

Minimum Flows and Levels Steinhatchee River and Springs Public Meeting



February 23, 2016
Steinhatchee, FL

Agenda

- Welcome and Introductions
- Background Information on MFLs
- Ongoing data collection on Steinhatchee River
- Schedule
- MFL Project Updates and Communication
- Questions
- Group Activity

MFL Overview & Process

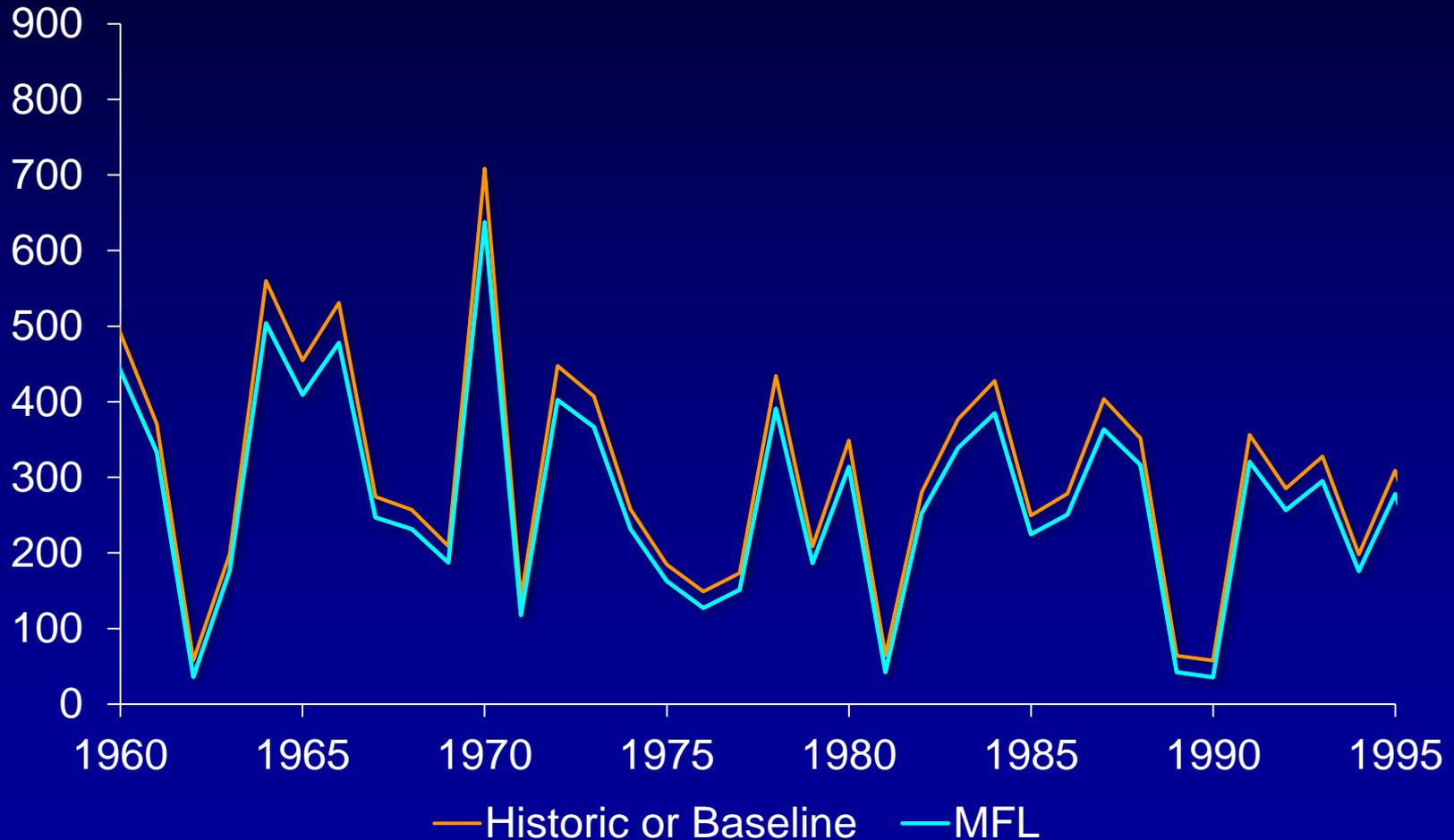
What is a Minimum Flow or Level?

- Statutory Requirement of Chap. 373.042 F.S.
 - Prevent “significant harm” to the water resources or ecology of an area due to water withdrawals
- When does harm become significant?

(MFLs) a Misnomer?

To be an effective water resource management tool, the establishment of MFLs must consider protection of the entire flow regime and not strictly low flow conditions. Thus, in some ways the term “minimum” flow and level may be misleading.

An MFL is an acceptable maximum flow shift in the natural regime

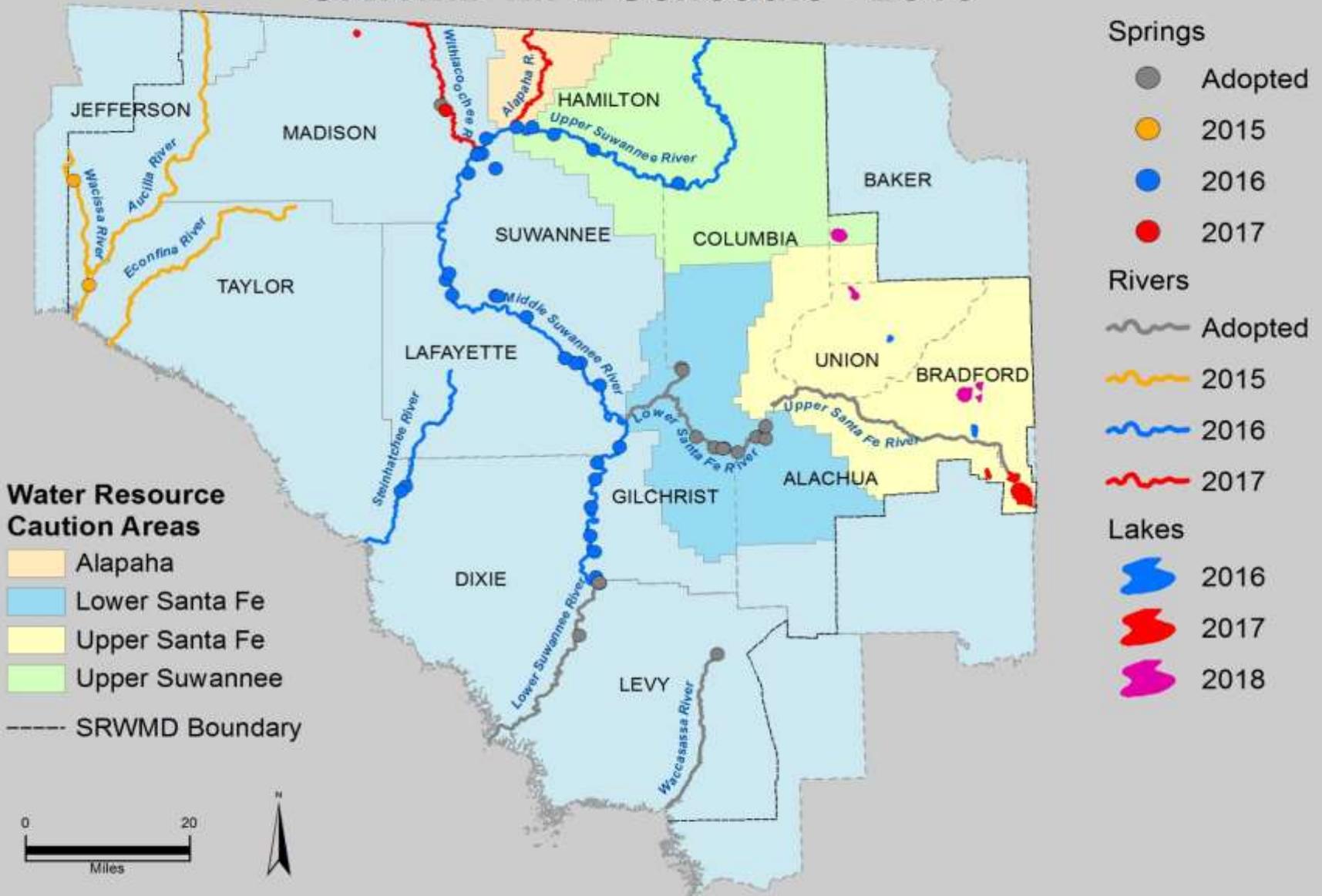


This is an example and not the MFL for the river

Other Statutory Provisions

- Use of “best available information”
- Independent scientific peer review
- Requires DEP review / approval of annual priority list and schedule

SRWMD MFL Schedule - 2016



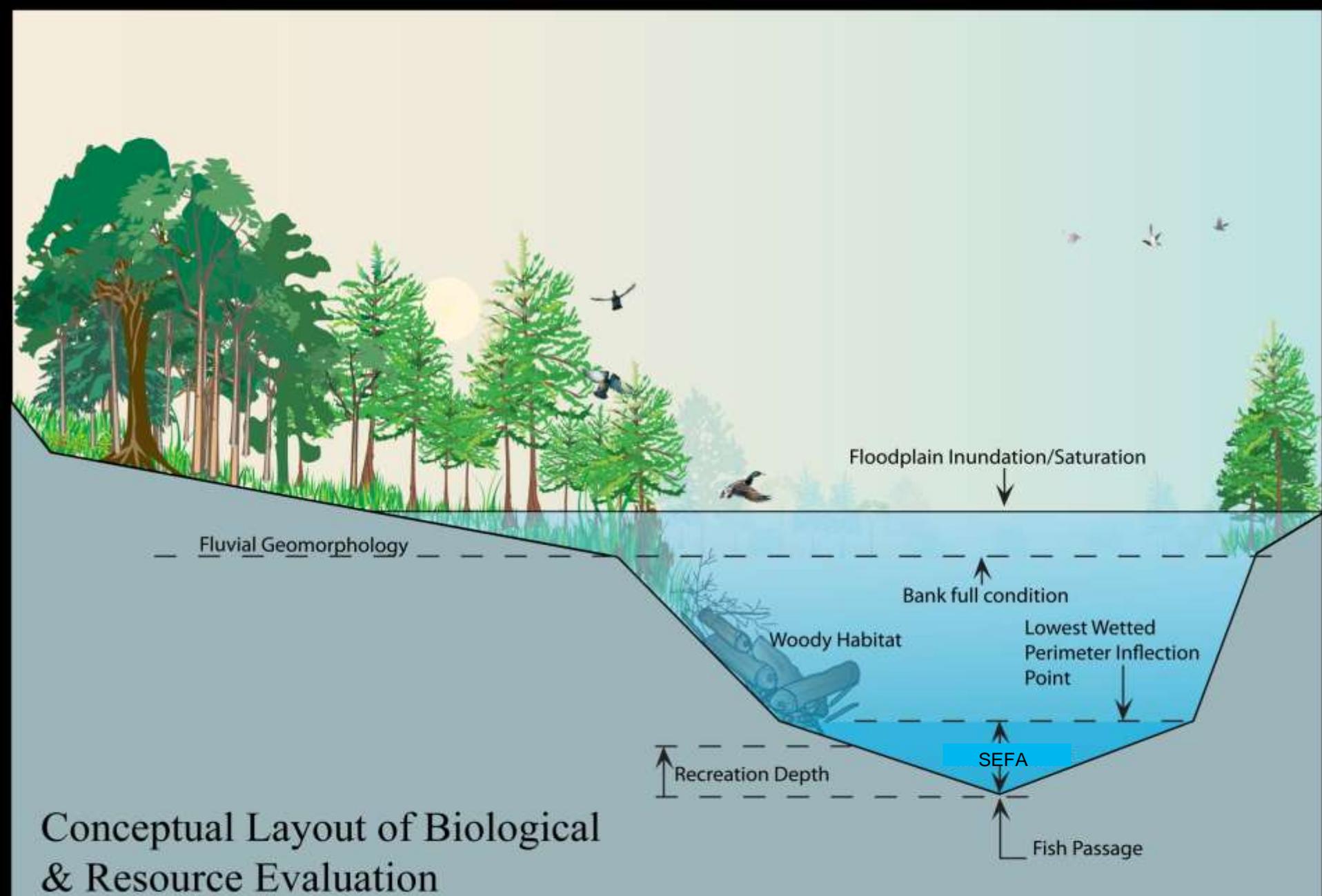
Benefits of MFLs

- Important Tool (cornerstone) for District Water Use Planning and Regulation
 - District Water Management Plans
 - Needs and Sources Analyses
 - Water Use Permit Criteria

62-40.473 Minimum Flows and Levels

(1) In establishing minimum flows and levels ... consideration shall be given natural seasonal fluctuations ... nonconsumptive uses, and environmental values ... including:

- 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; and
- Navigation.



Conceptual Layout of Biological & Resource Evaluation

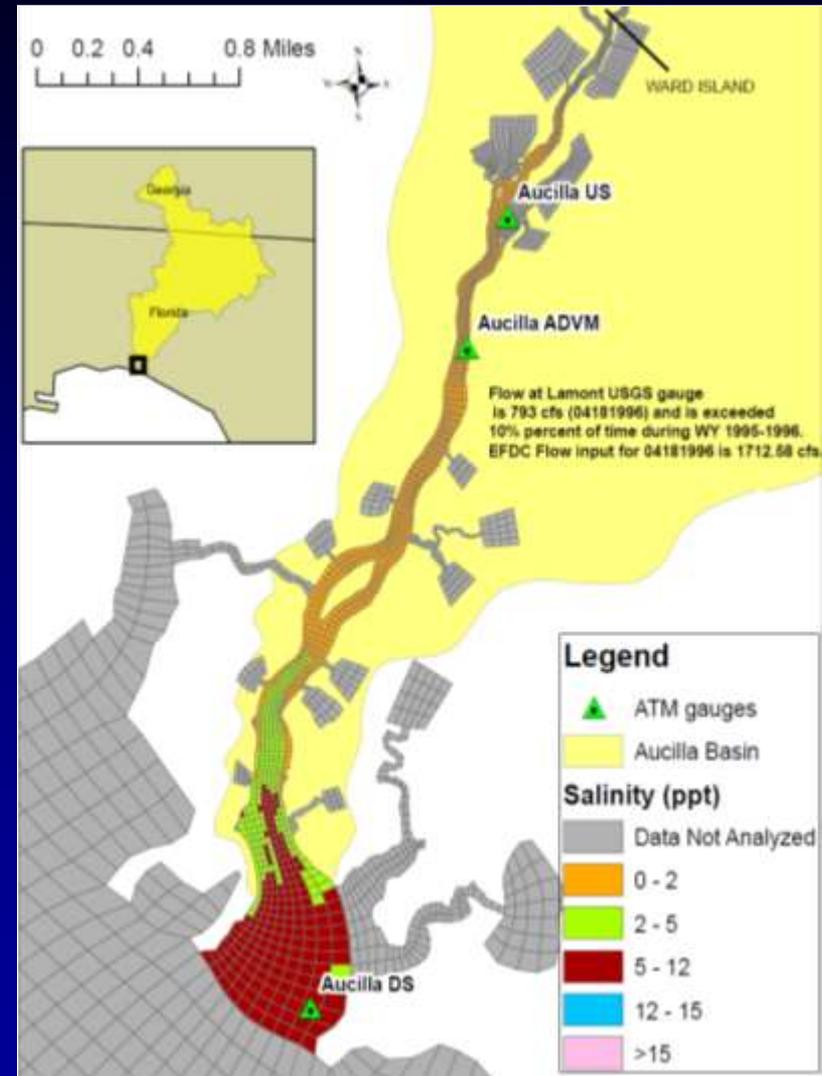
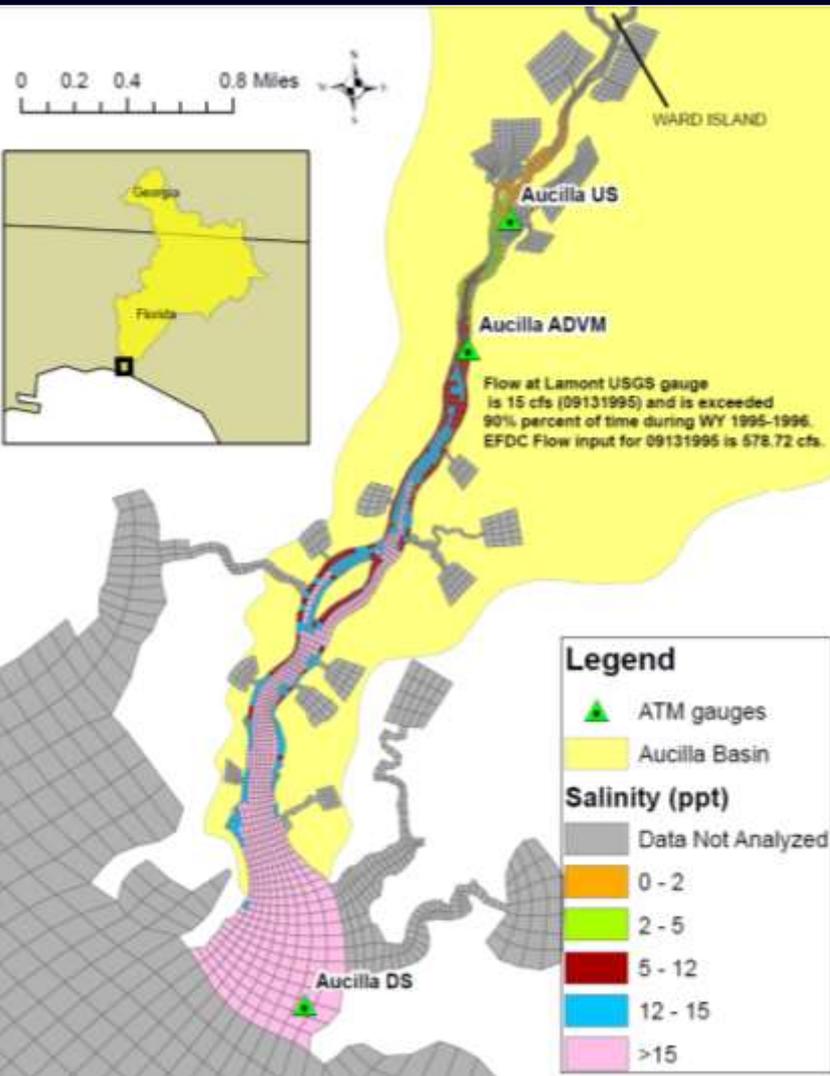
A conceptual illustration, not to scale

Salinity, Temperature and Velocity Modeling in the Estuary

Source:
Janicki Environmental
2006



Salinity, Temperature and Velocity Modeling Example



Salinity volumes for a low (left) and high (right) flow conditions

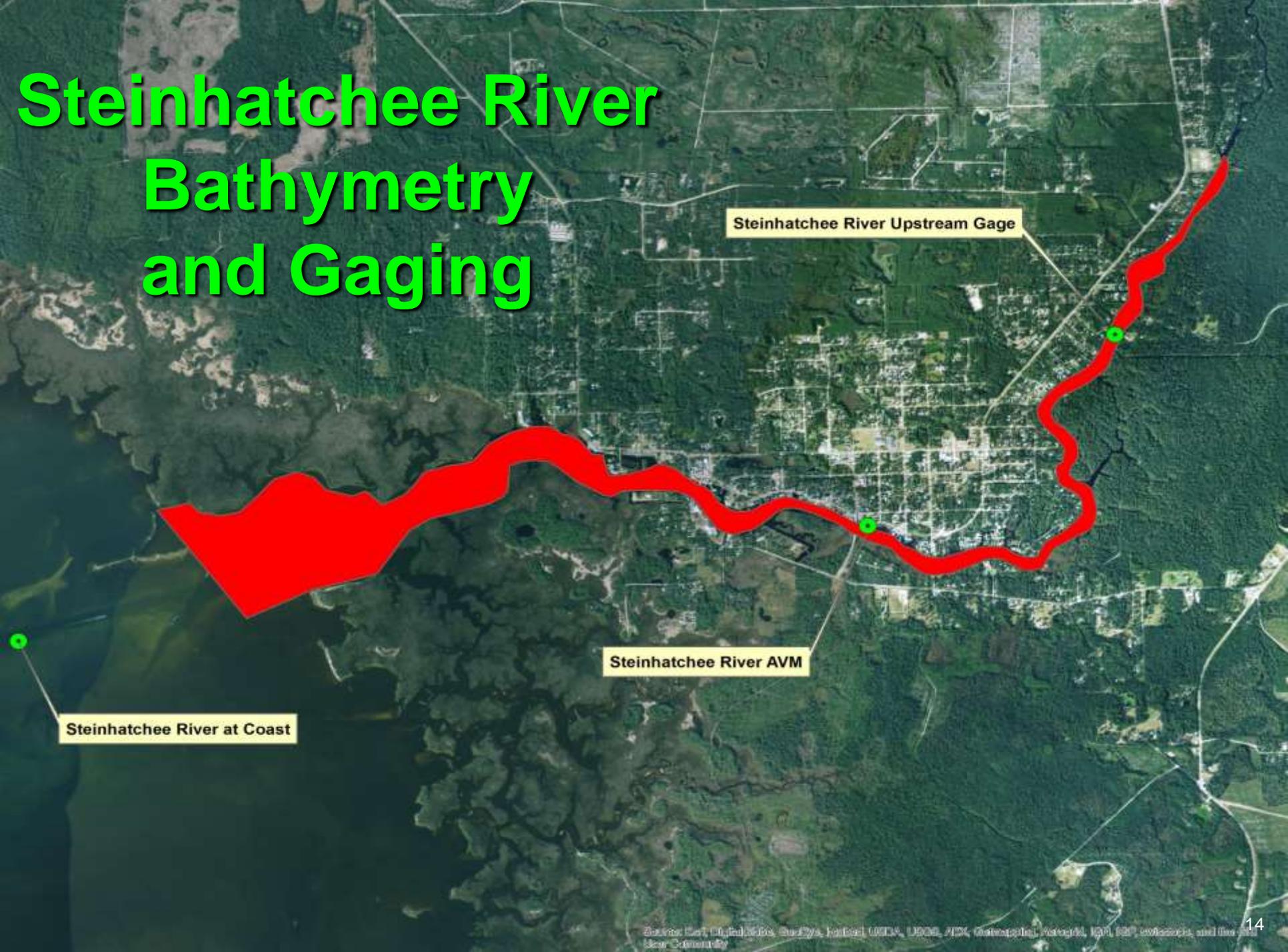


Monitoring Gages

- Tide
- Temperature
- Salinity
- Velocity/Direction
- Discharge



Steinhatchee River Bathymetry and Gaging

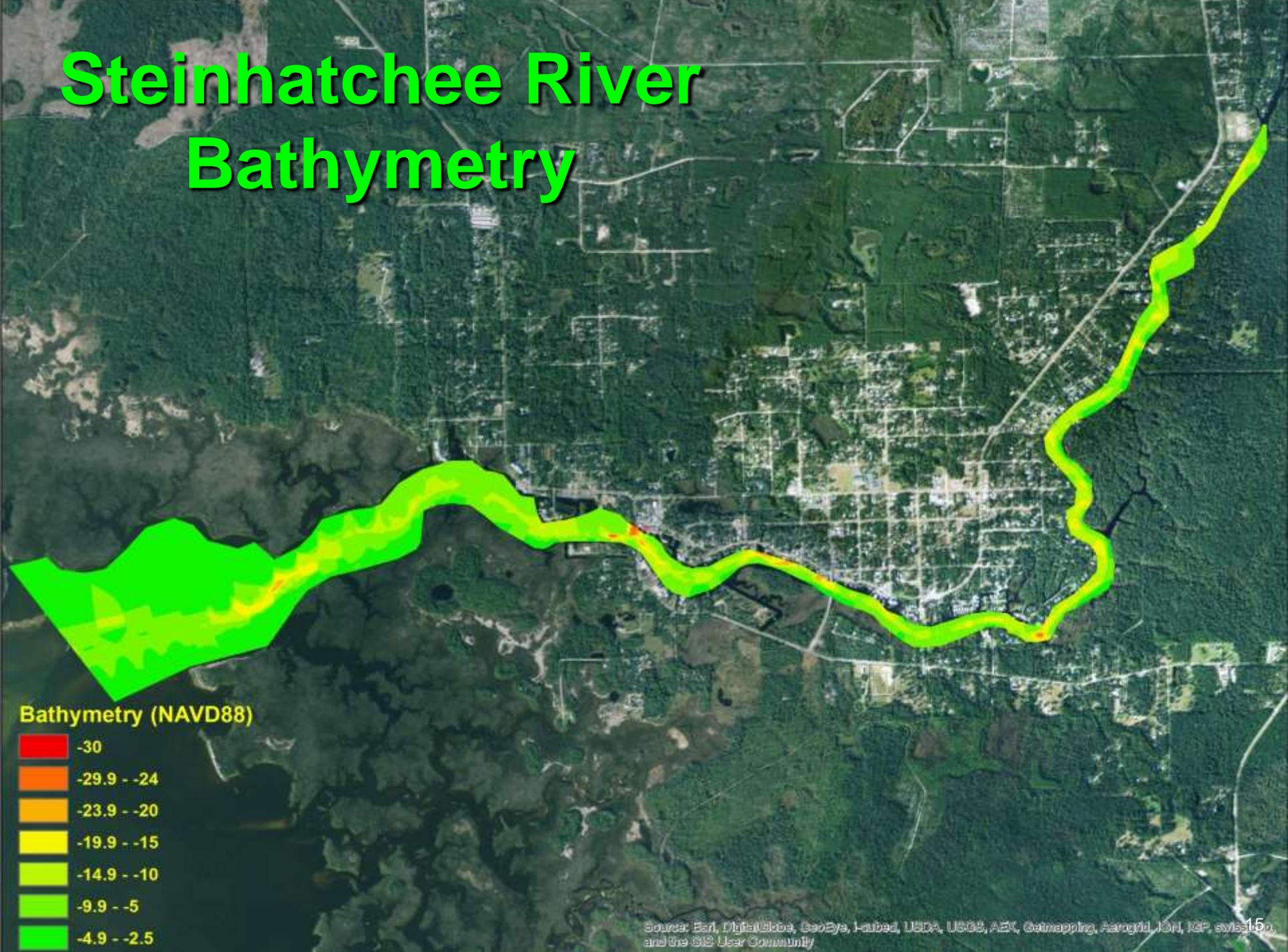


Steinhatchee River at Coast

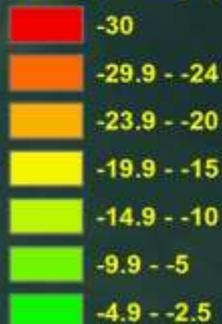
Steinhatchee River AVM

Steinhatchee River Upstream Gage

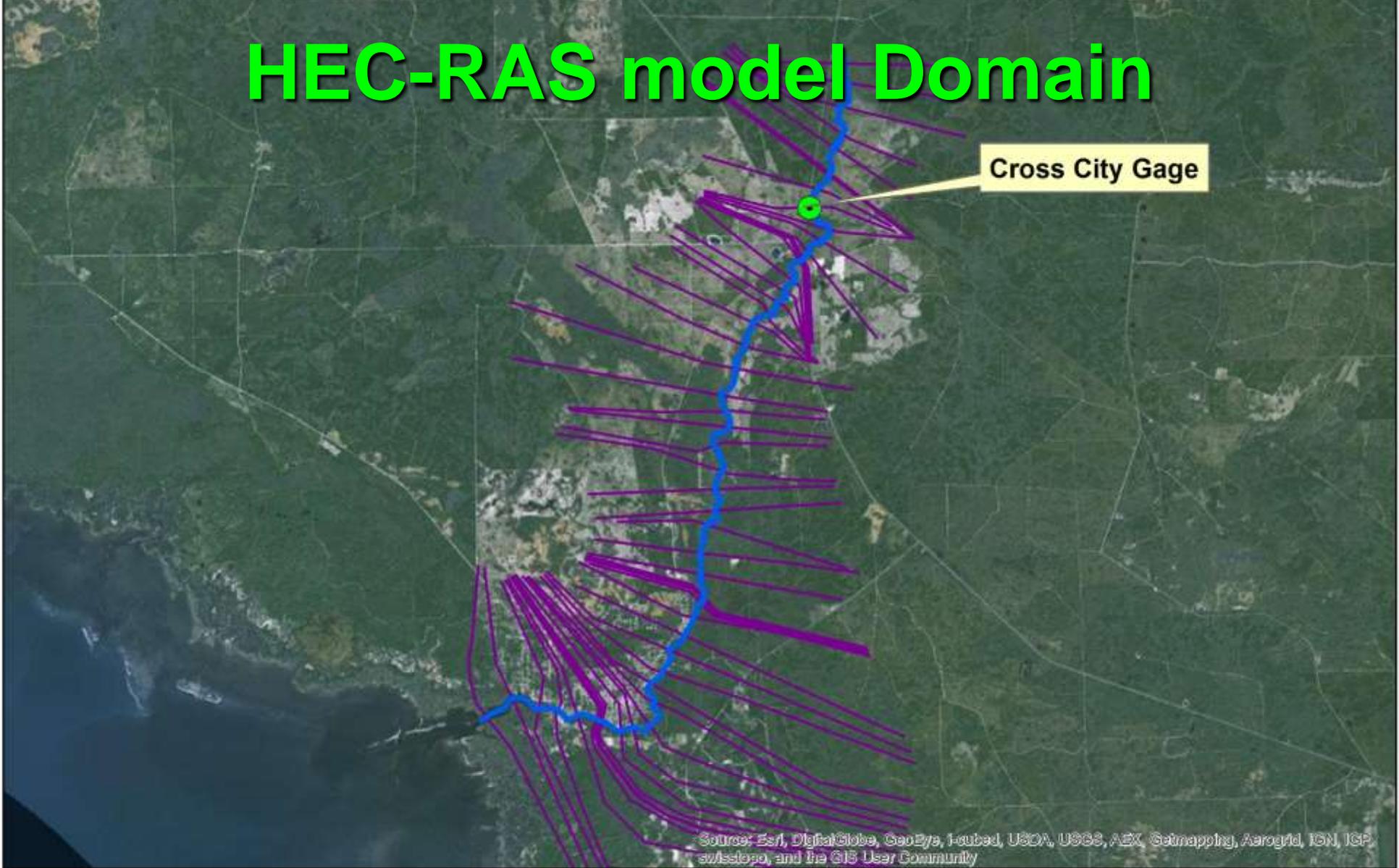
Steinhatchee River Bathymetry



Bathymetry (NAVD88)



HEC-RAS model Domain



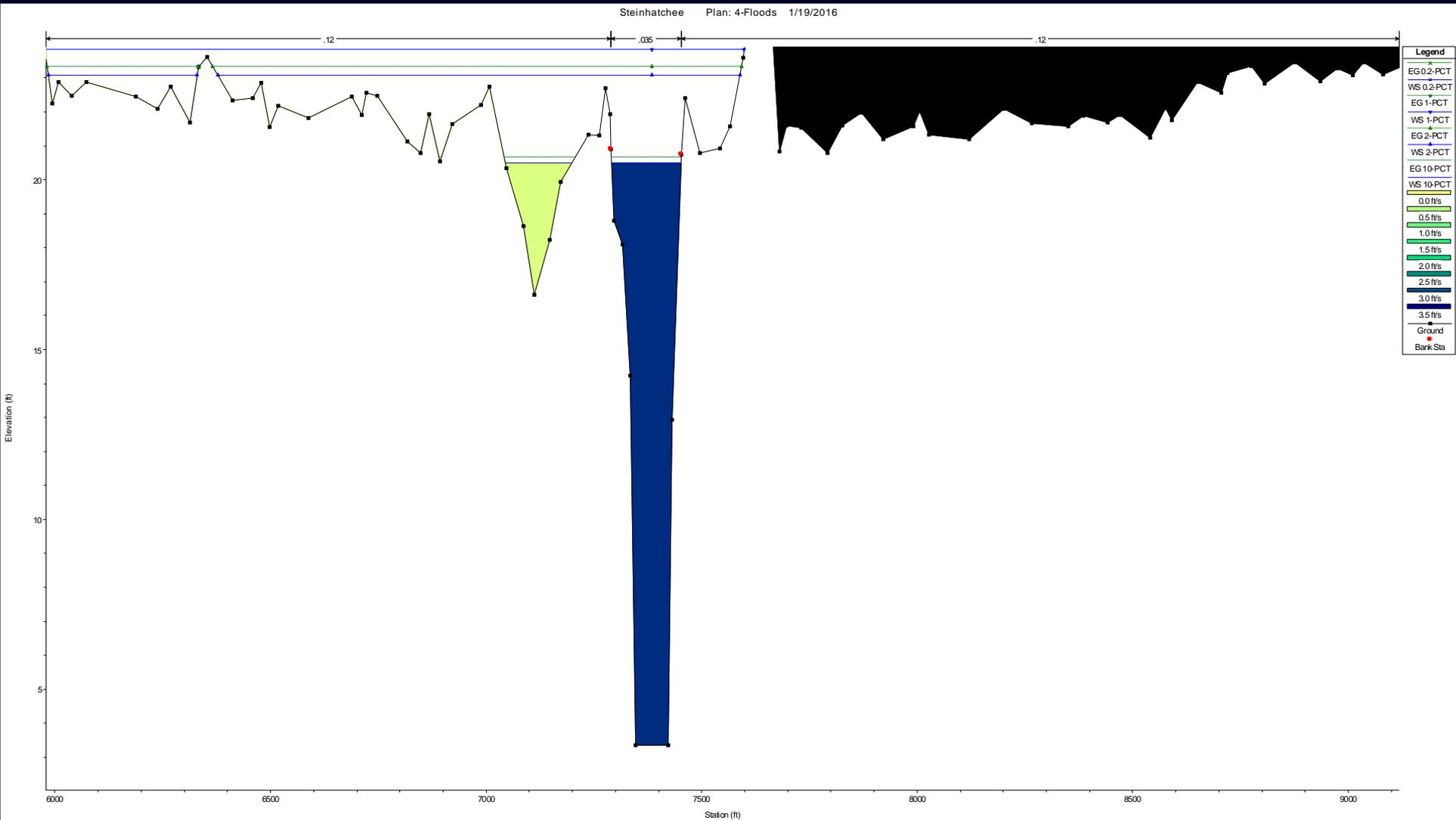
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Cross City Gage
- Steinhatchee River
- Cross Section



Note: This map was created by the Suwannee River Water Management District (SRWMD) to be used for planning purposes only. SRWMD shall not be held liable for any injury or damage caused by the use of data distributed as a public records request regardless of their use or application. SRWMD does not guarantee the accuracy, or suitability for any use of these data, and no warranty is expressed or implied. For more information please contact the SRWMD at 386-362-1001.
Map Created on 2/23/2016

HEC-RAS Cross Section



System for Environmental Flow Analysis (SEFA) Sites

Cross City Gage

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, @calmapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

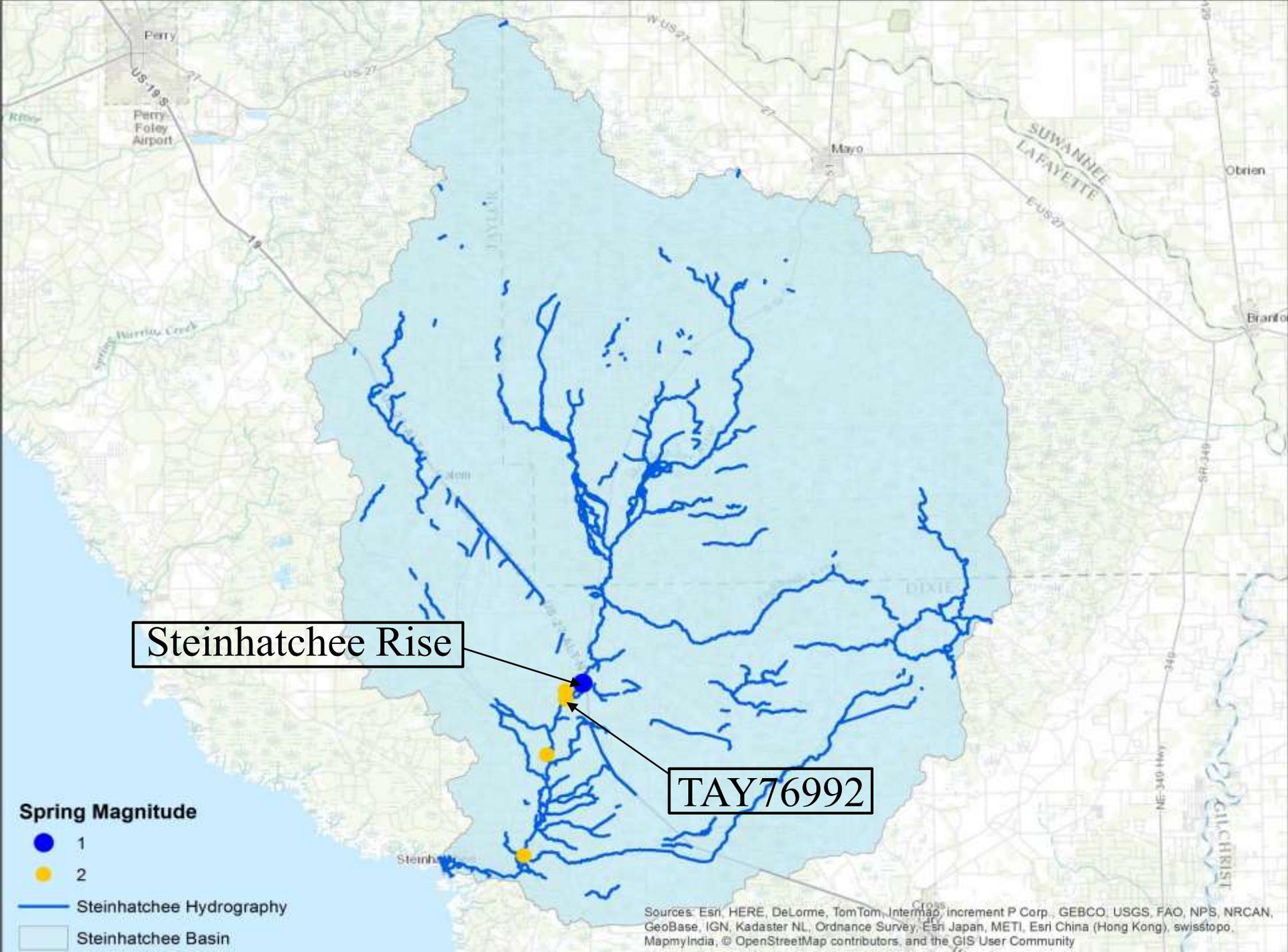
- SEFA Survey Locations
- Steinhatchee River
- Cross Section



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Map Created on 2/23/2016

Steinhatchee River Kayak Passage and SEFA





Steinhatchee Rise

TAY76992

Spring Magnitude

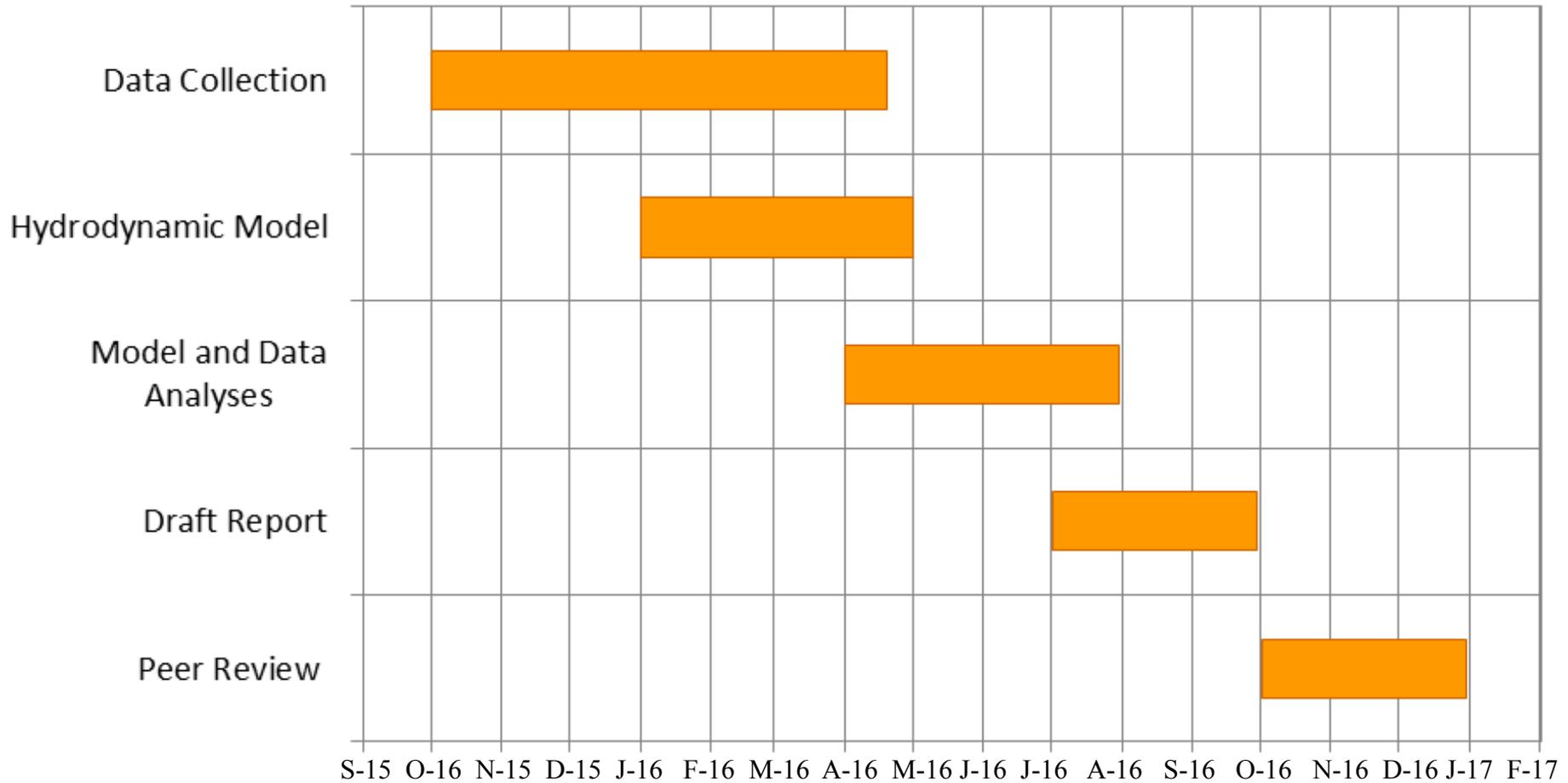
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— Steinhatchee Hydrography

□ Steinhatchee Basin

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

General Schedule



Suwannee River

WATER MANAGEMENT DISTRICT



- Agriculture
- Business & Financial
- Permitting Consistency
- Minimum Flows & Levels
- Water Conservation
- Springs
- Water Supply Planning
- Water Well Depth Search
- Surplus Lands Program
- Flooding Information & Updates
- FEMA Floodplain Mapping Information
- GIS Data
- Partnerships
- FAQS
- Notify Me**
- Document Center
- Archive Center



Request for Offers

The District is soliciting Requests for Offers in which property owners in the District offer to sell parcels of real property. Parcels may be purchased by the District (either in fee simple or permanent easement) for the purpose of placing and maintaining monitoring wells for measurement of ground water levels and quality. Please subscribe to [Notify Me](#) under the [Land Parcels](#) section to receive automated notification of when Requests for Offers are posted by County.

2015 Water Conservation Calendar

The District would like to extend a special thank you to the students and teachers that participated in the [Water Conservation Calendar Contest](#).

The calendar contest was a pilot program designed to bring water conservation education to the classroom. The calendar features student artwork [along with tips on water conservation](#).

Understanding the No-Rise Certificate

Engineers and Certified Floodplain Mangers are invited to attend the [Understanding the No-Rise](#) training on Jan. 30, 2015 from 9AM to 4:30 PM at District headquarters. Register online at www.ffloods.org

NEWS & ANNOUNCEMENTS

District to host "Understanding No-Rise" workshop

LIVE OAK, FL, January 16, 2015 - The Suwannee River Water Management District (District) is hosting the Florid Floodplain Managers Association's (FFMA) training "Understanding No-Rise Certificate." The training will take place on Friday, January 30th ... [Additional Info...](#)

Feb 3, SRWMD MFL meeting for Aucilla, Econfina and Wacissa Rivers

LIVE OAK, FL, January 15, 2015 - The Suwannee River Water Management District (District) invites businesses, residents and recreational users of the Econfina, Wacissa, and Aucilla Rivers to participate in a public meeting. The purpose of the meeting is [Additional Info...](#)

SRWMD land acquisition benefits regional water resources and buffers Camp Blanding

LIVE OAK, FL, December 9, 2014 - The Suwannee River Water Management District (District) recently acquired a 334 acre tract in Bradford County for flood control and water resource development projects. The property was purchased from Rayonier. [Additional Info...](#)

[VIEW ALL](#)

NOTIFY ME

Suwannee River

WATER MANAGEMENT DISTRICT

SEARCH



RECREATION

GOVERNING BOARD

RIVER & LAKE LEVELS

E-PERMITS

- Agriculture
- Business & Financial
- Permitting Consistency
- Minimum Flows & Levels
- Water Conservation
- Springs
- Water Supply Planning
- Water Well Depth Search
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Notify Me

Available Lists

1. Type your email address in the box and select **Sign In**.
2. If you want to receive text messages enter your phone number and select **Save**.
3. To subscribe or unsubscribe click and/or next to the lists to which you wish to subscribe/unsubscribe.

Please sign in to subscribe, unsubscribe, or manage your subscriptions

Email Address

Sign In



Notify Me

METHOD	LIST NAME	DESCRIPTION
	Monthly Governing Board Meeting Materials	By subscribing to the list, you will be notified when the meeting materials for monthly Governing Board meetings are available for download.
	Springs Restoration & Aquifer Recharge Projects	By subscribing to the list, you will be notified when District springs protection and restoration projects are posted or updated, when public meetings related to springs projects are scheduled, and when documents associated with springs projects are added or updated on the website.
	Surplus Lands Program	By subscribing to the list, you will be notified when public meetings related the Surplus Lands program are scheduled and when documents associated with the Surplus Lands program are added or updated on the website.
	Water Supply: MFLs, Planning and Resource Protection	By subscribing to the list, you will be notified when public meetings related to water supply planning and minimum flows and levels (MFLs) are scheduled, and when documents associated with water supply assessments, planning, and MFLs are added or updated on the website.
	Water Use Applications	By subscribing to the list, you will be notified when documents associated with water use permits of interest are added or updated.

Questions?



Group Activity

- *Break before group activity?*
- **Why is Steinhatchee River important to you?**
- **What concerns do you have about the Steinhatchee River?**



0 2.25 4.5 9 Miles

- Legend**
- Major rivers
 - Steinhatchee Basin



Salinity, Temperature and Velocity Modeling in Estuaries

(example from
Suwannee River)

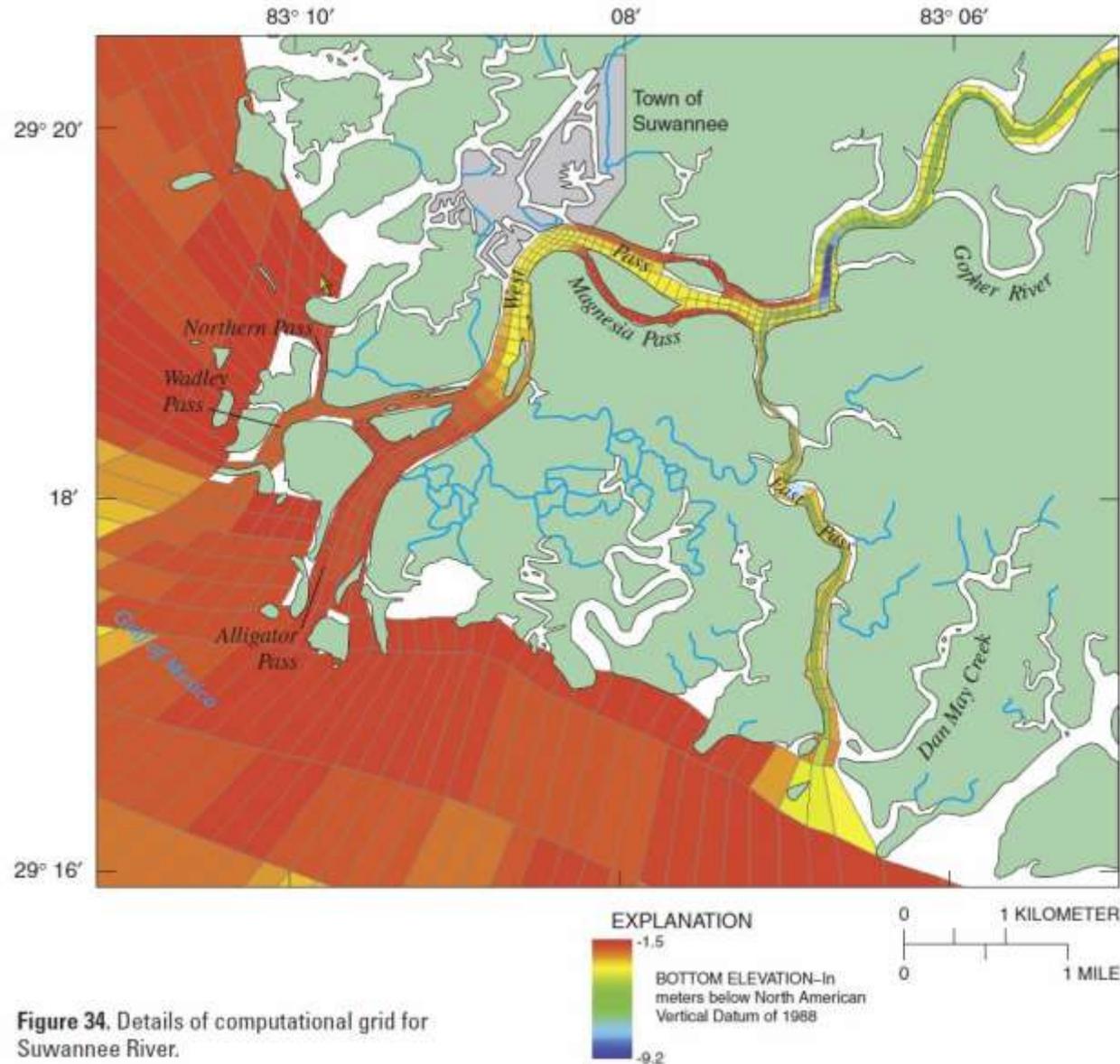


Figure 34. Details of computational grid for Suwannee River.