\)](mailto:fj.kennedy@bocc.citrus.fl.us); [Jennene Norman-Vacha \(invacha@ci.brooksville.fl.us\)](mailto:jennene.norman-vacha@invacha@ci.brooksville.fl.us); [Joyce Kleen@fws.gov; Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](mailto:kandi.harper@kandi.harper@bocc.citrus.fl.us); [Keith Ramos \(Keith.Ramos@fws.gov\)](mailto:Keith.Ramos@Keith.Ramos@fws.gov); [Kent Smith \(kent.smith2@myfwc.com\)](mailto:kent.smith2@myfwc.com); [Kevin Grimsley \(kjgrims@usgs.gov\)](mailto:Kevin.Grimmsley@kjgrims@usgs.gov); [Michael Lusk \(Michael.Lusk@fws.gov\)](mailto:Michael.Lusk@Michael.Lusk@fws.gov); [Mitchell Newberger \(mnewberger@verizon.net\)](mailto:mnewberger@verizon.net); [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](mailto:Nick.Robbins@Nick.Robbins@dep.state.fl.us); [Nicole Adimey \(Nicole.Adimey@fws.gov\)](mailto:Nicole.Adimey@Nicole.Adimey@fws.gov); [Paul Thomas \(paulw.thomas@MyFWC.com\)](mailto:paulw.thomas@MyFWC.com); [Ron Mezich \(ron.mezich@MyFWC.com\)](mailto:ron.mezich@ron.mezich@MyFWC.com); [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](mailto:Shelly.Yaun@shelly.yaun@dep.state.fl.us); [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](mailto:Toby.Brewer@Toby.Brewer@dep.state.fl.us); ["Tracy Colson"; Wallace, Traci; "Adkins, Jim"; "Bitter, Jim"; "Bryant, Richard"; "Calbeck, Jack"; "Cantero, Vince"; "Carpenter, Paul"; "Daniels, Chase"; "Darlene Herth \(2cetechology21@gmail.com\)"; "Dueker, Duane"; "Gordon, Lisa-Perras"; "Gramling, Hugh"; "Harrelson, Cathy"; "Hubbell, Pete"; "Johnson, Eric"; "Johnson, Martyn"; "Keim, Robert"; "Kincaid, Todd"; "Kline, Allen"; "Knight, Bob"; "Knight, Robert"; "Knudson, Ross"; "Overa, Tom"; "Owen, Rick"; "Parrow, Liz"; "Pierce, Thomas"; "Rolf Auermann \(rauerman@tampabay.rr.com\)"; "Rusnak, Teddi"; "Tarochinoe, Joseph"; "Watkins, Priscilla"; "Watrous, Russell"; "Wilson, Roger"](mailto:Tracy.Colson@Tracy.Colson@dep.state.fl.us)
Cc: [Cara S. Martin](mailto:Cara.S.Martin@cara.s.martin@fws.gov); [Chris Zajac](mailto:Chris.Zajac@chris.zajac@fws.gov); [Christopher Pettit](mailto:Christopher.Pettit@christopher.pettit@fws.gov); [Darcy A. Brune](mailto:Darcy.A.Brune@darcy.a.brune@fws.gov); [Dave Dewitt](mailto:Dave.Dewitt@dave.dewitt@fws.gov); [Doug Leeper](mailto:Doug.Leeper@doug.leeper@fws.gov); [Gary E. Williams](mailto:Gary.E.Williams@gary.e.williams@fws.gov); [Jay Yingling](mailto:Jay.Yingling@jay.yingling@fws.gov); [Karen West](mailto:Karen.West@karen.west@fws.gov); [Kenneth R. Herd](mailto:Kenneth.R.Herd@kenneth.r.herd@fws.gov); [Laura Donaldson](mailto:Laura.Donaldson@laura.donaldson@fws.gov); [Lou Kavouras](mailto:Lou.Kavouras@lou.kavouras@fws.gov); [Mark Barcelo](mailto:Mark.Barcelo@mark.barcelo@fws.gov); [Mark Hammond](mailto:Mark.Hammond@mark.hammond@fws.gov); [Michael Molligan](mailto:Michael.Molligan@michael.molligan@fws.gov); [Mike Heyl](mailto:Mike.Heyl@mike.hey@fws.gov); ["Paul Williams"; Robyn O. Felix](mailto:Paul.Williams@paul.williams@fws.gov); [Ron Basso](mailto:Ron.Basso@ron.basso@fws.gov); [Sid Flannery](mailto:Sid.Flannery@sid.flannery@fws.gov); [Tammy Hinkle](mailto:Tammy.Hinkle@tammy.hinkle@fws.gov); [Veronica Craw](mailto:Veronica.Craw@veronica.craw@fws.gov); [Xinjian Chen](mailto:Xinjian.Chen@xinjian.chen@fws.gov); [Yassert Gonzalez](mailto:Yassert.Gonzalez@yassert.gonzalez@fws.gov); [Jerry Mallams](mailto:Jerry.Mallams@jerry.mallams@fws.gov)
Subject: Update on Chassahowitzka and Homosassa MFLs
Date: Thursday, March 15, 2012 12:25:00 PM

Greetings:

I'm writing to provide an update on the development of revised reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District for the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have revised reports for the systems ready for public review by the end of April or early in May.

Providing stakeholders with time to review the reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for the Chassahowitzka and Homosassa minimum flows or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Doug Leeper
To: ["Brent Whitley"](#)
Subject: RE: Update on Chassahowitzka and Homosassa MFLs
Date: Thursday, March 15, 2012 5:01:00 PM

Hi Brent:

The EPA Atlanta office has received inquiries from a stakeholder or stakeholders interested in the Chassahowitzka MFLs. Lisa Gordon, an Environmental Scientist with the Agency has communicated with staff regarding the proposed minimum flows. Lisa recently contacted me to inquire on the status of our revised MFLs report for the Chassahowitzka and I provided her with the schedule update information that I sent to you and others earlier today.

The EPA inquiry has not really slowed up the development of MFLs for Springs Coast systems. Rather, I simply have not had much time to devote to the necessary additional data analyses and report revision, due to other work responsibilities.

Please let me know if you have additional questions.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Brent Whitley [<mailto:BrentWhitley@Sierra-Properties.com>]
Sent: Thursday, March 15, 2012 12:32 PM
To: Doug Leeper
Subject: RE: Update on Chassahowitzka and Homosassa MFLs

Doug,

What is this I hear about EPA getting involved? Confidentially, is this slowing you up?

Brent

From: Doug Leeper [<mailto:Doug.Leeper@swfwmd.state.fl.us>]
Sent: Thursday, March 15, 2012 12:25 PM
To: Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRRC@tampabay.rr.com); Brent Whitley; Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen; Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona

(hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); Rebecca Bays (rebecca.bays@bocc.citrus.fl.us); Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Brad Rimbey (BWR.CRRRC@tampabay.rr.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandsolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Helen Spivey; Jack Calbeck (calbeckj@citrus.k12.fl.us); Jane Perrin (jcsperinmd@sbcglobal.net); Janet Garvin (wgarvin@tampabay.rr.com); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Howie (janicehowie@aol.com); John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (tpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; Brad Thorpe (brad.thorpe@bocc.citrus.fl.us); Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com); J. J. Kenney (jj.kenney@bocc.citrus.fl.us); Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce Kleen@fws.gov; Kandi Harper (kandi.harper@bocc.citrus.fl.us); Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Calbeck, Jack; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Darlene Herth (2cetechology21@gmail.com); Dueker, Duane; Gordon, Lisa-Perras; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Johnson, Martyn; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; Knight, Robert; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Pierce, Thomas; Rolf Auermann (rauerman@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger

Cc: Cara S. Martin; Chris Zajac; Christopher Pettit; Darcy A. Brune; Dave Dewitt; Doug Leeper; Gary E. Williams; Jay Yingling; Karen West; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Michael Molligan; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Tammy Hinkle; Veronica Craw; Xinjian Chen; Yassert Gonzalez; Jerry Mallams

Subject: Update on Chassahowitzka and Homosassa MFLs

Greetings:

I'm writing to provide an update on the development of revised reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District for

the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have revised reports for the systems ready for public review by the end of April or early in May. Providing stakeholders with time to review the reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for the Chassahowitzka and Homosassa minimum flows or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: Doug Leeper
To: ["ROBERT A. KNIGHT"](#)
Cc: [Mike Heyl](#); [Chris Zajac](#); [Cara S. Martin](#); [Darcy A. Brune](#)
Subject: RE: request for e-mail list addition
Date: Monday, March 19, 2012 3:55:00 PM

Ms. Ouellette & Mr. Knight:

I've added Mr. Cheek to my Springs Coast minimum flows and levels e-mail list per your request.

Hope you have a great afternoon.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: CATHERINE J. OUELLETTE [mailto:CATHERINE.OUELLETTE@bocc.citrus.fl.us] **On Behalf Of**
ROBERT A. KNIGHT
Sent: Monday, March 19, 2012 3:48 PM
To: Doug Leeper
Cc: KEN K. CHEEK
Subject: RE: Update on Chassahowitzka and Homosassa MFLs

Good afternoon!

Would you please add Mr. Ken Cheek to your distribution list? Ken is the Interim Water Resources Director for Citrus County. Ken's email address is: ken.cheek@bocc.citrus.fl.us. Thank you.

Sincerely,

Catherine J. Ouellette, Executive Secretary
Citrus County Department of Water Resources
3600 W. Sovereign Path, Suite 202
Lecanto, FL 34461
Office: (352) 527-7646
Fax: (352) 527-5429
Catherine.Ouellette@bocc.citrus.fl.us
[Citrus County's Official Government Website](#)

From: Doug Leeper [mailto:Doug.Leeper@swfwmd.state.fl.us]

Sent: Thursday, March 15, 2012 12:25 PM

To: Al Grubman (grubman1@gmail.com); Bill Geiger (bgeiger@cityofbrooksville.us); Bill Pouder (bill.pouder@myfwc.com); Boyd Blihovde (Boyd_Blihovde@fws.gov); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Brent Whitley (brentwhitley@sierra-properties.com); Brockway, Alys (abrockway@co.hernando.fl.us); Dennis D. Dutcher (Dennis3ds@aol.com); Frank DiGiovanni (administration@inverness-fl.gov); Greenwood, Kathleen; Helen Spive; Hilliard, Dan (2buntings@comcast.net); Hoehn, Ted; Hope Corona (hopecorona@tampabay.rr.com); Jim Farley (jfarley682@aol.com); Katie Tripp (ktripp@savethemanatee.org); Norman Hopkins (norman@amyhrf.org); REBECCA K. BAYS; Richard Kane (rkane@usgs.gov); Richard Radacky (rradacky@cityofbrooksville.us); Ron Miller (rmille76@tampabay.rr.com); Sarah Tenison (cityofweekiwachee@yahoo.com); Sullivan, Jack (jsullivan@carltonfields.com); Voyles, Carolyn (Carolyn.Voyles@dep.state.fl.us); Whitey Markle (whmarkle@gmail.com); (janicehowie@aol.com); Abdon Sidibie (asidibie@chronicle.online.com); Alex McPherson (aamcpherson@msn.com); Ann - 2 Hodgson (ahodgson@gmail.com); Ann Hodgson (ahodgson@audubon.org); Bernard Berauer (bfberauer@aol.com); Beverly Overa (boverly@tampabay.rr.com); Bill Garvin (wgarvin@tampabay.rr.com); Bob Caldwell (Bobcaldwell51@yahoo.com); Brack Barker (brack154@msn.com); Brad Rimbey (BWR.CRRC@tampabay.rr.com); Carl Matthai (thebabesmimi@gmail.com); Casey, Emily (fcnwr@atlantic.net); Charles Dean (dean.charles.web@flsenate.gov); Charles Stonerock (katcha.stonerock3@gmail.com); Chris Safos (chrissafos@embarqmail.com); Czerwinski, Mike (mczerwin@tampabay.rr.com); Darlene Herth (2cetechology21@gmail.com); Darrell Snedecor (president@citruscountyaudubon.com); Don Hiers (dhiers3@gmail.com); Douglas Dame (doug_dame@yahoo.com); Elaine Luther (barneyandcap@hotmail.com); Emily Casey (ecasey21@hotmail.com); Emma Knight (eknight@wetlandssolutionsinc.com); George Harbin (gharbin@tampabay.rr.com); George McClog (classof47@gmail.com); Gorgon O'Connor (gorgon_o@yahoo.com); Harry Steiner (harry109@aol.com); Helen Spivey; Jack Calbeck (calbeckj@citrus.k12.fl.us); jane Perrin (jcsperinmd@sbcglobal.net); Janet Garvin (wgarvin@tampabay.rr.com); Jerry Morton (JerrMorton@aol.com); Jessie Gourlie (gourliej@thirdplanetwind.com); Jim Collins (jimmiekey22@yahoo.com); Jimmie Smith (Jimmie.Smith@myfloridahouse.gov); Joe Calamari; John Howie (janicehowie@aol.com); John Lord (jclord109@yahoo.com); John Mayo (freedomway1@gmail.com); Karen Johnstone (kjohns213@sbcglobal.net); Kim Caldwell (caldwell.kimberly@yahoo.com); Kim Dinkins (kim.dinkins@marioncountyfl.org); Linda Pierce (tpierce35@tampabay.rr.com); Linda Vanderveen (hernandoaudubon@yahoo.com); Mary Anne Lynn (mlynn1978@tampabay.rr.com); Matthew Corona (mcorona1@tampabay.rr.com); Max Rhinesmith (rhinesmith@webtv.net); Amber Breland; Andy Houston (ahouston@crystalriverfl.org); Art Yerian (Al.Yerian@dep.state.fl.us); Ben Weiss; Beth Hovinde; BRAD B. THORPE; Courtney Edwards (cedwards@savethemanatee.org); Dale Jones (Jones@MyFWC.com); Dana Bryan (dana.bryan@dep.state.fl.us); Darrell Snedecor; David Hamilton (countyadministrator@hernandocounty.us); David Hankla (david_hankla@fws.gov); Don Wright (wright@sura.org); Dusty McDevitt (mcdevitt@usgs.gov); Ed Call (marvin.call@MyFWC.com); Eric Nagid (eric.nagid@MyFWC.com); FFWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com); JJ KENNEY; Jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us); Joyce_Kleen@fws.gov; KANDI K. HARPER; Keith Ramos (Keith.Ramos@fws.gov); Kent Smith (kent.smith2@myfwc.com); Kevin Grimsley (kjgrims@usgs.gov); Michael Lusk (Michael_Lusk@fws.gov); Mitchell Newberger (mnewberger@verizon.net); Nick Robbins (Nick.Robbins@dep.state.fl.us); Nicole Adimey (Nicole_Adimey@fws.gov); Paul Thomas (paulw.thomas@MyFWC.com); Ron Mezich (ron.mezich@MyFWC.com); Shelly Yaun (shelly.yaun@dep.state.fl.us); Toby Brewer (Toby.Brewer@dep.state.fl.us); Tracy Colson; Wallace, Traci; Adkins, Jim; Bitter, Jim; Bryant, Richard; Calbeck, Jack; Cantero, Vince; Carpenter, Paul; Daniels, Chase; Darlene Herth (2cetechology21@gmail.com); Dueker, Duane; Gordon, Lisa-Perras; Gramling, Hugh; Harrelson, Cathy; Hubbell, Pete; Johnson, Eric; Johnson, Martyn; Keim, Robert; Kincaid, Todd; Kline, Allen; Knight, Bob; ROBERT A. KNIGHT; Knudson, Ross; Overa, Tom; Owen, Rick; Parrow, Liz; Pierce, Thomas; Rolf Auermann (rauermann@tampabay.rr.com); Rusnak, Teddi; Tarochinoe, Joseph; Watkins, Priscilla; Watrous, Russell; Wilson, Roger

Cc: Cara S. Martin; Chris Zajac; Christopher Pettit; Darcy A. Brune; Dave Dewitt; Doug Leeper; Gary E. Williams; Jay Yingling; Karen West; Kenneth R. Herd; Laura Donaldson; Lou Kavouras; Mark Barcelo; Mark Hammond; Michael Molligan; Mike Heyl; Paul Williams; Robyn O. Felix; Ron Basso; Sid Flannery; Tammy Hinkle; Veronica Craw; Xinjian Chen; Yassert Gonzalez; Jerry Mallams

Subject: Update on Chassahowitzka and Homosassa MFLs

Greetings:

I'm writing to provide an update on the development of revised reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District for the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have revised reports for the systems ready for public review by the end of April or early in May. Providing stakeholders with time to review the reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for the Chassahowitzka and Homosassa minimum flows or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

Saving manatees from the cold, naturally

By [Kate Spinner](#)

Published: Friday, February 24, 2012 at 4:27 p.m.

Before settlers ditched and drained Florida, more water bubbled up from beneath the ground to feed rivers and streams or seeped slowly into creeks from soggy wetlands. Warmed by the Earth, that water kept manatees alive during the chilliest days of winter.

But Florida's development upended that natural system. Now the endangered manatees, aquatic cousins to the elephant, rely largely on people's demand for electricity to get them through the winter.

Power plants provide the only source of warmth in many of the state's diminished waterways, attracting manatees by the hundreds during cold snaps. Yet state wildlife regulators say power plants are not manatees' best insurance plan, because they can fail suddenly, may close temporarily or have to be remodeled.

Hundreds of manatees died during the last two years — two of the coldest winters on record — but even more would have perished if even one power plant failed. The need is so critical that Florida Power & Light is spending \$250,000 a year to keep water warm for manatees at its Cape Canaveral plant while a new operation is being built there.

Thinking long-term, the Florida Fish and Wildlife Conservation Commission is looking to the state's remaining natural areas — including one in North Port — to provide permanent manatee protection during cold days.

Successfully preserving natural warm areas hinges on limiting the amount of water people take from the spring-fed rivers for drinking water, agriculture, recreation and other uses.

But a separate agency, the [Southwest Florida Water Management District](#), determines how much water can be taken from rivers and streams, through regulations called minimum flows.

Flows in almost every spring in the state are declining, but not quite enough to significantly put manatees in danger now, said Ron Mezich, a biological scientist with the FWC. The pressure on those resources is increasing, however.

"We're in pretty good shape. That's why we're pushing for these minimum flows to get set now rather than later so we don't lose more flow than necessary," Mezich said.

Need for warmth

Manatees require warm water to survive the winter. When water temperatures fall below 68 degrees, the large animals swim inland, finding refuge in spring-fed creeks and rivers where water temperatures are higher.

This year's mild weather made the winter easy for the big mammals. Only nine so far this year have been found dead from cold stress, even after a few days of near freezing weather.

The story was different in 2010 and 2011, when prolonged freezes took an enormous toll. Wildlife rescuers found about 400 dead manatees, with the likelihood that many more died out of sight.

Those large numbers, for a population of animals estimated at about 5,000, raised questions among FWC staff and manatee advocates about whether there are enough natural warm sites for manatees to gather.

Although hundreds of manatees congregate at power plants to shelter from the cold, a failure of the plant or a reduction in its heat generation could lead to a deadly situation. Manatees also tend to survive better at natural sites, manatee advocates say.

"Certainly manatees are most protected at natural warm water sites and we've seen that in the last few winters," said Katie Tripp, director of science and conservation with Save the Manatee Club. "The cold stress in and around the springs has been lower than it has been around power plant waters because it's natural."

Managing flow

Once the water district sets a minimum flow, it puts a limit on how much water developers, farmers or other industries can take from the river or its surrounding aquifers.

In the Homosassa, Chassahowitzka and Crystal rivers north of Tampa, springs keep 72-degree water constantly flowing. During cold days, hundreds of manatees pack into those rivers, making them among the most important refuges in the state.

To protect them, the water district was originally supposed to set minimum flows for the Crystal River in 2010 and the other two rivers in 2011.

"We're a little bit delayed relative to our original schedule," said Doug Leeper, the water district's chief environmental scientist. He blamed the delay on the complexity of the river systems and the large number of "stakeholders."

Among the most contentious is the Chassahowitzka. The district proposed that the river could handle an 11 percent reduction in flow without significantly harming wildlife, including manatees. Residents protested, appalled at any flow reduction.

The district is not allowed to set a minimum flow that would cause significant harm, a subjective threshold.

Leeper said the district is in talks with residents but any proposed minimum flow has to be approved by the governor-appointed board that manages the water district. Pressure comes from both sides: residents and those who may want to tap the river's water in the future.

"Those pressures don't necessarily influence the scientific basis for minimum flows, but they can come into play when political bodies, such as the governing board, decides not to implement minimum flows," Leeper said.

On the northeast coast of Florida, where Blue Spring also draws hundreds of manatees, pressure from water suppliers near Orlando is threatening flow rules already in place.

"There's some push back to allow more pumping of groundwater in that area," Mezich said.

Flow protections for Blue Spring, set in 2008, came after a lengthy battle, Tripp said. The rules require flows to increase so that the spring can host more manatees in the future.

Improving access

Maintaining water flow is one part of the equation in protecting wintering manatees. Another is improving access to warm water.

Of the 22 small and large natural springs across the state, more than half have barriers that impede manatees, according to a 2006 assessment by the federal Marine Mammal Commission.

North Port's Warm Mineral Spring is one. Known as a refuge for tourists seeking a soothing dip in Florida's only true warm spring, it also could host manatees if they could get there.

The spring seeps into Salt Creek, a shallow and narrow tributary that runs straight through a neighborhood before it empties into the Myakka River.

There are weirs and low tides to navigate, limiting the number of manatees the creek can hold. Still more than 70 manatees at a time have packed the creek during cold weather.

The FWC is researching ways to make the creek more accessible, possibly by dredging parts of it, if water flows from the spring are sufficient.

Salt Creek and Warm Mineral Spring does not attract as many manatees as other refuges, but it is a critical site because it is the only natural warm water area in Southwest Florida.

"It's important," Mezich said. "In the long term it's very important."

From: [2buntings](#)
To: [2buntings](#)
Subject: Our Water, Our Future
Date: Thursday, April 26, 2012 7:52:19 PM
Attachments: [Our Water-4-1.pdf](#)

Greetings,

Over the course of the last few days I have been immersed in a storm of interaction with various players in the Florida water wars on both sides of the debate. Some thoughts extended from, of all places, Nevada, triggered a personal review of a 5 part series written for and published in the Citrus Chronicle in the fall of 2010. After this passage of time I was somewhat surprised to find little within that I would change if writing it today. Thought I'd share it with you in case you missed the printed version in the Chronic. If so inclined, feel free to pass it around. Forgive the format please, this is how the editorial staff requested it be delivered.

For any who are interested, the WAR, Inc quarterly meeting will be held at the Yankeetown Woman's Club on 16 May 2012 from 7-9PM. #5 56th Street, Yankeetown. Desserts and refreshments are on the house and our guest speaker is Dr. Bob Weisberg from USF. Dr. Weisberg is a physical oceanographer with expertise in Gulf currents, and west coast estuaries. His presentation will generally address impacts to coastal estuaries resulting from reduced riverine system flows.

Semper Swamp,

Dan

--

Dan Hilliard
Director
W.A.R. Inc.(501.C3)
352/447-5434
WWW.WARINCONLINE.COM

Our Water, Our Future Part 1: The state of our State

There are generally two perspectives shared by residents of Florida regarding our water resources. One held by the Boomer Generation, born or raised here recognizes we have lost much of our water resource wealth since WWII. The other is shared by those more recent residents who may not have reference to such change and therefore see little objection to the current state of affairs. Ask either group these questions and you will hear wildly disparate responses: ***Do you know of a lake, river or estuary in Florida that is as healthy and productive today as when you first saw it? Do you know of two?***

Florida was once considered a vast swampy peninsula fit more for beast than man. With little consideration of long term impacts and a great zeal for a pot of gold at the end of the development rainbow, the draining of Florida began in the mid to late 1800s. The state and federal governments dispensed with inducements to entrepreneurs and the road to present day Florida was paved.

Reclaiming the land was a daunting, but not insurmountable task. Unlike water quantity, which is finite, the force of will to make Florida “habitable” was and remains unconstrained by supply. Canals were dug, wetlands drained and land made more accessible for development and speculation. The many schemes worked collectively to provide for vast acreage, suitable for both agriculture and urban development. One of Florida’s first invasive plants, the melaleuca, was introduced to aid in achieving this objective.

Today we live in a different land, one which demonstrates several truths. One, if you drain it they will come. Two, if you drain it you will have much less water. Perhaps a third, if one is picky, you will have altered the climate. We drained vast wetland systems, especially in south and central Florida and now experience regional reductions of rainfall and cooler winters because vast areas of surface water were eliminated which moderate temperatures and promote aquifer recharge.¹

Because vast areas of wetlands have been destroyed and developed, surface water drainage is no longer a leisurely event. Instead, the sometimes torrid rate of run off may result in localized flooding for those living in low lying areas, or fish kills in our lakes and rivers.

Today, we have a population in the range of 18,000,000 residents. In south Florida the water district recently launched a comprehensive water plan which calls for water consumption reduction goals which may well result in restrictions that are permanent.² South Florida has the highest per capita public use rate in the State, about 179 gallons per day. Overall, agricultural consumption in the region accounts for 53% and power

¹ Cynthia Barnett, *Mirage* University of Michigan Press 2007, 15

² https://my.sfwmd.gov/portal/page?_pageid=2814.22710388&_dad=portal&_schema=PORTAL

generation uses about 10% of all South Florida Water District (District) consumption. The fraction attributed to public consumption is that part which comes from your tap, or that used by golf courses or commercial activities and it is the smaller portion of regional consumption.

Our water comes from the sky and we are using it, or dispensing with it faster than rainfall renews our aquifers. The broad and ongoing destruction of our wetlands promotes rapid run off and less recharge to our aquifer. As wetlands are destroyed the natural filtering systems they provide no longer thoroughly clean the water which manages to recharge our ground water. We lose quantity and quality as a result. One of the South Florida District's web pages states:

“Water conservation can cost as little as 6 cents to 72 cents per 1,000 gallons of water saved, while the cost of constructing alternative water supply facilities can range from \$5 to \$7 per 1,000 gallons of water created.”

Murphy's Law states simply, “Anything that can go wrong will go wrong and do so at the worst possible moment.” No better example exists than the travails of Tampa Bay Water Authority. This is the regional water supply agency for the greater Tampa area and as recently reported, they have their share of problems. Their manmade reservoir has more cracks than water. Their surface water supplies dried up during the drought and the high tech solution, a desalinization plant, is not operating at capacity nor does it meet demand.

This leads to questions: Do you want to pay the bills attendant to current water supply sources, or the alternative? Are legislative mandates for water management in Florida adequate to meet future needs or maintain our current position?

What is Florida's water resource future?

750 words, including title

Our Water, Our Future
Part 2: The Law

The Florida Constitution, Article II, Section 7 (a) states: *It shall be the policy of the state to conserve and protect its natural resources and scenic beauty. Adequate provision shall be made by law for the abatement of air and water pollution and of excessive and unnecessary noise and for the conservation and protection of natural resources.*

The legal support for those simple words is found in Florida Statutes (FS) 373 and 403. The law is implemented via Florida Administrative Code (Code) and administered by the Water Districts and the Florida Department of Environmental Protection (DEP).

Legislative policy intended to defend our water and natural systems is clearly presented in FS 373:

Florida Statute 373.016: Declaration of policy.--

- (1) The waters in the state are among its basic resources. Such waters have not heretofore been conserved or fully controlled so as to realize their full beneficial use.
- (2) The department and the governing board shall take into account cumulative impacts on water resources and manage those resources in a manner to ensure their sustainability.
- (3) It is further declared to be the policy of the Legislature:
 - (a) To provide for the management of water and related land resources;
 - (b) To promote the conservation, replenishment, recapture, enhancement, development, and proper utilization of surface and ground water;
 - (c) To develop and regulate dams, impoundments, reservoirs, and other works and to provide water storage for beneficial purposes;
 - (d) To promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems;
 - (e) To prevent damage from floods, soil erosion, and excessive drainage;
 - (f) To minimize degradation of water resources caused by the discharge of stormwater;
 - (g) To preserve natural resources, fish, and wildlife;
 - (h) To promote the public policy set forth in s. 403.021;
 - (i) To promote recreational development, protect public lands, and assist in maintaining the navigability of rivers and harbors; and
 - (j) Otherwise to promote the health, safety, and general welfare of the people of this state.

Noble sentiments. DEP and the Districts are tasked with formulating Code, but they must base such rules on specific provisions of statute. Florida Statute 120 which governs administrative processes in Florida clearly directs that legislative Policy or Intent may not provide the basis for Code formulation. This legal water is a bit murky, no? Water is, by law, a resource which belongs to the people of this state, but one is left bedazzled by the legal processes at work. Such is the world of politics, agendas and legislative process.

Contention over the issue of water stems from conflict between developers and those concerned about the health of natural systems and the state's long term economic prosperity. The conflict is sharp and very expensive. It is so because the stakes are high.

On one hand there is the potential of great profit to be made by developers. On the other, there are citizens who expect state agencies to act in their behalf to protect natural resources, because the Constitution and Statute say so. Curiously, even some developers are growing concerned, since water supply is necessary if they are to gain approval for the myriad of development opportunities they perceive. In a land once overflowing with water, we now have water wars.

The issue is money and the salient point of contention is whether or not we allow plunder for the short term benefit of a few, or take a sustainable approach in the stewardship of our natural resources and by logical extension, ensure long term prosperity in Florida.

The questions before us are whether or not our grandfather's methods are suitable or sustainable, and to what extent we are willing to subsidize development throughout the state at the expense of our resources and future generations.

Our Water, Our Future
Part 3: The Regulators

Water resources in Florida are managed primarily by DEP and by delegation of authority, the regional Water Districts. In general terms DEP oversees water quality while the Districts deal with water quantity issues. The two aspects are related of course and in fact the DEP and District do overlap in review and administration of their tasks.

Cynics sometimes refer to the DEP as “Don’t Expect Protection” and the water districts as “Weapons of Mass Development”. These titles are not deserved, but originate from frustrated citizens who reasonably expect protection and management in a positive sense. Codes which provide the narrow legal focus upon which the DEP and Districts base their regulation are formulated on basis of statutes emanating from the Florida Legislature. In the main, the DEP and Districts do their jobs in accordance with the law. Granted, they are not perfect and do on occasion make flawed decisions. However, if one is disposed to throw darts, do take the time to understand the processes and select the proper target.

These agencies develop rules through processes governed by FS 120 and those things seemingly necessary for common sense regulation may be pureed by legal buzz saws or other forces. While their rule making actions are promoted by Florida Statute, they are equally constrained by the same laws, over which neither agency has control. The statutes are promulgated by your legislature.

Within the DEP and Districts are many people dedicated to the view held by those concerned about sustainability and our present course. Regardless of sentiment, the Districts and DEP staff numbers are few in proportion to their task. As an example, the Department’s Bureau of Mine Reclamation, Mandatory Non-Phosphate Branch is staffed by 4-6 individuals and oversees over 500 mines in the state. For such reasons the broader state permitting or reclamation processes rely on experts contracted by various developers requiring permits for water use, or other activities affecting waters of the state. These experts and consultants are retained by the project developer, not the state. The experts build the application; the agencies ask questions and experts reply, with the crossing of “T’s” and dotting the odd letter “i” here and there. Such experts designed and built the reservoir used by The Tampa Bay Water Authority. You may recall that reservoir is filled with cracks, not water.

In these processes it is very important that one understands the staff personnel attending these applications are fully bound by pertinent Administrative Code in their determinations. They cannot arbitrarily deny a permit because they think it a good idea.

The directions these agencies follow are influenced by political winds; no surprise there. The various water District Governing Boards are filled by political appointments made by your governor and come mostly from the business world. Your tax dollars support the

Districts without elected representation. Whether electing these individuals is a preferable alternative is not clear. However, they determine the future of water in the state and set the tax rates which fund various projects and administrative expenses. There is no requirement they be well versed on the subject they regulate.

These agencies regulate by issuance of a permit. This means if they don't issue the permit, they don't get to regulate anything. If they don't issue the permit there is an ever present possibility of a law suit. The agencies are loathe to squander the taxpayer's dollar in such actions and rightly so. It is in such circumstances the use of such terms as "small" or "minor" become routine characterizations of impact, such as in context of lowering of the water table. While commonly incorporated and accepted, they are one basis for cumulative impacts which are sanctioned by the state.

As a result, our water dies the death of a thousand cuts.

"Even with the combined effect of regulation and resource management programs, we have definitely experienced, and are in all likelihood still experiencing, cumulative degradation of natural resources in the Peace River watershed." - Peace River Cumulative Impact Study of 2007: ³

3 Peace River CIS, PBS&J for FDEP, 5-2

676 words including title

Our Water, Our Future Part 4: The Impacts of Development

A land once rich with natural water resources is no more. In a scant 150 years, the River of Grass is no longer a river; Lake Okeechobee is threatened and South Florida finds itself in an ongoing state of water budget deficits. That means we use or dispose of more water to meet demands of residential, agriculture and industrial users than is replaced and it augers poorly for our future. John Audubon and Marjory Stoneman Douglas would be astounded.

Many years ago a dike system was built around Lake Okeechobee in response to wholesale destruction resulting from a hurricane. Such actions would be consistent with current Code regarding flood control. This structure has provided for higher water levels in the past to support water supply and flood management practices. It has greatly

supported agricultural interests in South Florida even as it has obstructed sheet flow into the Everglades.

State law mandates four areas of responsibility to the regulators. They are; Water Supply, Water Quality, Flood Protection and Natural Systems. In short, the state is obligated to provide for an ample supply of quality water, prevent flooding and protect or enhance natural systems. In approaching any of these four responsibilities the state often finds itself in direct conflict with the other three.

Today, because the dikes around Lake Okeechobee are in disrepair, the South Florida District drains water from the lake into the Gulf and Atlantic due to concerns about their integrity. The District is sacrificing supply for flood protection. Because the water is drained via canals and not the Everglades, we are sacrificing a vast and valuable wetlands system called the Everglades and by extension, Florida Bay. Because of that, water does not get cleaned by those natural systems and the opportunity for aquifer recharge is lost. This is but one of the many conundrums faced by the state. The State is, from all appearances, damned if they dam, and damned if they don't. Yes, there is ongoing litigation over these issues; so much so that it seems a growth industry.

Perhaps a less muddled approach with very clearly defined objectives would resolve these many conflicts. As citizens, we must decide if the long term benefit to natural systems and economic prosperity in this state is being addressed.

In 2007 the DEP published the "Peace River Cumulative Impact Study". It is a comprehensive work that details the combined impacts of mining, agriculture and municipal water use in the region of the Peace River Basin.⁴

Without placing blame on any particular user, the impacts are substantial. Large springs have ceased their flow. Base flow, or that contribution to streams and rivers by small springs and the aquifer, has likewise been reduced. In 1995 the U.S. EPA identified Charlotte Harbor as the only estuarine area in the country worthy of its own maintenance program due to pollution and disrupted flow scenarios caused by comprehensive degradation of source flows to the basin. In portions of Polk and Hardee Counties the upper elevation of the aquifer, or water table, has been lowered approximately 40 feet

After review of this 380+ page document you may be confused by the continued issuance of permits for mining in the Peace River Basin. One senior staff official of DEP, when commenting on a phosphate mine application stated there was no basis to refuse the application. He meant, "Legal basis". This is not to say there is no need for phosphate, for there is. The question which arises however is whether the people of this state should sacrifice their resources as subsidy to a regional industry that provides approximately 75% of the national demand, and 25% of world demand. There are other sources of

⁴ PBS&J, Peace River Cumulative Impact Study, 2007
http://www.dep.state.fl.us/water/mines/pr_cis.htm

phosphate on planet Earth, yet there is no large scale suitable substitute and it might properly be considered a strategic resource.

Very recently there came a Federal Court decision which crystallized the long running battle between Florida, Alabama and Georgia over impacts to the Flint and Chattahoochee River systems. Barring intervention by Congress or higher courts it was a victory for Florida and Apalachicola Bay. In short, the city of Atlanta was found to be illegally drawing water from Lake Lanier. In his decision Judge Magnuson had this to say:

``Too often, state, local and even national government actors do not consider the long-term consequences of their decisions. Local governments allow unchecked growth because it creates tax revenues, but these same governments do not sufficiently plan for the resources such unchecked growth will require.''

758 words, incl. title

Our Water Part 5: Our Future

The quality of our natural systems and waters of the state are our legacy for generations to come and water is our most vital resource.

Collectively we discard vast amounts of water every day, yet now find ourselves in the odd position of prolonged drought cycles, water shortages, failing infrastructure, declining water quality and natural systems. The forecast is continued growth in Florida. The question is whether or not we will maintain our water resources sufficiently to support that growth and maintain our natural systems.

A document released by the Florida Fish and Wildlife Conservation Commission last year referenced a study by A Thousand Friends of Florida which projects a state population of 36,000,000 by the year 2060. It is available online through MyFWC.Com and is entitled *Wildlife 2060: What's at Stake for Florida?* Much of this growth will be found along the I75 corridor north of Tampa, extending up to Gainesville and west to the coastal regions.

Where will the water come from? If you live in south Florida the water may come from here. Don't rely on Local Sources First legislation, as ultimately the courts will not bar water transfers if no other alternative is available. If all the Future Land Use Maps in all counties of Florida were to reach build-out, the estimated population of the state would be approximately 86 million people. We cannot come close to supporting such population burdens with current water use management practices.

Where is the water going to come from and at what cost? Dollars are what they are, but other costs present in the form of mutilation of natural systems that are bled dry, climate change and destruction of estuaries because of reduced fresh water flow. This destruction will have considerable and perpetual economic impact. A frightfully expensive impact if one wishes to compute what makes Florida attractive to visitors and new residents. Restoration is exorbitantly expensive as compared to preservation.

What is the cost of the destruction of the sport fishing industry in Florida? Hint: Billions. While many come to visit in the winter, they do so because of favorable weather and surrounding natural environments. "Natural Systems" is what the state calls them. Lakes, rivers, estuaries, the things that make Florida tick. They are the geese that lay the golden eggs and if we lose them, we have lost it all. Imagine Homosassa without the Springs. Turbid stagnant water does not make a tourist destination. Imagine Crystal River opaque, and then pause to consider what this will do to county tax roll values.

Today's path has been demonstrated in south Florida to be a failure, and like a cancer, that failure will spread until the whole system we call Florida chokes on its own dust and collapses. Is this what we want? Might it not serve the benefit of the state to recognize its obligations to the people and our future rather than continue contribution to systematic destruction of your water resources? It might serve us well to begin aggressively upgrading water quantity and quality before we dig a hole into oblivion.

One small first step is simple; balance the water budget. Supply must meet demand, drought notwithstanding. Step two might require collective recognition that we are all in this together; citizens, industry and agriculture alike. We should recognize the intricate relationship between natural systems, resources such as water and economic prosperity. Water should be considered as valuable as wetlands and processes be established that require much higher efficiencies of use. Both resources should be protected very aggressively. The depletion of these resources is not in our best interests and should no longer be tolerated.

Regulations might be considered that provide incentives to vertical development rather than sprawl, thus reducing demand for irrigation. Rewarding conservation in a financial sense may provide large scale incentive to facilitate this change. Perhaps it is time to examine the concept of water credits. It is reasonable to conclude there is no single silver bullet which will resolve the issues, but a healthy dose of pragmatic common sense might. Is there any understanding that we cannot live beyond our means? It works with money and it can work with water. It is time to raise the bar!

When the people of this state let their legislators know where their priorities lay, we will have taken a big step in solving some of these problems. At present however, we are writing resource checks future generations won't be able to cash.

751 words, incl. title

From: Doug Leeper
To: ["2buntings"](#)
Subject: RE: Our Water, Our Future
Date: Friday, April 27, 2012 1:24:00 PM

Thanks Dan:
I will share your e-mail and thoughtful attachment.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: 2buntings [<mailto:2buntings@comcast.net>]
Sent: Thursday, April 26, 2012 7:52 PM
To: 2buntings
Subject: Our Water, Our Future

Greetings,

Over the course of the last few days I have been immersed in a storm of interaction with various players in the Florida water wars on both sides of the debate. Some thoughts extended from, of all places, Nevada, triggered a personal review of a 5 part series written for and published in the Citrus Chronicle in the fall of 2010. After this passage of time I was somewhat surprised to find little within that I would change if writing it today. Thought I'd share it with you in case you missed the printed version in the Chronic. If so inclined, feel free to pass it around. Forgive the format please, this is how the editorial staff requested it be delivered.

For any who are interested, the WAR, Inc quarterly meeting will be held at the Yankeetown Woman's Club on 16 May 2012 from 7-9PM. #5 56th Street, Yankeetown. Desserts and refreshments are on the house and our guest speaker is Dr. Bob Weisberg from USF. Dr. Weisberg is a physical oceanographer with expertise in Gulf currents, and west coast estuaries. His presentation will generally address impacts to coastal estuaries resulting from reduced riverine system flows.

Semper Swamp,

Dan

--

Dan Hilliard
Director
W.A.R. Inc.(501.C3)
352/447-5434
WWW.WARINCONLINE.COM

From: [Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)
To: [Doug Leeper](mailto:Doug.Leeper)
Subject: Re: Update on Chassahowitzka and Homosassa MFLs
Date: Thursday, May 03, 2012 11:24:00 AM

Hi Doug. Are you still planning to have the revised reports for the Chaz and Homosassa MFL's completed in the near future? I've had several people ask me about the schedule. Brad Rimbey

----- Original Message -----

From: [Doug Leeper](mailto:Doug.Leeper)

To: [Al Grubman \(grubman1@gmail.com\)](mailto:Al.Grubman@gmail.com) ; [Bill Geiger \(bgeiger@cityofbrooksville.us\)](mailto:bgeiger@cityofbrooksville.us) ; [Bill Pouder \(bill.pouder@myfwc.com\)](mailto:Bill.Pouder@myfwc.com) ; [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](mailto:Boyd.Blihovde@fws.gov) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](mailto:Brad.Rimbey@BWR.CRRC@tampabay.rr.com) ; [Brent Whitley \(brentwhitley@sierra-properties.com\)](mailto:brentwhitley@sierra-properties.com) ; [Brockway. Alys \(abrockway@co.hernando.fl.us\)](mailto:Alys.abrockway@co.hernando.fl.us) ; [Dennis D. Dutcher \(Dennis3ds@aol.com\)](mailto:Dennis3ds@aol.com) ; [Frank DiGiovanni \(administration@inverness-fl.gov\)](mailto:Frank.DiGiovanni@administration@inverness-fl.gov) ; [Greenwood, Kathleen](mailto:Greenwood.Kathleen) ; [Helen Spive](mailto:Helen.Spive) ; [Hilliard, Dan \(2buntings@comcast.net\)](mailto:Hilliard.Dan) ; [Hoehn, Ted](mailto:Hoehn.Ted) ; [Hope Corona \(hopecorona@tampabay.rr.com\)](mailto:HopeCorona@tampabay.rr.com) ; [Jim Farley \(jfarley682@aol.com\)](mailto:Jim.Farley@jfarley682@aol.com) ; [Katie Tripp \(ktripp@savethemanatee.org\)](mailto:ktripp@savethemanatee.org) ; [Norman Hopkins \(norman@amyhrf.org\)](mailto:Norman.Hopkins@norman@amyhrf.org) ; [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](mailto:Rebecca.Bays@rebecca.bays@bocc.citrus.fl.us) ; [Richard Kane \(rkane@usgs.gov\)](mailto:Richard.Kane@rkane@usgs.gov) ; [Richard Radacky \(rradacky@cityofbrooksville.us\)](mailto:Richard.Radacky@rradacky@cityofbrooksville.us) ; [Ron Miller \(rmille76@tampabay.rr.com\)](mailto:Ron.Miller@rmille76@tampabay.rr.com) ; [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](mailto:Sarah.Tenison@cityofweekiwachee@yahoo.com) ; [Sullivan, Jack \(jsullivan@carltonfields.com\)](mailto:Sullivan.Jack@jsullivan@carltonfields.com) ; [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](mailto:Carolyn.Voyles@dep.state.fl.us) ; [Whitely Markle \(whmarkle@gmail.com\)](mailto:Whitely.Markle@whmarkle@gmail.com) ; janicehowie@aol.com ; [Abdon Sidibie \(asidibie@chronicle.online.com\)](mailto:Abdon.Sidibie@asidibie@chronicle.online.com) ; [Alex McPherson \(aamcpherson@msn.com\)](mailto:Alex.McPherson@aamcpherson@msn.com) ; [Ann - 2 Hodgson \(ahodgson@gmail.com\)](mailto:Ann-2.Hodgson@ahodgson@gmail.com) ; [Ann Hodgson \(ahodgson@audubon.org\)](mailto:Ann.Hodgson@ahodgson@audubon.org) ; [Bernard Berauer \(bfberauer@aol.com\)](mailto:Bernard.Berauer@bfberauer@aol.com) ; [Beverly Overa \(boverly@tampabay.rr.com\)](mailto:Beverly.Overa@boverly@tampabay.rr.com) ; [Bill Garvin \(wgarvin@tampabay.rr.com\)](mailto:Bill.Garvin@wgarvin@tampabay.rr.com) ; [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](mailto:Bob.Caldwell@Bobcaldwell51@yahoo.com) ; [Brack Barker \(brack154@msn.com\)](mailto:Brack.Barker@brack154@msn.com) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](mailto:Brad.Rimbey@BWR.CRRC@tampabay.rr.com) ; [Carl Matthai \(thebabesmimi@gmail.com\)](mailto:Carl.Matthai@thebabesmimi@gmail.com) ; [Casey, Emily \(fcnwr@atlantic.net\)](mailto:Casey.Emily@fcnwr@atlantic.net) ; [Charles Dean \(dean.charles.web@flsenate.gov\)](mailto:Charles.Dean@dean.charles.web@flsenate.gov) ; [Charles Stonerock \(katcha.stonerock3@gmail.com\)](mailto:Charles.Stonerock@katcha.stonerock3@gmail.com) ; [Chris Safos \(chrisafos@embarqmail.com\)](mailto:Chris.Safos@chrisafos@embarqmail.com) ; [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](mailto:Czerwinski.Mike@mczerwin@tampabay.rr.com) ; [Darlene Herth \(2cetechology21@gmail.com\)](mailto:Darlene.Herth@2cetechology21@gmail.com) ; [Darrell Snedecor \(president@citruscountyaudubon.com\)](mailto:Darrell.Snedecor@president@citruscountyaudubon.com) ; [Don Hiers \(dhiers3@gmail.com\)](mailto:Don.Hiers@dhiers3@gmail.com) ; [Douglas Dame \(doug_dame@yahoo.com\)](mailto:Douglas.Dame@doug_dame@yahoo.com) ; [Elaine Luther \(barneyandcap@hotmail.com\)](mailto:Elaine.Luther@barneyandcap@hotmail.com) ; [Emily Casey \(ecasey21@hotmail.com\)](mailto:Emily.Casey@ecasey21@hotmail.com) ; [Emma Knight \(eknight@wetlandssolutionsinc.com\)](mailto:Emma.Knight@eknight@wetlandssolutionsinc.com) ; [George Harbin \(gharbin@tampabay.rr.com\)](mailto:George.Harbin@gharbin@tampabay.rr.com) ; [George McClog \(classof47@gmail.com\)](mailto:George.McClog@classof47@gmail.com) ; [Gorgon O'Connor \(gorgon_o@yahoo.com\)](mailto:Gorgon.O'Connor@gorgon_o@yahoo.com) ; [Harry Steiner \(harry109@aol.com\)](mailto:Harry.Steiner@harry109@aol.com) ; [Helen Spivey](mailto:Helen.Spivey) ; [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](mailto:Jack.Calbeck@calbeckj@citrus.k12.fl.us) ; [jane Perrin \(jcsperinmd@sbcglobal.net\)](mailto:jane.Perrin@jcsperinmd@sbcglobal.net) ; [Janet Garvin \(wgarvin@tampabay.rr.com\)](mailto:Janet.Garvin@wgarvin@tampabay.rr.com) ; [Jerry Morton \(JerrMorton@aol.com\)](mailto:Jerry.Morton@JerrMorton@aol.com) ; [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](mailto:Jessie.Gourlie@gourliej@thirdplanetwind.com) ; [Jim Collins \(jimmiekey22@yahoo.com\)](mailto:Jim.Collins@jimmiekey22@yahoo.com) ; [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](mailto:Jimmie.Smith@Jimmie.Smith@myfloridahouse.gov) ; [Joe Calamari](mailto:Joe.Calamari) ; [John Howie \(janicehowie@aol.com\)](mailto:John.Howie@janicehowie@aol.com) ; [John Lord \(jclord109@yahoo.com\)](mailto:John.Lord@jclord109@yahoo.com) ; [John Mayo \(freedomway1@gmail.com\)](mailto:John.Mayo@freedomway1@gmail.com) ; [Karen Johnstone \(kjohns213@sbcglobal.net\)](mailto:Karen.Johnstone@kjohns213@sbcglobal.net) ; [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](mailto:Kim.Caldwell@caldwell.kimberly@yahoo.com) ; [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](mailto:Kim.Dinkins@kim.dinkins@marioncountyfl.org) ; [Linda Pierce \(tpierce35@tampabay.rr.com\)](mailto:Linda.Pierce@tpierce35@tampabay.rr.com) ; [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](mailto:Linda.Vanderveen@hernandoaudubon@yahoo.com) ; [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](mailto:MaryAnne.Lynn@mlynn1978@tampabay.rr.com) ; [Matthew Corona \(mcorona1@tampabay.rr.com\)](mailto:Matthew.Corona@mcorona1@tampabay.rr.com) ; [Max Rhinesmith \(rhinesmith@webtv.net\)](mailto:Max.Rhinesmith@rhinesmith@webtv.net) ; [Amber Breland](mailto:Amber.Breland) ; [Andy Houston \(ahouston@crystalriverfl.org\)](mailto:Andy.Houston@ahouston@crystalriverfl.org) ; [Art Yerian \(Al.Yerian@dep.state.fl.us\)](mailto:Art.Yerian@Al.Yerian@dep.state.fl.us) ; [Ben Weiss](mailto:Ben.Weiss) ; [Beth Hovinde](mailto:Beth.Hovinde) ; [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](mailto:Brad.Thorpe@brad.thorpe@bocc.citrus.fl.us) ; [Courtney Edwards \(cedwards@savethemanatee.org\)](mailto:Courtney.Edwards@cedwards@savethemanatee.org) ; [Dale Jones \(Jones@MyFWC.com\)](mailto:Dale.Jones@Jones@MyFWC.com) ; [Dana Bryan \(dana.bryan@dep.state.fl.us\)](mailto:Dana.Bryan@dana.bryan@dep.state.fl.us) ; [Darrell Snedecor](mailto:Darrell.Snedecor) ; [David Hamilton \(countyadministrator@hernandocounty.us\)](mailto:David.Hamilton@countyadministrator@hernandocounty.us) ; [David Hankla \(david_hankla@fws.gov\)](mailto:David.Hankla@david_hankla@fws.gov) ; [Don Wright \(wright@sura.org\)](mailto:Don.Wright@wright@sura.org) ; [Dusty McDevitt \(mcdevitt@usgs.gov\)](mailto:Dusty.McDevitt@mcdevitt@usgs.gov) ; [Ed Call \(marvin.call@MyFWC.com\)](mailto:Ed.Call@marvin.call@MyFWC.com) ; [Eric Nagid \(eric.nagid@MyFWC.com\)](mailto:Eric.Nagid@eric.nagid@MyFWC.com) ; [FFWCC MFLs Review E-Mail Address \(fwwccconservationplanningservices@myfwc.com\)](mailto:FFWCC.MFLs.Review.E-Mail.Address@fwwccconservationplanningservices@myfwc.com) ; [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](mailto:J.J.Kenney@jj.kenney@bocc.citrus.fl.us) ; [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](mailto:Jennene.Norman-Vacha@jnvacha@ci.brooksville.fl.us) ; [Joyce Kleen@fws.gov](mailto:Joyce.Kleen@fws.gov) ; [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](mailto:Kandi.Harper@kandi.harper@bocc.citrus.fl.us) ; [Keith Ramos \(Keith.Ramos@fws.gov\)](mailto:Keith.Ramos@Keith.Ramos@fws.gov) ; [Kent Smith \(kent.smith2@myfwc.com\)](mailto:Kent.Smith@kent.smith2@myfwc.com) ; [Kevin Grimsley \(kjgrims@usgs.gov\)](mailto:Kevin.Grimsley@kjgrims@usgs.gov) ; [Michael Lusk \(Michael_Lusk@fws.gov\)](mailto:Michael.Lusk@Michael_Lusk@fws.gov) ; [Mitchell Newberger \(mnewberger@verizon.net\)](mailto:Mitchell.Newberger@mnewberger@verizon.net) ; [Nick Robbins](mailto:Nick.Robbins)

(Nick.Robbins@dep.state.fl.us) ; [Nicole Adimey \(Nicole_Adimey@fws.gov\)](mailto:Nicole.Adimey@fws.gov) ; [Paul Thomas \(paulw.thomas@MyFWC.com\)](mailto:Paul.Thomas@MyFWC.com) ; [Ron Mezich \(ron.mezich@MyFWC.com\)](mailto:Ron.Mezich@MyFWC.com) ; [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](mailto:Shelly.Yaun@dep.state.fl.us) ; [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](mailto:Toby.Brewer@dep.state.fl.us) ; [Tracy Colson](#) ; [Wallace Traci](#) ; [Adkins, Jim](#) ; [Bitter, Jim](#) ; [Bryant, Richard](#) ; [Calbeck, Jack](#) ; [Cantero, Vince](#) ; [Carpenter, Paul](#) ; [Daniels, Chase](#) ; [Darlene Herth \(2cetechnology21@gmail.com\)](mailto:Darlene.Herth@2cetechnology21@gmail.com) ; [Dueker, Duane](#) ; [Gordon, Lisa-Perras](#) ; [Gramling, Hugh](#) ; [Harrelson, Cathy](#) ; [Hubbell, Pete](#) ; [Johnson, Eric](#) ; [Johnson, Martyn](#) ; [Keim, Robert](#) ; [Kincaid, Todd](#) ; [Kline, Allen](#) ; [Knight, Bob](#) ; [Knight, Robert](#) ; [Knudson, Ross](#) ; [Overa, Tom](#) ; [Owen, Rick](#) ; [Parrow, Liz](#) ; [Pierce, Thomas](#) ; [Rolf Auermann \(rauerman@tampabay.rr.com\)](mailto:Rolf.Auermann@tampabay.rr.com) ; [Rusnak, Teddi](#) ; [Tarochinoe, Joseph](#) ; [Watkins, Priscilla](#) ; [Watrous, Russell](#) ; [Wilson, Roger](#)

Cc: [Cara S. Martin](#) ; [Chris Zajac](#) ; [Christopher Pettit](#) ; [Darcy A. Brune](#) ; [Dave Dewitt](#) ; [Doug Leeper](#) ; [Gary E. Williams](#) ; [Jay Yingling](#) ; [Karen West](#) ; [Kenneth R. Herd](#) ; [Laura Donaldson](#) ; [Lou Kavouras](#) ; [Mark Barcelo](#) ; [Mark Hammond](#) ; [Michael Molligan](#) ; [Mike Heyl](#) ; [Paul Williams](#) ; [Robyn O. Felix](#) ; [Ron Basso](#) ; [Sid Flannery](#) ; [Tammy Hinkle](#) ; [Veronica Crow](#) ; [Xinjian Chen](#) ; [Yassert Gonzalez](#) ; [Jerry Mallams](#)

Sent: Thursday, March 15, 2012 12:25 PM

Subject: Update on Chassahowitzka and Homosassa MFLs

Greetings:

I'm writing to provide an update on the development of revised reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District for the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have revised reports for the systems ready for public review by the end of April or early in May. Providing stakeholders with time to review the reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for the Chassahowitzka and Homosassa minimum flows or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2114/4872 - Release Date: 03/15/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: Doug Leeper
To: "[Brad Rimbey@CRRC](mailto:Brad.Rimbey@CRRC)"
Cc: [Mike Heyl](#); [Jerry Mallams](#); [Veronica Crow](#)
Subject: RE: Update on Chassahowitzka and Homosassa MFLs
Date: Thursday, May 03, 2012 6:23:00 PM

Hi Brad –

Was good to see you today at the Kings Bay Working Group meeting.

With regard to the question posed in your e-mail, yes, we do plan to soon release updated reports on proposed minimum flows for the Chassahowitzka and Homosassa River systems. The reports are expected to be circulated among staff next week and will be released following any necessary revisions identified as part of the internal review process. I expect that we will be able to post the updated reports on the District web site sometime this month.

As always, call or write if you have any additional questions.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

From: Brad Rimbey@CRRC [<mailto:BWR.CRRC@tampabay.rr.com>]
Sent: Thursday, May 03, 2012 11:24 AM
To: Doug Leeper
Subject: Re: Update on Chassahowitzka and Homosassa MFLs

Hi Doug. Are you still planning to have the revised reports for the Chaz and Homosassa MFL's completed in the near future? I've had several people ask me about the schedule. Brad Rimbey

----- Original Message -----

From: [Doug Leeper](#)
To: [Al Grubman \(grubman1@gmail.com\)](#) ; [Bill Geiger \(bgeiger@cityofbrooksville.us\)](#) ; [Bill Pouder \(bill.pouder@myfwc.com\)](#) ; [Boyd Blihovde \(Boyd_Blihovde@fws.gov\)](#) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](#) ; [Brent Whitley \(brentwhitley@sierra-properties.com\)](#) ; [Brockway, Alys \(abrockway@co.hernando.fl.us\)](#) ; [Dennis D. Dutcher \(Dennis3ds@aol.com\)](#) ; [Frank DiGiovanni \(administration@inverness-fl.gov\)](#) ; [Greenwood, Kathleen](#) ; [Helen Spive](#) ; [Hilliard, Dan \(2buntings@comcast.net\)](#) ; [Hoehn, Ted](#) ; [Hope Corona \(hopecorona@tampabay.rr.com\)](#) ; [Jim Farley \(jfarley682@aol.com\)](#) ; [Katie Tripp \(ktripp@savethemanatee.org\)](#) ; [Norman Hopkins \(norman@amyhrf.org\)](#) ; [Rebecca Bays \(rebecca.bays@bocc.citrus.fl.us\)](#) ; [Richard Kane \(rkane@usgs.gov\)](#) ; [Richard Radacky \(rradacky@cityofbrooksville.us\)](#) ; [Ron Miller \(rmille76@tampabay.rr.com\)](#) ; [Sarah Tenison \(cityofweekiwachee@yahoo.com\)](#) ; [Sullivan, Jack \(jsullivan@carltonfields.com\)](#) ; [Voyles, Carolyn \(Carolyn.Voyles@dep.state.fl.us\)](#) ; [Whitey Markle \(whmarkle@gmail.com\)](#) ; [Janicehowie@aol.com\)](#) ; [Abdon Sidibie \(asidibie@chronicle.online.com\)](#) ;

[Alex McPherson \(aamcpherson@msn.com\)](mailto:aamcpherson@msn.com) ; [Ann - 2 Hodgson \(ahodgson@gmail.com\)](mailto:ahodgson@gmail.com) ; [Ann Hodgson \(ahodgson@audubon.org\)](mailto:ahodgson@audubon.org) ; [Bernard Berauer \(bfberauer@aol.com\)](mailto:bfberauer@aol.com) ; [Beverly Overa \(boverly@tampabay.rr.com\)](mailto:boverly@tampabay.rr.com) ; [Bill Garvin \(wgarvin@tampabay.rr.com\)](mailto:wgarvin@tampabay.rr.com) ; [Bob Caldwell \(Bobcaldwell51@yahoo.com\)](mailto:BobCaldwell@yahoocom) ; [Brack Barker \(brack154@msn.com\)](mailto:brack154@msn.com) ; [Brad Rimbey \(BWR.CRRC@tampabay.rr.com\)](mailto:BWR.CRRC@tampabay.rr.com) ; [Carl Matthai \(thebabesmimi@gmail.com\)](mailto:thebabesmimi@gmail.com) ; [Casey, Emily \(fcnwr@atlantic.net\)](mailto:fcnwr@atlantic.net) ; [Charles Dean \(dean.charles.web@flsenate.gov\)](mailto:dean.charles.web@flsenate.gov) ; [Charles Stonerock \(katcha.stonerock3@gmail.com\)](mailto:katcha.stonerock3@gmail.com) ; [Chris Safos \(chrissafos@embarqmail.com\)](mailto:chrissafos@embarqmail.com) ; [Czerwinski, Mike \(mczerwin@tampabay.rr.com\)](mailto:mczerwin@tampabay.rr.com) ; [Darlene Herth \(2cetechology21@gmail.com\)](mailto:2cetechology21@gmail.com) ; [Darrell Snedecor \(president@citruscountyaudubon.com\)](mailto:president@citruscountyaudubon.com) ; [Don Hiers \(dhiers3@gmail.com\)](mailto:dhiers3@gmail.com) ; [Douglas Dame \(doug_dame@yahoo.com\)](mailto:doug_dame@yahoo.com) ; [Elaine Luther \(barneyandcap@hotmail.com\)](mailto:barneyandcap@hotmail.com) ; [Emily Casey \(ecasey21@hotmail.com\)](mailto:ecasey21@hotmail.com) ; [Emma Knight \(eknight@wetlandsolutionsinc.com\)](mailto:eknight@wetlandsolutionsinc.com) ; [George Harbin \(gharbin@tampabay.rr.com\)](mailto:gharbin@tampabay.rr.com) ; [George McClog \(classof47@gmail.com\)](mailto:classof47@gmail.com) ; [Gorgon O'Connor \(gorgon_o@yahoo.com\)](mailto:gorgon_o@yahoo.com) ; [Harry Steiner \(harry109@aol.com\)](mailto:harry109@aol.com) ; Helen Spivey ; [Jack Calbeck \(calbeckj@citrus.k12.fl.us\)](mailto:calbeckj@citrus.k12.fl.us) ; [Jane Perrin \(jcsperrinmd@sbcglobal.net\)](mailto:jcsperrinmd@sbcglobal.net) ; [Janet Garvin \(wgarvin@tampabay.rr.com\)](mailto:wgarvin@tampabay.rr.com) ; [Jerry Morton \(JerrMorton@aol.com\)](mailto:JerrMorton@aol.com) ; [Jessie Gourlie \(gourliej@thirdplanetwind.com\)](mailto:gourliej@thirdplanetwind.com) ; [Jim Collins \(jimmiekey22@yahoo.com\)](mailto:jimmiekey22@yahoo.com) ; [Jimmie Smith \(Jimmie.Smith@myfloridahouse.gov\)](mailto:Jimmie Smith (Jimmie.Smith@myfloridahouse.gov)) ; Joe Calamari ; [John Howie \(janicehowie@aol.com\)](mailto:janicehowie@aol.com) ; [John Lord \(jlclord109@yahoo.com\)](mailto:jlclord109@yahoo.com) ; [John Mayo \(freedomway1@gmail.com\)](mailto:freedomway1@gmail.com) ; [Karen Johnstone \(kjohns213@sbcglobal.net\)](mailto:kjohns213@sbcglobal.net) ; [Kim Caldwell \(caldwell.kimberly@yahoo.com\)](mailto:caldwell.kimberly@yahoo.com) ; [Kim Dinkins \(kim.dinkins@marioncountyfl.org\)](mailto:kim.dinkins@marioncountyfl.org) ; [Linda Pierce \(tpierce35@tampabay.rr.com\)](mailto:tpierce35@tampabay.rr.com) ; [Linda Vanderveen \(hernandoaudubon@yahoo.com\)](mailto:hernandoaudubon@yahoo.com) ; [Mary Anne Lynn \(mlynn1978@tampabay.rr.com\)](mailto:mlynn1978@tampabay.rr.com) ; [Matthew Corona \(mcorona1@tampabay.rr.com\)](mailto:mcorona1@tampabay.rr.com) ; [Max Rhinesmith \(rhinesmith@webtv.net\)](mailto:rhinesmith@webtv.net) ; Amber Breland ; [Andy Houston \(ahouston@crystalriverfl.org\)](mailto:ahouston@crystalriverfl.org) ; [Art Yerian \(Al.Yerian@dep.state.fl.us\)](mailto:Al.Yerian@dep.state.fl.us) ; Ben Weiss ; Beth Hovinde ; [Brad Thorpe \(brad.thorpe@bocc.citrus.fl.us\)](mailto:brad.thorpe@bocc.citrus.fl.us) ; [Courtney Edwards \(cedwards@savethemanatee.org\)](mailto:cedwards@savethemanatee.org) ; [Dale Jones \(Jones@MyFWC.com\)](mailto:Jones@MyFWC.com) ; [Dana Bryan \(dana.bryan@dep.state.fl.us\)](mailto:dana.bryan@dep.state.fl.us) ; Darrell Snedecor ; [David Hamilton \(countyadministrator@hernandocounty.us\)](mailto:David Hamilton (countyadministrator@hernandocounty.us)) ; [David Hankla \(david_hankla@fws.gov\)](mailto:david_hankla@fws.gov) ; [Don Wright \(wright@sura.org\)](mailto:Don Wright (wright@sura.org)) ; [Dusty McDevitt \(mcdevitt@usgs.gov\)](mailto:mcdevitt@usgs.gov) ; [Ed Call \(marvin.call@MyFWC.com\)](mailto:marvin.call@MyFWC.com) ; [Eric Nagid \(eric.nagid@MyFWC.com\)](mailto:eric.nagid@MyFWC.com) ; [FWCC MFLs Review E-Mail Address \(fwccconservationplanningservices@myfwc.com\)](mailto:FWCC MFLs Review E-Mail Address (fwccconservationplanningservices@myfwc.com)) ; [J. J. Kenney \(jj.kenney@bocc.citrus.fl.us\)](mailto:jj.kenney@bocc.citrus.fl.us) ; [Jennene Norman-Vacha \(jnvacha@ci.brooksville.fl.us\)](mailto:jennene Norman-Vacha (jnvacha@ci.brooksville.fl.us)) ; [Joyce Kleen \(Joyce_Kleen@fws.gov\)](mailto:Joyce_Kleen@fws.gov) ; [Kandi Harper \(kandi.harper@bocc.citrus.fl.us\)](mailto:kandi.harper@bocc.citrus.fl.us) ; [Keith Ramos \(Keith.Ramos@fws.gov\)](mailto:Keith.Ramos@fws.gov) ; [Kent Smith \(kent.smith2@myfwc.com\)](mailto:kent.smith2@myfwc.com) ; [Kevin Grimsley \(kjgrims@usgs.gov\)](mailto:kjgrims@usgs.gov) ; [Michael Lusk \(Michael_Lusk@fws.gov\)](mailto:Michael Lusk (Michael_Lusk@fws.gov)) ; [Mitchell Newberger \(mnewberger@verizon.net\)](mailto:mnewberger@verizon.net) ; [Nick Robbins \(Nick.Robbins@dep.state.fl.us\)](mailto:Nick Robbins (Nick.Robbins@dep.state.fl.us)) ; [Nicole Adimey \(Nicole_Adimey@fws.gov\)](mailto:Nicole_Adimey@fws.gov) ; [Paul Thomas \(paulw.thomas@MyFWC.com\)](mailto:paulw.thomas@MyFWC.com) ; [Ron Mezich \(ron.mezich@MyFWC.com\)](mailto:ron.mezich@MyFWC.com) ; [Shelly Yaun \(shelly.yaun@dep.state.fl.us\)](mailto:Shelly Yaun (shelly.yaun@dep.state.fl.us)) ; [Toby Brewer \(Toby.Brewer@dep.state.fl.us\)](mailto:Toby.Brewer@dep.state.fl.us) ; Tracy Colson ; Wallace, Traci ; Bitter, Jim ; Bryant, Richard ; Calbeck, Jack ; Cantero, Vince ; Carpenter, Paul ; Daniels, Chase ; [Darlene Herth \(2cetechology21@gmail.com\)](mailto:2cetechology21@gmail.com) ; Dueker, Duane ; Gordon, Lisa-Perras ; Gramling, Hugh ; Harrelson, Cathy ; Hubbell, Pete ; Johnson, Eric ; Johnson, Martyn ; Keim, Robert ; Kincaid, Todd ; Kline, Allen ; Knight, Bob ; Knight, Robert ; Knudson, Ross ; Overa, Tom ; Owen, Rick ; Parrow, Liz ; Pierce, Thomas ; [Rolf Auermann \(rauerman@tampabay.rr.com\)](mailto:rauerman@tampabay.rr.com) ; Rusnak, Teddi ; Tarochinoe, Joseph ; Watkins, Priscilla ; Watrous, Russell ; Wilson, Roger ; Cara S. Martin ; Chris Zajac ; Christopher Pettit ; Darcy A. Brune ; Dave Dewitt ; Doug Leeper ; Gary E. Williams ; Jay Yingling ; Karen West ; Kenneth R. Herd ; Laura Donaldson ; Lou Kavouras ; Mark Barcelo ; Mark Hammond ; Michael Molligan ; Mike Heyl ; Paul Williams ; Robyn O. Felix ; Ron Basso ; Sid Flannery ; Tammy Hinkle ; Veronica Crow ; Xinjian Chen ; Yassert Gonzalez ; Jerry Mallams

Sent: Thursday, March 15, 2012 12:25 PM

Subject: Update on Chassahowitzka and Homosassa MFLs

Greetings:

I'm writing to provide an update on the development of revised reports and rule amendments associated with minimum flows proposed by the Southwest Florida Water Management District

for the Chassahowitzka and Homosassa River systems.

Although District staff anticipated releasing updated reports on proposed minimum flows for the river systems by the end of February, we were not able to meet this target. We currently expect to have revised reports for the systems ready for public review by the end of April or early in May. Providing stakeholders with time to review the reports, and staff the necessary time for consideration of stakeholder concerns, we anticipate finalization of the reports in July. The reports will be provided to Governing Board members in advance of staff presentations on proposed minimum flow rule amendments at the July 31, 2012 Board meeting at the District's headquarters in Brooksville.

Please feel free to contact me directly if you have any questions concerning the updated schedule for the Chassahowitzka and Homosassa minimum flows or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Resource Projects Department
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

No virus found in this message.

Checked by AVG - www.avg.com

Version: 2012.0.1913 / Virus Database: 2114/4872 - Release Date: 03/15/12

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: [Alan Martyn Johnson](#)
To: [Al Grubman](#); [Brad Rimbey](#); [Brent Whitley](#); manatees2@gmail.com; [Dan Hillard](#); ktripp@savethemanatee.org; [Norman Hopkins](#); rebecca.bays@bocc.citrus.fl.us; [Ron Miller](#); [Bill Garvin](#); al.yerian@dep.state.fl.us; cedwards@savethemanatee.org; jones@myfwc.com; [Dana Bryan](#); [Jim Bitter](#); bknight@wetlandssolutionsinc.com; robert.knight@bocc.citrus.fl.us
Cc: [Doug Leeper](#); [Mark Hammond](#); [Sid Flannery](#); [J Weaver](#); [R Rodriguez](#); [Kevin J Grimsley](#); [Ron Basso](#); [Mike Heyl](#)
Subject: Chassahowitzka and Homosassa MFL"s
Date: Sunday, May 13, 2012 4:34:31 PM

Are you like myself curious as to why it is taking SWFWMD so long to rewrite the MFL Draft Reports for the Homosassa and Chassahowitzka?

May be they are doing some additional studies;

May be they are having confidence concerns re studies/data in the first draft reports;

May be they are having difficulty finding the right words to make the argument supporting continued increases in the amount of water being sucked out of the aquifer.

May be delays have political considerations regarding compliance.

May be they have realized Significant Harm has already occurred.

That is a lot of may be(s).

Let me share some points/indicators which should give cause for concern about the future of these two rivers/spring systems; Outstanding Florida Waters. And provide a backdrop for your reading the reports.

Homosassa

SE Fork

Some of you may know that I take regular samples of water emanating from the springs in the SE Fork and conduct my own flow monitoring using a floating orange/stage area under Fishbowl Bridge (yes old fashioned but no need for regression uncertainties).

1. Flows at the Fishbowl Bridge are very significantly less than in January.
2. Flows from Abdoney and Belcher Springs are now virtually zero at high stage.
3. Specific Conductance at all the springs has increase almost 50% since January.
4. USGS Field Measurements February 8-9, 2012 show results approx 10% less than calculated flows.
5. Still no word on hourly data from the velocity meter installed last September.

Main Spring

1. Specific Conductance of water emanating the main spring continues to increase (salt water ingress) and shows significant increase at high stage; indications are flow of better quality water from the aquifer is reducing.
2. Only two spot check Field Measurements are reported for flow Feb 3 and April 10

Chassahowitzka

1. Early in the year I shared e-mails from SWFWMD regarding MFL's Rule 40D.8.041 and reference to previous days flow. The draft rule was withdrawn from the November 2010 meeting agenda; possibly someone realized Crab Creek adds to the flow only a couple of hundred feet downstream from the gage site 02310650. Keep your eyes open for the new wording.
2. It was pointed out USGS Specific Conductance data at the Gage Site show continued increase during times the calculated flow from the springs is reported as changing from reverse to positive. No explanation or follow up to better understand, *other than four*

extended kayak trips by myself.

3. It was pointed out Hydrodynamic Model referenced in the Draft Report was calibrated using reconstructed data which differs on average 5% to USGS data. No comments/explanation offered.
4. From personal observation the flow does not reverse until over an hour after the calculated results indicate. Is the discharge cfs equation erroneous?
5. At high stage the salt water ingress into the main vent significantly increases. The specific conductance of water emanating from the main spring at high stage is now almost equivalent to the water from Crab Creek Spring.

Weeki Wachee Well

1. Since January Weeki Wachee Well level has dropped faster than any corresponding period in history. Without Mother Nature providing some long term steady rainfall historic lows may be reached. Historic low was May 13, 2009 at 10.67 feet dropping from 13.10 feet Jan 1, 2009. Today level is 11.08 feet having dropped from 13.72 feet on Jan 1, 2012. Do the math.
2. The well level has not been above 16 feet since March 5, 2006; historically levels reached close to 20 feet on a regular basis.
3. Level in the aquifer is a major factor driving spring flow (Weeki Wachee considered a primary indicator), hence it is clear that the spring flows could be historically and possibly critically low.

USGS Investigation

A USGS head office review of spring flow data collection/calculation was conducted January 22-24. The review as reported was lacking specific details, but commented;

“found no major problems with the operation of gages or the calculation of streamflow records.”

Comment: The future of Chazz and Homosassa is critical on small changes of flow 5%.

And

“Accurately documenting any flow asymmetry likely will require collecting measurements over the duration of at least one full tidal cycle.”

Comment: Report does not list locations, but for SE Fork no record of Field Measurements over a full tidal cycle; Feb 8-9 was 11 hours on 8th plus 3 hours on 9th .

And

“While measurements were seen to generally compare well to the rating curve, we recommend that the equations be updated.

Comment: Compare well, but recommend update?

And

“While Knochenmus and Yobbi’s original equations were documented in report WRIR 2001-4230, the newer regression equations that are currently in use are not as well documented.

SWFWMD Clarity Re MFL

Specific questions have been asked about what the Minimum Flow is, SWFWMD replies appear elusive, such as;

You wrote: “1. Is baseline for establishing Minimum Flow for the Homosassa River 152 cubic feet per second combined flows from the USGS gage sites Homosassa Main Spring and SE Fork of Homosassa River (Executive Summary, Draft Peer Review July 2010).

YES

NO”

Response: No – As used for development of the proposed minimum flows, ‘baseline’ simply refers to a statistical metric (typically median) characterizing conditions associated with a specific period of flow (benchmark period). For the Homosassa system, two benchmark periods, calendar year 2007 and October 18, 1995 through May 13, 2009, were used to develop minimum flow recommendations. Combined flow records for the USGS Homosassa Main Spring and SE Fork Homosassa River for each benchmark period were used to characterize baseline conditions such as the volume of salinity-based habitat associated where salinities were less than or equal to 5. The baseline conditions evaluated for each benchmark period were associated with the respective median flows, *i.e.*, 130 cfs for the 2007 benchmark period and 150 cfs for the 1995-2009 benchmark period. Because median benchmark flows were used for the analyses, it may be expected that one-half of the flow values during each benchmark period were lower than the median values. Finally, it should be noted that the 152 cfs average flow value included in the Executive Summary of the draft minimum flows report represents the average or mean combined flow for the longer benchmark period, rather than a median value.

You wrote: “3. Is the recommended minimum flows for the Homosassa River system defined as a five percent reduction from baseline flows of 152 cfs which is minimum flow 144 cfs.

YES

NO”

Response: No -- The recommended minimum flows for the Homosassa River system are an allowable percentage of flow reduction from the natural flow condition, which is defined as the flows that would exist in the absence of water withdrawals.

And for Chazz

“The proposed Chassahowitzka MFL is a percentage of flow, not a fixed number and is not directly related to a long-term median. The MFL is a percent of flow and the actual withdrawal varies with the flow, not a historic median. As discussed later, the 63 cfs flow rate is not an MFL criterion.”

No doubt we will all read the revised draft MFL reports in detail once issued, but lets hope the comments made and the concerns expressed about the HARM which has already occurred in these rivers was recognized by SWFWMD.

Martyn

Richard M. Bryant
805 S. Longneedle Drive
St. Augustine, FL 32092



Blake Guillory, Executive Director
Southwest Florida Water Management District
2379 Broad St.
Brooksville, FL 34604

May 8, 2012

RE: Chassahowitzka River Recommended Minimum Flows and Levels

Dear Mr. Guillory,

I have recently reviewed the documentation provided on the District's website for the Minimum Flow determination for the Spring Coast. While the body of research is vast and far ranging, I am concerned with the lack of **quality** data and pertinence to the springs of the Chassahowitzka River.

Many of the studies and models do not seem to be applicable to the Florida west coast area and many assumption used in these models are based on flawed or incomplete data. In several cases, data that is pertinent has been ignored (example - rainfall data that does not show any trends was disregarded and instead you have assumed that rainfall amounts are dropping). While there is spring flow data dating back to 1930, you instead chose to use only data from a well located miles south of the Chassahowitzka. Many models do not take into account the rising level of the Gulf water, but the District does acknowledge that sea levels are increasing. Most studies of spring output do show a statistical decrease in flow amounts, yet most of the models used in the studies assume no decrease in flow rates.

I spent nearly half of my 32-year career for the U.S. Department of Interior – National Park Service working on the ecological processes of Florida habitats. This included water monitoring and the impacts of changes to natural flows. As a biologist and a land owner on the Chassahowitzka River, I urge you to use common sense and logic instead of flawed data and non-pertinent models that have not been validated.

The Chassahowitzka River is already stressed. The following items attest to the impacted condition of the Chassahowitzka River:

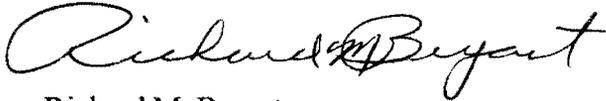
1. Currently the Chassahowitzka River is on the list of impaired water for dissolved oxygen.
2. The main spring has declined in flow over historic times. This is shown both by a look at the records from 1930 to present day and as noted by the District in a study to remove

obstructions from the main spring and dredge excess sediment from the basin surrounding the main spring. This study is not in your web site, but has been under review for several years.

3. Sea levels are rising (as noted in several of the studies provided by the District). The increased sea levels have already impacted the hydric hammocks and the emergent vegetation (*Spartina* and mangrove areas). A loss of emergent vegetation is apparent in comparison of recent aerial photography with historic aerial photographs, from personal observations and noted by numerous landowners.
4. The declines in habitat over the previous decades has been apparent in the changes in aquatic vegetation, alterations in fish abundance, loss of certain species of emergent vegetation, and the decline of the stream-side hydric hammocks.

The above changes clearly show that the Chassahowitzka River system is impacted and stressed. Any additional water withdrawals of freshwater will increase the stress to the river and further damage habitat. I urge you to use common sense and logic when considering freshwater withdrawals. The system is already stressed. No additional freshwater withdrawals should be permitted to this already impacted system. Any additional withdrawals will result in more harm to the ecological balance of the Chassahowitzka River.

Sincerely,

A handwritten signature in cursive script that reads "Richard M. Bryant". The signature is written in black ink and is positioned above the printed name.

Richard M. Bryant



An Equal Opportunity Employer

Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899

(352) 796-7211 or 1-800-423-1476 (FL only)

TDD only: 1-800-231-6103 (FL only)

On the Internet at WaterMatters.org

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

- H. Paul Senft, Jr.**
Chair, Polk
- Hugh M. Gramling**
Vice Chair, Hillsborough
- Douglas B. Tharp**
Secretary, Sumter
- Albert G. Joerger**
Treasurer, Sarasota
- Neil Combee**
Former Chair, Polk
- Todd Pressman**
Former Chair, Pinellas
- Judith C. Whitehead**
Former Chair, Hernando
- Jeffrey M. Adams**
Pinellas
- Michael A. Babb**
Hillsborough
- Carlos Beruff**
Manatee
- Bryan K. Beswick**
DeSoto
- Jennifer E. Closshey**
Hillsborough
- Randall S. Maggard**
Pasco
- Blake C. Gullory**
Executive Director

June 27, 2012

Richard M. Bryant
805 S. Longneedle Drive
St. Augustine, FL 32092

Subject: Chassahowitzka River Recommended Minimum Flows and Levels

Dear Mr. Bryant,

Thank you for your continued interest in the Southwest Florida Water Management District's development of Minimum Flows and Levels (MFLs) for the Chassahowitzka River system. Mr. Guillory has forwarded your inquiry to me and asked that I respond to your questions.

As you are aware, the District welcomes comments from the public. The District convened a Springs Coast MFLs Working group for stakeholders and interested citizens, and hosted a series of public meetings during 2011 to facilitate exchange of ideas. The purpose of those meetings was to have the stakeholders and interested citizens identify quality datasets and alternative techniques for analyzing the data.

In your letter, you indicated that you felt many of the studies and models used in developing the MFLs proposed for the Chassahowitzka River system were not applicable to the Florida West Coast. The proposed Chassahowitzka MFLs are based entirely on data and models collected in the Chassahowitzka or nearby areas along the west coast of Florida. The following studies and models were used to develop quantitative withdrawal limits that would be associated with the proposed Chassahowitzka MFLs:

- Salinity - Data collected in the Chassahowitzka 1996 – 2008.
- Benthic community – Data collected in the Chassahowitzka during 2005 and 2008.
- Mollusc – Data collected in the Chassahowitzka during 2007.
- Submerged Aquatic Vegetation – Data collected in the Chassahowitzka from 1997 – 2005.
- Fish/Invertebrates – Data collected in the Chassahowitzka during 2005 – 2007.
- Groundwater impacts – Data collected within the hydrogeologic domain from southern Alachua County to southern Tampa Bay including watersheds and springsheds directly contributing to the discharge of the Chassahowitzka spring system.
- Habitat evaluation (salinity and thermal) using hydrodynamic model - Discharge, salinity and temperature data collected in the Chassahowitzka and reported by the USGS. Supplemented with meteorological data from St. Petersburg, and historical tide water level data from Cedar Key Florida.

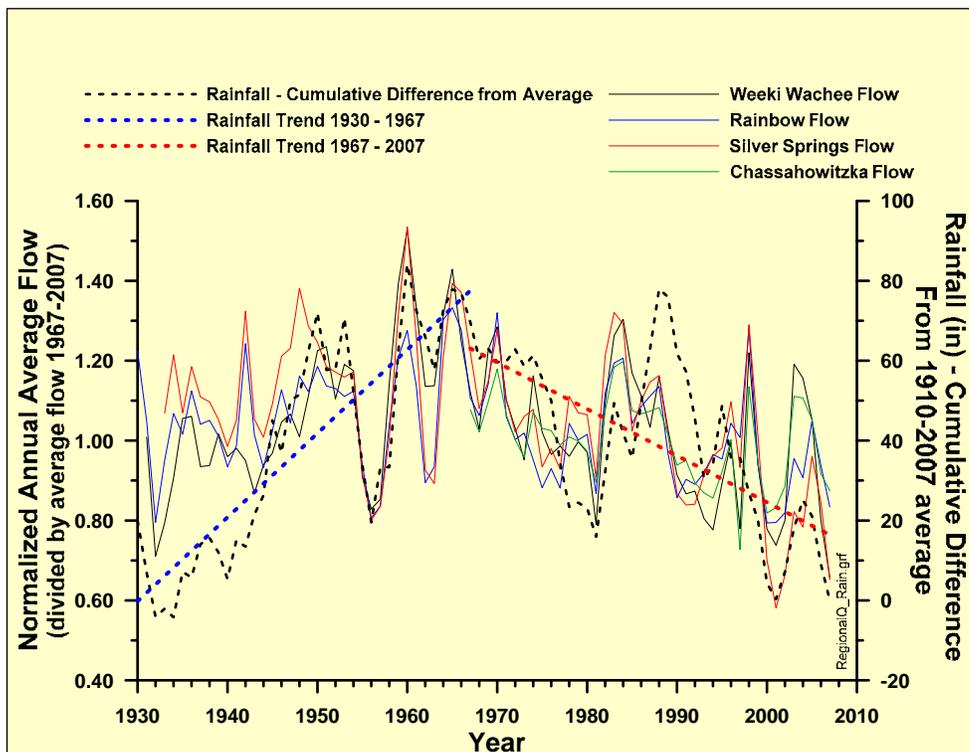
Mr. Richard M. Bryant
 Subject: Chassahowitzka River Recommended Minimum Flows and Levels
 Southwest Florida Water Management District
 Page 2
 June 27, 2012

The proposed MFLs threshold developed for the West Indian Manatee was based on thermal habit in the Chassahowitzka River. Typical manatee dimensions, and observed density of use were based on data collected on the East Coast of Florida. The U.S. Fish and Wildlife aerial counts of manatee usage of the Chassahowitzka were also reported, but the MFLs threshold proposed for manatees in the Chassahowitzka was independent of these results and was based solely on change in available habitat within the Chassahowitzka River.

You cited rainfall as pertinent data that you feel was ignored by the District. The District has always maintained that departures from average rainfall increased from 1910 until around 1966, followed by a decrease in rainfall that continued through 2007. The increasing trend from 1910 until 1967 is statistically significant and the decreasing trend from 1967 until 2007 is statistically significant. This decrease was not simply 'assumed' by the District. When discussing trends, it is essential that the evaluation period be clearly defined. The District agrees that there has been very little trend in rainfall when evaluating the period 1910 through 2007, but notes that the lack of a rainfall trend for this extended period is the result of an early increasing trend cancelling out a later decreasing trend.

Please recall that in the District's November 2010 response to you on local rainfall trends, a figure from United States Geological Survey (USGS) Water Resource Investigation 01-4230 was included. Figure 1 expands on the USGS figure and includes estimated spring flows and cumulative departure from average rainfall information for the same period. The figure demonstrates that spring discharge from the Weeki Wachee, Rainbow, and Chassahowitzka rivers and Silver Springs has closely tracked changes in rainfall for the nearly 100-year record shown.

Figure 1. Cumulative departure from 1910-2007 average rainfall at Chinsegut Hill, Florida and normalized spring discharge.

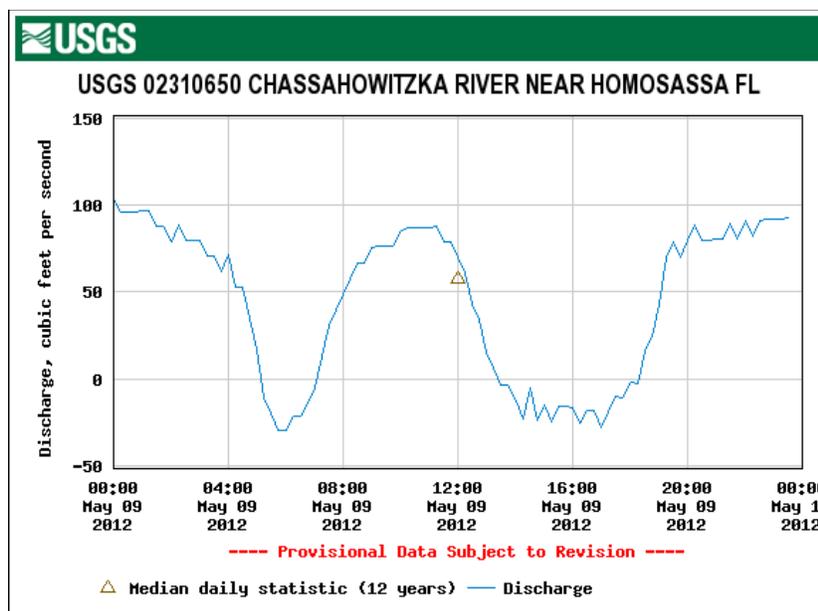


Mr. Richard M. Bryant
Subject: Chassahowitzka River Recommended Minimum Flows and Levels
Southwest Florida Water Management District
Page 3
June 27, 2012

The District's decision to use the Weeki Wachee well to predict discharge from the Chassahowitzka was based on a procedure established by the USGS decades prior. The discharge values reported by the USGS for the Chassahowitzka, Weeki Wachee, Homosassa, and Homosassa Southeast Fork are all derived in part from the water level in the Weeki Wachee well. Measurements of water level in that well commenced in 1967 and thus, the Chassahowitzka flow record could only be estimated back to that point in time. The flow in all of the systems studied has declined since the mid-1960s.

You correctly indicated that the spring flow measurements in the Chassahowitzka River began in the 1930s. However, using the earlier data is problematic for several reasons. First, the data is sporadic, averaging 186 days between observations. A continuous record of daily average flow is preferred for determining an MFL. Second, the data was collected at a different location in the river than the current daily measurements. The early data included discharge from Crab Creek, which has not been included in the current USGS daily measurements that began in 1997. Finally, of the 143 historical measurements identified between 1930 and 1997, 90 percent represent only a single point measurement during a calendar day. This site is affected by tides and in order to obtain an accurate estimate of discharge, multiple measurements must be completed over the entire tide cycle. For consideration of this issue, please see Figure 2, which is a graph of USGS discharge reported for May 9, 2011 downstream of Chassahowitzka Main spring. If the single discharge measurement representing this day were taken at midnight, the flow would be +100 cfs (toward) the Gulf of Mexico. On the other hand, if the single measurement were taken at 6:00 AM the flow would be -30 cfs (incoming) flow. The USGS reported the average daily flow for May 9th as +46 cfs. Comparison of these three flows (+100, -30 and +46 cfs) illustrates how misleading it may be to represent net daily flow using a single daily observation in a system so strongly affected by tides.

Figure 2. Chassahowitzka discharge May 9, 2012.



Mr. Richard M. Bryant
Subject: Chassahowitzka River Recommended Minimum Flows and Levels
Southwest Florida Water Management District
Page 4
June 27, 2012

The District is unaware of an impaired designation for dissolved oxygen in the Chassahowitzka River, although the District does acknowledge that the Florida Department of Environmental Protection (FDEP) has designated nine water body reaches in the Chassahowitzka Planning area as impaired for other parameters. Six are classified as impaired by mercury contamination of fish flesh. Statewide there are 120 water body reaches designated as impaired for mercury. The spatial extent is so vast that FDEP is preparing a statewide solution. There is no evidence that the impairment is unique to the Chassahowitzka River or related to flow.

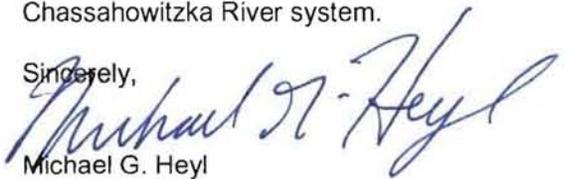
In addition to the mercury impairment, five of the Chassahowitzka water bodies have been classified as impaired for nutrients as evidenced by algal mats. The FDEP has commented that the cause of impairment is nitrate+nitrite nitrogen (NO_x-N). The District has evaluated the relationship between NO_x-N and both flow and time in the Chassahowitzka River. The results are included in Section 4.3 of the November 2010 MFL report that you cited. The increase in NO_x-N is not related to changes in flow.

The District acknowledges that a rise in sea level is resulting in the loss of hydric hammocks and that a widespread shift in vegetation is likely to continue along Florida's west coast and elsewhere. Photographic evidence provided by the U.S. Fish and Wildlife Service at the September 2011 stakeholder meeting suggests that the change may have begun several decades ago, and possibly pre-dates the District's first record (1975) of groundwater withdrawals. On a longer time-scale, cycles of changing sea level have been repeated many times. The District has reacted to stakeholder comments concerning the effects of sea level change by evaluating scenarios involving low, medium and high estimates of rise. The results were presented at the July 2011 stakeholder meetings, and have been incorporated in the most recent drafts of the Chassahowitzka and Homosassa River MFLs reports. Those reports are currently undergoing an internal review, and it is expected that the reports will be posted on the District's web site within a few weeks. The stakeholder presentations can be viewed at <http://www.swfwmd.state.fl.us/projects/mfl/springs-coast-mfl.php>. The final reports will be posted at http://www.swfwmd.state.fl.us/projects/mfl/mfl_reports.php when available.

In your letter, you also expressed a concern that "quality data" was not used by the District and that the models were based on "flawed or incomplete data". It would be helpful to our program if you would specifically identify the data you referenced in your letter and more importantly, if you could identify an existing dataset that you feel would be more appropriate for the District to consider. Section 373.042 of The Florida Statutes require that the District or the FDEP use the *'best information available'* and to the best of our knowledge, we have done so.

Again, I thank you for your comments regarding the establishment of minimum flows for the Chassahowitzka River system.

Sincerely,



Michael G. Heyl
Chief Environmental Scientist
Natural Systems & Restoration Bureau
Environmental Section - Tampa Office
Southwest Florida Water Management District.

cc: Blake Guillory, Executive Director
Colleen Thayer, Bureau Chief, Public Affairs
Eric DeHaven, Bureau Chief, Natural Systems & Restoration
Veronica Crow, Manager, Environmental, Natural Systems & Restoration
Chris Zajac, Program Manager, Community Affairs

From: [Mike Heyl](#)
To: [Brent Whitley](#)
Cc: [Ron Basso](#); [Doug Leeper](#)
Subject: RE: quick question
Date: Monday, May 21, 2012 7:58:01 AM

Brent – We don't permit surface water withdrawals in terms of absolute quantities, so we wouldn't permit "8 cfs" or "6 cfs". We might say applicant one can have 4% of the daily flow and applicant two can have 6%. On the first day of your example when the flow is 60 cfs, applicant one could take 2.4 cfs and applicant two could take 3.6 cfs. On the second day when the flow is 54 cfs the respective takes could be 3.2 cfs and 4.0 cfs. If the flow rose to 70 cfs on the third day, the takes would be 2.8 and 4.2 cfs. That's the way we would handle a surface water withdrawal.

Groundwater permitting would be different and I've cc'd Ron Basso on this response. He indicated that he would comment on how the groundwater permitting works.

Hope this helps.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- *Note : District Limit for Incoming Email is 5 Megabytes* -----
An ftp site is available for larger attachments : http://ftp.swfwmd.state.fl.us/
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Brent Whitley [mailto:BrentWhitley@Sierra-Properties.com]
Sent: Thursday, May 17, 2012 3:58 PM
To: Mike Heyl
Subject: quick question

Mike,

I hope things are well with you and your team. I know the heat is turning up.

I have a quick question about the "natural flow". If the MFL at Chassahowitzka is set at 10% (round number) of the natural flow, then if the flow is 60 CFS it could be reduced to 54 CFS. If because of rainfall increase, it began to discharge in the future at 80 CFS the flow could be reduced by 8 CFS which would allow for more pumping than the earlier example, i.e. more permits could be issued. What happens in the event of reduced rainfall and it

drops BACK to 60 CFS and now we have permitted to allow for 8 CFS drawdown? How is that reconciled to match the mandated MFL you established initially of 10% drawdown?

You do not need to go into any great detail and if you want to just say the answer is in the coming report that is OK. I do not want to bog you down any further.

Thanks,

Brent

From: [Ron Basso](#)
To: [Brent Whitley](#)
Cc: [Doug Leeper](#); [Mike Heyl](#); [Jerry Mallams](#)
Subject: RE: quick question
Date: Monday, May 21, 2012 9:07:59 AM

Brent:

I don't know if your concern was surface water or groundwater withdrawals. First off, I think it's extremely unlikely that there would ever be direct surface water withdrawn from this spring or river. Mike Heyl has given you a nice description of how typical surface water withdrawals are regulated based on other rivers in the District. On the groundwater side, it's basic. We model the cumulative impacts of all withdrawals under average recharge (rainfall conditions). The model simulates a percentage of flow decline due only to withdrawals. This is independent of what the actual flow on the river or spring is on any given day.

We will often put statistical benchmarks in the rule such as a 5 or 10-year moving median and mean of flow – but these are used as triggers for additional investigation if not met. These triggers can be exceeded if there are unusually dry climatic conditions not related to withdrawals. We model all groundwater withdrawals under current and 2030 conditions. If the minimum flow is not projected to be exceeded in the next 20 years that gives us some confidence to continue to allow permitting of groundwater withdrawals (in relation to this one minimum flow set at Chassahowitzka). Of course, there are other Chapter 40D-2 F.A.C. rules that apply to individual permits plus other minimum flows that have to be met in addition to the Chassahowitzka River. We will also periodically reassess compliance with this minimum flow in the future as conditions change.

The percentage of flow decline attributable to groundwater withdrawals is based on long-term average flow conditions. This is consistent with the way SJRWMD does there minimum flows for springs. When wet weather returns, it also means that because we analyze this on an average basis, we wouldn't allow more groundwater withdrawals just because the river or spring is flowing at high rates. Hope this answers your question. Please free feel to discuss with me if you have any other questions or concerns.

Ron Basso, P.G.
Senior Professional Geologist
Resource Evaluation Section
Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

Only those who dare to fail greatly can ever achieve greatly – John F. Kennedy

From: Mike Heyl
Sent: Monday, May 21, 2012 7:58 AM
To: Brent Whitley
Cc: Ron Basso; Doug Leeper
Subject: RE: quick question

Brent – We don't permit surface water withdrawals in terms of absolute quantities, so we wouldn't permit "8 cfs" or "6 cfs". We might say applicant one can have 4% of the daily flow and applicant two can have 6%. On the first day of your example when the flow is 60 cfs, applicant one could take 2.4 cfs and applicant two could take 3.6 cfs. On the second day when the flow is 54 cfs the respective takes could be 3.2 cfs and 4.0 cfs. If the flow rose to 70 cfs on the third day, the takes would be 2.8 and 4.2 cfs. That's the way we would handle a surface water withdrawal.

Groundwater permitting would be different and I've cc'd Ron Basso on this response. He indicated that he would comment on how the groundwater permitting works.

Hope this helps.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
7601 U.S. Highway 301 1-813-985-7481 Ext 2211
Tampa, Fl. 33637-6759 1-813-987-6747 (Fax)
----- *Note : District Limit for Incoming Email is 5 Megabytes* -----
An ftp site is available for larger attachments : <http://ftp.swfwmd.state.fl.us/>
This email consists of 100% recycled electrons. Consider the environment before printing
=====
Please Note: All e-mail sent to and from this address is automatically archived
for records retention purposes in accordance with Florida's Public Records laws
and is available for inspection by the public upon request.

From: Brent Whitley [mailto:BrentWhitley@Sierra-Properties.com]
Sent: Thursday, May 17, 2012 3:58 PM
To: Mike Heyl
Subject: quick question

Mike,

I hope things are well with you and your team. I know the heat is turning up.

I have a quick question about the "natural flow". If the MFL at Chassahowitzka is set at 10% (round number) of the natural flow, then if the flow is 60 CFS it could be reduced to 54 CFS. If because of rainfall increase, it began to discharge in the future at 80 CFS the flow could be reduced by 8 CFS which would allow for more pumping than the earlier example, i.e. more permits could be issued. What happens in the event of reduced rainfall and it drops BACK to 60 CFS and now we have permitted to allow for 8 CFS drawdown? How is

that reconciled to match the mandated MFL you established initially of 10% drawdown?

You do not need to go into any great detail and if you want to just say the answer is in the coming report that is OK. I do not want to bog you down any further.

Thanks,

Brent

From: [Brent Whitley](#)
To: [Ron Basso](#)
Cc: [Doug Leeper](#); [Mike Heyl](#); [Jerry Mallams](#)
Subject: Re: quick question
Date: Monday, May 21, 2012 9:48:13 AM

Yes it does and I appreciate your time.

Sent from my iPhone

On May 21, 2012, at 9:08 AM, "Ron Basso" <Ron.Basso@swfwmd.state.fl.us> wrote:

Brent:

I don't know if your concern was surface water or groundwater withdrawals. First off, I think it's extremely unlikely that there would ever be direct surface water withdrawn from this spring or river. Mike Heyl has given you a nice description of how typical surface water withdrawals are regulated based on other rivers in the District. On the groundwater side, it's basic. We model the cumulative impacts of all withdrawals under average recharge (rainfall conditions). The model simulates a percentage of flow decline due only to withdrawals. This is independent of what the actual flow on the river or spring is on any given day.

We will often put statistical benchmarks in the rule such as a 5 or 10-year moving median and mean of flow – but these are used as triggers for additional investigation if not met. These triggers can be exceeded if there are unusually dry climatic conditions not related to withdrawals. We model all groundwater withdrawals under current and 2030 conditions. If the minimum flow is not projected to be exceeded in the next 20 years that gives us some confidence to continue to allow permitting of groundwater withdrawals (in relation to this one minimum flow set at Chassahowitzka). Of course, there are other Chapter 40D-2 F.A.C. rules that apply to individual permits plus other minimum flows that have to be met in addition to the Chassahowitzka River. We will also periodically reassess compliance with this minimum flow in the future as conditions change.

The percentage of flow decline attributable to groundwater withdrawals is based on long-term average flow conditions. This is consistent with the way SJRWMD does there minimum flows for springs. When wet weather returns, it also means that because we analyze this on an average basis, we wouldn't allow more groundwater withdrawals just because the river or spring is flowing at high rates. Hope this answers your question. Please free feel to discuss with me if you have any other questions or concerns.

Ron Basso, P.G.
Senior Professional Geologist
Resource Evaluation Section

Southwest Florida Water Management District
ph 1-800-423-1476 (in state)
ph 352-796-7211, ext. 4291 (outside state)
FAX 352-797-5799

Only those who dare to fail greatly can ever achieve greatly – John F. Kennedy

From: Mike Heyl
Sent: Monday, May 21, 2012 7:58 AM
To: Brent Whitley
Cc: Ron Basso; Doug Leeper
Subject: RE: quick question

Brent – We don't permit surface water withdrawals in terms of absolute quantities, so we wouldn't permit "8 cfs" or "6 cfs". We might say applicant one can have 4% of the daily flow and applicant two can have 6%. On the first day of your example when the flow is 60 cfs, applicant one could take 2.4 cfs and applicant two could take 3.6 cfs. On the second day when the flow is 54 cfs the respective takes could be 3.2 cfs and 4.0 cfs. If the flow rose to 70 cfs on the third day, the takes would be 2.8 and 4.2 cfs. That's the way we would handle a surface water withdrawal.

Groundwater permitting would be different and I've cc'd Ron Basso on this response. He indicated that he would comment on how the groundwater permitting works.

Hope this helps.

MGH

=====
Michael G. Heyl - Chief Environmental Scientist
Mike.Heyl@SWFWMD.state.fl.us or Mike.Heyl@WaterMatters.org
=====
Natural Systems and Restoration Bureau / SWFWMD (7:00 am - 3:30 pm)
)
7601 U.S. Highway 301 1-813-985-7481 Ext
2211
Tampa, Fl. 33637-6759 1-813-987-6747
(Fax)

----- Note : District Limit for Incoming Email is 5 Megabytes -----
An ftp site is available for larger attachments :

<http://ftp.swfwmd.state.fl.us/>

This email consists of 100% recycled electrons. Consider the environment before printing

=====
Please Note: All e-mail sent to and from this address is automatically archived for records retention purposes in accordance with Florida's Public Records laws and is available for inspection by the public upon request.

From: Brent Whitley [mailto:BrentWhitley@Sierra-Properties.com]

Sent: Thursday, May 17, 2012 3:58 PM
To: Mike Heyl
Subject: quick question

Mike,

I hope things are well with you and your team. I know the heat is turning up.

I have a quick question about the "natural flow". If the MFL at Chassahowitzka is set at 10% (round number) of the natural flow, then if the flow is 60 CFS it could be reduced to 54 CFS. If because of rainfall increase, it began to discharge in the future at 80 CFS the flow could be reduced by 8 CFS which would allow for more pumping than the earlier example, i.e. more permits could be issued. What happens in the event of reduced rainfall and it drops BACK to 60 CFS and now we have permitted to allow for 8 CFS drawdown? How is that reconciled to match the mandated MFL you established initially of 10% drawdown?

You do not need to go into any great detail and if you want to just say the answer is in the coming report that is OK. I do not want to bog you down any further.

Thanks,

Brent

IMPORTANT NOTICE: All E-mail sent to or from this address are public record and archived. The Southwest Florida Water Management District does not allow use of District equipment and E-mail facilities for non-District business purposes.

From: WaterMatters.org
To: schmidt.kh@gmx.com
Cc: [Doug Leeper](#)
Subject: Thanks for your Springs Coast MFL working group comments
Date: Wednesday, July 11, 2012 8:03:34 AM



Hi Valentina,

Thank you for your comments concerning the District's Springs Coast Minimum Flows and Levels Workshop Series.

Thank you for your comments concerning the District's Springs Coast Minimum Flows and Levels Workshop Series. Your input will be reviewed and will support management decisions regarding the data and methods used to establish and/or reevaluate minimum flows for important river and spring systems of the Springs Coast.

Please Note: At this time the District will not be responding to submitted comments.

Your Comments:

Good points all around. Truly appericiated.

From: [Alan Martyn Johnson](#)
To: [Doug Leeper](#); [Kevin J. Grimsley](#)
Subject: Unusually High Specific Conductance SE Fork
Date: Tuesday, June 26, 2012 8:21:44 AM
Attachments: [June 23 24 SE Fork High Spec C. data.xls](#)

Doug and Kevin,

Certainly pleased there is some rainfall, but would have hoped for better control of the faucet by Mother Nature!

But, quickly to my point as I am sure you have many other things to deal with...and I do not expect an immediate answer to this.

In reviewing the data for the Homosassa Gage Sites yesterday I noticed something rather unusual...Specific Conductance readings at the SE Fork site have some high readings, so high it is difficult to attribute these to waters reaching the gage site by reverse flow from the Blue Water. As you will see in the attached spreadsheet the water from the main springs has lower readings. Although readings in the first highlighted timeframe are higher at the Halls River Site; for the second highlighted interval the readings at Halls River are also lower. It is a real stretch to believe flow from the springs is so low that waters from this section of the river *'not specifically Halls River but the main body getting reverse flow from MacRaes'* are reaching all the way to the SE Fork.

This same phenomena can also be seen in the readings from last night to now.

Any thoughts about how this is possible?

I am speculation that one of the vents in the SE Fork is discharging some high Specific Conductance water and further speculate it is the vent only some 20 feet upstream of the Fishbowl Bridge on the right bank. Flow from the various other springs in the SE Fork must be almost zero under these high stage conditions. I have previously commented/observed this referenced vent opening at high stage and the water discharge being similar to the main springs, but this is unusual.. Is this subterranean seawater ingress big time? I am further puzzled as to why run off waters are not reducing the figures; you can see where rainwater run off dropped the readings to the 400's.

Another point that I have been watching is the frequency of higher specific conductance readings at Halls River Gage. When this site first came on-line in March, the readings indicated water from the main springs and SE Fork were most likely the water passing the site under reverse flow. As time progressed there has been more water which appears to be from the reverse flow at MacRaes. The recent increases of water level in the aquifer (at Weeki Wachee) does not appear to have increased spring flow to a point that was in March. The graphs on sheet 3 of the attachment help illustrate.

Velocity data from the SE Fork meter may help understand this.

When you get a chance would appreciate your thoughts on these points/unusual situations. Great coffee break conversation!

I trust that you have personally weathered Debby without too many problems.

Martyn

From: [Kevin J. Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: [Doug Leeper](#)
Subject: Re: Unusually High Specific Conductance SE Fork
Date: Sunday, July 01, 2012 11:50:16 AM

Hi Martyn,

There's no way to say conclusively if the higher conductance water came from a spring vent without having a meter directly at the vent. However, it's much more likely that the higher conductance water came from the surface-water since that's obviously the "path of least resistance". It makes sense that this would be different at the main spring because there's much more flow from the spring and the conductance meter is closer to the vents.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jun 26, 2012, at 8:21 AM, "Alan Martyn Johnson" <martynellijay@hotmail.com> wrote:

Doug and Kevin,
Certainly pleased there is some rainfall, but would have hoped for better control of the faucet by Mother Nature!

But, quickly to my point as I am sure you have many other things to deal with... and I do not expect an immediate answer to this.

In reviewing the data for the Homosassa Gage Sites yesterday I noticed something rather unusual...Specific Conductance readings at the SE Fork site have some high readings, so high it is difficult to attribute these to waters reaching the gage site by reverse flow from the Blue Water. As you will see in the attached spreadsheet the water from the main springs has lower readings. Although readings in the first highlighted timeframe are higher at the Halls River Site; for the second highlighted interval the readings at Halls River are also lower. It is a real stretch to believe flow from the springs is so low that waters from this section of the river *'not specifically Halls River but the main body getting reverse flow from MacRaes'* are reaching all the way to the SE Fork.

This same phenomena can also be seen in the readings from last night to now.

Any thoughts about how this is possible?

I am speculation that one of the vents in the SE Fork is discharging some high Specific Conductance water and further speculate it is the vent only some 20 feet upstream of the Fishbowl Bridge on the right bank. Flow from the various other springs in the SE Fork must be almost zero under these high stage conditions. I have previously commented/observed this referenced vent opening at high stage and the water discharge being similar to the main springs, but this is unusual.. Is this subterranean seawater ingress big time? I am further puzzled as to why run off waters are not reducing the figures; you can see where rainwater run off dropped the readings to the 400's.

Another point that I have been watching is the frequency of higher specific conductance readings at Halls River Gage. When this site first came on-line in March, the readings indicated water from the main springs and SE Fork were most likely the water passing the site under reverse flow. As time progressed there has been more water which appears to be from the reverse flow at MacRaes. The recent increases of water level in the aquifer (at Weeki Wachee) does not appear to have increased spring flow to a point that was in March. The graphs on sheet 3 of the attachment help illustrate.

Velocity data from the SE Fork meter may help understand this.

When you get a chance would appreciate your thoughts on these points/unusual situations. Great coffee break conversation!

I trust that you have personally weathered Debby without too many problems.

Martyn

<June 23 24 SE Fork High Spec C data.xls>

From: [Alan Martyn Johnson](mailto:Alan.Martyn.Johnson)
To: [Kevin J Grimsley](mailto:Kevin.J.Grimsley)
Cc: [Doug Leeper](mailto:Doug.Leeper)
Subject: RE: Unusually High Specific Conductance SE Fork
Date: Monday, July 02, 2012 7:57:27 AM

Kevin,

Thanks for taking the time to respond.

I agree there is no way to say 'conclusively', but it is difficult to understand/explain how the conductance was higher at the SE Fork than Halls River. I would have thought high conductance water entering the river at MacRaes would have been seen at Halls River long before the SE Fork, and most likely conductance would be higher at Halls River as there is less dilution from the main spring flow. I have been thinking of checking the river volumes upstream of MacRaes to determine where the spring flows (total volume discharge) would be sufficient to match the rising stage height/tide...maybe when I have time for such a mathematical exercise!!

Would have been interesting if I had been in Homosassa when this happened to see it firsthand.

Do you have any data from the velocity meter at the SE Fork that would help our understanding?

The velocity meter at Halls River has been streaming data since it was installed (March if memory serves) yet data from the unit at the SE Fork is still 'confidential' after some 9 months.

All in all, it certainly was unusual along with unusually heavy rainfall, but we sure needed the rain.

Martyn

To: martynellijay@hotmail.com
Date: Sun, 1 Jul 2012 12:13:52 -0400
From: kjgrims@usgs.gov
Subject: Re: Unusually High Specific Conductance SE Fork
CC: doug.leeper@swfwmd.state.fl.us

Hi Martyn,

There's no way to say conclusively if the higher conductance water came from a spring vent without having a meter directly at the vent. However, it's much more likely that the higher conductance water came from the surface-water since that's obviously the "path of least resistance". It makes sense that this would be different at the main spring because there's much more flow from the spring and the conductance meter is closer to the vents.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov

813-498-5064

On Jun 26, 2012, at 8:21 AM, "Alan Martyn Johnson" <martynellijay@hotmail.com> wrote:

Doug and Kevin,

Certainly pleased there is some rainfall, but would have hoped for better control of the faucet by Mother Nature!

But, quickly to my point as I am sure you have many other things to deal with... and I do not expect an immediate answer to this.

In reviewing the data for the Homosassa Gage Sites yesterday I noticed something rather unusual...Specific Conductance readings at the SE Fork site have some high readings, so high it is difficult to attribute these to waters reaching the gage site by reverse flow from the Blue Water. As you will see in the attached spreadsheet the water from the main springs has lower readings. Although readings in the first highlighted timeframe are higher at the Halls River Site; for the second highlighted interval the readings at Halls River are also lower. It is a real stretch to believe flow from the springs is so low that waters from this section of the river *'not specifically Halls River but the main body getting reverse flow from MacRaes'* are reaching all the way to the SE Fork.

This same phenomena can also be seen in the readings from last night to now.

Any thoughts about how this is possible?

I am speculation that one of the vents in the SE Fork is discharging some high Specific Conductance water and further speculate it is the vent only some 20 feet upstream of the Fishbowl Bridge on the right bank. Flow from the various other springs in the SE Fork must be almost zero under these high stage conditions. I have previously commented/observed this referenced vent opening at high stage and the water discharge being similar to the main springs, but this is unusual.. Is this subterranean seawater ingress big time? I am further puzzled as to why run off waters are not reducing the figures; you can see where rainwater run off dropped the readings to the 400's.

Another point that I have been watching is the frequency of higher specific conductance readings at Halls River Gage. When this site first came on-line in March, the readings indicated water from the main springs and SE Fork were most likely the water passing the site under reverse flow. As time progressed there has been more water which appears to be from the reverse flow at MacRaes. The recent increases of water level in the aquifer (at Weeki Wachee) does not appear to have increased spring flow to a point that was in March. The graphs on sheet 3 of the attachment help illustrate.

Velocity data from the SE Fork meter may help understand this.

When you get a chance would appreciate your thoughts on these points/unusual

situations. Great coffee break conversation!

I trust that you have personally weathered Debby without too many problems.

Martyn

<June 23 24 SE Fork High Spec C data.xls>

From: [Kevin J. Grimsley](#)
To: [Alan Martyn Johnson](#)
Cc: [Doug Leeper](#)
Subject: RE: Unusually High Specific Conductance SE Fork
Date: Monday, July 02, 2012 10:17:15 AM

Sorry, our DBA had made a mistake when establishing the Hall's River station by putting the velocity on the web before our rating was established. We've corrected that.

It's a further distance to our Hall's River gage than the SE Fork, so that doesn't seem odd to me that the conductance would be higher at SE Fork. It occurred to me that you might have assumed our new gage was at the bridge where a previous gage had been. That was not a good location for gaging discharge, so the new gage was established further upstream.

http://waterdata.usgs.gov/fl/nwis/nwismap/?site_no=02310689&agency_cd=USGS

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Kevin J Grimsley <kjgrims@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>
Date: 07/02/2012 07:57 AM
Subject: RE: Unusually High Specific Conductance SE Fork

Kevin,

Thanks for taking the time to respond.

I agree there is no way to say 'conclusively', but it is difficult to understand/explain how the conductance was higher at the SE Fork than Halls River. I would have thought high conductance water entering the river at MacRaes would have been seen at Halls River long before the SE Fork, and most likely conductance would be higher at Halls River as there is less dilution from the main spring flow. I have been thinking of checking the river volumes upstream of MacRaes to determine where the spring flows (total volume discharge) would be sufficient to match the rising stage height/tide...maybe when I have time for such a mathematical exercise!!

Would have been interesting if I had been in Homosassa when this happened to see it firsthand.

Do you have any data from the velocity meter at the SE Fork that would help our understanding?

The velocity meter at Halls River has been streaming data since it was installed (March if memory serves) yet data from the unit at the SE Fork is still 'confidential' after some 9 months.

All in all, it certainly was unusual along with unusually heavy rainfall, but we sure needed the rain.

Martyn

To: martynellijay@hotmail.com
Date: Sun, 1 Jul 2012 12:13:52 -0400
From: kjgrims@usgs.gov
Subject: Re: Unusually High Specific Conductance SE Fork
CC: doug.leeper@swfwmd.state.fl.us

Hi Martyn,

There's no way to say conclusively if the higher conductance water came from a spring vent without having a meter directly at the vent. However, it's much more likely that the higher conductance water came from the surface-water since that's obviously the "path of least resistance". It makes sense that this would be different at the main spring because there's much more flow from the spring and the conductance meter is closer to the vents.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jun 26, 2012, at 8:21 AM, "Alan Martyn Johnson" <martynellijay@hotmail.com> wrote:

Doug and Kevin,
Certainly pleased there is some rainfall, but would have hoped for better control of the faucet by Mother Nature!

But, quickly to my point as I am sure you have many other things to deal with...and I do not expect an immediate answer to this.

In reviewing the data for the Homosassa Gage Sites yesterday I noticed something rather unusual...Specific Conductance readings at the SE Fork site have some high readings, so high it is difficult to attribute these to waters reaching the gage site by reverse flow from the Blue Water. As you will see in the attached spreadsheet the water from the main springs has lower readings. Although readings in the first highlighted timeframe are higher at the Halls River Site; for the second highlighted interval the readings at Halls River are also lower. It is a real stretch to believe flow from the springs is so low that waters from this section of the river *'not specifically Halls River but the main body getting reverse flow from MacRaes'* are

reaching all the way to the SE Fork.

This same phenomena can also be seen in the readings from last night to now.

Any thoughts about how this is possible?

I am speculation that one of the vents in the SE Fork is discharging some high Specific Conductance water and further speculate it is the vent only some 20 feet upstream of the Fishbowl Bridge on the right bank. Flow from the various other springs in the SE Fork must be almost zero under these high stage conditions. I have previously commented/observed this referenced vent opening at high stage and the water discharge being similar to the main springs, but this is unusual.. Is this subterranean seawater ingress big time? I am further puzzled as to why run off waters are not reducing the figures; you can see where rainwater run off dropped the readings to the 400's.

Another point that I have been watching is the frequency of higher specific conductance readings at Halls River Gage. When this site first came on-line in March, the readings indicated water from the main springs and SE Fork were most likely the water passing the site under reverse flow. As time progressed there has been more water which appears to be from the reverse flow at MacRaes. The recent increases of water level in the aquifer (at Weeki Wachee) does not appear to have increased spring flow to a point that was in March. The graphs on sheet 3 of the attachment help illustrate.

Velocity data from the SE Fork meter may help understand this.

When you get a chance would appreciate your thoughts on these points/unusual situations. Great coffee break conversation!

I trust that you have personally weathered Debby without too many problems.

Martyn

<June 23 24 SE Fork High Spec C data.xls>

From: [Alan Martyn Johnson](#)
To: [Kevin J Grimsley](#)
Cc: [Doug Leeper](#)
Subject: RE: Unusually High Specific Conductance SE Fork
Date: Tuesday, July 03, 2012 9:11:00 AM

Oh Kevin I trust the DBA did not get too badly punished for the mistake!!

You have spoiled my fun by removing the Velocity data, but no need to be sorry, I have come to understand some of the politics and modus operandi. I assume these data were simply raw velocity readings from the meter...unedited what harm were they doing that they now have to be 'hidden'...no need to explain.

The data already appeared to confirm that flow from the Halls River spring(s) is low. Net water movement shows/did show the water that passes the gage site moving back and forth with the change in stage. This was/is confirmed by the Specific Conductance readings normally showing a steady 4000-5000. When the stage is/was high (dates such as April 22, May 7, 10, 30 and June 6, 22) conductance due to geater reverse flow increased.

Regarding location of the Halls River Site, you may recall over a year ago I did suggest in an e-mail the better location to determine spring flow...essentially where you have the gage.

Mere speculation, but was it my e-mail of June 26 that prompted the Field Measurements on June 27 from 11:54 to 15:36?

Was this Field Measurement to help establish the rating?

While I am not an expert, it appears this was not the best time to run field measurements, for rating purposes, as the conditions were far from 'normal'...Stage Height was 2.75 feet dropping to 2.52 feet (after the previous days highs over 3.5 feet) and Specific Conductance was 2970 dropping during the measuring period to 2380 (after the previous days highs of 10,000)...all this indicates that conditions were primarily the result of heavy rainfall/rainwater run off. Specific Conductance dropped to under 2000 a few hours later which could be interprited to mean over 50% of the flow was surface run off rainwater.

As I recall somewhere there was a recommendation that 'calibration' is most accurate when a full tidal cycle is monitored...but I have to agree that spending the night at the Halls River location would not be my 'cup of tea'.

Regarding the Gage Height data for Halls River site, is there a reference to an established reference point? I have not seen one quoted anywhere.

Kevin I do appreciate your communications/e-mails.
Thanks for the time you spend answering my questions,
Martyn

To: martynellijay@hotmail.com
CC: doug.leeper@swfwmd.state.fl.us
Subject: RE: Unusually High Specific Conductance SE Fork
From: kjgrims@usgs.gov
Date: Mon, 2 Jul 2012 10:17:10 -0400

Sorry, our DBA had made a mistake when establishing the Hall's River station by putting the velocity on the web before our rating was established. We've corrected that.

It's a further distance to our Hall's River gage than the SE Fork, so that doesn't seem odd to me that the conductance would be higher at SE Fork. It occurred to me that you might have assumed our new gage was at the bridge where a previous gage had been. That was not a good location for gaging discharge, so the new gage was established further upstream.

http://waterdata.usgs.gov/fl/nwis/nwismap/?site_no=02310689&agency_cd=USGS

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

From: Alan Martyn Johnson <martynellijay@hotmail.com>
To: Kevin J Grimsley <kjgrims@usgs.gov>
Cc: Doug Leeper <doug.leeper@swfwmd.state.fl.us>
Date: 07/02/2012 07:57 AM
Subject: RE: Unusually High Specific Conductance SE Fork

Kevin,
Thanks for taking the time to respond.
I agree there is no way to say 'conclusively', but it is difficult to understand/explain how the conductance was higher at the SE Fork than Halls River. I would have thought high conductance water entering the river at MacRaes would have been seen at Halls River long before the SE Fork, and most likely conductance would be higher at Halls River as there is less dilution from the main spring flow. I have been thinking of checking the river volumes upstream of MacRaes to determine where the spring flows (total volume discharge) would be sufficient to match the rising stage height/tide...maybe when I have time for such a mathematical exercise!!

Would have been interesting if I had been in Homosassa when this happened to see it firsthand.

Do you have any data from the velocity meter at the SE Fork that would help our understanding?

The velocity meter at Halls River has been streaming data since it was installed (March if memory serves) yet data from the unit at the SE Fork is still 'confidential' after some 9 months.

All in all, it certainly was unusual along with unusually heavy rainfall, but we sure needed the rain.

Martyn

To: martynellijay@hotmail.com
Date: Sun, 1 Jul 2012 12:13:52 -0400
From: kjgrims@usgs.gov
Subject: Re: Unusually High Specific Conductance SE Fork
CC: doug.leeper@swfwmd.state.fl.us

Hi Martyn,

There's no way to say conclusively if the higher conductance water came from a spring vent without having a meter directly at the vent. However, it's much more likely that the higher conductance water came from the surface-water since that's obviously the "path of least resistance". It makes sense that this would be different at the main spring because there's much more flow from the spring and the conductance meter is closer to the vents.

Kevin Grimsley, P.E.
Hydrologic Data Chief, Tampa
USGS, Florida Water Science Center
10500 University Center Drive, Suite 215
Tampa, FL 33612
kjgrims@usgs.gov
813-498-5064

On Jun 26, 2012, at 8:21 AM, "Alan Martyn Johnson" <martynellijay@hotmail.com> wrote:

Doug and Kevin,
Certainly pleased there is some rainfall, but would have hoped for better control of the faucet by Mother Nature!

But, quickly to my point as I am sure you have many other things to deal with...and I do not expect an immediate answer to this.

In reviewing the data for the Homosassa Gage Sites yesterday I noticed something rather unusual...Specific Conductance readings at the SE Fork site have some high readings, so high it is difficult to attribute these to waters reaching the gage site by reverse flow from the Blue Water. As you will see in the attached spreadsheet the water from the main springs has lower readings. Although readings in the first highlighted timeframe are higher at the Halls River Site; for the second highlighted interval the readings at Halls River are also lower. It is a real stretch to believe flow from the springs is so low that waters from this section of the river *'not specifically Halls River but the main body getting reverse flow from MacRaes'* are reaching all the way to the SE Fork.

This same phenomena can also be seen in the readings from last night to now.

Any thoughts about how this is possible?

I am speculation that one of the vents in the SE Fork is discharging some high Specific Conductance water and further speculate it is the vent only some 20 feet upstream of the

Fishbowl Bridge on the right bank. Flow from the various other springs in the SE Fork must be almost zero under these high stage conditions. I have previously commented/observed this referenced vent opening at high stage and the water discharge being similar to the main springs, but this is unusual.. Is this subterranean seawater ingress big time? I am further puzzled as to why run off waters are not reducing the figures; you can see where rainwater run off dropped the readings to the 400's.

Another point that I have been watching is the frequency of higher specific conductance readings at Halls River Gage. When this site first came on-line in March, the readings indicated water from the main springs and SE Fork were most likely the water passing the site under reverse flow. As time progressed there has been more water which appears to be from the reverse flow at MacRaes. The recent increases of water level in the aquifer (at Weeki Wachee) does not appear to have increased spring flow to a point that was in March. The graphs on sheet 3 of the attachment help illustrate.

Velocity data from the SE Fork meter may help understand this.

When you get a chance would appreciate your thoughts on these points/unusual situations. Great coffee break conversation!

I trust that you have personally weathered Debby without too many problems.

Martyn <June 23 24 SE Fork High Spec C data.xls>

July 15, 2012

MEMORANDUM

TO: File

FROM: Douglas A. Leeper, Chief Environmental Scientist, Resource Evaluation Section,
Southwest Florida Water Management District

SUBJECT: Correspondence concerning development of minimum flows for Florida spring systems

This memorandum documents correspondence between a number of stakeholders and Southwest Florida Water Management District staff concerning development of minimum flows for Florida springs and water use permitting.

DAL
Attachments

From: Gulf Restoration Network on behalf of Jan Novotny
To: Doug Leeper
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 24, 2012 10:20:56 PM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please

design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jan Novotny

401 15th Ave N

Jacksonville Beach, FL 32250-4710

From: [Gulf Restoration Network](#) on behalf of [Millicent Shargel](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:14:14 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

THIS IS A CRITICAL PLEA TO THOSE OF YOU WITH POWER TO SAFEGUARD FLORIDA'S WATER AND HER PEOPLE'S FUTURE.

Here in NW Florida wells are drying up, requiring deeper drilling into the aquifer. Ancient springs in the vicinity of Tallahassee within a mile of the capitol are disappearing.

We all know that water is the next crisis. Please take heed of this.

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer

"connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Millicent Shargel
1515 Seminole Dr
Tallahassee, FL 32301-5735

From: [Gulf Restoration Network](#) on behalf of [Stacey Daniels-Dattilo](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:15:24 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Stacey Daniels-Dattilo
12705 Vista Pine Cir
Fort Myers, FL 33913-7974

From: [Gulf Restoration Network](#) on behalf of [Esther Garvett](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:15:29 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Esther Garvett
10431 SW 143rd Ave
Miami, FL 33186-3033

From: [Gulf Restoration Network](#) on behalf of [melinda.ramsey](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:16:47 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's beautiful springs are one of our most unique natural assets, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs - springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user - Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs - a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control - water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. melinda ramsey
265 Melinda Ln
Monticello, FL 32344-6186
(850) 997-1157

From: [Gulf Restoration Network](#) on behalf of [Russell Riley](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:17:01 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Russell Riley
7954 Atlas St
Pensacola, FL 32506-3652

From: [Gulf Restoration Network](#) on behalf of [Suzy Siegmann](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:17:25 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Suzy Siegmann
212 Forest Park Ave
Temple Terrace, FL 33617-4133
(813) 988-4261

From: [Gulf Restoration Network](#) on behalf of [Frederick Tuttle, Jr.](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:17:38 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs; springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user- Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 20 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Frederick Tuttle, Jr.
4516 NW 35th St
Ocala, FL 34482-8347

From: [Gulf Restoration Network](#) on behalf of [Gregory Esteve](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:17:56 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Gregory Esteve
3655 N Scenic Hwy
Lake Wales, FL 33898-6608
(863) 676-8015

From: [Gulf Restoration Network](#) on behalf of [Celeste Shitama](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:18:10 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Celeste Shitama
425 NE 9th St
Gainesville, FL 32601-5580
(352) 376-7972

From: Gulf Restoration Network on behalf of Steven Handwerker
To: Doug Leeper
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:18:30 AM

May 24, 2012
Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,
Dr. Steven Handwerker
6465 Via Benita
Boca Raton, FL 33433-6421
(561) 417-2494

From: [Gulf Restoration Network](#) on behalf of [Andrea Chisari](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:18:39 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Andrea Chisari
720 Walker Rd
Titusville, FL 32780-3931

From: [Gulf Restoration Network](#) on behalf of [Bonnie Mc Cune](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:18:56 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Bonnie Mc Cune
5631 SW 78th St Apt 3
Miami, FL 33143-5644

From: [Gulf Restoration Network](#) on behalf of [Vicki Robertson](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:19:09 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Vicki Robertson
119 SW 9th Ave
Boynton Beach, FL 33435-5541
(561) 236-7250

From: [Gulf Restoration Network](#) on behalf of [Marian Linda Perry](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:19:35 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Marian Linda Perry
4103 NW 18th Pl
Gainesville, FL 32605-3524

From: [Gulf Restoration Network](#) on behalf of [Joan Walker](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:19:46 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

I write as a resident of Bell, near the Santa Fe and Suwanee Rivers and many nearby springs.

As you must know, Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs - springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. I have seen it even over just the past 6 years of our residence. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user - Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs - a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control - water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. This must stop! In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious

waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater. Our lives depend on it.

Sincerely,

Mrs. Joan Walker
1800 SW 15th St
Bell, FL 32619-2262

From: [Gulf Restoration Network](#) on behalf of [Margie Blake](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:20:03 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Margie Blake
6504 Los Altos Way
Tampa, FL 33634-6249

From: [Gulf Restoration Network](#) on behalf of [Gloria Morotti](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:20:14 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Gloria Morotti
1111 14th Ave W
Bradenton, FL 34205-7244

From: [Gulf Restoration Network](#) on behalf of [Janet Robinson](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:20:26 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Janet Robinson
6391 Toulon Dr
Boca Raton, FL 33433-3801

From: [Gulf Restoration Network](#) on behalf of [Maureen Burke](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:20:44 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Maureen Burke
16 Lexington Ln W
Palm Beach Gardens, FL 33418-7107

From: [Gulf Restoration Network](#) on behalf of [Felicity Hohenshelt](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:20:59 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Felicity Hohenshelt
11326 Carlsburg Ct
Jacksonville, FL 32246-1392

From: [Gulf Restoration Network](#) on behalf of [Lars Andersen](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:21:16 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's 900+ springs are among our most unique natural assets. Besides creating vibrant natural environments for recreation and wildlife, they are also windows into the Floridan Aquifer, our main source of fresh water. Over 90% of the water we consume for drinking, agriculture and other uses comes from these springs and aquifers. They also supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

It's time to stop the destruction of Florida's springs and the aquifers that feed them. Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream

systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Lars Andersen
18238 NW US Highway 441
High Springs, FL 32643-8716

From: [Gulf Restoration Network](#) on behalf of [Karen Smith](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:21:30 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Karen Smith
PO Box 161
Aripeka, FL 34679-0161

From: [Gulf Restoration Network](#) on behalf of [JAMIE HART](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:21:42 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. JAMIE HART
1121 Pepperdine Ln
Sanford, FL 32771-6646

From: [Gulf Restoration Network](#) on behalf of [Bruce Seaman](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:21:53 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user, Adena Springs Ranch. This is CRAZY - the permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs, a famous Florida icon. Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with.

It should go without saying that to allow a somewhat lower level of consumption from the huge Adena Springs permit request is also unacceptable and continues to suggest that there is no real problem when the evidence is clear that we are losing one of Florida's great natural resources.

It's time for a mandate to preserve and protect these critical resources for all Floridians.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Bruce Seaman
2 Pecan Drive Loop
Ocala, FL 34472-6248

From: [Gulf Restoration Network](#) on behalf of [Judith Peter](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:22:05 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Judith Peter
2184 Pellam Blvd
Port Charlotte, FL 33948-3300

From: [Gulf Restoration Network](#) on behalf of [Sharon Davis](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:22:13 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sharon Davis
PO Box 2576
Riverview, FL 33568-2576

From: [Gulf Restoration Network](#) on behalf of [Francis Scheuer](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:22:30 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

I lovingly recall several beautiful experiences with springs. Swimming. Boating. Enjoying aqua life. Relaxing. All important to living and all important to this land called FLORIDA!

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please

design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Francis Scheuer
PO Box 1341
Sarasota, FL 34230-1341
(941) 720-5543

From: [Gulf Restoration Network](#) on behalf of [Jane Schnee](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:22:43 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jane Schnee
1022 Foster Rd Apt A
Sebastian, FL 32958-8658
(772) 589-3201

From: [Gulf Restoration Network](#) on behalf of [Tony Marra](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:22:57 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Tony Marra
42 Terrapin Trl
Crawfordville, FL 32327-4505
(850) 322-8216

From: [Gulf Restoration Network](#) on behalf of [Roberta Dever](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:23:11 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Roberta Dever
303 W Frances Ave
Tampa, FL 33602-2039

From: [Gulf Restoration Network](#) on behalf of [Colonel Meyer](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:23:21 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Colonel Meyer
3701 Eagle Pass St
North Port, FL 34286-2009

From: [Gulf Restoration Network](#) on behalf of [gail larkin](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:23:34 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss gail larkin
6879 Bridlewood Ct
Boca Raton, FL 33433-3558

From: [Gulf Restoration Network](#) on behalf of [Barbara Sallee](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:23:46 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Barbara Sallee
6045 39th Ct E
Bradenton, FL 34203-7003
(941) 739-2420

From: [Gulf Restoration Network](#) on behalf of [Linc Cole](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:23:55 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Linc Cole
Cutlass Ln
Cudjoe Key, FL 33042

From: [Gulf Restoration Network](#) on behalf of [Andres Mejides](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:05 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Andres Mejides
25650 SW 197th Ave
Homestead, FL 33031-1611

From: [Gulf Restoration Network](#) on behalf of [Lori Bennett Rimar](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:17 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Lori Bennett Rimar
3317 Mangrove Dr
Hernando Beach, FL 34607-2842

From: [Gulf Restoration Network](#) on behalf of [ken gunther](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:28 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. ken gunther
11024 161st St N
Jupiter, FL 33478-6204
(561) 746-0741

From: [Gulf Restoration Network](#) on behalf of [Christina Farnsworth](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:37 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

PLEASE...DO THE RIGHT THING for our precious waters. If they are not healthy, WE are not healthy. Thank you.

Sincerely,

Ms. Christina Farnsworth
6701 Collins Ave # 916
Miami Beach, FL 33141-3242

From: [Gulf Restoration Network](#) on behalf of [Evelyn Zerlin](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:47 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water.

It's time to stop the destruction of Florida's springs, springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water.

Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control: water supply and management. But, at the same time, they assert that the over-pumping that is within District control is not a big part of the problem.

That's a Catch 22 we can't live with.

Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow.

It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Evelyn Zerlin
1071 Donegan Rd
Largo, FL 33771-2941

From: [Gulf Restoration Network](#) on behalf of [Rebecca Miller](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:24:59 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Rebecca Miller
3521 N Sylvan Ln
Melbourne, FL 32935-5736

From: [Gulf Restoration Network](#) on behalf of [Sarah Oswald](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:25:10 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sarah Oswald
1917 Mosswood Dr
Melbourne, FL 32935-6037

From: [Gulf Restoration Network](#) on behalf of [R. J. Williams](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:25:24 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. R. J. Williams
4000 N Hills Dr Apt 34
Hollywood, FL 33021-2443

From: [Gulf Restoration Network](#) on behalf of [Meyer Jordan](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:25:37 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Meyer Jordan
403 W Michigan Ave
Pensacola, FL 32505-2503

From: [Gulf Restoration Network](#) on behalf of [Susan Preston](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:25:47 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Susan Preston
PO Box 415
La Crosse, FL 32658-0415

From: [Gulf Restoration Network](#) on behalf of [Dan Cross](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:25:58 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Dan Cross
1123 SW 5th Pl
Ft Lauderdale, FL 33312-2510
(954) 522-0550

From: [Gulf Restoration Network](#) on behalf of [Vaughan Greene](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:26:06 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Vaughan Greene
217 Walton Rose Ln
Panama City Beach, FL 32413-7249
(850) 231-0956

From: [Gulf Restoration Network](#) on behalf of [Paula Powers](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:26:20 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Paula Powers
172 SE 30th Ave
Boynton Beach, FL 33435-8235

From: [Gulf Restoration Network](#) on behalf of [Nancy O'Byrne](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:26:29 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Nancy O'Byrne
5308 2nd St
St Augustine, FL 32080-7241
(904) 461-9216

From: [Gulf Restoration Network](#) on behalf of [James Brunton](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:26:36 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. James Brunton
12718 Forest Hills Dr
Tampa, FL 33612-4035

From: [Gulf Restoration Network](#) on behalf of [margaret silver](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:26:54 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. margaret silver
1829 Sea Oats Dr
Atlantic Beach, FL 32233-4511

From: [Gulf Restoration Network](#) on behalf of [Doug Landau](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:06 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Doug Landau
150 73rd St S
St Petersburg, FL 33707-1143

From: [Gulf Restoration Network](#) on behalf of [Karen Ahlers](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:15 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Karen Ahlers
124 Vause Lake Rd
Hawthorne, FL 32640-6108

From: [Gulf Restoration Network](#) on behalf of [Timothy Nover](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:23 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Timothy Nover
14635 Horseshoe Trce
Wellington, FL 33414-8245

From: [Gulf Restoration Network](#) on behalf of [tye block](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:33 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. tye block
PO Box 39254
Fort Lauderdale, FL 33339-9254

From: [Gulf Restoration Network](#) on behalf of [ron silver](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:43 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. ron silver
1829 Sea Oats Dr
Atlantic Beach, FL 32233-4511

From: [Gulf Restoration Network](#) on behalf of [Lauren Devine](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:27:52 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Lauren Devine
1377 Walnut Ter
Boca Raton, FL 33486-6909

From: [Gulf Restoration Network](#) on behalf of [Chris Benjamin](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:28:02 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Chris Benjamin
13190 Washington Dr # B
Largo, FL 33774-1910

From: [Gulf Restoration Network](#) on behalf of [mimi mendelson](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:28:10 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. mimi mendelson
4822 Ocean Blvd
6
Sarasota, FL 34242-1368

From: [Gulf Restoration Network](#) on behalf of [Gunn Honican](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:28:18 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Gunn Honican
316 Lakeview Ln
Winter Haven, FL 33884-2630

From: [Gulf Restoration Network](#) on behalf of [JOHN HALL](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:28:27 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. JOHN HALL
12600 County Road 561a
Clermont, FL 34715-8783

From: [Gulf Restoration Network](#) on behalf of [S Logan](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, May 25, 2012 8:28:37 AM

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. S Logan
1001 Brickell Bay Dr
Miami, FL 33131-4900

From: [Gulf Restoration Network](#) on behalf of [Susan Chandler](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:04:52 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Susan Chandler
3008 N 25th St
Fort Pierce, FL 34946-1705
(772) 466-9874

From: [Gulf Restoration Network](#) on behalf of [Melissa Norman](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:05:13 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Melissa Norman
2331 NW 13th Pl
Gainesville, FL 32605-5143

From: [Gulf Restoration Network](#) on behalf of [cathy houde](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:05:30 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. cathy houde
1205 Vizcaya Lakes Rd
Ocoee, FL 34761-6967

From: [Gulf Restoration Network](#) on behalf of [leslie.rabb](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:05:43 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. leslie rabb
637 Westbourne Dr
West Hollywood, CA 90069-5101

From: [Gulf Restoration Network](#) on behalf of [sylvia_rabb](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:05:57 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. sylvia rabb
5500 NW 69th Ave
Lauderhill, FL 33319-7266

From: [Gulf Restoration Network](#) on behalf of [Margaret Walker](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:06:15 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Margaret Walker
1601 Cherry St
Panama City, FL 32401-4015

From: [Gulf Restoration Network](#) on behalf of [Suzanne Saunders](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:06:39 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Suzanne Saunders
8455 13th St N
Apt D
St Petersburg, FL 33702-7950

From: [Gulf Restoration Network](#) on behalf of [Kristen Bolomey](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:06:51 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Kristen Bolomey
11090 Cameron Ct Apt 103
Davie, FL 33324-4171

From: [Gulf Restoration Network](#) on behalf of [Michael Ott](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:07:02 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Michael Ott
6105 Sheree Dr
Milton, FL 32570-8853

From: [Gulf Restoration Network](#) on behalf of [Ethel Leider](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:07:48 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Ethel Leider
5187 Robino Cir
West Palm Beach, FL 33417-3306
(561) 684-9153

From: [Gulf Restoration Network](#) on behalf of [Larry Furgal](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:07:57 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Larry Furgal
155 6th St NE
Largo, FL 33770-3701

From: [Gulf Restoration Network](#) on behalf of [Rachel Detoro](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:08:07 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Rachel Detoro
412 Shoreline Dr
Gulf Breeze, FL 32561-4515

From: [Gulf Restoration Network](#) on behalf of [Lesley Cox](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:08:47 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Lesley Cox
PO Box Cc
Carrabelle, FL 32322-1229

From: [Gulf Restoration Network](#) on behalf of [Melissa Allen](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:08:59 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Melissa Allen
8405 SW 156th St
Palmetto Bay, FL 33157-2164

From: [Gulf Restoration Network](#) on behalf of [Ginny Pendas](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:09:24 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Ginny Pendas
311Balsam st
P.B.G, FL 33410

From: [Gulf Restoration Network](#) on behalf of [Laurinda Travers](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:09:39 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Laurinda Travers
1240 47th Ave N
St Petersburg, FL 33703-3514

From: [Gulf Restoration Network](#) on behalf of [Jack Farmer](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:09:54 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Jack Farmer
285 Wilderness Way
Santa Rosa Beach, FL 32459-5882

From: [Gulf Restoration Network](#) on behalf of [Bob Fay](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:10:09 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Bob Fay
4000 24th St N
St Petersburg, FL 33714-4023

From: [Gulf Restoration Network](#) on behalf of [Elsy Shallman](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:10:32 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Elsy Shallman
17294 37th Pl N
Loxahatchee, FL 33470-3627

From: [Gulf Restoration Network](#) on behalf of [Kat McConnell](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:10:52 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Kat McConnell
1266 Monterey St
Jacksonville, FL 32207-6339

From: [Gulf Restoration Network](#) on behalf of [Todd Smith](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:11:10 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Todd Smith
650 12th Ave S
Saint Petersburg, FL 33701-5119

From: [Gulf Restoration Network](#) on behalf of [John Zohn](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:11:20 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. John Zohn
4365 1st St
Vero Beach, FL 32968-2358

From: [Gulf Restoration Network](#) on behalf of [darlene wolf](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:11:37 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. darlene wolf
1705 Gordon Dr
Naples, FL 34102-7553
(239) 435-6492

From: [Gulf Restoration Network](#) on behalf of [Robert Keiser](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:11:50 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Robert Keiser
6131 SW 85th St
South Miami, FL 33143-8145
(305) 995-3646

From: [Gulf Restoration Network](#) on behalf of [Laura Bedinger](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:12:07 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Laura Bedinger
4329 SW 70th Ter
Gainesville, FL 32608-6488

From: [Gulf Restoration Network](#) on behalf of [Mark Hinnebusch](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:12:24 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Mark Hinnebusch
1627 NW 12th St
Gainesville, FL 32609-3422
(352) 219-8172

From: [Gulf Restoration Network](#) on behalf of [Faith Hoogs](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:12:38 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Faith Hoogs
6650 Hunt Rd
Groveland, FL 34736-9762

From: [Gulf Restoration Network](#) on behalf of [Su J](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:12:49 AM

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Su J
3006 Sherry Dr
Orlando, FL 32810-3752

From: [Gulf Restoration Network](#) on behalf of [Sigrid Benson](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:13:54 AM

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are unique, create natural environments for recreation and wildlife, and supply drinking water. So stop the destruction of Florida's springs.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs.

Water Management Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sigrid Benson
1514 Mariners Cir
Gulf Breeze, FL 32563-2988
do not call

From: [Gulf Restoration Network](#) on behalf of [jacqueline Mason](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:14:06 AM

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. jacqueline Mason
1819 Peach Tree Blvd
Saint Cloud, FL 34769-1606

From: [Gulf Restoration Network](#) on behalf of [Vinny Mullins](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:14:23 AM

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Vinny Mullins
13706 Whitby Rd
Hudson, FL 34667-1468

From: [Gulf Restoration Network](#) on behalf of [Jaclyn Boles](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:15:05 AM

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Jaclyn Boles
25231 Sherwood Dr
Land O Lakes, FL 34639-5528
(813) 431-5817

From: [Gulf Restoration Network](#) on behalf of [Sharon Rich](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:15:15 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Sharon Rich
2834 Regent Cres
South Daytona, FL 32119-8556

From: [Gulf Restoration Network](#) on behalf of [jacqueline Mason](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:15:24 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. jacqueline Mason
1819 Peach Tree Blvd
Saint Cloud, FL 34769-1606

From: [Gulf Restoration Network](#) on behalf of [sara le maire](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:15:39 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. sara le maire
11109 SW 10th Ter
Micanopy, FL 32667-3340

From: [Gulf Restoration Network](#) on behalf of [Colleen McGlone](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:15:52 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Colleen McGlone
3540 Hartland Dr
New Port Richey, FL 34655-2505
(727) 375-2356

From: [Gulf Restoration Network](#) on behalf of [Barbara Newcomer](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:16:07 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Barbara Newcomer
4315 Sunbeam Lake Dr
Jacksonville, FL 32257-8118

From: [Gulf Restoration Network](#) on behalf of [KATRINA SHADIX](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Monday, May 28, 2012 10:16:23 AM

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. KATRINA SHADIX
180 W 3rd St
Chuluota, FL 32766-9079

From: [Gulf Restoration Network](#) on behalf of [Mervi Rantala](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Wednesday, May 30, 2012 1:02:08 PM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Mervi Rantala
Tesomajarvenkatu 20 b 23
Tampere, FL 33310

From: [Gulf Restoration Network](#) on behalf of [Morgan Williams](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Wednesday, May 30, 2012 1:05:44 PM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Morgan Williams
5901 N Central Ave
Tampa, FL 33604-6705

From: [Gulf Restoration Network](#) on behalf of [Keth Luke](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:12:22 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Keth Luke
5438 Tennessee Ave
New Port Richey, FL 34652-2932
(727) 842-6788

From: [Gulf Restoration Network](#) on behalf of [Lori McCraney](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:13:01 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Lori McCraney
PO Box 1351
Live Oak, FL 32064-1351

From: [Gulf Restoration Network](#) on behalf of [Terry Luke](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:13:17 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Terry Luke
5438 Tennessee Ave
New Port Richey, FL 34652-2932
(727) 842-6788

From: [Gulf Restoration Network](#) on behalf of [Roger Vaughan III](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:13:56 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Roger Vaughan III
3016 W Harbor View Ave
Tampa, FL 33611-1645

From: [Gulf Restoration Network](#) on behalf of [Ana Alvarez](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:14:24 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Ana Alvarez
11500 Brandiwine Ct
Clermont, FL 34711-6451
(352) 242-4469

From: [Gulf Restoration Network](#) on behalf of [Susie Cooke](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:14:37 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

My grandchildren and I have a tradition of spending their Spring Break at one of our beautiful natural springs parks. I would hate to see that beautiful memory polluted by the degradation of our springs.

Sincerely,

Ms. Susie Cooke
5116 N Seminole Ave
Tampa, FL 33603-2204
(813) 236-8119

From: [Gulf Restoration Network](#) on behalf of [Christopher Sego](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:14:50 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Christopher Segó
1070 Shimmering Sand Dr
Ocoee, FL 34761-9138
(407) 578-8019

From: [Gulf Restoration Network](#) on behalf of [Tim Glover](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:15:02 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs - springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control - water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent

regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Thank you for considering my comments.

Sincerely,

Mr. Tim Glover
9446 Fleming Grant Rd
Micco, FL 32976-2710

From: [Gulf Restoration Network](#) on behalf of [Rosalind Parneix](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:15:14 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Rosalind Parneix
14 Oasis Cir
Palm Coast, FL 32137-1522

From: [Gulf Restoration Network](#) on behalf of [Annette Long](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:15:25 AM

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Annette Long
12651 NW 117th Ave
Chiefland, FL 32626-4524
(352) 490-8930

From: [Gulf Restoration Network](#) on behalf of [robin milcowitz](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 9:25:33 AM

May 30, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. robin milcowitz
914 E Hamilton Ave
Tampa, FL 33604-4323
(813) 231-7164

From: [Gulf Restoration Network](#) on behalf of [Amy Olson](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, June 01, 2012 8:42:00 AM

Jun 1, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Amy Olison
1023 Moss Ridge way
Orlando, FL 32832

From: [Gulf Restoration Network](#) on behalf of [Lisa D'Antonio](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Friday, June 01, 2012 8:42:19 AM

May 31, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch.

This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Lisa D'Antonio
711 Forest Club Dr Apt 602
Wellington, FL 33414-7910
(561) 818-9958

From: Doug Leeper
To: ["Jan Novotny"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:46:00 PM

Ms. Novotny:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Jan Novotny
Sent: Thursday, May 24, 2012 10:21 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use

permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jan Novotny
401 15th Ave N
Jacksonville Beach, FL 32250-4710

From: Doug Leeper
To: ["Millicent Shargel"](#)
Bcc: [Mike Heyl](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:49:00 PM

Ms. Shargel:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Millicent Shargel
Sent: Friday, May 25, 2012 12:46 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

**THIS IS A CRITICAL PLEA TO THOSE OF YOU WITH POWER TO SAFEGUARD
FLORIDA'S WATER AND HER PEOPLE'S FUTURE.**

Here in NW Florida wells are drying up, requiring deeper drilling into the aquifer. Ancient springs in the vicinity of Tallahassee within a mile of the capitol are disappearing.

We all know that water is the next crisis. Please take heed of this.

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Millicent Shargel
1515 Seminole Dr
Tallahassee, FL 32301-5735

From: Doug Leeper
To: "[Esther Garvett](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:51:00 PM

Ms. Garvett:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Esther Garvett
Sent: Friday, May 25, 2012 4:58 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Esther Garvett
10431 SW 143rd Ave
Miami, FL 33186-3033

From: Doug Leeper
To: "[melinda.ramsey](mailto:melinda.ramsey@watermatters.org)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:51:00 PM

Ms. Ramsey:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of melinda.ramsey
Sent: Friday, May 25, 2012 12:16 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's beautiful springs are one of our most unique natural assets, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast. Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. melinda ramsey
265 Melinda Ln
Monticello, FL 32344-6186
(850) 997-1157

From: Doug Leeper
To: ["Russell Riley"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:51:00 PM

Mr. Riley:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Russell Riley
Sent: Friday, May 25, 2012 12:16 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Russell Riley
7954 Atlas St
Pensacola, FL 32506-3652

From: Doug Leeper
To: ["Suzy Siegmann"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:52:00 PM

Ms. Siegmann:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Suzy Siegmann
Sent: Thursday, May 24, 2012 11:21 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Suzy Siegmann
212 Forest Park Ave
Temple Terrace, FL 33617-4133
(813) 988-4261

From: Doug Leeper
To: ["Frederick Tuttle, Jr."](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:52:00 PM

Mr. Tuttle:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Frederick Tuttle, Jr.
Sent: Thursday, May 24, 2012 11:03 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs; springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user- Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 20 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Frederick Tuttle, Jr.
4516 NW 35th St
Ocala, FL 34482-8347

From: Doug Leeper
To: ["Gregory Esteve"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:53:00 PM

Mr. Esteve:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Gregory Esteve
Sent: Thursday, May 24, 2012 10:52 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Gregory Esteve
3655 N Scenic Hwy
Lake Wales, FL 33898-6608
(863) 676-8015

From: Doug Leeper
To: "[Celeste Shitama](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:53:00 PM

Ms. Shitama:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Celeste Shitama
Sent: Thursday, May 24, 2012 10:23 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Celeste Shitama
425 NE 9th St
Gainesville, FL 32601-5580
(352) 376-7972

From: Doug Leeper
To: ["Andrea Chisari"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:54:00 PM

Ms. Chisari:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Andrea Chisari
Sent: Thursday, May 24, 2012 9:08 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Andrea Chisari
720 Walker Rd
Titusville, FL 32780-3931

From: Doug Leeper
To: ["Bonnie Mc Cune"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:54:00 PM

Ms. McCune:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Bonnie Mc Cune
Sent: Thursday, May 24, 2012 9:19 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Bonnie Mc Cune
5631 SW 78th St Apt 3
Miami, FL 33143-5644

From: Doug Leeper
To: "[Marian Linda Perry](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:55:00 PM

Dr. Perry:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Marian Linda Perry
Sent: Thursday, May 24, 2012 9:08 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Marian Linda Perry
4103 NW 18th Pl
Gainesville, FL 32605-3524

From: Doug Leeper
To: ["Joan Walker"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:56:00 PM

Ms. Walker:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Joan Walker
Sent: Thursday, May 24, 2012 8:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

I write as a resident of Bell, near the Santa Fe and Suwanee Rivers and many nearby springs.

As you must know, Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. I have seen it even over just the past 6 years of our residence. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for

tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. This must stop! In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater. Our lives depend on it.

Sincerely,

Mrs. Joan Walker
1800 SW 15th St
Bell, FL 32619-2262

From: Doug Leeper
To: "[Margie Blake](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:56:00 PM

Ms. Blake:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Margie Blake
Sent: Thursday, May 24, 2012 8:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Margie Blake
6504 Los Altos Way
Tampa, FL 33634-6249

From: Doug Leeper
To: "[Gloria Morotti](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:56:00 PM

Ms. Morotti:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Gloria Morotti
Sent: Thursday, May 24, 2012 8:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Gloria Morotti
1111 14th Ave W
Bradenton, FL 34205-7244

From: Doug Leeper
To: ["Maureen Burke"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:57:00 PM

Ms. Burke:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Maureen Burke
Sent: Thursday, May 24, 2012 7:47 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Maureen Burke
16 Lexington Ln W
Palm Beach Gardens, FL 33418-7107

From: Doug Leeper
To: ["Lars Andersen"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:57:00 PM

Mr. Anderson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lars Andersen
Sent: Thursday, May 24, 2012 7:10 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's 900+ springs are among our most unique natural assets. Besides creating vibrant natural environments for recreation and wildlife, they are also windows into the Floridan Aquifer, our main source of fresh water. Over 90% of the water we consume for drinking, agriculture and other uses comes from these springs and aquifers. They also supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

It's time to stop the destruction of Florida's springs and the aquifers that feed them. Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any

incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Lars Andersen
18238 NW US Highway 441
High Springs, FL 32643-8716

From: Doug Leeper
To: ["Karen Smith"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:58:00 PM

Ms. Smith:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Karen Smith
Sent: Thursday, May 24, 2012 7:10 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Karen Smith
PO Box 161
Aripeka, FL 34679-0161

From: Doug Leeper
To: ["JAMIE HART"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:58:00 PM

Ms. Hart:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of JAMIE HART
Sent: Thursday, May 24, 2012 6:39 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. JAMIE HART
1121 Pepperdine Ln
Sanford, FL 32771-6646

From: Doug Leeper
To: ["Bruce Seaman"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:58:00 PM

Mr. Seaman:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Bruce Seaman
Sent: Thursday, May 24, 2012 6:38 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user, Adena Springs Ranch. This is CRAZY - the permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs, a famous Florida icon. Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with.

It should go without saying that to allow a somewhat lower level of consumption from the huge Adena Springs permit request is also unacceptable and continues to suggest that there is no real problem when the evidence is clear that we are losing one of Florida's great natural resources.

It's time for a mandate to preserve and protect these critical resources for all Floridians.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Bruce Seaman
2 Pecan Drive Loop
Ocala, FL 34472-6248

From: Doug Leeper
To: ["Judith Peter"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:58:00 PM

Ms. Peter:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Judith Peter
Sent: Thursday, May 24, 2012 6:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Judith Peter
2184 Pellam Blvd
Port Charlotte, FL 33948-3300

From: Doug Leeper
To: "[Sharon Davis](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:59:00 PM

Ms. Davis:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Sharon Davis
Sent: Thursday, May 24, 2012 6:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sharon Davis
PO Box 2576
Riverview, FL 33568-2576

From: Doug Leeper
To: ["Francis Scheuer"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:59:00 PM

Ms. Scheuer:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Francis Scheuer
Sent: Thursday, May 24, 2012 6:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

I lovingly recall several beautiful experiences with springs. Swimming. Boating. Enjoying aqua life. Relaxing. All important to living and all important to this land called FLORIDA!

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Francis Scheuer
PO Box 1341
Sarasota, FL 34230-1341
(941) 720-5543

From: Doug Leeper
To: "[Jane Schnee](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:59:00 PM

Ms. Schnee:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Jane Schnee
Sent: Thursday, May 24, 2012 6:37 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jane Schnee
1022 Foster Rd Apt A
Sebastian, FL 32958-8658
(772) 589-3201

From: Doug Leeper
To: ["Tony Marra"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:00:00 PM

Mr. Marra:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Tony Marra
Sent: Thursday, May 24, 2012 6:36 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Tony Marra
42 Terrapin Trl
Crawfordville, FL 32327-4505
(850) 322-8216

From: Doug Leeper
To: ["Roberta Dever"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:00:00 PM

Dr. Dever:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Roberta Dever
Sent: Thursday, May 24, 2012 6:32 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Roberta Dever
303 W Frances Ave
Tampa, FL 33602-2039

From: Doug Leeper
To: ["Colonel Meyer"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:01:00 PM

Ms. Meyer:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Colonel Meyer
Sent: Thursday, May 24, 2012 6:32 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Colonel Meyer
3701 Eagle Pass St
North Port, FL 34286-2009

From: Doug Leeper
To: ["gail larkin"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:01:00 PM

Ms.Larkin:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of gail larkin
Sent: Thursday, May 24, 2012 6:18 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss gail larkin
6879 Bridlewood Ct
Boca Raton, FL 33433-3558

From: Doug Leeper
To: ["Barbara Sallee"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:01:00 PM

Ms. Sallee:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Barbara Sallee
Sent: Thursday, May 24, 2012 6:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Barbara Sallee
6045 39th Ct E
Bradenton, FL 34203-7003
(941) 739-2420

From: Doug Leeper
To: ["Linc Cole"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:01:00 PM

Mr. Cole:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Linc Cole
Sent: Thursday, May 24, 2012 6:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Linc Cole
Cutlass Ln
Cudjoe Key, FL 33042

From: Doug Leeper
To: ["Andres Mejides"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:02:00 PM

Mr. Mejides:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Andres Mejides
Sent: Thursday, May 24, 2012 6:09 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Andres Mejides
25650 SW 197th Ave
Homestead, FL 33031-1611

From: Doug Leeper
To: "[Lori Bennett Rimar](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:02:00 PM

Ms. Rimar:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lori Bennett Rimar
Sent: Thursday, May 24, 2012 6:09 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Lori Bennett Rimar
3317 Mangrove Dr
Hernando Beach, FL 34607-2842

From: Doug Leeper
To: ["ken gunther"](mailto:ken.gunther@watermatters.org)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:03:00 PM

Mr. Gunther:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of ken gunther
Sent: Thursday, May 24, 2012 6:09 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. ken gunther
11024 161st St N
Jupiter, FL 33478-6204
(561) 746-0741

From: Doug Leeper
To: ["Evelyn Zerin"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:03:00 PM

Ms. Zerin:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Evelyn Zerin
Sent: Thursday, May 24, 2012 6:06 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water.

It's time to stop the destruction of Florida's springs, springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water.

Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control: water supply and management. But, at the same time, they assert that the over-pumping that is within District control is not a big part of the problem.

That's a Catch 22 we can't live with.

Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow.

It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Evelyn Zerlin
1071 Donegan Rd
Largo, FL 33771-2941

From: Doug Leeper
To: ["Rebecca Miller"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:04:00 PM

Ms. Miller:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Rebecca Miller
Sent: Thursday, May 24, 2012 6:03 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Rebecca Miller
3521 N Sylvan Ln
Melbourne, FL 32935-5736

From: Doug Leeper
To: ["Sarah Oswald"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:04:00 PM

Ms. Oswald:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Sarah Oswald
Sent: Thursday, May 24, 2012 6:03 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sarah Oswald
1917 Mosswood Dr
Melbourne, FL 32935-6037

From: Doug Leeper
To: ["R. J. Williams"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:04:00 PM

Mr. Williams:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of R. J. Williams
Sent: Thursday, May 24, 2012 6:02 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. R. J. Williams
4000 N Hills Dr Apt 34
Hollywood, FL 33021-2443

From: Doug Leeper
To: "[Meyer Jordan](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:05:00 PM

Mr. Jordan:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Meyer Jordan
Sent: Thursday, May 24, 2012 6:01 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Meyer Jordan
403 W Michigan Ave
Pensacola, FL 32505-2503

From: Doug Leeper
To: ["Susan Preston"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:05:00 PM

Ms. Preston:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Susan Preston
Sent: Thursday, May 24, 2012 5:36 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Susan Preston
PO Box 415
La Crosse, FL 32658-0415

From: Doug Leeper
To: ["Dan Cross"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:05:00 PM

Mr. Cross:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Dan Cross
Sent: Thursday, May 24, 2012 5:32 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Dan Cross
1123 SW 5th Pl
Ft Lauderdale, FL 33312-2510
(954) 522-0550

From: Doug Leeper
To: ["Vaughan Greene"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:05:00 PM

Ms. Greene:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Vaughan Greene
Sent: Thursday, May 24, 2012 5:32 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Vaughan Greene
217 Walton Rose Ln
Panama City Beach, FL 32413-7249
(850) 231-0956

From: Doug Leeper
To: ["Paula Powers"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:06:00 PM

Ms. Powers:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Paula Powers
Sent: Thursday, May 24, 2012 5:32 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Paula Powers
172 SE 30th Ave
Boynton Beach, FL 33435-8235

From: Doug Leeper
To: ["Nancy O'Byrne"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:06:00 PM

Ms. O'Byrne:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Nancy O'Byrne
Sent: Thursday, May 24, 2012 5:30 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Nancy O'Byrne
5308 2nd St
St Augustine, FL 32080-7241
(904) 461-9216

From: Doug Leeper
To: ["James Brunton"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:06:00 PM

Mr. Brunton:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of James Brunton
Sent: Thursday, May 24, 2012 5:30 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. James Brunton
12718 Forest Hills Dr
Tampa, FL 33612-4035

From: Doug Leeper
To: ["margaret silver"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:07:00 PM

Ms. Silver:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of margaret silver
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Margaret Silver
1829 Sea Oats Dr
Atlantic Beach, FL 32233-4511

From: Doug Leeper
To: ["Doug Landau"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:07:00 PM

Mr. Landau:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Doug Landau
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Doug Landau
150 73rd St S
St Petersburg, FL 33707-1143

From: Doug Leeper
To: ["Karen Ahlers"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:07:00 PM

Ms. Ahlers:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Karen Ahlers
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Karen Ahlers
124 Vause Lake Rd
Hawthorne, FL 32640-6108

From: Doug Leeper
To: ["Timothy Nover"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:08:00 PM

Mr. Nover:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Timothy Nover
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Timothy Nover
14635 Horseshoe Trce
Wellington, FL 33414-8245

From: Doug Leeper
To: ["tye block"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:08:00 PM

Ms. Block:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of tye block
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. tye block
PO Box 39254
Fort Lauderdale, FL 33339-9254

From: Doug Leeper
To: ["ron silver"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:09:00 PM

Mr. Silver:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of ron silver
Sent: Thursday, May 24, 2012 5:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. ron silver
1829 Sea Oats Dr
Atlantic Beach, FL 32233-4511

From: Doug Leeper
To: "[Lauren Devine](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:09:00 PM

Ms. Devine:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lauren Devine
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Lauren Devine
1377 Walnut Ter
Boca Raton, FL 33486-6909

From: Doug Leeper
To: ["Chris Benjamin"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:09:00 PM

Mr. Benjamin:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Chris Benjamin
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Chris Benjamin
13190 Washington Dr # B
Largo, FL 33774-1910

From: Doug Leeper
To: ["Gunn Honican"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:10:00 PM

Ms. Honican:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Gunn Honican
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Gunn Honican
316 Lakeview Ln
Winter Haven, FL 33884-2630

From: Doug Leeper
To: ["JOHN HALL"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:11:00 PM

Mr. Hall:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of JOHN HALL
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. JOHN HALL
12600 County Road 561a
Clermont, FL 34715-8783

From: Doug Leeper
To: ["S Logan"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:11:00 PM

Ms. Logan:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of S Logan
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. S Logan
1001 Brickell Bay Dr
Miami, FL 33131-4900

From: Doug Leeper
To: ["Susan Chandler"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:12:00 PM

Ms. Chandler:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Susan Chandler
Sent: Saturday, May 26, 2012 7:47 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Susan Chandler
3008 N 25th St
Fort Pierce, FL 34946-1705
(772) 466-9874

From: Doug Leeper
To: "[Melissa Norman](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:12:00 PM

Ms. Norman:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Melissa Norman
Sent: Saturday, May 26, 2012 12:45 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Melissa Norman
2331 NW 13th Pl
Gainesville, FL 32605-5143

From: Doug Leeper
To: ["cathy houde"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:12:00 PM

Ms. Houde:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of cathy houde
Sent: Saturday, May 26, 2012 12:45 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. cathy houde
1205 Vizcaya Lakes Rd
Ocoee, FL 34761-6967

From: Doug Leeper
To: ["leslie.rabb"](mailto:leslie.rabb)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:13:00 PM

Ms. Rabb:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of leslie rabb
Sent: Saturday, May 26, 2012 12:38 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. leslie rabb
637 Westbourne Dr
West Hollywood, CA 90069-5101

From: Doug Leeper
To: ["sylvia rabb"](mailto:sylvia.rabb)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:14:00 PM

Ms. Rabb:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of sylvia rabb
Sent: Friday, May 25, 2012 11:06 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. sylvia rabb
5500 NW 69th Ave
Lauderhill, FL 33319-7266

From: Doug Leeper
To: ["Margaret Walker"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:14:00 PM

Ms. Walker:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Margaret Walker
Sent: Friday, May 25, 2012 10:58 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Margaret Walker
1601 Cherry St
Panama City, FL 32401-4015

From: Doug Leeper
To: ["Suzanne Saunders"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:14:00 PM

Ms. Saunders:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Suzanne Saunders
Sent: Friday, May 25, 2012 9:44 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Suzanne Saunders
8455 13th St N
Apt D
St Petersburg, FL 33702-7950

From: Doug Leeper
To: ["Kristen Bolomey"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:14:00 PM

Ms. Bolomey:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Kristen Bolomey
Sent: Friday, May 25, 2012 9:40 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Kristen Bolomey
11090 Cameron Ct Apt 103
Davie, FL 33324-4171

From: Doug Leeper
To: "[Michael Ott](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:15:00 PM

Mr. Ott:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Michael Ott
Sent: Friday, May 25, 2012 6:46 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Michael Ott
6105 Sheree Dr
Milton, FL 32570-8853

From: Doug Leeper
To: ["Ethel Leider"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:15:00 PM

Ms. Leider:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Ethel Leider
Sent: Friday, May 25, 2012 6:42 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Ethel Leider
5187 Robino Cir
West Palm Beach, FL 33417-3306
(561) 684-9153

From: Doug Leeper
To: ["Larry Furgal"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:15:00 PM

Mr. Furgal:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Larry Furgal
Sent: Friday, May 25, 2012 6:06 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Larry Furgal
155 6th St NE
Largo, FL 33770-3701

From: Doug Leeper
To: "[Rachel Detoro](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:15:00 PM

Ms. Detoro:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Rachel Detoro
Sent: Friday, May 25, 2012 4:42 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Rachel Detoro
412 Shoreline Dr
Gulf Breeze, FL 32561-4515

From: Doug Leeper
To: "[Lesley Cox](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:16:00 PM

Ms. Cox:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lesley Cox
Sent: Friday, May 25, 2012 4:07 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Lesley Cox
PO Box Cc
Carrabelle, FL 32322-1229

From: Doug Leeper
To: "[Melissa Allen](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:16:00 PM

Ms. Allen:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Melissa Allen
Sent: Friday, May 25, 2012 3:04 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Melissa Allen
8405 SW 156th St
Palmetto Bay, FL 33157-2164

From: Doug Leeper
To: ["Ginny Pendas"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:16:00 PM

Ms. Pendas:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Ginny Pendas
Sent: Friday, May 25, 2012 2:46 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Ginny Pendas
311Balsam st
P.B.G, FL 33410

From: Doug Leeper
To: "[Laurinda Travers](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:16:00 PM

Ms. Travers:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Laurinda Travers
Sent: Friday, May 25, 2012 2:35 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Laurinda Travers
1240 47th Ave N
St Petersburg, FL 33703-3514

From: Doug Leeper
To: ["Jack Farmer"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:16:00 PM

Mr. Farmer:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Jack Farmer
Sent: Friday, May 25, 2012 1:27 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Jack Farmer
285 Wilderness Way
Santa Rosa Beach, FL 32459-5882

From: Doug Leeper
To: ["Bob Fay"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:17:00 PM

Mr. Fay:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Bob Fay
Sent: Friday, May 25, 2012 12:44 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Bob Fay
4000 24th St N
St Petersburg, FL 33714-4023

From: Doug Leeper
To: ["Elsy Shallman"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:17:00 PM

Ms. Shallman:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Elsy Shallman
Sent: Friday, May 25, 2012 12:08 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Elsy Shallman
17294 37th Pl N
Loxahatchee, FL 33470-3627

From: Doug Leeper
To: ["Todd Smith"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:17:00 PM

Mr. Smith:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Todd Smith
Sent: Friday, May 25, 2012 11:31 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Todd Smith
650 12th Ave S
Saint Petersburg, FL 33701-5119

From: Doug Leeper
To: ["John Zohn"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:18:00 PM

Mr. Zorn:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of John Zohn
Sent: Friday, May 25, 2012 11:30 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. John Zohn
4365 1st St
Vero Beach, FL 32968-2358

From: Doug Leeper
To: ["darlene wolf"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:18:00 PM

Ms. Wolf:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of darlene wolf
Sent: Friday, May 25, 2012 10:27 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. darlene wolf
1705 Gordon Dr
Naples, FL 34102-7553
(239) 435-6492

From: Doug Leeper
To: ["Robert Keiser"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:18:00 PM

Mr. Keiser:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Robert Keiser
Sent: Friday, May 25, 2012 9:45 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Robert Keiser
6131 SW 85th St
South Miami, FL 33143-8145
(305) 995-3646

From: Doug Leeper
To: ["Laura Bedinger"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:18:00 PM

Ms. Bedinger:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Laura Bedinger
Sent: Friday, May 25, 2012 9:46 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Laura Bedinger
4329 SW 70th Ter
Gainesville, FL 32608-6488

From: Doug Leeper
To: ["Faith Hoogs"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:19:00 PM

Ms. Hoogs:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Faith Hoogs
Sent: Friday, May 25, 2012 9:21 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Faith Hoogs
6650 Hunt Rd
Groveland, FL 34736-9762

From: Doug Leeper
To: ["Su J"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:20:00 PM

Ms. Su J:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Su J
Sent: Friday, May 25, 2012 8:02 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Su J
3006 Sherry Dr
Orlando, FL 32810-3752

From: Doug Leeper
To: ["Sigrid Benson"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:20:00 PM

Ms. Benson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Sigrid Benson
Sent: Sunday, May 27, 2012 4:19 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are unique, create natural environments for recreation and wildlife, and supply drinking water. So stop the destruction of Florida's springs.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration.

St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs.

Water Management Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels.

Please design and implement a permitting policy that saves our waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Sigrid Benson
1514 Mariners Cir
Gulf Breeze, FL 32563-2988
do not call

From: Doug Leeper
To: ["jacqueline Mason"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:20:00 PM

Ms. Mason:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of jacqueline Mason
Sent: Sunday, May 27, 2012 3:14 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jacqueline Mason
1819 Peach Tree Blvd
Saint Cloud, FL 34769-1606

From: Doug Leeper
To: ["Jaclyn Boles"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:21:00 PM

Ms. Boles:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Jaclyn Boles
Sent: Sunday, May 27, 2012 7:44 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Jaclyn Boles
25231 Sherwood Dr
Land O Lakes, FL 34639-5528
(813) 431-5817

From: Doug Leeper
To: ["Vinny Mullins"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:21:00 PM

Mr. Mullins:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Vinny Mullins
Sent: Sunday, May 27, 2012 1:30 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 27, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Vinny Mullins
13706 Whitby Rd
Hudson, FL 34667-1468

From: Doug Leeper
To: "[Sharon Rich](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:21:00 PM

Ms. Rich:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Sharon Rich
Sent: Sunday, May 27, 2012 12:59 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Sharon Rich
2834 Regent Cres
South Daytona, FL 32119-8556

From: Doug Leeper
To: ["jacqueline Mason"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:21:00 PM

Ms. Mason:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of jacqueline Mason
Sent: Saturday, May 26, 2012 8:05 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Jacqueline Mason
1819 Peach Tree Blvd
Saint Cloud, FL 34769-1606

From: Doug Leeper
To: ["sara le maire"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:22:00 PM

Ms. Le Maire:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of sara le maire
Sent: Saturday, May 26, 2012 4:34 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Sara Le Maire
11109 SW 10th Ter
Micanopy, FL 32667-3340

From: Doug Leeper
To: "[Colleen McGlone](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:22:00 PM

Ms. McGlone:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Colleen McGlone
Sent: Saturday, May 26, 2012 3:00 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Colleen McGlone
3540 Hartland Dr
New Port Richey, FL 34655-2505
(727) 375-2356

From: Doug Leeper
To: ["Barbara Newcomer"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:22:00 PM

Ms. Newcomer:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Barbara Newcomer
Sent: Saturday, May 26, 2012 1:40 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Barbara Newcomer
4315 Sunbeam Lake Dr
Jacksonville, FL 32257-8118

From: Doug Leeper
To: "[KATRINA SHADIX](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:22:00 PM

Ms. Shadix:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of KATRINA SHADIX
Sent: Saturday, May 26, 2012 9:37 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 26, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. KATRINA SHADIX
180 W 3rd St
Chuluota, FL 32766-9079

From: Doug Leeper
To: ["Mervi Rantala"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:27:00 AM

Ms. Rantala:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Mervi Rantala
Sent: Tuesday, May 29, 2012 10:10 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Mervi Rantala
Tesomajarvenkatu 20 b 23
Tampere, FL 33310

From: Doug Leeper
To: ["Morgan Williams"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:27:00 AM

Ms. Williams:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Morgan Williams
Sent: Tuesday, May 29, 2012 3:25 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Morgan Williams
5901 N Central Ave
Tampa, FL 33604-6705

From: Doug Leeper
To: ["Keth Luke"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:28:00 AM

Mr. Luke:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Keth Luke
Sent: Tuesday, May 29, 2012 2:55 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Keth Luke
5438 Tennessee Ave
New Port Richey, FL 34652-2932
(727) 842-6788

From: Doug Leeper
To: "[Lori McCraney](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:28:00 AM

Ms. McCraney:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lori McCraney
Sent: Tuesday, May 29, 2012 2:55 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Lori McCraney
PO Box 1351
Live Oak, FL 32064-1351

From: Doug Leeper
To: ["Terry Luke"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:28:00 AM

Mr. Luke:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Terry Luke
Sent: Tuesday, May 29, 2012 1:55 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Terry Luke
5438 Tennessee Ave
New Port Richey, FL 34652-2932
(727) 842-6788

From: Doug Leeper
To: ["Roger Vaughan III"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:29:00 AM

Mr. Vaughan:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Roger Vaughan III
Sent: Tuesday, May 29, 2012 11:55 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Roger Vaughan III
3016 W Harbor View Ave
Tampa, FL 33611-1645

From: Doug Leeper
To: ["Ana Alvarez"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:30:00 AM

Ms. Alvarez:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Ana Alvarez
Sent: Tuesday, May 29, 2012 10:09 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Ana Alvarez
11500 Brandiwine Ct
Clermont, FL 34711-6451
(352) 242-4469

From: Doug Leeper
To: ["Susie Cooke"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:30:00 AM

Ms. Cooke:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Susie Cooke
Sent: Tuesday, May 29, 2012 10:09 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

My grandchildren and I have a tradition of spending their Spring Break at one of our beautiful natural springs parks. I would hate to see that beautiful memory polluted by the degradation of our springs.

Sincerely,

Ms. Susie Cooke
5116 N Seminole Ave
Tampa, FL 33603-2204
(813) 236-8119

From: Doug Leeper
To: ["Christopher Segó"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:30:00 AM

Mr. Segó:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Christopher Segó
Sent: Tuesday, May 29, 2012 10:09 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Christopher Segó
1070 Shimmering Sand Dr
Ocoee, FL 34761-9138
(407) 578-8019

From: Doug Leeper
To: ["Tim Glover"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:31:00 AM

Mr. Glover:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Tim Glover
Sent: Tuesday, May 29, 2012 10:09 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs - springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control - water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Thank you for considering my comments.

Sincerely,

Mr. Tim Glover
9446 Fleming Grant Rd
Micco, FL 32976-2710

From: Doug Leeper
To: ["Rosalind Parneix"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:31:00 AM

Ms. Parneix:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Rosalind Parneix
Sent: Tuesday, May 29, 2012 10:09 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Rosalind Parneix
14 Oasis Cir
Palm Coast, FL 32137-1522

From: Doug Leeper
To: ["Annette Long"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 7:31:00 AM

Ms. Long:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Annette Long
Sent: Tuesday, May 29, 2012 10:03 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 29, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Annette Long
12651 NW 117th Ave
Chiefland, FL 32626-4524
(352) 490-8930

From: Doug Leeper
To: ["Amy Olson"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Friday, June 01, 2012 11:24:00 AM

Ms. Olson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Amy Olson
Sent: Friday, June 01, 2012 1:39 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

Jun 1, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use

permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Amy Olson
1023 Moss Ridge way
Orlando, FL 32832

From: Doug Leeper
To: ["Stacey Daniels-Dattilo"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:50:00 PM

Ms. Daniels-Dattilo:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Stacey Daniels-Dattilo
Sent: Friday, May 25, 2012 7:15 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Stacey Daniels-Dattilo
12705 Vista Pine Cir
Fort Myers, FL 33913-7974

From: Doug Leeper
To: ["Steven Handwerker"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:54:00 PM

Dr. Handwerker:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Steven Handwerker
Sent: Thursday, May 24, 2012 9:50 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Dr. Steven Handwerker
6465 Via Benita
Boca Raton, FL 33433-6421
(561) 417-2494

From: Doug Leeper
To: "[Vicki Robertson](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:55:00 PM

Ms. Robertson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Vicki Robertson
Sent: Thursday, May 24, 2012 9:08 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. Vicki Robertson
119 SW 9th Ave
Boynton Beach, FL 33435-5541
(561) 236-7250

From: Doug Leeper
To: "[Janet Robinson](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:56:00 PM

Ms. Robinson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Janet Robinson
Sent: Thursday, May 24, 2012 8:17 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Janet Robinson
6391 Toulon Dr
Boca Raton, FL 33433-3801

From: Doug Leeper
To: "[Felicity Hohenshelt](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 3:57:00 PM

Ms. Hohenshelt:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Felicity Hohenshelt
Sent: Thursday, May 24, 2012 7:46 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Felicity Hohenshelt
11326 Carlsburg Ct
Jacksonville, FL 32246-1392

From: Doug Leeper
To: ["Christina Farnsworth"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:03:00 PM

Ms. Farnsworth:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Christina Farnsworth
Sent: Thursday, May 24, 2012 6:07 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

PLEASE...DO THE RIGHT THING for our precious waters. If they are not healthy, WE are not healthy. Thank you.

Sincerely,

Ms. Christina Farnsworth
6701 Collins Ave # 916
Miami Beach, FL 33141-3242

From: Doug Leeper
To: ["mimi.mendelson"](mailto:mimi.mendelson)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:09:00 PM

Ms. Mendelson:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of mimi mendelson
Sent: Thursday, May 24, 2012 5:16 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 24, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. mimi mendelson
4822 Ocean Blvd
6
Sarasota, FL 34242-1368

From: Doug Leeper
To: "[Kat McConnell](#)"
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:17:00 PM

Ms. McConnell:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Kat McConnell
Sent: Friday, May 25, 2012 12:03 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Ms. Kat McConnell
1266 Monterey St
Jacksonville, FL 32207-6339

From: Doug Leeper
To: ["Mark Hinnebusch"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Tuesday, May 29, 2012 4:19:00 PM

Mr. Hinnebusch:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Mark Hinnebusch
Sent: Friday, May 25, 2012 9:21 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 25, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Mark Hinnebusch
1627 NW 12th St
Gainesville, FL 32609-3422
(352) 219-8172

From: Doug Leeper
To: ["robin.milcowitz"](mailto:robin.milcowitz)
Subject: RE: Stop the destruction of Florida's Water
Date: Thursday, May 31, 2012 9:32:00 AM

Ms. Milcowitz:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of robin milcowitz
Sent: Wednesday, May 30, 2012 9:48 AM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 30, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies.

Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use

permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mrs. robin milcowitz
914 E Hamilton Ave
Tampa, FL 33604-4323
(813) 231-7164

From: Doug Leeper
To: ["Lisa D'Antonio"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Friday, June 01, 2012 11:25:00 AM

Ms. D'Antonio:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Lisa D'Antonio
Sent: Thursday, May 31, 2012 12:44 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

May 31, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St

Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Miss Lisa D'Antonio
711 Forest Club Dr Apt 602
Wellington, FL 33414-7910
(561) 818-9958

From: [Gulf Restoration Network](#) on behalf of [Douglas Powless](#)
To: [Doug Leeper](#)
Subject: Stop the destruction of Florida's Water
Date: Wednesday, July 11, 2012 8:49:41 AM

Jul 10, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve.

Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Douglas Powless
7757 Lincoln Way E
Fayetteville, PA 17222-9524

From: Doug Leeper
To: ["Douglas Powless"](#)
Subject: RE: Stop the destruction of Florida's Water
Date: Wednesday, July 11, 2012 9:03:00 AM

Mr. Powless:

Thank you for your recently submitted comments concerning development of minimum flows and levels for spring systems of the Southwest Florida Water Management District. District staff will consider your comments and include them along with other submitted input and peer-review findings in revised reports on proposed minimum flows that are currently being developed for the Homosassa and Chassahowitzka River systems. The revised reports for these two spring-dominated river systems will be made available for public review and will be presented to the District Governing Board to support the Board's consideration of rule amendments associated with the proposed minimum flows.

Please feel free to contact me if you have additional comments concerning development of minimum flows for the Homosassa or Chassahowitzka River systems or other water management issues.

Douglas A. Leeper
Chief Environmental Scientist
Water Resources Bureau
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604-6899
1-800-423-1476, ext. 4272 (FL only)
352-796-7211, ext. 4272
352-754-6885 (Fax)
doug.leeper@watermatters.org

-----Original Message-----

From: Gulf Restoration Network [<mailto:info@healthygulf.org>] On Behalf Of Douglas Powless
Sent: Tuesday, July 10, 2012 11:59 PM
To: Doug Leeper
Subject: Stop the destruction of Florida's Water

Jul 10, 2012

Chief Environmental Scientist, SWFWMD Doug Leeper

Dear Leeper,

Florida's springs are our most unique natural asset, creating vibrant natural environments for recreation and wildlife, and supplying our drinking water. It's time to stop the destruction of Florida's springs that supply water to lakes, streams, rivers and to the vital estuaries and coastal environments of the Gulf of Mexico and to our Atlantic coast.

Decades of over-pumping and 20 years of drought have slowed or dried up these magnificent sources of crystal clear water. Many are now murky with slime from nitrates fed by over-fertilized lawns, septic tanks, and farm and ranch operations that must use up their permitted amount of water to avoid being cut back, erasing any incentive to conserve. Florida springs have been a recreational and economic driver for tourism dollars for over a century, providing jobs in local economies. Now these beautiful and vital sources of water and inspiration for Floridians and tourists alike are threatened with obliteration. St Johns River Water Management District is considering a consumptive use

permit to allow 13 million gallons per day for one user Adena Ranch. This permit amount is greater than the permitted water use for the entire city of Ocala, and it directly threatens seriously degraded Silver Springs a famous Florida icon.

Water Management Districts continue to maintain that drought and climate change are natural events that are not within their purview and that they can only be concerned with what's under their control water supply and management. At the same time, they assert that the over-pumping that is within District control is not a big part of the problem. That's a Catch 22 we can't live with. Yet the Districts continue to set minimum flows and levels from 5-15% below current water levels for springs and rivers that are already seriously depleted by overpumping and drought - a "drought" that is our new climate pattern. In 120 years, 1989-2008 was the lowest 20-year rainfall period, and it continues.

The Districts use statistical models, not the truth of what's really happening on the ground to measure "significant harm" to the environment from reduced water flow. It's time for a mandate to preserve and protect these critical resources for all Floridians. The water management policy must be adaptable to drought and climate change. Many springs have ceased to flow or are no longer "connecting" with larger waterways, affecting the downstream systems.

Please stop the MFL process for all springsheds and basins, and halt the current permitting process while you convene an independent regional body to study the reality of reduced flows and levels. Please design and implement a permitting policy that saves our precious waterways, creates maximum flows and levels for our most important resource, and reverses the decline and degradation of our freshwater.

Sincerely,

Mr. Douglas Powless
7757 Lincoln Way E
Fayetteville, PA 17222-9524