

DRAFT
MEETING SUMMARY

Springs Coast Steering Committee

April 6, 2016

The Springs Coast Steering Committee meeting met at 2:00 p.m., April 6, 2016, at the Southwest Florida Water Management District, Governing Board Room, 2379 Broad Street, Brooksville, Florida.

Members Present

Michael Babb, SWFWMD
Alys Brockway, Hernando County
Dennis Damato, Citrus County
Greg D'Angelo, FDEP (via telephone)
Robert Holmes, City of Crystal River
Shannon Wright, FFWCC

Members Absent

Steven Dwinell, FDACS
Tom Frick, FDEP
Stan McClain, Marion County
Nick Nicholson, Hernando County

SWFWMD Staff

Chris Anastasiou
Veronica Craw
Mark Hammond
Sean King
Sky Notestein
Danielle Rogers
Jennette Seachrist
Chris Zajac

Others Present

Kelly Rice, SWFWMD

SWFWMD – Southwest Florida Water Management District
FDEP – Florida Department of Environmental Protection

FFWCC – Florida Fish and Wildlife Conservation Commission
FDACS – Florida Department of Agriculture and Consumer Services

A list of others present who signed the attendance sheet is filed in the permanent files of the Springs Coast Steering Committee.

1. Call to Order and Roll Call

Chair Babb called the meeting to order and advised the Committee that the meeting will begin with the process for the three SWIM plans: Homosassa, Chassahowitzka and Weeki Wachee. He advised the Committee that at the March 29, 2016 Governing Board meeting the Springs Coast Steering Committee members were acknowledged and awarded plaques for their service. To those members who were unable to attend the meeting, he also offered his thanks for their service. He advised the Committee that the Board proclaimed April 2016 as Springs Protection Awareness Month and that the Board approved the Crystal River/Kings Bay and Rainbow River SWIM Plans. He said the Plans will now be sent to FDEP for final approval.

Ms. Veronica Craw called the roll and confirmed a quorum.

Mr. Babb noted that Friday will be Veronica's last day with the District and thanked her for her service.

2. Action Item: Minutes Approval from January 6, 2016

Following consideration, Commissioner Damato moved for approval, seconded by Ms. Shannon Wright. The motion passed.

3. System Introductions for Weeki Wachee, Homosassa and Chassahowitzka – Dr. Chris Anastasiou, SWFWMD

Dr. Anastasiou presented an overview and history of the three springs systems. He said these systems include everything from the springshed to the sea. He said there are some similarities in these three systems in terms of population and land use trends. There has been a shift from more natural areas and agriculture to more urban or mixed use residential and some light commercial land use. Dr. Anastasiou said one thing that makes these three systems very unique from many of the other systems throughout the state is the natural area which includes a lot of forested wetland and the salt marsh complex that makes up the Chassahowitzka Wildlife Refuge, the St. Martin's Marsh Aquatic Preserve and a lot of public lands. That is a defining feature of all three of these systems with a relatively undisturbed wetland community along the immediate coast. Dr. Anastasiou said that is where the similarities end in these three systems.

Dr. Anastasiou presented a graphic depicting some of the major features of each of the three systems and highlighted the things that define the differences. He said that Weeki Wachee has a lot of grass, especially in the upper portion of the river, Homosassa has little to no grass in the river and Chassahowitzka has a fair amount of grass. Other differences are how they behave in terms of their tidal influence and how they behave with respect to the Gulf of Mexico.

Dr. Anastasiou said that even though these are spring fed systems, a lot of what has been observed is driven by processes that are beyond the springs themselves. He presented graphics depicting what happens in a typical estuarine or coastal system starting at the spring or spring complex where there is more fresh water, and ending up out in the Gulf. Dr. Anastasiou mentioned the importance of the three parts per thousand salinity line and explained that in terms of salinity in the water, when the salinity line exceeds three parts per thousand, there is a loss of a lot of the freshwater plants and a lot of the freshwater organisms start to move away and transition into more of a marine estuarine system.

Dr. Anastasiou said that three very important drivers regarding the clarity of the water are chlorophyll, color and turbidity. He explained that the submerged aquatic vegetation in these systems also makes them unique in that the types of submerged aquatic vegetation, how much there is and where they are located is very different in each of these systems.

Dr. Anastasiou said the Homosassa is a very strange system in that it does not have one big boil and a river run that flows out from it. He said there is a complex of springs that makes up the Homosassa complex and there are differences in the salinity levels in the various vents. He said that all of the vents in the three systems are tidal and have connections with the Gulf of Mexico and change with the tide.

Dr. Anastasiou provided historical data and photographs of the Homosassa showing the changes in the vegetation in the system over the years. He noted that there is a good cross section of both salt water and fresh water fish. He provided information regarding the Chassahowitzka, referring to a fishing guide dating back to 1876, which provided details of what the spring vent looked like and the depth of the spring back then. He said that Chassahowitzka is also a complex of small springs that flow into the Chassahowitzka River and it is unique in that most of the development has been focused in the upper portion of the river.

Dr. Anastasiou said the Weeki Wachee is more of a traditional spring in the upper portion in that most of the flow comes from the main spring. There are some smaller springs downstream but are

insignificant in terms of discharge. The main spring is where most of the flow comes from in the Weeki Wachee River. He said the upper portion of the Weeki Wachee is a traditionally fresh system; the main spring is not tidal. The middle section has more development directly on the river and where it transitions into the more estuarine, brackish part of the river and then down towards Bayport is where it is more salt marsh complex with palm islands along the coastline. He said another thing that makes this system unique as opposed to the other two systems in the upper portion is that it is very narrow, fast flowing channel with lots of trees overhead. There are 33 species of fish in the river with a little more freshwater species than the other two systems.

Dr. Anastasiou noted that all of these rivers ultimately flow into the Gulf of Mexico and this is the second largest sea grass area in the United States. Later this year the District expects to publish a draft map of the sea grass in the springs coast, as well as the rest of the District. He said the District has about 400,000 acres of mapped sea grass offshore.

Mr. Holmes asked how long the sea grass study has been going on. Dr. Anastasiou said this is the third mapping effort; the first was in 2007 and one was completed in 2012. He said the District flies the springs coast every four years and collects the map data using aerial photography and then photo interpreters look at the maps and interpret what sea grass are out there and how deep they are. He said that they have been collecting data that way since 2007 but, there have been numerous studies conducted by others. The first major effort was done back in the late 1970s.

Mr. Babb referred to the graphic showing the clarity of the three springs and the differences in the vegetation and asked if there is any coincidence to that, if there is any pollution causing it and what is the rationale for the dramatic drop. Dr. Anastasiou said the drop in clarity is a natural occurrence seen in just about any river. A lot of it has to do with velocity and vegetation plays a huge role because it helps to capture a lot of the sediment that would otherwise be in the water. He said the velocity of flow in Weeki Wachee is much faster than the other two systems. There are also other natural processes that occur as the water ages and as it goes down river, it tends to pick up phytoplankton and other material but, it is a natural phenomenon. He said there will always be a decline in clarity as you go downstream.

4. Summary of Springs Coast Management Committee Items

a. Action Item: Homosassa, Chassahowitzka and Weeki Wachee Issues – Sky Notestein, SWFWMD

Mr. Notestein talked about the primary issues that affect each of the three systems. He said the Technical Working Group and the Management Committee found it useful to define the term “issue” to help focus people. He said the District views the issues to be the primary problems that each of these systems is experiencing, which is what the District would like to fix or improve with these SWIM plans. The primary issues will be the focus part of each SWIM plan and they will help to define the key or priority projects and ultimately, the goal is to come up with projects that can improve or address these problems.

Mr. Notestein presented a graphic showing the three areas of responsibility for each of the three systems to be water quality, water quantity and natural systems. Under water quality, nitrate enrichment is a common primary issue for all three systems. In the Homosassa and Chassahowitzka, which are more coastal with more influence by the gulf waters, a primary issue is changing salinity. Under water quantity, all of the systems consistent primary issue is the potential decrease in historical

or natural flows. Under natural systems, altered or changing aquatic vegetation is a consistent primary issue for each system. The one exception is Weeki Wachee, which has a sedimentation issue.

Mr. Notestein presented graphics showing each of the areas of responsibility and provided examples of the primary drivers of each of the issues identified in all three categories for all three systems.

Upon completion of his presentation, Mr. Notestein asked for the Committee's approval of the primary issues identified for the Homosassa, Chassahowitzka and Weeki Wachee SWIM plans.

Commissioner Damato moved for approval; Ms. Alys Brockway seconded.

Commissioner Damato complimented Mr. Notestein's presentation and said the backup information presented was excellent, particularly the historical information. He said the number one priority that he sees is nitrate enrichment, particularly in Homosassa and Chassahowitzka. Referring to the Homosassa, he said the north side of the river from River Haven Village to U.S. 19 is all on central sewer; all septic tanks and package plants are gone. He talked about where the effluent is pumped and treated to reclaimed water standards. He said with help from the District, Citrus County and DEP, the Sugar Mill Woods wastewater treatment plant is going to be upgraded and will produce reclaimed water. In his opinion, the number one priority for the Homosassa River is the completion of septic tanks and package plant removal on the south side of the river, particularly in the blue water area right behind the main spring. He said we really need to start working on the area right behind the attraction. He said everyone in Citrus County wants to have their waterway cleaned up. Nobody wants a sewer assessment for the area. He said that assessments need to be in the \$5,000 to \$6,000 range. Anything more than that would cause a push back. He said it would help if it starts in that area and works down toward Old Homosassa to remove some package plants and camp grounds and get those who are directly on the river off of septic. He also said the 19 corridor needs some help. Those are a few things that he sees for the Homosassa River. Commissioner Damato then referred to and provided a copy of an article published in Florida Trend entitled Flush with Evidence about what was found in the Indian River Lagoon when they had people go in and look at it and all of the things that were found in the water. He also mentioned the Halls River and said he thought that invasive species plant removal would help to increase the spring's flow and said that is something the District should look at. Finally, with regard to Chassahowitzka, Commissioner Damato said he appreciates what has been done with the District and DEP but, he feels more needs to be done.

Mr. Babb thanked Commissioner Damato for his comments and asked if there were any other comments or discussion.

Ms. Alys Brockway asked how often nitrate monitoring is performed. Mr. Notestein said the District does that at least quarterly and the data is available on the District's springs dashboard. Ms. Brockway then asked if it is just the District monitoring and Mr. Notestein said that it is often also the counties or cities and DEP. Ms. Brockway mentioned that a former District employee recently mentioned that the MFL on Weeki Wachee is nearing going over the minimum flow for the river and she asked if anyone heard anything about that. Mr. Notestein said that in the following presentation, there will be a data slide that shows what the MFL is and what the current human use is and it is below the MFL. He said he believes that when it was implemented, we were close to the MFL, around nine percent, and the MFL allowable was ten percent, but for the past several years since that adoption, human use percentages have actually gone down. Ms. Brockway said that the local water department has seen a decline of three billion gallons of water that has been pumping from the area

and the sources were moved away from the Weeki Wachee so, she was surprised to hear that. Mr. Notestein said he doesn't think there is any data supporting that assertion.

Mr. Babb then called the motion, which passed.

b. Action Item: Homosassa, Chassahowitzka and Weeki Wachee Quantifiable Objectives – Danielle Rogers, SWFWMD

Ms. Rogers presented to the Committee a list of the quantifiable objectives for the three springs systems. She started with the Homosassa system and went over the list of quantifiable objectives that were approved by the Management Committee in February. She said the three categories, which are consistent with the other SWIM plans, are water quality, water quantity and natural systems. Under water quality, she said there are two objectives for water clarity, one for river average and another for the headspring area, at greater than 20 feet and greater than 40 feet, respectively. The other item is for the nitrate concentration in the springs to be less than .23 milligrams per liter, which is consistent with the FDEP TMDL that has been set. Under water quantity, the objective is to be consistent with our MFL. For natural systems, the objective is for the desirable benthic habitat to be greater than 65 percent coverage; coverage of invasive aquatic vegetation less than ten percent and no net loss of shoreline in natural condition along the river.

Ms. Rogers then presented graphics to show how the data was used to establish those objectives and whether or not they are being achieved. She said that currently, the water clarity quantifiable objective at the headspring is being achieved. The river average quantifiable objective is not currently being met. The nitrate concentrations set to be consistent with the FDEP TMDL program are not currently being achieved. Ms. Rogers said the current MFL for the Homosassa River allows for a three percent reduction in flow due to groundwater withdrawals and it is currently at two percent so, that objective is being achieved. With regard to submerged aquatic vegetation coverage, in 2015 the quantifiable objective for the invasive aquatic vegetation was being achieved, but it was not being achieved for the desirable submerged aquatic vegetation. Ms. Rogers also presented an aerial photograph depicting the developed shoreline versus the natural shoreline. The current estimate is the natural or undisturbed shoreline to be approximately 75 percent versus 25 percent developed. The objective is to have a no net loss going forward.

Moving on to the quantifiable objectives for the Chassahowitzka spring system, Ms. Rogers said they look very similar to that described for the Homosassa, with an additional objective in the water quality section for total nitrogen concentration in the river to be less than .25 milligrams per liter to be consistent with DEP TMDL program. The water quantity and natural systems categories are also similar to the objectives for the Homosassa system. Ms. Rogers said that currently the water clarity objectives for both the river average and near the headspring are not being achieved. The quantifiable objectives for the nitrate concentration in the springs and total nitrogen concentration in the river are not currently being achieved. The quantifiable objective for the MFLs is currently being achieved. The quantifiable objectives in the natural systems category for submerged aquatic vegetation coverage is not currently being achieved; however, the quantifiable objective is currently being achieved for the invasive species.

Ms. Rogers said the quantifiable objectives for the Weeki Wachee system are very consistent with the other two systems as far as the types of objectives. The most significant difference is under natural systems where the objective for the coverage of desirable submerged aquatic vegetation is greater than 40 percent and in the other systems, it is greater than 65 percent. This is because this river is

narrower and has more shading coming from the tree canopy. The objective for water clarity for both the river average and near the headspring is currently being achieved. The nitrate concentration is currently set to be consistent with the TMDL at 0.23 milligrams per liter and this objective is not currently being achieved. The MFL is set at ten percent allowable reduction and we are currently at seven percent. For the submerged aquatic vegetation, both desirable and invasive, the objectives currently are not being achieved.

Upon completion of her presentation, Ms. Rogers asked for the Committee's approval of the quantifiable objectives for the Homosassa, Chassahowitzka and Weeki Wachee SWIM plans. Commissioner Damato moved for approval, seconded by Council Member Holmes.

Commissioner Damato referred back to a graphic demonstrating that the nitrate levels were not decreasing in the Chassahowitzka. He said he found it interesting that the nitrate levels seem to be going up when most of the people around the springs have been on sewers for a few years. He asked if he was correct in his understanding that it has not increased a lot, but it has not really come down a lot either. Ms. Rogers said it is starting to stabilize so it stopped increasing and it is thought that what is being observed now is a legacy load left over from the agriculture that used to be in the area. Commissioner Donato said he thinks the District should look east of that area and he enumerated several things that he considers to be contributors to the issue. Dr. Anastasiou added that from a regional perspective, this seems to be a trend that is occurring in other springs along the coast where there is a leveling off or a slight drop. Whether or not it's a real trend remains to be seen but, there has been an observation that something from a regional perspective is happening which could be the legacy load that is starting to bleed itself out of the system and may be stabilizing at a certain level. Dr. Anastasiou said this is a good indication that even if it stabilizes, we are still above our target, which means a lot more work has to be done. Commissioner Damato agreed and said he would like to see more exploration east within that springshed and it seems like there is an introduction of nitrates from other parts of the springshed. He said he appreciated the comments about it leveling off and he wants to see it go down to meet the goals and objectives. Dr. Anastasiou said the DEP, through its BMAP process, will be looking at that, similar to what has been done in Rainbow and Crystal River. The District does not have the updated pie charts for Chassahowitzka and Homosassa yet but, that is coming through the efforts of DEP.

Ms. Shannon Wright asked if there was an explanation as to why in 1997 and 1999 the nitrates were below the line (referring to the graph shown). Dr. Anastasiou said that it could have been a sampling error.

Mr. Greg D'Angelo, FDEP, in referring to the graph showing the total nitrogen and nitrate numbers for the Chassahowitzka, said the TMDL is currently set up as a nitrate target at the headspring and a total nitrogen (TN) target in the river itself; however, he said in the summer and fall, they will be revising that TMDL and converting that TN number into a nitrate value. The nitrate concentration will likely be around .10 and that might change the answer in terms of where you get under .10 and it might be a better story about achieving the nitrate target in the main stem of the river.

Chair Babb called the motion; motion passed.

5. Action Item: Expansion of Committee Follow-Up – Chris Zajac, SWFWMD

Chris Zajac updated the Committee regarding its direction at the January meeting to engage Pasco County regarding their participation in the development of the next three SWIM plans. On March 14,

Executive Director, Robert Beltran, met with the Pasco County Administrator, Michele Baker, and explained to the County what is involved and what the effort means and they were very excited with the offer to participate. The item was placed on their County Commission agenda and on March 29, the Board approved Commissioner Mike Moore to sit on this Committee as a representative for Pasco County. Mr. Zajac also informed the Committee that Flip Mellinger, the Utility Director from Marion County, now works as Assistant County Administrator/Utility Director for Pasco County and he has been volunteered as the Management Committee representative for Pasco County. Mr. Zajac said that Mr. Mellinger also worked on the Rainbow and Crystal River/Kings Bay Plans. He said that the County has been participating in the Technical Working Group, which does not meet in the sunshine so, they are already involved in the process from a technical working group perspective. Mr. Zajac said the staff recommendation is to expand both the Springs Coast Steering Committee and the Springs Coast Management Committee by one member to allow a representative from Pasco County to join in this effort. If approved, Commissioner Mike Moore will join the Steering Committee at the July meeting.

Commissioner Damato moved to accept the staff recommendation. Council Member Holmes seconded.

Chair Babb said that he knows both very well and he thinks Mike Moore will be a phenomenal addition to the Committee. At this time, Chair Babb called the motion, which passed.

Chair Babb then introduced Board member Kelly Rice and informed the Committee that this is his last meeting as Chair of this Committee and is passing the gavel over to Mr. Rice. He told the Committee that Mr. Rice has been on the Board for a while and this is an opportunity to expand the Board and get other members involved in other committees. He said it has been a pleasure serving on the Committee and getting to know the members.

Chair Babb announced that the next Committee meeting will be July 13.

Dr. Anastasiou mentioned that the Technical Working Group meeting is tomorrow and will be discussing the projects for Weeki Wachee. All are welcome to attend.

6. Public Input

None

7. Adjournment

Commissioner Damato made a motion to adjourn, which was seconded. The motion passed and the meeting was adjourned at 3:21 p.m.