

Surface Water Improvement and Management (SWIM) Plan Update



Apalachicola River and Bay Watershed

June 5, 2017



Surface Water Improvement and Management (SWIM) Program

Created through passage of the Surface Water Improvement and Management Act in 1987; Sections 373.451-459, Florida Statutes.

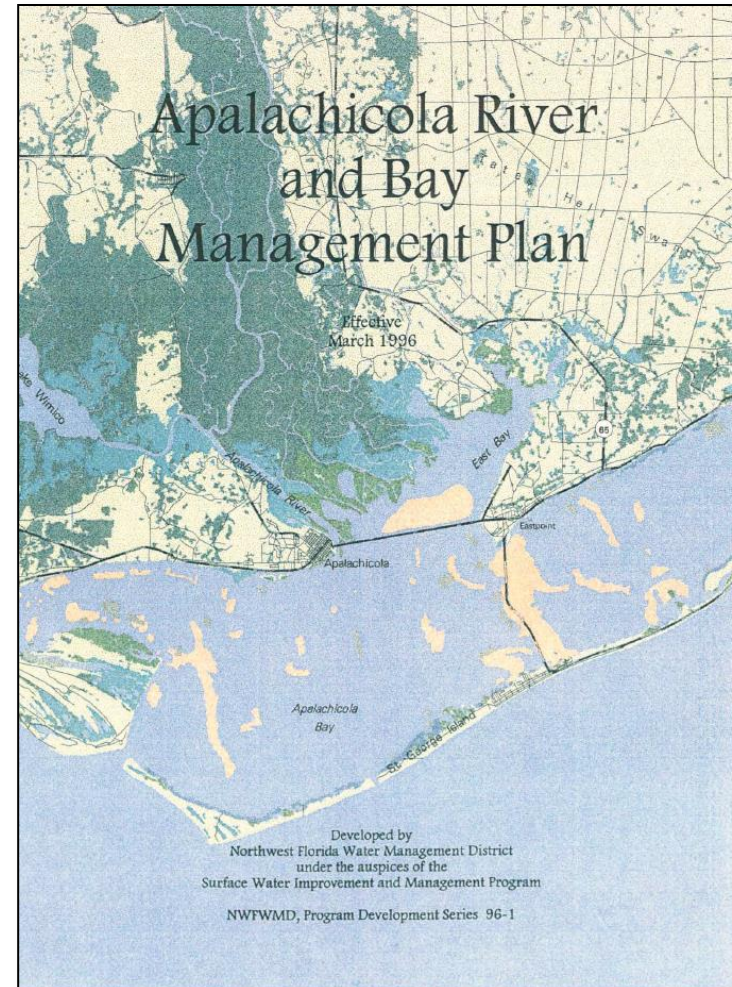
Purpose: Developed to address major watershed (coastal/ surface water) issues throughout the State.

Plans will provide:

- Watershed description;
- Assessment of watershed and water resource conditions;
- Evaluation of accomplishments and improvements since previous SWIM Plan;
- Project plan to address identified watershed needs and challenges; and
- Estimate funding needs and funding alternatives.

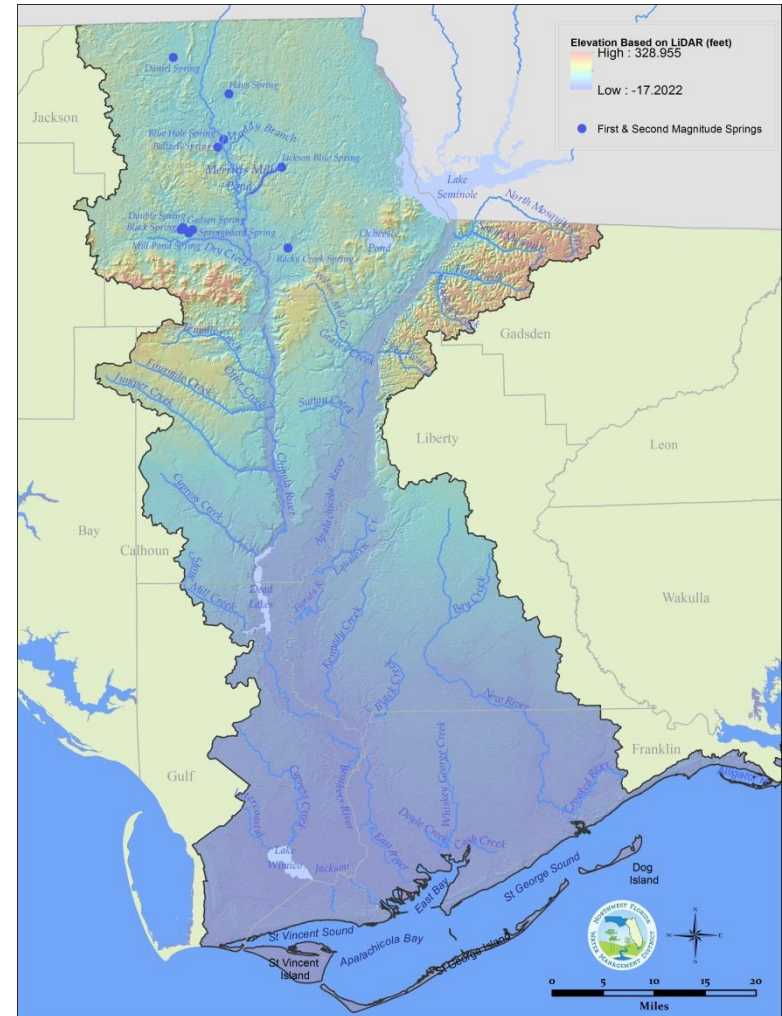
SWIM in Northwest Florida

Watershed	Most Recent Plan/Update
Apalachicola	1996
Pensacola	1997
Choctawhatchee	2002
St. Marks	2009
St. Andrew Bay	2000
Lake Jackson	1997
Perdido	Draft 2011
Ochlockonee	Draft 2012



Apalachicola River and Bay SWIM Plan

- Focus:
 - ***Water quality***
 - ***Natural systems***
 - ***Floodplain functions***
 - ***Public benefits and uses***
- Outline strategies for watershed protection and restoration
- Identify priority restoration actions
- Support cooperative partnerships among stakeholders
- Support regional and local project and funding priorities
- Leverage multiple funding resources
- Support regional Deepwater Horizon-related funding priorities

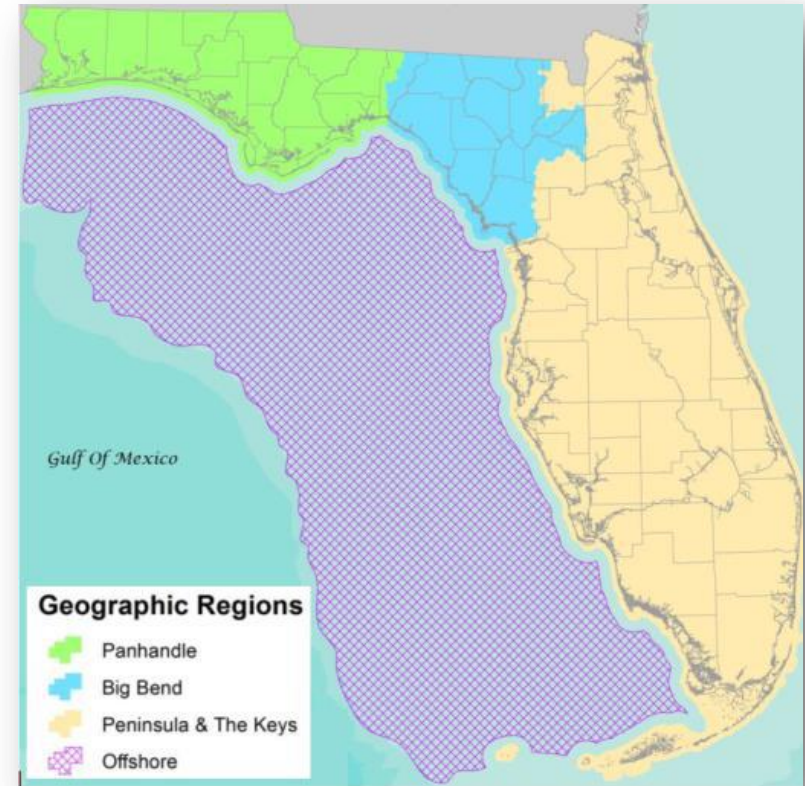


Gulf Environmental Benefit Fund (GEBF)

GEBF Restoration Strategy:

- SWIM Plan Updates (NWF & Suwannee WMDs).
- Seagrass Assessment (Fish and Wildlife Research Institute).

Goal: Prioritized Project List





Apalachicola River and Bay Watershed





Apalachicola River and Bay Watershed

- Main channel begins at the confluence of the Chattahoochee and Flint Rivers at Lake Seminole
- Florida portion of the watershed covers approximately 2,600 square miles
- Florida's largest river in terms of flow
- Largest forested floodplain in Florida
- Approximately 212 square mile estuary



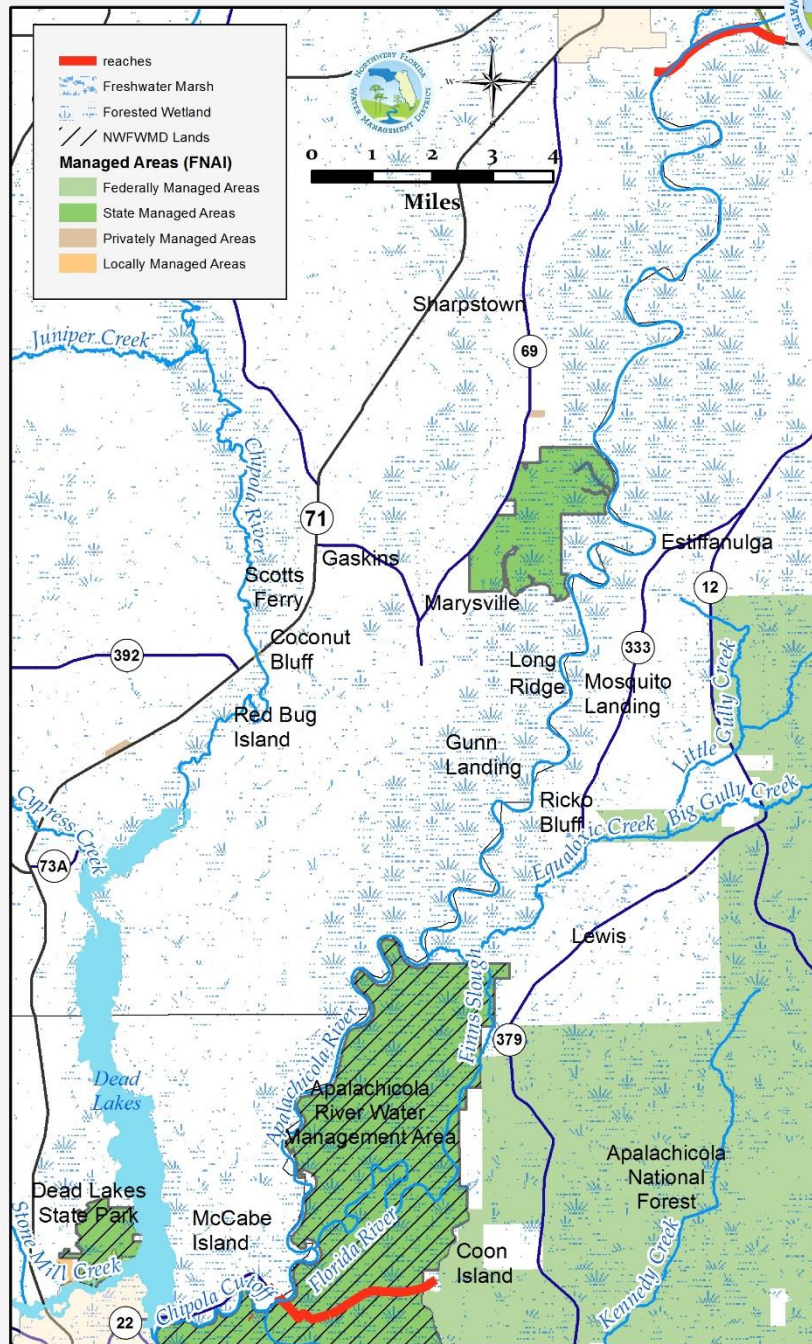
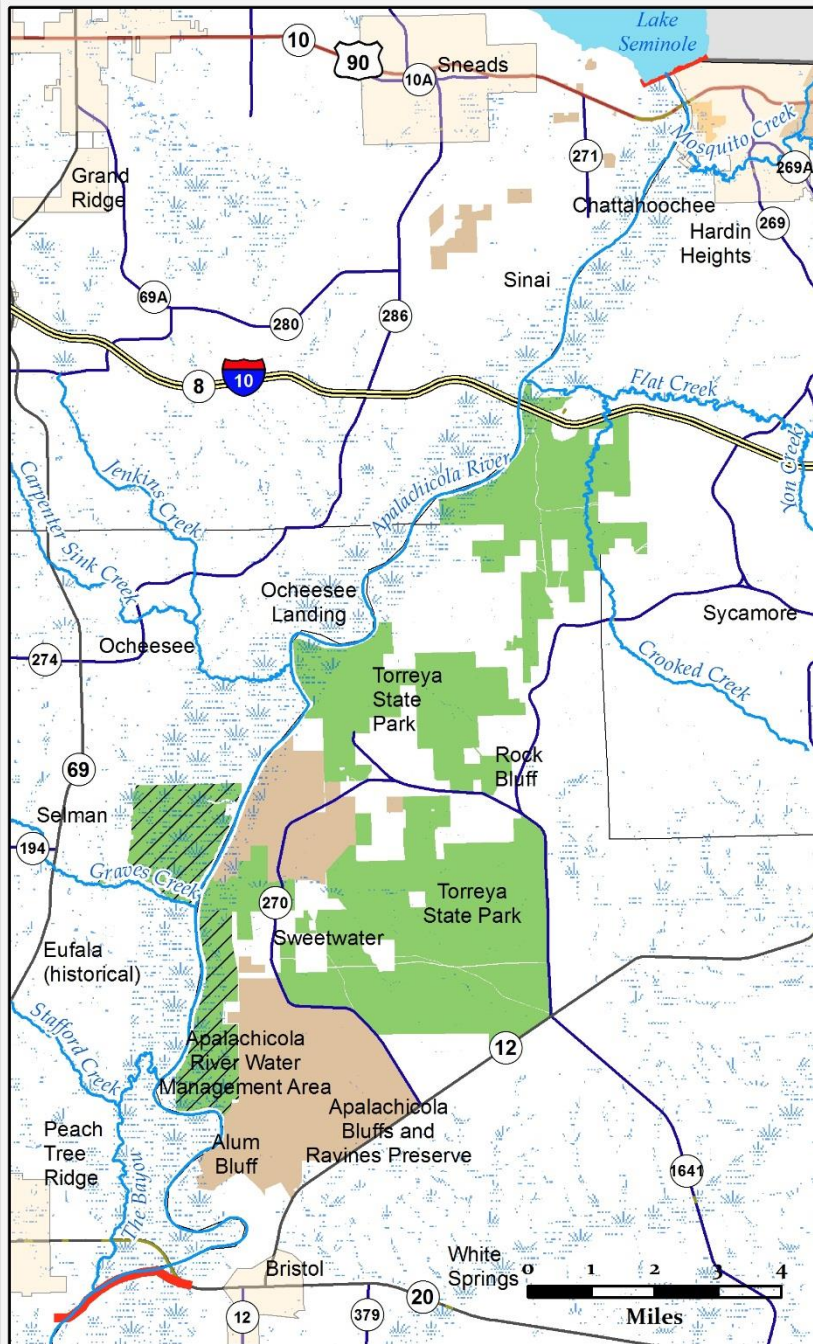


Apalachicola River and Bay Watershed

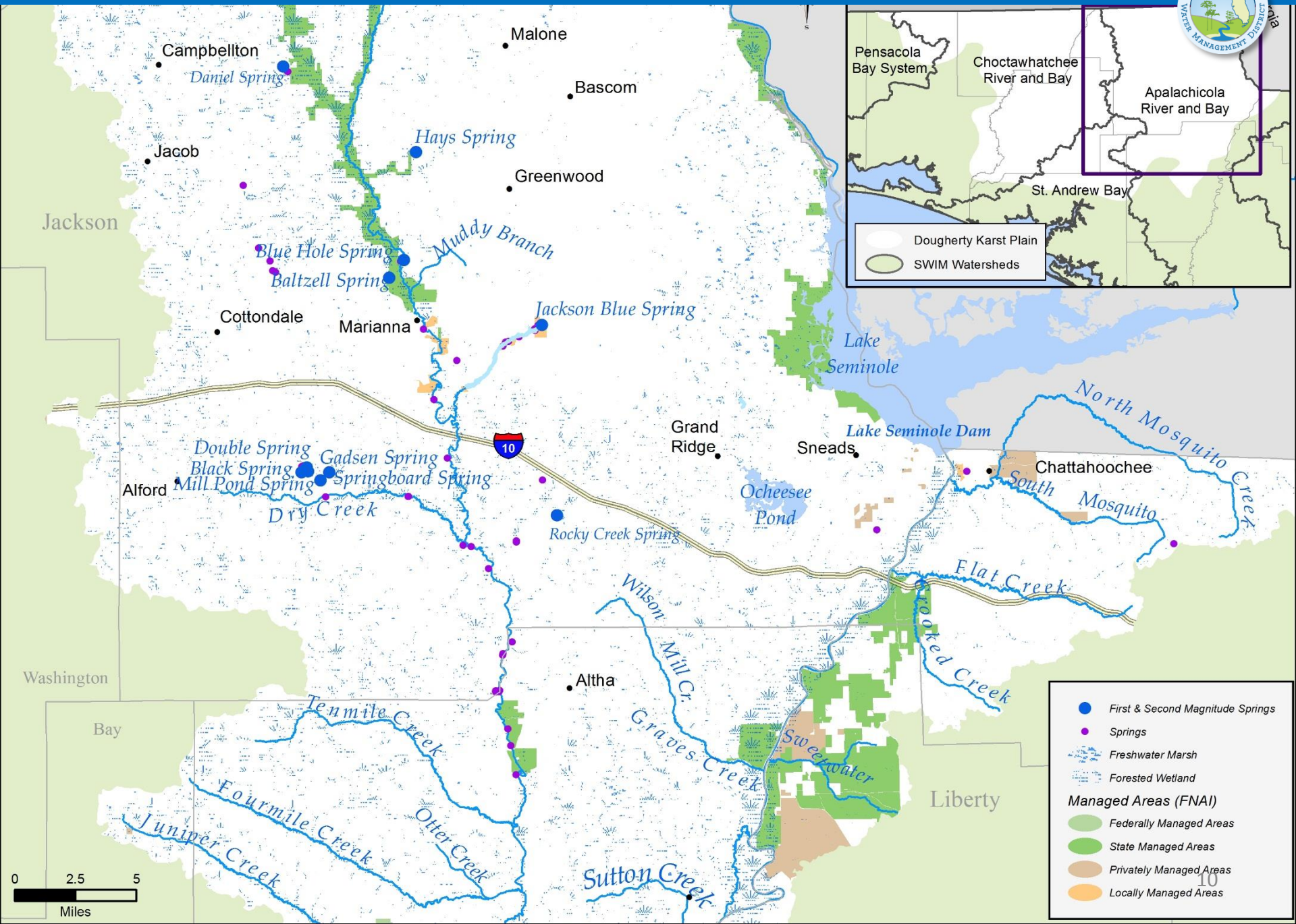
- Over 600,000 acres of public conservation lands
- Apalachicola National Estuarine Research Reserve
- Two aquatic preserves
- Historically supported the largest oyster harvesting industry in Florida
- Expansive alluvial floodplain
- Extensive tidal and non-tidal wetlands
- Nearly 15,000 acres of seagrass (2010)



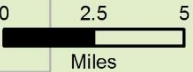
NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



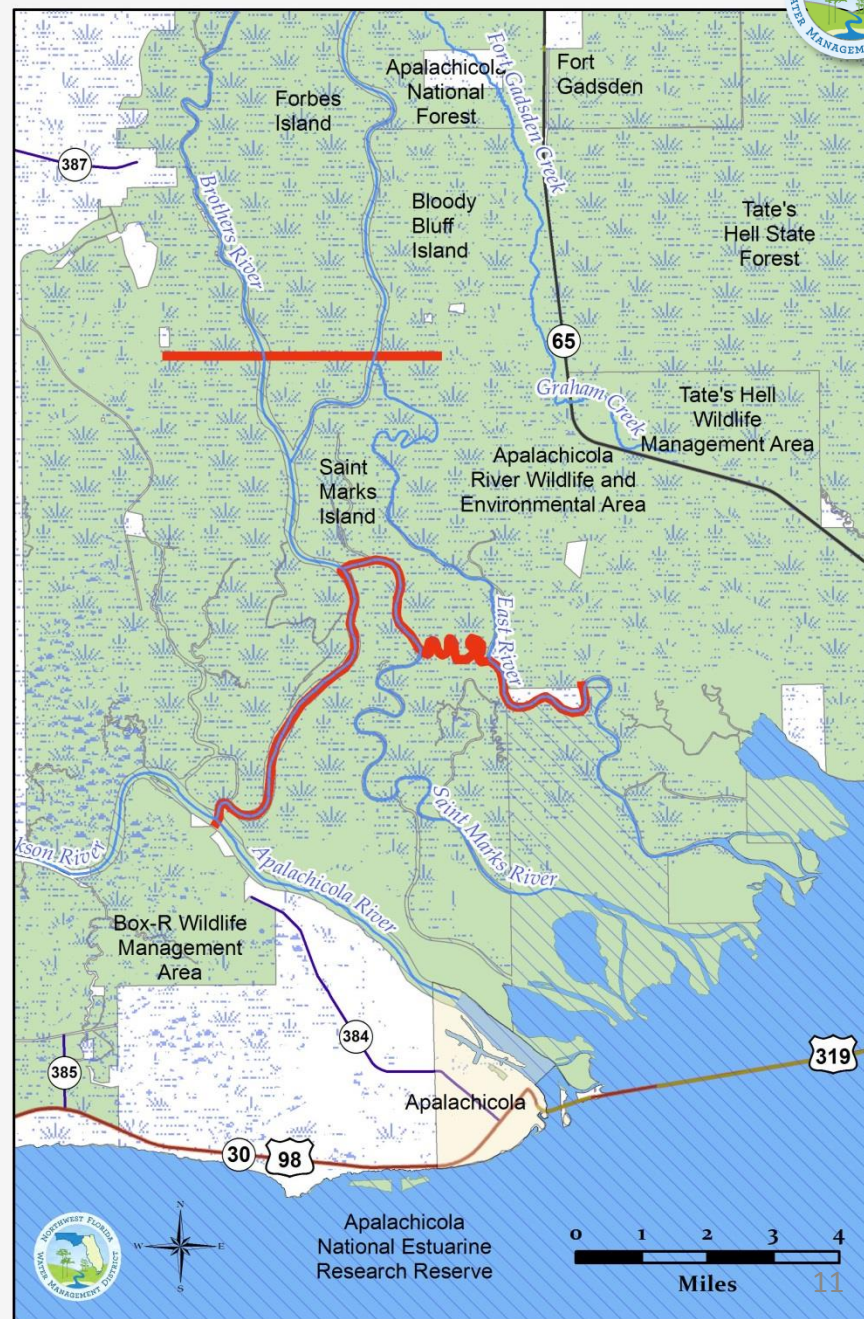
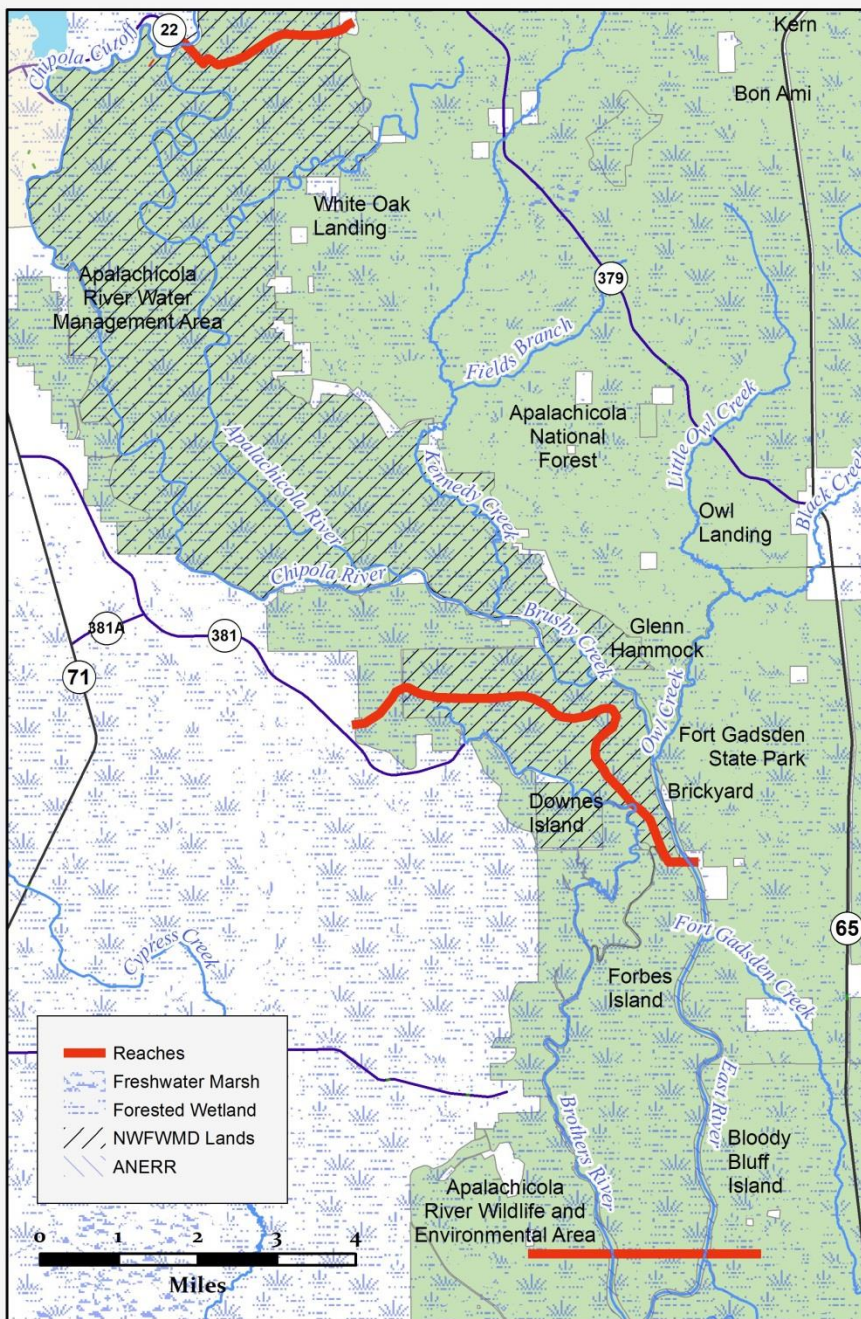
NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



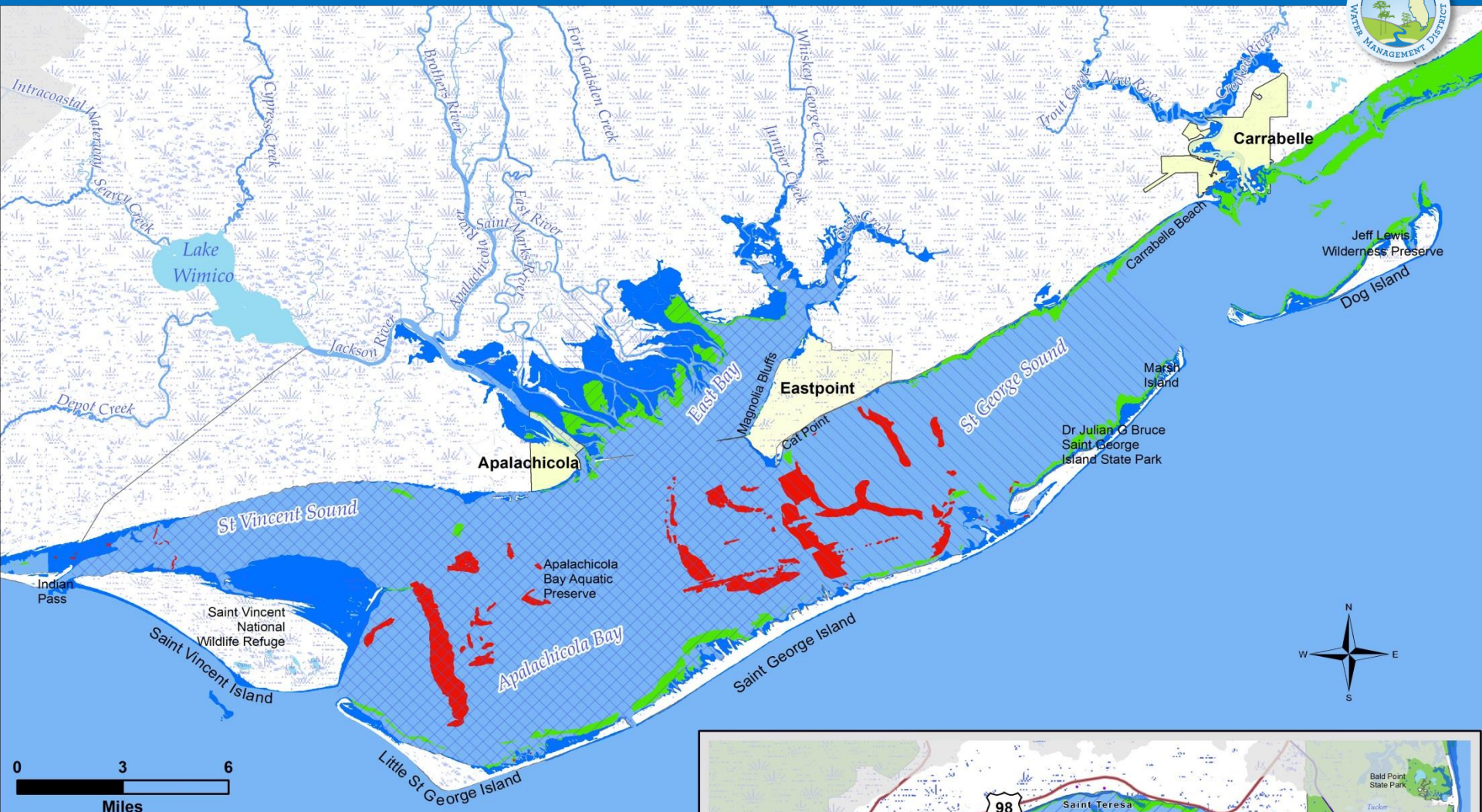
- First & Second Magnitude Springs
- Springs
- Freshwater Marsh
- Forested Wetland
- Managed Areas (FNAI)**
- Federally Managed Areas
- State Managed Areas
- Privately Managed Areas
- Locally Managed Areas



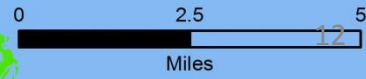
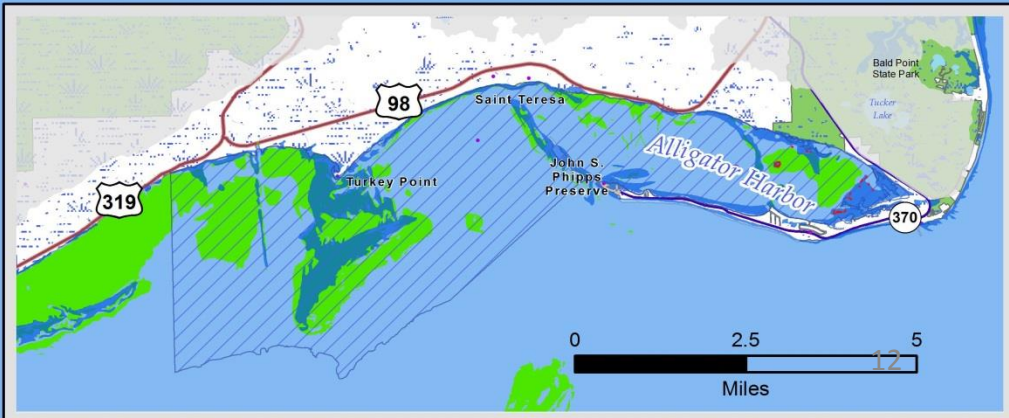
NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



- Apalachicola National Estuarine Research Reserve
- Aquatic Preserves
- Sea Grass
- Oyster Beds
- Salt Marsh
- Freshwater Marsh
- Freshwater Swamp
- Apalachicola River and Bay Watershed





Watershed Challenges





Watershed Challenges

Freshwater Inflow

- Subject to interstate litigation



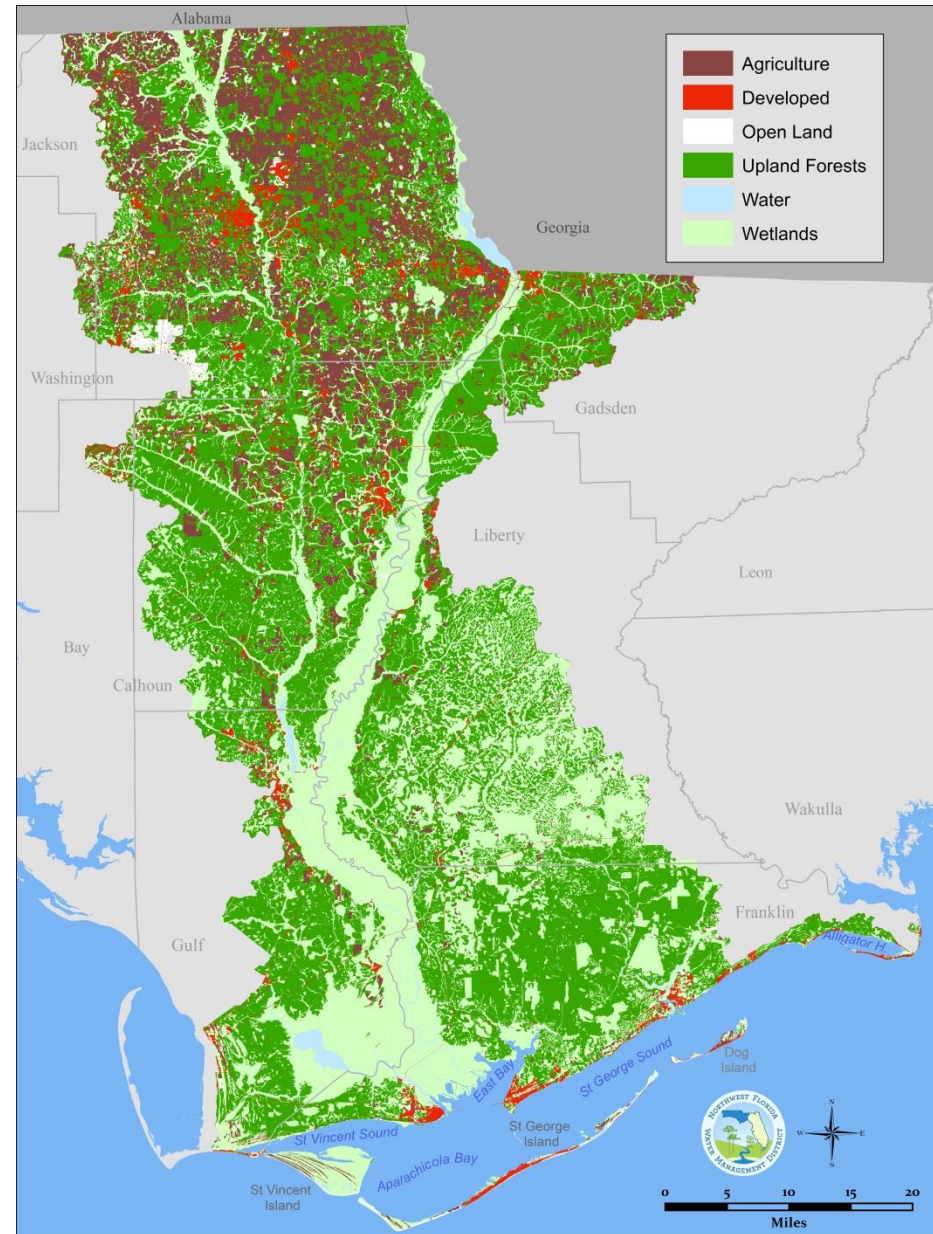
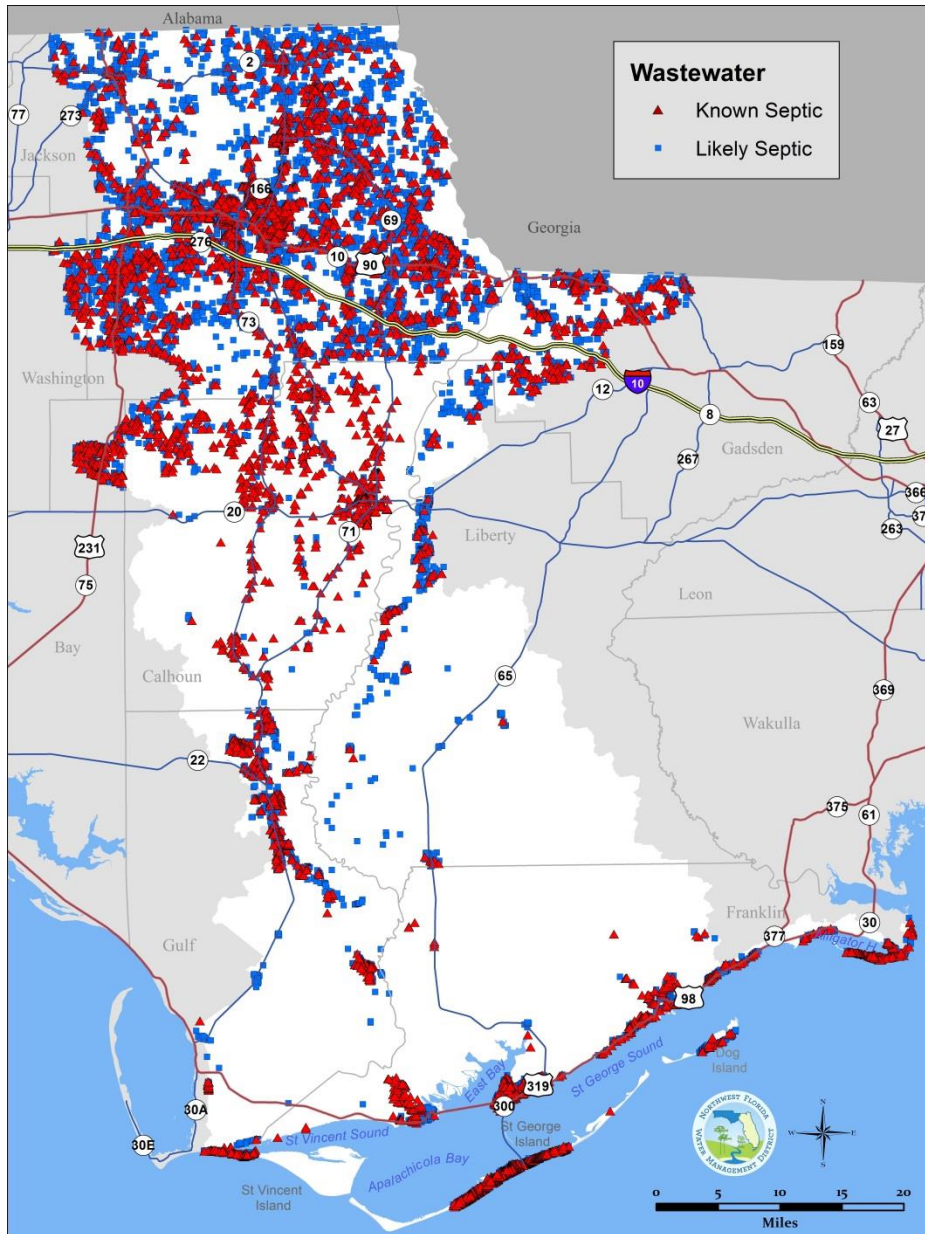
Watershed Challenges

Water Quality

- Nonpoint source pollution
 - Urban stormwater runoff
 - Agricultural nonpoint sources
 - Erosion and sedimentation
- Pollutant export from septic tanks
- Domestic and industrial wastewater
- Impacts to specific waterbodies:
 - Jackson Blue Spring (nutrients)
 - Apalachicola Bay (fecal coliform)



Watershed Challenges





Watershed Challenges

Water Quality

- Basin Management Action Plan (BMAP) for Jackson Blue Spring and Merritts Mill Pond

Objective: Reduce nitrate (monthly average) from approximately 3.6 to 0.35 mg/L.

BMAP approved by FDEP in May 2016



Watershed Challenges

Aquatic and Wetland Habitat

- Extensive impacts to shellfish beds
- Seagrasses generally stable, but recently reported losses in Apalachicola Bay and Alligator Harbor
- Sedimentation and physical impacts from unpaved roads, erosion, construction sites, and other sources
- Elevated nutrients and algae within Jackson Blue Spring; associated TMDL and BMAP
- Impacts to riverine fish and shellfish habitat



Watershed Challenges

Hydrologic Impacts

- Extensive hydrologic alteration and disruption – including Tates Hell Swamp and M.K. Ranch
- Physical impacts to the Apalachicola River floodplain
- Disrupted connectivity between floodplain and main river channel
- Impacted sloughs, streams, and other tributaries that serve as critical habitat for fish and wildlife, including protected species
- Sedimentation impacts from unpaved roads, borrow pits, and other erosion sites



Watershed Challenges



Public Engagement

- Technical education – implementation of agricultural, silvicultural, and urban BMPs
- Community engagement opportunities
 - Participation with resource management decision-making
 - Hands-on project participation
 - Citizen science
- Support and expand public awareness of basis for management programs and projects

Implementation



Implementation

- Priority Issues
- 
- Proposed Objectives
- 
- Proposed Approaches and Projects



Stormwater

*Apalachicola –
Battery Park*



*Carrabelle –
Marine Street*

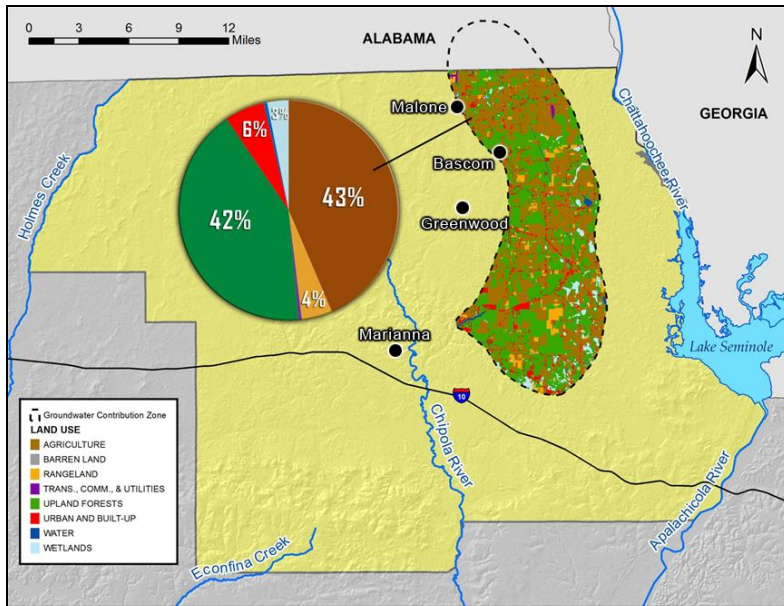




Agricultural Best Management Practices



Center Pivot Retrofit



Jackson Blue Spring Basin



Side Dressing and Banding Technology



Hydrologic Restoration



Tates Hell Swamp



Project Planning

CONCEPTUAL PROJECTS	FUNCTIONAL PRIORITIES			
	WATER QUALITY	FLOODPLAIN FUNCTIONS	HABITAT	PUBLIC ENGAGEMENT
Urban Stormwater Retrofits	✓	✓	✓	
Septic Tank Abatement	✓			
Advanced Onsite Systems	✓			
Reuse of Reclaimed Water	✓		✓	
Wastewater System Upgrades	✓		✓	
Agriculture and Silviculture BMPs	✓	✓	✓	✓
Sedimentation Abatement	✓	✓	✓	
Riparian Buffer Zones	✓	✓	✓	✓
Hydrologic & Wetland Restoration	✓	✓	✓	



Project Planning

CONCEPTUAL PROJECTS	FUNCTIONAL PRIORITIES			
	WATER QUALITY	FLOODPLAIN FUNCTIONS	HABITAT	PUBLIC ENGAGEMENT
Estuarine Habitat Restoration	✓		✓	
Sub-basin Plans	✓	✓	✓	✓
Strategic Land Conservation	✓	✓	✓	
Watershed Stewardship Initiative	✓	✓	✓	✓
Analytical Program Support	✓	✓	✓	✓
Comprehensive Monitoring	✓	✓	✓	✓

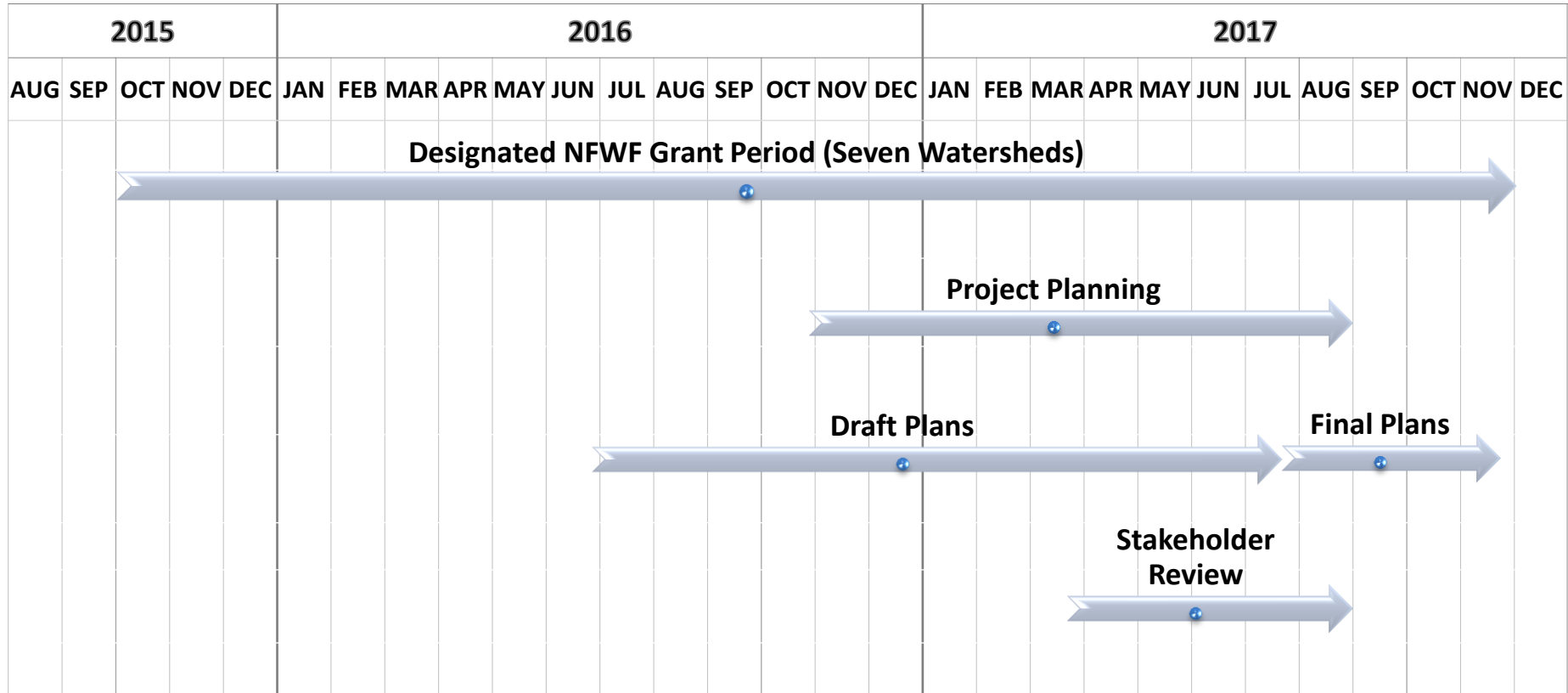


An Array of Funding Resources

<p>RESTORE Bucket 1 County MYIPs</p>	<p>NFWF Gulf Environmental Benefit Fund</p>	<p>Florida Legislature</p>
<p>RESTORE Bucket 2 Gulf Coast Ecosystem Restoration Council</p>	<p>Florida Springs Restoration Funding</p>	<p>US EPA Section 319 Grants</p>
<p>RESTORE Bucket 3 Florida Gulf Consortium</p>	<p>NRDA Natural Resource Damage Assessment</p>	<p>Triumph Gulf Coast Inc.</p>
<p>RESTORE Bucket 4 NOAA Science Program</p>	<p>Florida Land Acquisition Trust Fund</p>	<p>TMDL Water Quality Restoration Grants</p>
<p>RESTORE Bucket 5 FL Inst. of Oceanography</p>	<p>Clean Water State Revolving Fund</p>	<p>FL Coastal Mgt Program</p>



Apalachicola SWIM Plan Update – Schedule





Open Discussion

Please share your thoughts, questions, and recommendations.

Please also share more details with us in writing following the meeting.



Thank you!

Please provide comments, recommendations, and questions by June 20, 2017

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For more information:

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