



Technical Advisory Committee

St. Andrew Bay and St. Joe Bay Watershed

April 28, 2016





Goals for Today

- ✓ Introduce the SWIM program and plan development process
- ✓ Summarize the technical review process
- ✓ Request your participation and assistance



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 State

Plans 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

The District developed SWIM plans for all major watersheds/waterbodies; two (Perdido and Ochlockonee) remain in a draft status.

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



SWIM Implementation to Date

- Local partnerships and cooperative funding:
 - Stormwater retrofit projects;
 - Sediment assessment;
 - Biological resource evaluations; and
 - Water quality monitoring.
- Multiple State, Local, and Federal funding sources
- Need your help in documenting implementation.



Other Related Initiatives

It is important that SWIM Plan updates fit within and help guide the larger set of related Deep Water Horizon and State restoration initiatives:



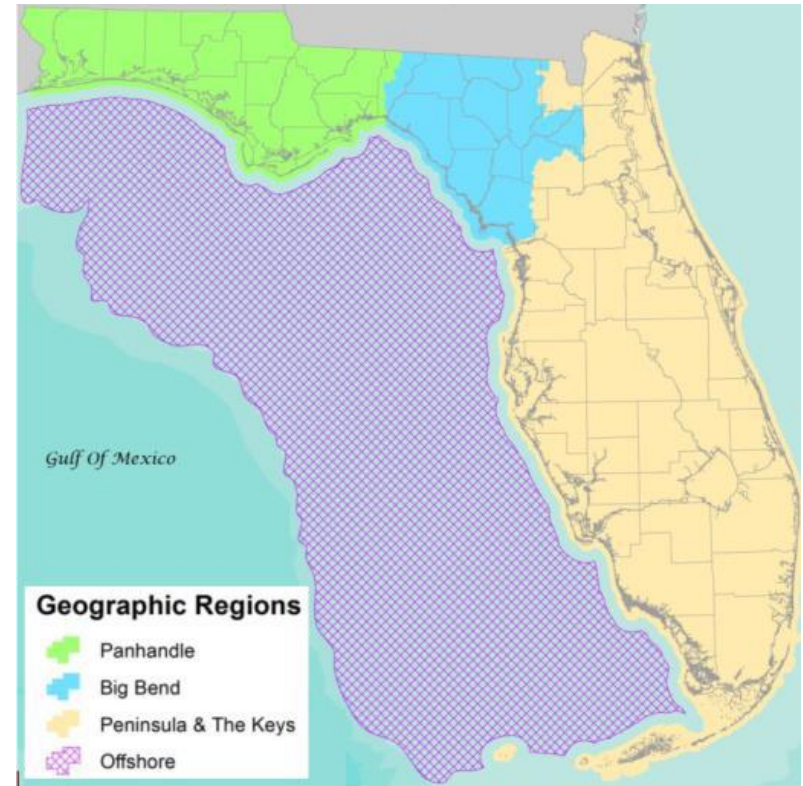


Gulf Environmental Benefit Fund (GEBF)

GEBF Restoration Strategy:

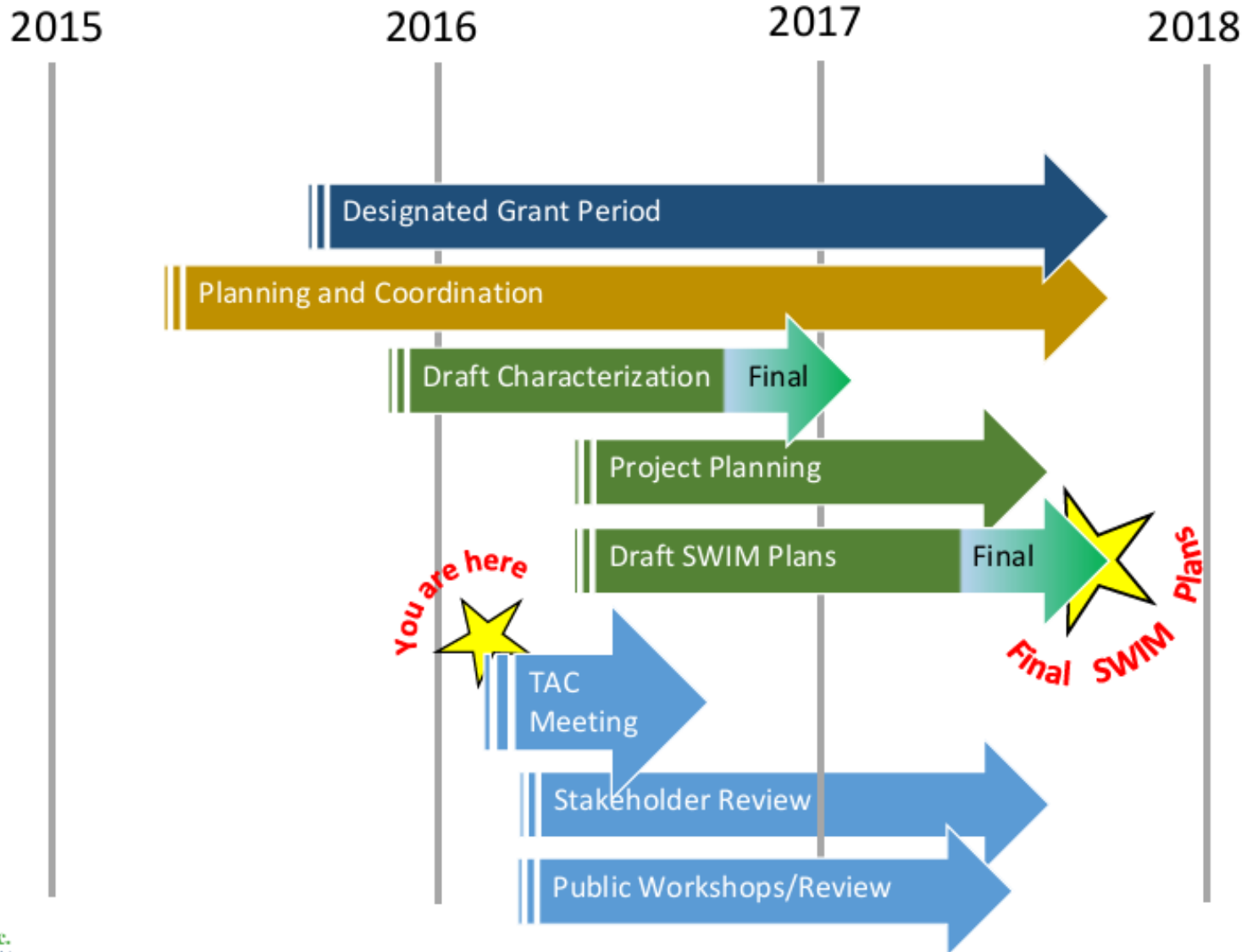
- SWIM Plan Updates (NWF & Suwannee River WMD)
- Seagrass Assessment (FWC Fish and Wildlife Research Institute)

Goal: Prioritized Project List



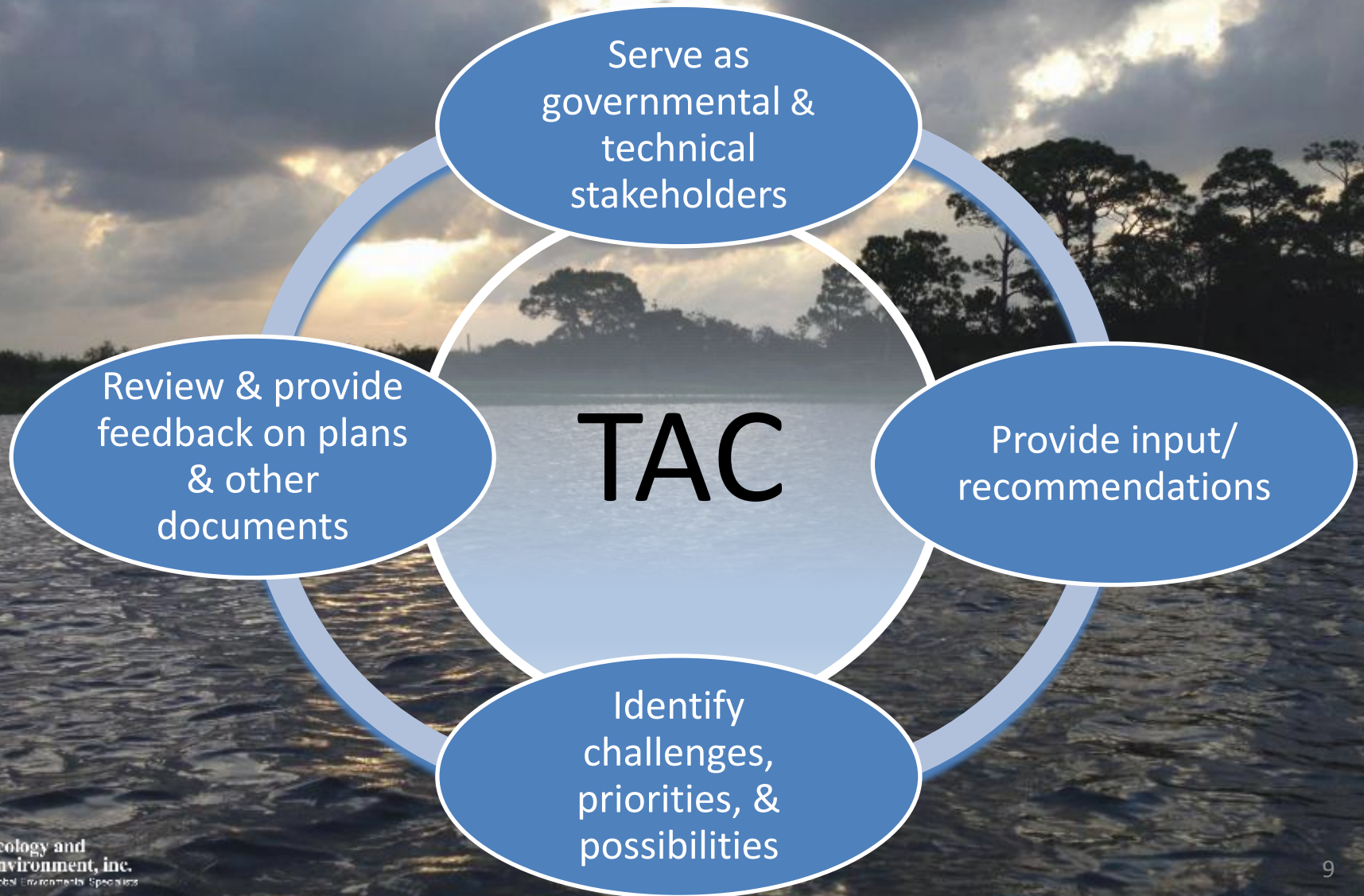


Plan Development Schedule





Requested Functions of the TAC





St. Andrew/ St. Joe Watershed (Florida portion)





St. Andrew/ St. Joe Bay Watershed

Physical Characteristics

- Approximately 749,663 acres total
- Spans six counties in Florida, with most of the watershed occurring in Gulf and Bay counties
- Populations in all counties of the watershed projected to increase
- Two major bay systems: St. Andrew Bay and St. Joseph Bay
- The St. Andrew Bay estuary includes West Bay, North Bay, St. Andrew Bay, and East Bay.
- Planning area includes Deer Point Lake Reservoir and Lake Powell
- Estuarine waters are relatively deep and of high salinity due to the low freshwater inflow provided by only a streams (the most significant being [Econfina Creek](#), which receives inflow from a number of Floridan Aquifer springs).



St. Andrew/ St. Joe Bay Watershed





St. Andrew/ St. Joe Bay Watershed

Unique Attributes

- Only major estuarine drainage in the NFWWMD located entirely within the state of Florida
- Lake Powell, at the Walton County/Bay County border, is the largest coastal dune lake and an Outstanding Florida Water
- St. Joseph Bay has no major freshwater influence, causing clearer, high-salinity water
- Extensive (9,669 acres) seagrass and recreationally important bay Scallops in St. Joe Bay; over 11,000 acres of seagrasses in St. Andrew Bay
- Watershed includes Deer Point Lake Reservoir, a Class I waterbody that provides drinking water to the residents of Bay County
- The St. Andrew Bay estuary supports approximately 3,643 species, including birds, fish and shellfish species, a significant number of which are rare, endemic and/or protected species
- Six marinas in the basin have Clean Marina designations



Major Challenges

“Global” Issues

- Historic seagrass and oyster habitat loss
- Sedimentation
- Shoreline armoring; loss of littoral habitat
- Elevated mercury levels in fish tissue
- Sea level rise

Watershed Specific Issues

- Stormwater runoff from development in close proximity to St. Andrew Bay
- Historic long-term surface water discharges of wastewater to bay systems
- Major seagrass loss in West Bay (former shrimp farm)
- Nonpoint pollution from marinas and public access points



Water Quality Impairments

- 85 of 189 (45%) waterbody segments in the St. Andrew Bay/St. Joe Bay watershed, are verified impaired (data through June 2010)
 - 56 for **mercury**
 - 25 for **bacteria** – fecal coliforms, beach advisories, or shellfish harvesting classification)
 - 4 for **nutrients** – Direct Runoff to Bay (WBID 1060), Parker Creek (WBID 1141A), Little Sandy Creek (WBID 1155), and Direct Runoff to Bay (WBID 1184)
- 3 waterbody segments verified impaired for **bacteria** based on **shell fish classifications** issued by DACS:
 - East Bay (East) (WBID 1061F)
 - North Bay (North Segment 1) (WBID 1061G)
 - Sandy Creek (WBID 1111)
- ❖ Note: Water quality results reported only for waterbody segments with sufficient data



Water Quality Consequences

- 10 beach segments verified impaired for **bacteria** based on **beach advisories** issued by county health departments:
 - Carl Gray Park (WBID 1061BB)
 - Beach Drive (WBID 1061CB)
 - Delwood (WBID 1061EB)
 - Dupont Bridge (WBID 1061FB)
 - St. Joe Bay Monument Beach (WBID 1267C)
 - Laguna Beach (WBID 8012B)
 - Bid-A-Wee Beach (WBID 8013A)
 - Beckrich Rd (WBID 8013B)
 - Rick Seltzer Park (WBID 8013C)
 - 8th Street (WBID 8015A)



Seagrass Trends

Seagrasses in St. Andrew Bay in 2010			
Stressors	Status	Trend	Assessment, Causes
Seagrass cover	Green	Increasing	Large (“recent”) increase in West Bay
Water clarity	Yellow	Variable	Stormwater runoff, especially 2012-13
Nutrients	Green	Generally low	Low levels
Natural events (storms, etc.)	Yellow	Episodic	Stormwater runoff, especially 2012-13
Propeller scarring	Orange	Extensive	All shallow areas

Notes:

Chart reflective of recent trends only; system has experienced significant historic losses; long-term recovery needed

Additional research may be needed to distinguish long-term trends from event-driven impacts.

Source: Seagrass Integrated Mapping and Monitoring (SIMM) program, FWC, 2015



Seagrass Trends

Seagrasses in St. Joe Bay in 2010			
Stressors	Status	Trend	Assessment, Causes
Seagrass cover	Green	Stable	Likely increasing
Water clarity	Green	Stable	Stormwater runoff, especially 2012-13
Natural events (storms, etc.)	Yellow	Episodic	Stormwater runoff, especially 2012-13
Propeller scarring	Red	Extensive	Severe in southern bay

Notes:

Chart reflective of recent trends only; system has experienced significant historic losses; long-term recovery needed

Additional research may be needed to distinguish long-term trends from event-driven impacts.

Source: Seagrass Integrated Mapping and Monitoring (SIMM) program, FWC, 2015



It's Your Turn

- Each of you will have time to share your thoughts regarding:
 - Watershed conditions and challenges; and/or
 - What are today's major issues and opportunities?
- *Please share more details with us in writing following the meeting*

Take a break!



Restoration/Management NFWF/GEBF Projects

Multiple benefits and partners

- **Oyster Reef Habitat Restoration in the St. Andrew Bay Estuary** (FWC, \$1,973,500) – restore one and a quarter miles of oyster reef habitat in West Bay, improve water quality, enhance fisheries, and increase coastal resiliency. Project is expected to promote the expansion of over 200 acres of seagrass beds.
 - Project partners include: DACS, University of Florida, FWS, and St. Andrew Bay Resource Management Association



Restoration/Management

NFWF/GEBF Projects

Recreational projects

- **Panama City Marina Fishing Pier, Boat Ramp, and Staging Docks** (\$2,000,000) – construct 400-foot long pier, replace boat ramp, and construct new staging docks.
- **City of Parker, Earl Gilbert Dock and Boat Ramp Improvements** (\$169,929) – improve existing dock and expand existing parking.
- **Panama City St. Andrews Marina Docking Facility Expansions** (\$250,029) – add three boat slips, replace boat ramp, and replace wooden dock with a concrete floating dock.
- **City of Mexico Beach Marina** (\$1,763,554) – remove and replace eighteen existing finger piers, replace existing retaining wall, and replace boardwalk dock with a concrete surface and increasing the width.



Restoration/Management

NRDA Projects

Multiple benefits and partners

- **Oyster Cultch Placement** (\$5,370,596, St. Andrew, Pensacola, Apalachicola bays) – 12,000 cubic yards of cultch material over 60 acres for the settling of oyster larvae and oyster colonization to foster reef development in St. Andrew Bay.
- **Seagrass Recovery** (\$2,691,867, St. Andrew and St. Joe bays and Alligator Harbor) – survey and map seagrass scaring and place sediment tubes and bird stakes across two acres of seagrass propeller scars to restore seagrass in St. Joseph Bay Aquatic Preserve, and perhaps St. Andrews Aquatic Preserve.
- **Artificial Reef Creation and Restoration** (\$11,463,587, Escambia, Santa Rosa, Okaloosa, Walton, and Bay counties) – off the coast of Bay County, will develop both deep water “nearshore reefs” within nine nautical miles of shore and shallower “snorkeling reefs” within 950 feet of shore and at depths of < 20 feet.
- **Scallop Enhancement for Increased Recreational Fishing** (\$2,890,250, Pensacola Bay, Santa Rosa Sound, St. Andrew Bay) – will increase scallop populations to self-sustaining levels to support recreational harvests St. Andrew Bay.



Restoration/Management

TNC Community-Based WMP

- 32 projects to address 7 major issues:
 - Protect, restore, create and/or manage natural habitat and resources and increase buffer areas;
 - Increase cooperation and coordination for management, monitoring, funding, implementation, outreach, enforcement;
 - Reduce impacts to groundwater and ensure adequate fresh water availability;
 - Reduce and treat stormwater;
 - Reduce nutrient loading;
 - Reduce sedimentation; and
 - Increase economic diversification.



It's Your Turn

- Each of you will have time to share your thoughts regarding:
 - Restoration and resource management needs;
 - What is missing? What is highest priority?
- *Please share more details with us in writing following the meeting*



Open Discussion





The Path Ahead

- Next Steps
- Public workshop
- NWFWMMD - SWIM Plan Website for TAC/ Public input communication
- Let us know about new data, publications, or studies that your organization has done!



Additional Resources:



FDEP – Deep Water Horizon Oil Spill

<http://www.dep.state.fl.us/deepwaterhorizon/>



NOAA – Gulf Spill Restoration

<http://www.gulfspillrestoration.noaa.gov/>



NFWF

NFWF – Gulf Environmental Benefit Fund

<http://www.nfwf.org/gulf/Pages/home.aspx>



Gulf Coast Ecosystem Restoration Council

<https://www.restorethegulf.gov/>



Thank You

For more information and to submit questions, comments, and recommendations:

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Additional Points of Contact:

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www.nfwwater.com/Water-Resources/SWIM/SWIM-Plan-Updates