

Appendix J

Summary of September 2023

Public Workshop

## MEETING SUMMARY

### Southwest Florida Water Management District Recommended Minimum Flows for the Little Manatee River Virtual Public Workshop

September 27<sup>th</sup>, 2023

The Southwest Florida Water Management District (District) organized and facilitated a public workshop on proposed minimum flows for the Little Manatee River. The meeting was facilitated as a teleconference, using the Microsoft Teams videoconferencing application.

The meeting was held from 5:30 PM to approximately 6:20 PM on September 27<sup>th</sup>, 2023.

The meeting was advertised in the Florida Administrative Register and on the District's website. Notifications concerning the event were distributed to local governments, other agencies, and stakeholder groups or representatives.

Nineteen individuals participated in the meeting and are listed below.

#### District Staff

Mike Bray	XinJian Chen	Kristina Deak	Yonas Ghile
Kym Holzward	Tom Hyle	Doug Leeper	Randy Smith
Adrienne Vinning	Chris Zajac		

#### District Consultants

Tony Janicki	Ray Pribble	Mike Wessell	
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#### Others

Jacki Champion	Jacob Fenuccio	David Glicksburg	Natalie Kraft
Angel Martin	Brian Ruddeforth		

Mr. Doug Leeper, the District Minimum Flows and Levels Program Lead, opened the meeting by welcoming all participants and introducing the purpose of the meeting. He then introduced Ms. Kym Holzward, a Lead Ecologist with the District, who provided general information on minimum flows development and requirements, and detailed information concerning the minimum flows proposed by the District for the upper and lower segments of the Little Manatee River.

Mr. Leeper then facilitated a public input portion of the meeting, indicating that comments and inquiries regarding the proposed minimum flows could also be submitted in writing to the District via email or through use of a public comments form on the Minimum Flows for the Little Manatee River page of the District website.

Mr. Brian Ruddeforth, the owner of the Canoe Outpost on the Little Manatee River expressed support for the technical work used to develop the recommended minimum flows, noting particularly that he thought the proposed low-flow threshold component of the minimum flows would be expected to fully support recreation use of the river. Mr. Ruddeforth also asked about updates concerning discharge reporting at the U.S. Geological Survey's Little Manatee River streamflow gaging station at U.S. Highway 301. District staff indicated they were not aware of any reporting issues associated with the gaging station, adding that the U.S. Geological Survey routinely collects supporting data and performs maintenance at gage sites to ensure accurate and timely data collection.

Mr. Angel Martin inquired about the utility of increasing the number of flow blocks to refine minimum flows for in-channel (i.e., within bank) flows. He also asked for confirmation that surface/groundwater interactions are minimal in the watershed. District staff noted that the number of blocks and criteria used for minimum flow determinations were considered sufficient and confirmed that surface/groundwater interactions within the watershed are minimal. With regard to surface/groundwater interactions, Mr. Martin noted that care should be taken when describing baseline conditions associated with minimum flow analyses so as not to infer that baseline conditions equate to baseflow to a river system.

Mr. Martin also indicated that besides changing sea level, which was discussed during the meeting, other factors such as long-term drought, availability of additional data, and development of new methods for setting minimum flows could all contribute to the identification of a future need to reevaluate minimum flows established for the river. District staff noted that natural rainfall variation, including drought, is considered in minimum flow development and implementation, and agreed that a variety of factors can be considered when identifying the need for minimum flow or level reevaluations.

Finally, Mr. Martin identified himself as a former employee of the U.S. Geological Survey and noted that the local U.S. Geological Survey office could be contacted directly with any questions concerning data collection and reporting at the Little Manatee gage site.

The meeting concluded at approximately 6:20 PM.

The meeting agenda and slides presented during the meeting are provided below.

## **Meeting Agenda**



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# Southwest Florida Water Management District

2379 Broad Street, Brooksville, Florida 34604-6899  
(352) 796-7211 or 1-800-423-1476 (FL only)  
WaterMatters.org

The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs, services and activities. Anyone requiring reasonable accommodation, or who would like information as to the substance and location of accessible services, activities, and facilities, as provided for in the Americans with Disabilities Act, should contact the Human Resources Office Chief at 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only); or email ADACoordinator@WaterMatters.org. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (voice). If requested, appropriate auxiliary aids and services will be provided at any public meeting, forum, or event of the District. In the event of a complaint, please follow the grievance procedure located at WaterMatters.org/ADA.

# MEETING NOTICE

## RECOMMENDED MINIMUM FLOWS FOR THE LITTLE MANATEE RIVER VIRTUAL PUBLIC WORKSHOP

WEDNESDAY, SEPTEMBER 27, 2023

5:30 P.M.

### TEAMS MEETING

JOIN ON YOUR COMPUTER, MOBILE APP OR ROOM DEVICE: [Click here to join the meeting](#)  
OR CALL IN (AUDIO ONLY): 1-786-749-6127, PHONE CONFERENCE ID: 827298974

*All meetings are open to the public.*

1. Welcome and Introductions, Doug Leeper, MFLs Program Lead, SWFWMD<sup>1</sup>
2. Recommended Minimum Flows for the Little Manatee River, Kym Rouse Holzwart, Lead Ecologist, SWFWMD
3. Public Comment Period, Facilitated by Doug Leeper, MFLs Program Lead, SWFWMD

For questions regarding the meeting or the recommended minimum flows for the Little Manatee River, please contact Kym Rouse Holzwart by email at [Kym.Holzwart@watermatters.org](mailto:Kym.Holzwart@watermatters.org), by telephone at 1-352-269-5946, or by mail at the address listed at the top of this agenda.

If you have comments, please hold them until the public comment period. Doug Leeper will call on you at the appropriate time during the last portion of the meeting. Comments will typically be limited to three minutes per speaker. In appropriate circumstances, the Moderator may grant exceptions to the three-minute limit.

<sup>1</sup>SWFWMD = Southwest Florida Water Management District

**Barlow Office**  
170 Century Boulevard  
Barlow, FL 33630-7700  
865-534-1448 or 1-800-492-7862

**Sarasota Office**  
78 Sarasota Center Boulevard  
Sarasota, FL 34240  
941-377-3722 or 1-800-320-3503

**Tampa Office**  
7801 US Highway 301 North  
Tampa, FL 33637-6759  
813-985-7481 or 1-800-636-0707

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**RECOMMENDED MINIMUM FLOWS FOR THE  
LITTLE MANATEE RIVER  
VIRTUAL PUBLIC WORKSHOP**

**WEDNESDAY, SEPTEMBER 27, 2023  
5:30 P.M.**

**TEAMS MEETING**  
1 785 748-6127  
GOVERNOR'S ROOM 807080104  
\*All meetings are open to the public. \*\*

1. Welcome and Introductions, Doug Leeper, MFLA Program Lead, SWFWMD
2. Recommended Minimum Flows for the Little Manatee River, Kym Rouse Holmset, Lead Ecologist, SWFWMD
3. Public Comment Period, Facilitated by Doug Leeper, MFLA Program Lead, SWFWMD

1

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**Teams Meeting Information**

Please :

- Turn video off
- Keep your line muted unless speaking
- Save your comments/questions for the public comment period
- Use the hand raise function to be recognized for commenting
- Limit your comments/questions to 3 minutes
- State your name when speaking
- Put your cell phone on vibrate
- Mute your computer microphone and speaker if using your phone for audio



2

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**Proposed Minimum Flows  
for the  
Little Manatee River**

DRAFT WORKING  
DOCUMENT 9/27/2023

Kym Rouse Holmset  
Lead Ecologist  
Southwest Florida  
Water Management District



3

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**Florida's Water  
Management  
Districts**



4

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**District Mission and  
Areas of Responsibility**

Our mission is to protect water resources, minimize flood risks, and ensure the public's water needs are met

- Water Supply
- Water Quality
- Natural Systems
- Flood Protection



5

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

**Why Establish Minimum Flows?**

- Required by state law for all surface watercourses in the area (Section 373.042, Florida Statutes)




6

NORTH FLORIDA WATER RESOURCES DISTRICT

### What are Minimum Flows?

- Limits at which further withdrawals would be significantly harmful to the water resources or ecology of the area
- Established to protect flowing systems from impacts due to ground and surface water withdrawals

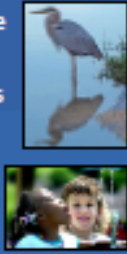


7

NORTH FLORIDA WATER RESOURCES DISTRICT

### What are Minimum Flows?

- Must be developed using the best available information
- Used by the District to:
  - Protect water resources
  - Review requests for withdrawals of ground and surface water
  - Plan for future water needs



8

NORTH FLORIDA WATER RESOURCES DISTRICT

### Defining Significant Harm

Significant harm threshold:

- Defined as more than a 15% decrease in available habitat or resource
- Protects 85% of available habitat or resource
- Developed at suggestion of independent scientists and reviewed/supported by > 20 panels of independent scientists
- Method used in minimum flows adopted for other Outstanding Florida Waters
- Well supported in the literature

9

NORTH FLORIDA WATER RESOURCES DISTRICT

### Environmental Values Considered When Developing Minimum Flows


- Recreation in and on the water
- Fish and wildlife habitats and the passage of fish
- Estuarine resources
- Transfer of detrital material
- Maintenance of freshwater storage and supply
- Aesthetic and scenic attributes
- Filtration and absorption of nutrients and other pollutants
- Sediment loads
- Water quality
- Navigation



10

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### Location of Little Manatee River



11

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### Upper and Lower Little Manatee River



12

Little Manatee River Minimum Flows Development History

- Minimum flows work initiated in late 1990s
- Draft report for upper river minimum flows completed and peer reviewed in 2011/2012
- Draft report flows for revised upper and lower river minimum flows completed in 2021
- Peer review conducted from 2021 through 2023
- Peer review panel supportive of our work



13

Flow-Based Blocks

- Developed flow-based blocks because river flows vary seasonally
  - Block 1: Dry season flows
  - Block 2: Medium flows
  - Block 3: Wet season flows
- Allows for evaluation of changes in habitat/environmental values during critical low- and high-flow periods



14

Baseline Flow Record

- Baseline Flows: Flows that would have occurred in the absence of withdrawals
- Used 1939-2021 flow record at USGS Little Manatee at US 301 near Wimauma, FL (No. 02300500) gage
- Daily FP&L surface water withdrawals from Upper Little Manatee River since 1976 added
- Flows from agricultural return since 1977 subtracted



15


Minimum Flows Criteria

- Percent-of-flow method ensures patterns of natural flow regime maintained
- Percentage that flow can be reduced without reducing the availability of habitats or resources by more than 15%, e.g., protects 85% of available habitats or resources



16

Upper Little Manatee River Minimum Flows Development: A Habitat-Based Approach



How Do Changes in Flow From Withdrawals Affect Habitat?

17

Upper Little Manatee River Minimum Flows Development Methods

- Instream Habitat (Low-Flow Threshold):
- Hydraulic model used to assess portion of wetted stream bottom and fish passage relative to flow and water level
- Developed to limit surface water withdrawals during dry periods




18

**Upper Little Manatee River Minimum Flows Development Methods**

Instream Habitat (Block 1 and 2 flows):

- Special software and the hydraulic model used to assess flow-based habitat changes based on water depth, velocity, and substrate/cover
- Evaluated 35 functional/taxonomic groups at 21 cross sections (7 sites)



19

**Upper Little Manatee River Minimum Flow Development Methods**

Inundated Floodplain Wetlands Habitat (Block 3 flows):

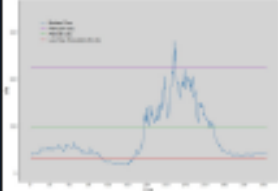
- Spatial component of hydraulic model used for analysis of floodplain inundation changes with flow changes
- Floodplain not as extensive as other SW FL rivers
- Classified as single type, Bottom Land Hardwood Swamp



20

**Upper River Flow-Based Blocks**

- Developed based on resources of concern
- Block 1: < 29 cfs (min. for fish passage)
- Block 2: > 29 cfs and ≤ 96 cfs
- Block 3: > 96 cfs (floodplain inundation)



21

**Upper Little Manatee River Minimum Flows Development Results**

Low-Flow Threshold:

- 29 cfs, based on fish passage
- Typically limits surface water withdrawals
- Since groundwater withdrawal impacts are minimal, applied to any withdrawal type for Block 1
- Results demonstrated protective of lower river, so applied to entire river



22

**Upper Little Manatee River Minimum Flow Development Results**

Instream Habitat:

- Hydropsychidae (net-spinning caddisflies) most sensitive group: 15% decrease in habitat from baseline at flow reductions > 12%
- Applied to Block 2 proposed minimum flows



23

**Upper Little Manatee River Minimum Flow Development Results**

Inundated Floodplain Wetlands Habitat:

- Block 3 flows between 96 and 224 cfs: 15% decrease in inundated floodplain acreage from baseline at flow reductions > 13%
- Higher elevation floodplain more sensitive to flow reductions, inundates at flows > 224 cfs
- Block 3 flows > 224 cfs: 15% decrease in inundated floodplain acreage from baseline at flow reductions > 10%

24

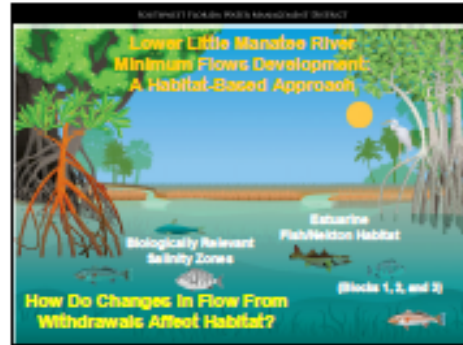


NORTH FLORIDA RIVER MANAGEMENT DISTRICT

### Proposed Minimum Flows for the Upper Little Manatee River

Established at USGS LMR at 301 Wausaua gage	If Previous Day's Flow, Adjusted for Upstream Withdrawals, is:	Minimum Flow is:	Potential Allowable Flow Reduction is:
Block 1	$\leq 29$ cfs	Flow on Previous Day	0 cfs
Block 2	$>29$ cfs and $\leq 33$ cfs	29 cfs	Flow on Previous Day Minus 29 cfs
	$>33$ cfs and $\leq 96$ cfs	88% of Flow on Previous Day	12% of Flow on Previous Day
Block 3	$>96$ cfs and $\leq 224$ cfs	87% of Flow on Previous Day	13% of Flow on Previous Day
	$>224$ cfs	90% of Flow on Previous Day	10% of Flow on Previous Day

25



26

NORTH FLORIDA RIVER MANAGEMENT DISTRICT

### Lower Little Manatee River Minimum Flow Development Methods

Biologically relevant salinity zones:

- Hydrodynamic model used to assess flow-related salinity zone changes
- Evaluated salinity habitats from 0-30 psu

27

NORTH FLORIDA RIVER MANAGEMENT DISTRICT

### Lower Little Manatee River Minimum Flow Development Methods

Estuarine fish/neckton habitat:

- Analysis used to assess habitat suitability changes
- Used seine data (1996-2021) from FWC's Fisheries Independent Monitoring Program
- Evaluated habitat availability for 11 species based on fish occurrence and shoreline habitat length as response to flow-related changes in salinity

28

NORTH FLORIDA RIVER MANAGEMENT DISTRICT

### Lower River Flow-Based Blocks

Developed based on flow-related low-salinity habitat responses predicted by hydrodynamic model; determined upper river flow blocks reasonable and appropriate for lower river use

- Block 1:  $\leq 29$  cfs
- Block 2:  $> 29$  cfs and  $\leq 96$  cfs
- Block 3:  $> 96$  cfs

29

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### Lower Little Manatee River Minimum Flow Development Results

Biologically relevant salinity zones:

- 15% decrease in low-salinity ( $<2$  psu) habitat (volume) associated with flow reductions from baseline of:
  - Block 1 flows:  $> 18\%$
  - Block 2 flows:  $> 25\%$
  - Block 3 flows:  $> 34\%$

30

SWFWMD Florida Water Management District

### Lower Little Manatee River Minimum Flow Development Results

Estuarine fish/nekton habitat:

- Block 1 flows: 15% decrease in favorable habitat from baseline for Mosquitofish, Hogchoker, Naked Goby, and Striped Mojarra at flow reductions > 10%
- Block 2 flows: 15% decrease in favorable habitat from baseline for Clown Goby and small gobies at flow reductions > 13%
- Block 3 flows: 15% decrease in favorable habitat from baseline for Clown Goby and small gobies at flow reductions > 32%

31

SWFWMD Florida Water Management District

### Proposed Minimum Flows for the Lower Little Manatee River

Established at USGS LMR at 301 Wimauma gage	If Previous Day's Flow, Adjusted for Upstream Withdrawals, Is:	Minimum Flow is:	Potential Allowable Flow Reduction is:
Block 1	<20 cfs	Flow on Previous Day	0 cfs
Block 2	>20 cfs and <24 cfs	20 cfs	Flow on Previous Day Minus 20 cfs
	>24 cfs and <40 cfs	87% of Flow on Previous Day	13% of Flow on Previous Day
Block 3	>40 cfs and <121 cfs	83 cfs	Flow on Previous Day Minus 83 cfs
	>121 cfs	88% of Flow on Previous Day	12% of Flow on Previous Day

32

SWFWMD Florida Water Management District

### Proposed Minimum Flows for the Little Manatee River: Current and Future Status

- Proposed minimum flows are protective of all environmental values
- Minimum flows are being met and are projected to be met for the 20-year planning period
- No recovery or specific prevention strategy necessary



33

SWFWMD Florida Water Management District

### Proposed Minimum Flows for the Little Manatee River: Current and Future Status

- Minimum flows status assessments will be completed:
  - On an annual basis
  - Every 5 years as part of the regional water supply planning process
  - On an as-needed basis in association with permitting and project-related activities
- Evaluations of the effects of future sea level rise indicates future re-evaluations will be needed

34

SWFWMD Florida Water Management District

### Planned Schedule

- October 10<sup>th</sup>: Present to District's Environmental Advisory Committee
- November 7<sup>th</sup>: Present to District's Public Supply Advisory Committee
- December 12<sup>th</sup>: Present proposed minimum flows to District's Governing Board and request approval to begin rule development

— All Meetings are Open to the Public —

35

SWFWMD Florida Water Management District

### Questions/Comments?

Kym.Holzward@watermatters.org  
352-269-5946

Can submit a comment until Oct. 6<sup>th</sup> at the bottom of the Minimum Flows for the Little Manatee River webpage:  
<https://www.swfwmd.state.fl.us/projects/mfis/minimum-flows-the-little-manatee-river>

36