

# Funding Restoration & Resilience

A National Estuary Program Approach

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Program Support Specialist





## **NATIONAL ESTUARY PROGRAMS**

Focus: Tampa Bay Estuary Program and Partners



## **STATE OF THE BAY**

Focus: Facing the Issues and Implementing the Plan



## **FUNDING RESTORATION AND RESILIENCE**

Focus: TBEP Funding Mechanisms and Approaching Requests for Proposals



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Focus: Tampa Bay Estuary Program and Partners



## STATE OF THE BAY

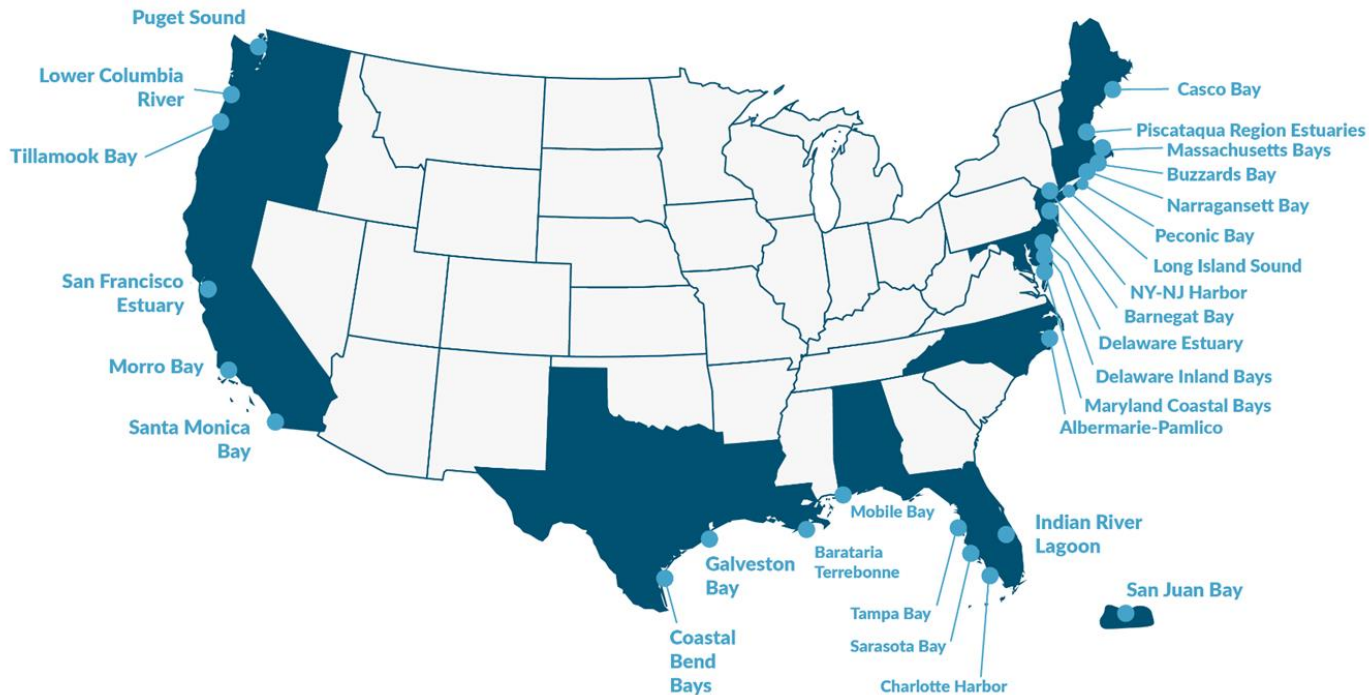
Focus: Facing the Issues and Implementing the Plan



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# NATIONAL ESTUARY PROGRAMS

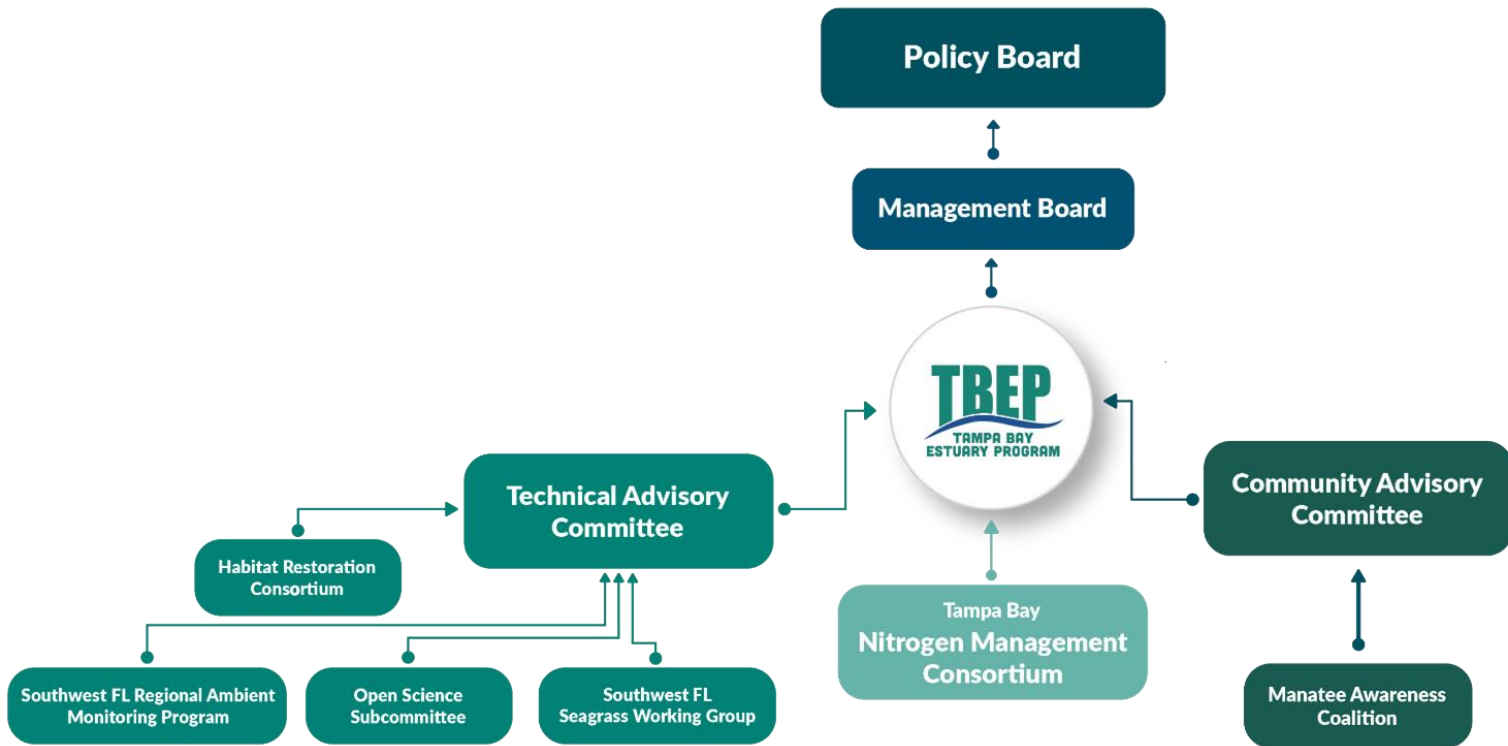




TBEP's mission is to **build partnerships** to **restore** and **protect** Tampa Bay through **implementation** of a scientifically sound, community-based **management plan**.



# TAMPA BAY ESTUARY PROGRAM



# TAMPA BAY ESTUARY PROGRAM





## Major Tributaries

Hillsborough, Alafia, Little Manatee, and Manatee Rivers



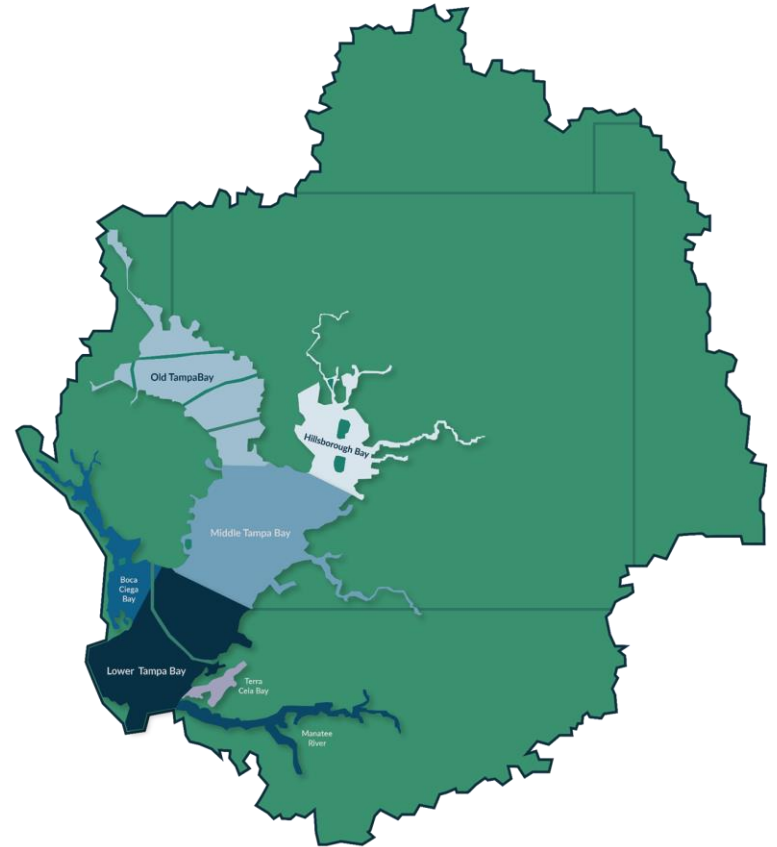
## Population

> 3.1 million in watershed



## Land Use

42% Urban/Suburban	32% Undeveloped
17% Agriculture	9% Mining







Clean Waters  
& Sediments



Thriving Habitats  
& Abundant Wildlife



Informed, Engaged,  
& Responsible Community

## Program Priorities



### CHARTING THE COURSE:

THE COMPREHENSIVE  
CONSERVATION  
AND MANAGEMENT PLAN  
FOR TAMPA BAY  
2017 UPDATE





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STATE OF THE BAY	
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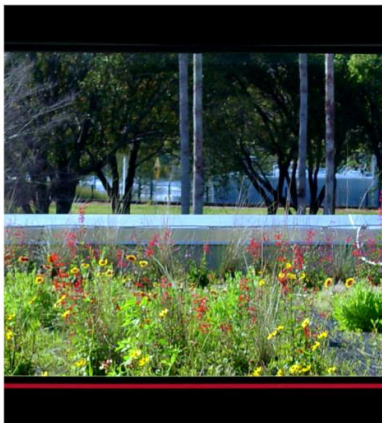
NOTE: CLICKING ANY EXTERNAL LINKS WILL TAKE YOU AWAY FROM THIS REPORT





## STORMWATER RUNOFF

### Expand use of Green Infrastructure practices



#### OBJECTIVES:

Promote expanded use of Green Infrastructure practices to prevent and reduce nitrogen pollution. Promote development and delivery of tools and incentives to expand low impact/green infrastructure implementation, including: professional training, compatibility reviews of local government development codes and comprehensive plans; and demonstration sites. Encourage Tampa Bay Estuary Program (TBEF) partners to submit local projects that implement innovative building or site design techniques to the Action Plan Database of the Tampa Bay Nitrogen Management Consortium. Encourage adoption and implement regional policies facilitate green infrastructure de

#### STATUS:

Revised from previous: Design and Implement Development Strategy.

#### RELATED ACTIONS:

WW-1 Expand the ben reclaimed water  
BH-6 Encourage habi along altered w properties

#### BACKGROUND:

Historically, stormwater in Florida focused on re rainwater from the buil to avoid flooding. High polluted runoff were re nearest receiving water

At left: The Staz Center for the first building in Tampa with a g on the second level of Ferguson Staz Center.

### WATER AND SEDIMENT QUALITY



A rain garden at the Betty Walker Discovery Garden at Hillsborough County Extension. Photo by Lynn Barber

- Professional training;
- Compatibility reviews of local government development codes and comprehensive plans;
- Demonstration sites with educational signs and information;
- Potential incentives;
- Focused research on the complete cost-benefits associated with Green Infrastructure building and site design relative to traditional approaches;
- Focused research on pollution reductions from emerging and innovative techniques in comparison to traditional approaches.

**Responsible parties:** TBRPC, TBEF, FDEP, SWFWMD, local governments, private landowners

**Timeframe:** Beginning 2017

**Cost and potential funding sources:** \$\$-\$\$\$ External grants

**Location:** Baywide

**Benefit/Performance measure:** Reduced barriers and increased incentives for Green Infrastructure.

extensive networks of gutters, ditches, canals and pipes. This management approach often resulted in polluted waterways, impacts to fish, wildlife and habitats and loss of economic and recreational opportunities that depend on healthy waters.

Florida Law requires that all new and redevelopment projects manage the first inch of rainfall onsite rather than discharging to storm drains. The Florida Department of Environmental Protection (FDEP) and the Southwest Florida Water Management District (SWFWMD) have determined that Environmental Resource Permit (ERP) applicants for new construction discharges in the Tampa Bay watershed

at its source, minimizing the volume of water and pollution discharged from the built environment. At the city or county scale, Green Infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air and cleaner water. At the neighborhood or site scale, green stormwater management systems mimic nature by soaking up and storing water, thereby reducing flow of pollutants to water bodies.

#### EXAMPLES OF GREEN INFRASTRUCTURE TECHNIQUES:

- Pervious surfaces for parking areas, walkways and drives

Increased number of Green Infrastructure projects in the Tampa Bay watershed. Metrics to measure specific components include number of trainings; number of attendees, number of demo sites and website usage.

**Results:** Reduced stormwater runoff and pollution. Improved water and habitat quality.

**Deliverables:** Training workshops and manuals. Recommendations for compatibility changes to appropriate local government codes and plans.

#### Activity 3

Encourage unified adoption and implementation of regional policies to expand use of Green Infrastructure techniques.

**Responsible parties:** FDEP, SWFWMD, local governments, TBRPC, Florida Stormwater Association, TBEF

**Timeframe:** Beginning upon adoption of CCMP

**Cost and potential funding sources:** \$ FDEP

**Location:** Baywide

**Benefit/Performance measure:** Adoption of regional policies

**Results:** Increased use of Green Infrastructure techniques. Reduced stormwater runoff and pollution. Improved water and habitat quality.

**Deliverables:** New or revised policies supporting and allowing Green Infrastructure.

#### Activity 4

Encourage TBEF partners to submit local projects that implement Green Infrastructure techniques to the Action Plan Database of the Tampa Bay Nitrogen Management Consortium, for nitrogen reduction credits or offsets.

**Responsible parties:** TBEF, Tampa Bay Nitrogen Management Consortium

**Timeframe:** Beginning 2017

**Cost and potential funding sources:** \$ TBNMC participants

**Location:** Baywide

**Benefit/Performance measure:** Inclusion of projects that implement Green Infrastructure techniques to the Action Plan Database.

**Results:** More Green Infrastructure projects in the Tampa Bay watershed. Reduced stormwater runoff and nutrient pollution.

**Deliverables:** Updates to the Action Plan Database of the TBNMC.

- <sup>1</sup> EPA 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices. United States Environmental Protection Agency. EPA 841-F-07-006. 37pp.
- <sup>2</sup> Tetra Tech 2014. Green Infrastructure Inconsistencies and Barriers – Final Technical Memo to Hillsborough County Public Works and Development Services. Technical Memorandum #08-14 of the Tampa Bay Estuary Program.
- <sup>3</sup> Clark, M. W., T. Rupert and T. Ankersen 2008. Protecting Florida's Water Quality: Identifying and Overcoming Barriers to Implementation of Low Impact Development (LID) Practices. Project #66921. University of Florida Water Institute, Gainesville FL.





**WATER AND SEDIMENT QUALITY**  
**SW-10**

**STORMWATER RUNOFF**  
Expand use of Green Infrastructure practices

**WATER AND SEDIMENT QUALITY**

**RELEVANT**  
Florida's Clean Water Act (CWA) and other federal and state water quality laws. Florida's Stormwater Management Act (FSMA) and other state water quality laws. Florida's Stormwater Management Act (FSMA) and other state water quality laws.

**STORMWATER RUNOFF**  
Expand use of Green Infrastructure practices

**WATER AND SEDIMENT QUALITY**

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**STORMWATER RUNOFF**  
Expand use of Green Infrastructure practices



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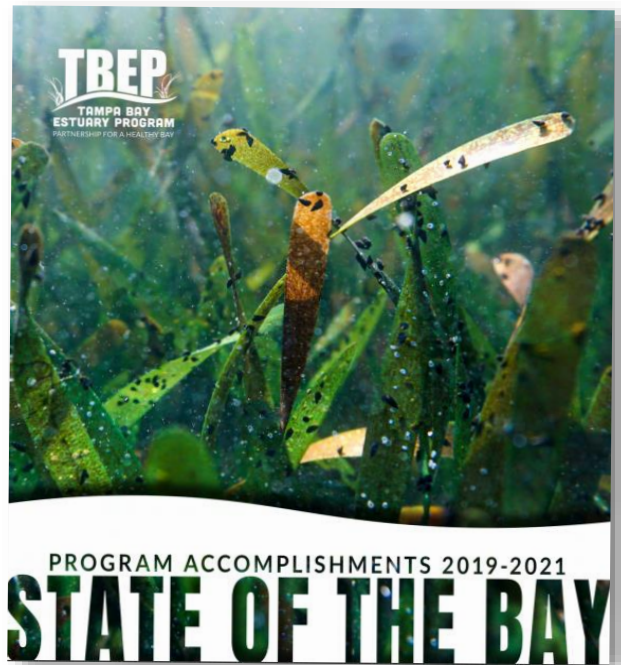
## STATE OF THE BAY

Focus: Facing the Issues and Implementing the Plan



## FUNDING RESTORATION AND RESILIENCE

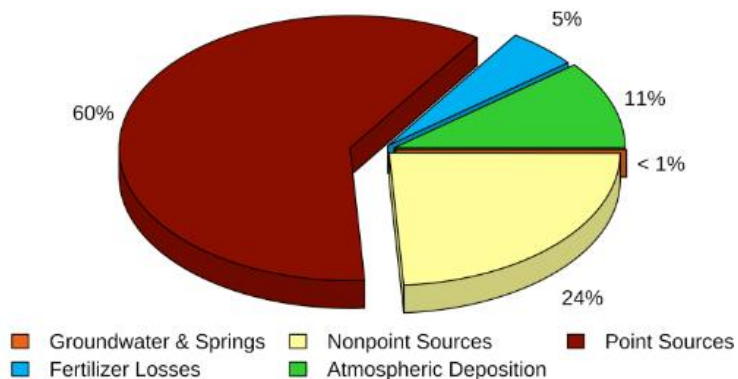
Focus: TBEP Funding Mechanisms and Approaching Requests for Proposals



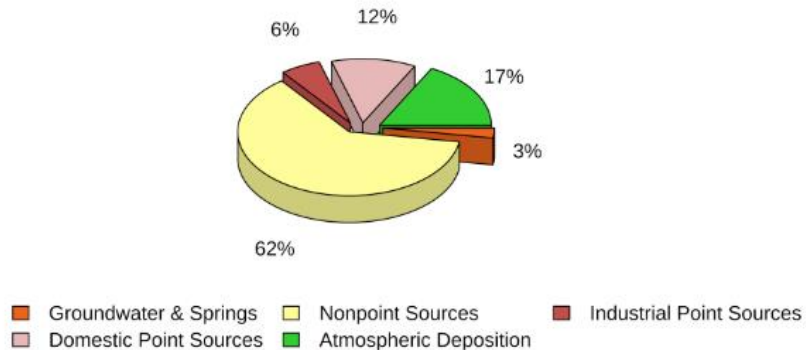
## Nutrient Pollution



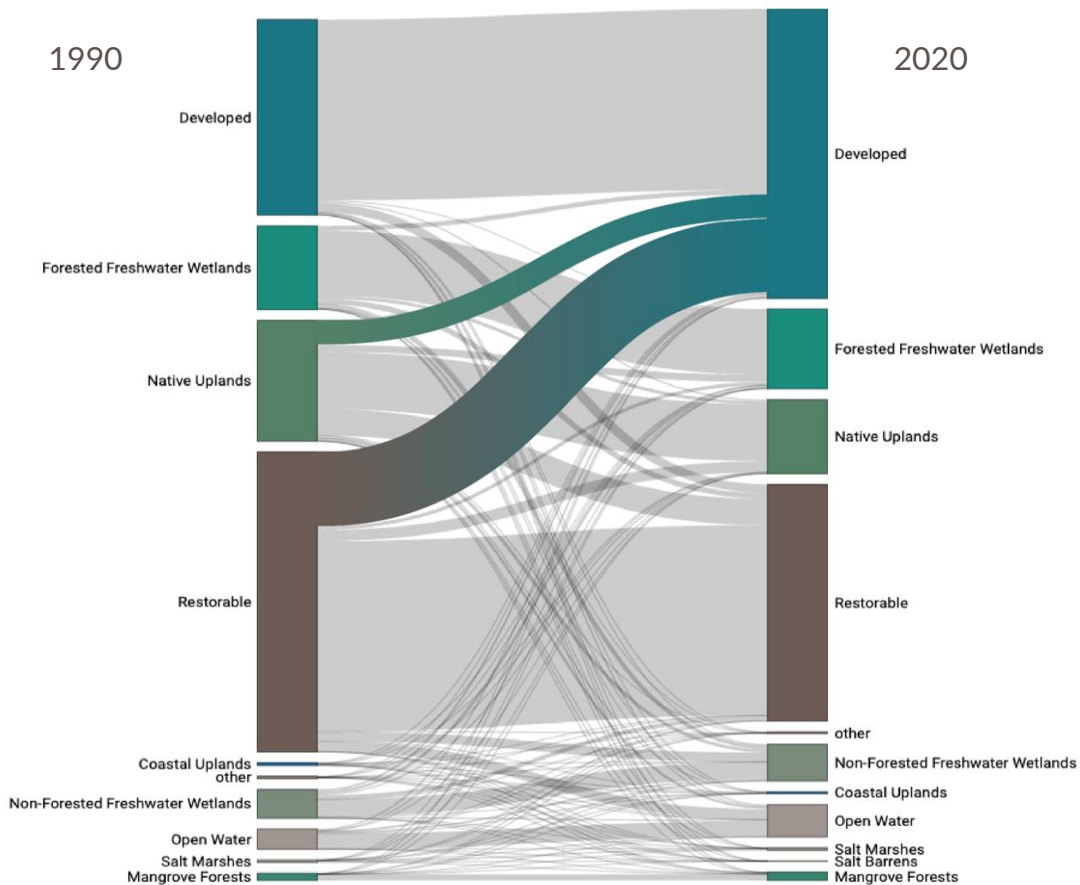
1970s: 9,904 tons/yr



2010s: 3,332 tons/yr

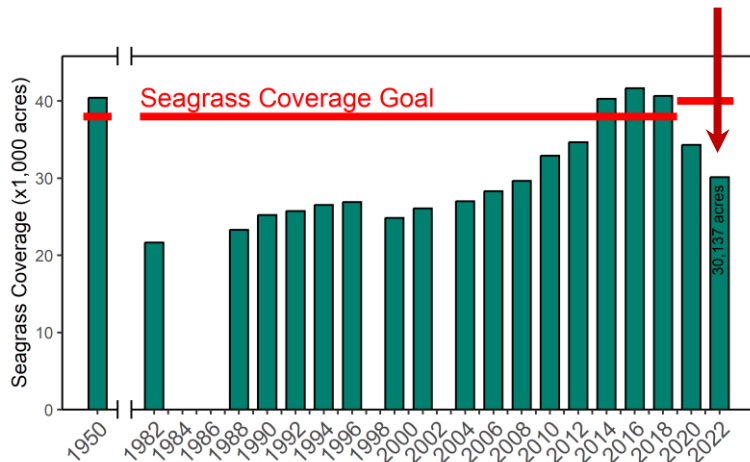
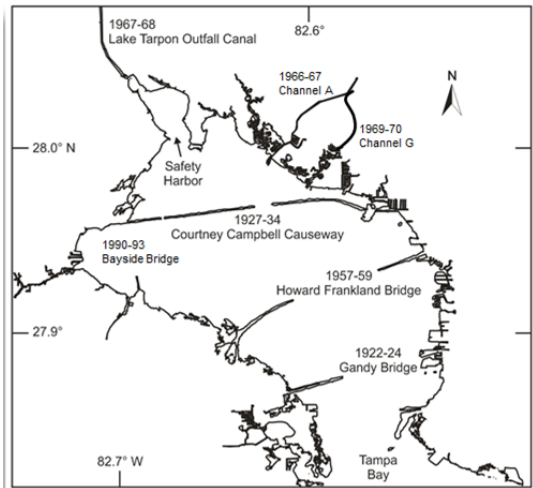


## Habitat Restoration





## Old Tampa Bay





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## STATE OF THE BAY

Focus: Facing the Issues and Implementing the Plan












## FUNDING RESTORATION AND RESILIENCE

Focus: TBEP Funding Mechanisms and Approaching Requests for Proposals

# FUNDING



Funding Mechanism	Source	Description	Objective(s)	Project Amount
1. EPA Work Plan				
2. Tampa Bay Environmental Restoration Fund				
3. Bay Mini-Grants				
4. Additional Grants	 		 	



# FUNDING



Clean Waters and Sediments



Thriving Habitats and Abundant Wildlife



Informed, Engaged, and Responsible Community

# FUNDING



Funding Mechanism	Source	Description	Objective(s)	Project Amount
<b>1. EPA Work Plan</b>	Annual federal appropriation via the Clean Water Act  Matched by partners	Supports operations and projects	CCMP implementation	\$10,000-\$300,000
<b>2. Tampa Bay Environmental Restoration Fund</b>				
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<b>4. Additional Grants</b>				



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<b>2. Tampa Bay Environmental Restoration Fund</b>	Funded with contributions and state grant award  Public-private partnership	Annual competitive grant program	Water quality, habitat restoration, applied research, behavior change campaigns	\$25,000-\$700,000
<b>3. Bay Mini-Grants</b>				
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<b>3. Bay Mini-Grants</b>	Funded by "Tarpon Tag"	Annual competitive grant program	Water quality, habitat restoration, participatory science	<\$10,000
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<b>3. Bay Mini-Grants</b>	Funded by "Tarpon Tag"	Annual competitive grant program	Water quality, habitat restoration, participatory science	<\$10,000
<b>4. Additional Grants</b>	Various sources	Opportunistic	Support specific, high priority work	\$10,000-\$1,000,000





# TBEP RFPs



Funding Mechanism	Task	Objective(s)	Timeline	Amount
<b>RESTORE</b>	Tampa Bay Regional Stormwater Controls Identification and Planning	Identify opportunities for a 90 ton nutrient load reduction	2024 - 2027	\$1,500,000
<b>EPA Work Plan</b>	Old Tampa Bay Assimilative Capacity Assessment	Develop a revised nutrient budget for Old Tampa Bay	Summer 2023	\$250,000
<b>EPA Work Plan + Nitrogen Management Consortium Dues</b>	2027 Reasonable Assurance Update	Develop and submit the 2027 Reasonable Assurance Update	Summer 2024	\$350,000



# TBEP RFPs



Funding Mechanism	Task	Objective(s)	Timeline	Amount
<b>Tampa Bay Environmental Restoration Fund</b>	2024 RFP	Implement water quality improvement, habitat restoration, applied research, and education priorities	RFP: January 2024 Projects: 2024 - 2027	\$25,000- \$700,000
<b>Bipartisan Infrastructure Law</b>	Accepting Project Concepts	Resilient Wastewater and Tidal Creek	Ongoing	<\$2.5M
<b>Bay Mini Grants</b>	2024 RFP	Address restoration and education priorities	RFP: July 2023 Projects: 2024	\$5,000/projec t
<b>National Science Foundation</b>	Blue Green Action Platform Academy	Nitrogen Management Engagement Support in Frontline Communities	November 2023 - November 2024	\$200,000



## OTHER RFPs



Program	Objective(s)	Timeline	Amount
<b>Sarasota Bay Estuary Program</b>	Bipartisan Infrastructure Law	2024-2026	\$909,800/year
<b>Sarasota Bay Estuary Program</b>	Bay Partners Grants	January-March, annually	\$10,000/project
<b>Coastal &amp; Heartland National Estuary Partnership</b>	Conservation Grants	August, annually	\$5,000/project
<b>Pensacola and Perdido Bays Estuary Program</b>	Community Grants	August, annually	\$10,000-\$50,000 /project
<b>Restore America's Estuaries</b>	Coastal Watersheds Grant Program	December-February, annually	\$75,000-250,000 /project
<b>Restore America's Estuaries</b>	NEP Watersheds Grant Program	January-March, annually	\$200,000-500,000 /project



## OTHER RFPs



Program	Objective(s)	Timeline	Amount
Indian River Lagoon National Estuary Program	Water Quality Restoration	October 2023	\$450,000
Indian River Lagoon NEP	Habitat Restoration	October 2023	\$150,000
Indian River Lagoon NEP	Community-Based Restoration	October 2023	\$150,000
Indian River Lagoon NEP	Science and Innovation	October 2023	\$100,000
Indian River Lagoon NEP	Small Grants	February 2024	\$25,000
Indian River Lagoon NEP	CCMP Implementation in Priority Communities	February 2024	\$467,300



# FUNDING

## Nutrient Pollution



### Past or Ongoing Work

Eagle Lake Park Water Quality Improvements - funded in 2016 TBERF  
Behavior change campaigns such as “Be Floridian” - funded in FY2019 Work Plan

### Future Opportunities

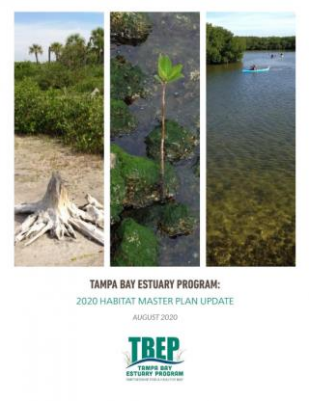
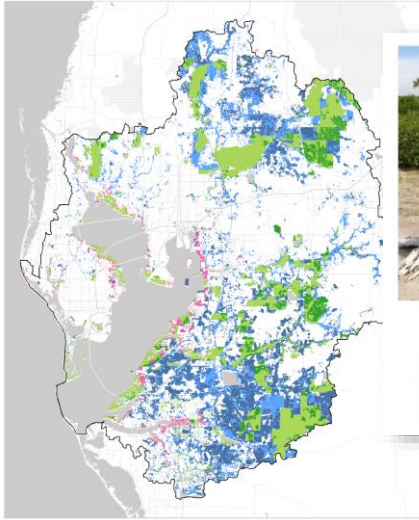
FY2024 and FY2025 Work Plans, Tampa Bay Environmental Restoration Fund, RESTORE, etc.



# FUNDING

## Habitat Restoration

Existing Conservation Native    Proposed Conservation Native    Reservation Native  
Existing Conservation Restorable    Proposed Conservation Restorable    Reservation Restorable



### Past or Ongoing Work

Habitat Master Plan 2020 Update - funded in FY2018 Work Plan  
Lower Green Swamp Preserve Freshwater Wetland Restoration - funded by 2020 TBERF and Work Plan

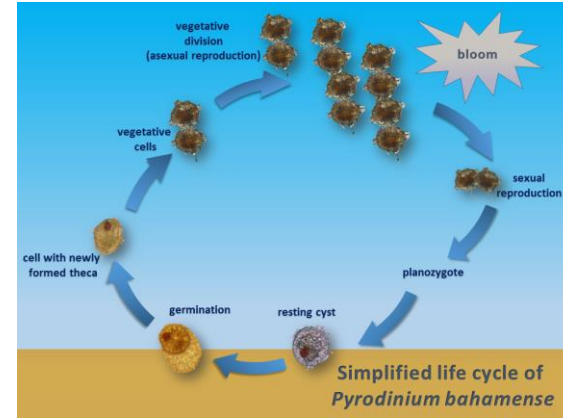
### Future Opportunities

Tampa Bay Environmental Restoration Fund (2024 onward), Bipartisan Infrastructure Law (2024-2026), Coastal Watersheds Grant



# FUNDING

## Old Tampa Bay



### Past or Ongoing Work

Designing a Genetic Algorithm for the Selection of Causeway Cut-Throughs in Old Tampa Bay - Work Plan, funded in FY2022  
Applied Research: Tampa Bay restoration and *Pyrodinium bahamense* blooms dynamics - Actionable Science Grant, 2022

### Future Opportunities

Old Tampa Bay Assimilative Capacity Assessment - **Work Plan RFP approaching**  
Stormwater Master Plan - **anticipated RESTORE RFP**





[www.TBEP.org/project-concept](http://www.TBEP.org/project-concept)







## NATIONAL ESTUARY PROGRAMS

Key Takeaway: NEPs need collaborators to achieve our goals



## STATE OF THE BAY

Key Takeaway: There is no shortage of work to be done!



## FUNDING RESTORATION AND RESILIENCE

Key Takeaway: Prepare project concepts now for upcoming RFPs, and submit Letters of Intent



## QUESTIONS?



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[www.TBEP.org/project-concept](http://www.TBEP.org/project-concept)  
[www.TBEP.org/library](http://www.TBEP.org/library)