



Indian River Lagoon Basin Management Action Plans (BMAPs) Annual Meeting

December 11, 2018



Agenda

- Overview of the Indian River Lagoon (IRL) BMAPs
- Statewide Annual Report
- St. Johns River Water Management District (SJRWMD) Water Quality Monitoring Update & Review
- Seagrass Mapping & Compliance
- Path Forward
- Next Steps



Overview of IRL BMAPs

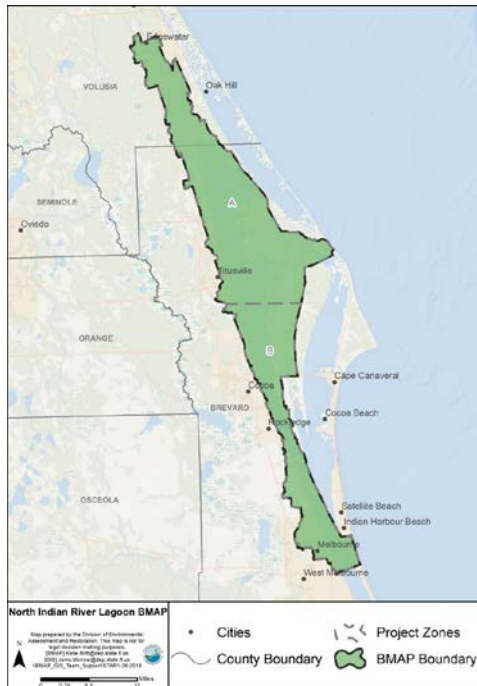
BMAP Coordination Team

BMAP Background

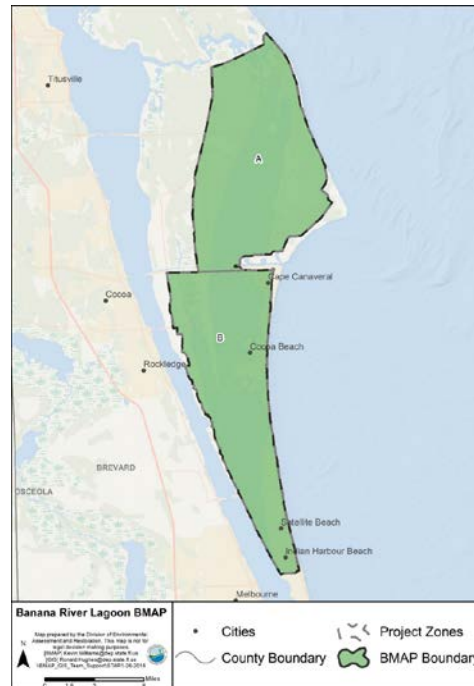
*Progress Toward the Total Daily Maximum Loads
(TMDLs)*



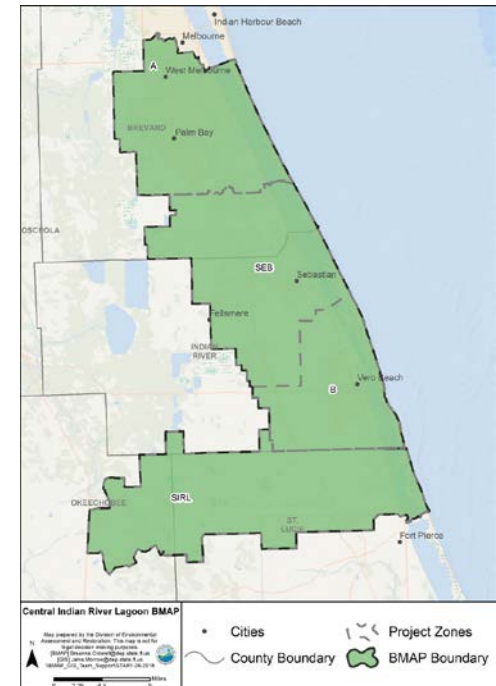
David Huggins



Kevin Williams



Breanna Crowell



Sara Davis



Indian River Lagoon BMAPs

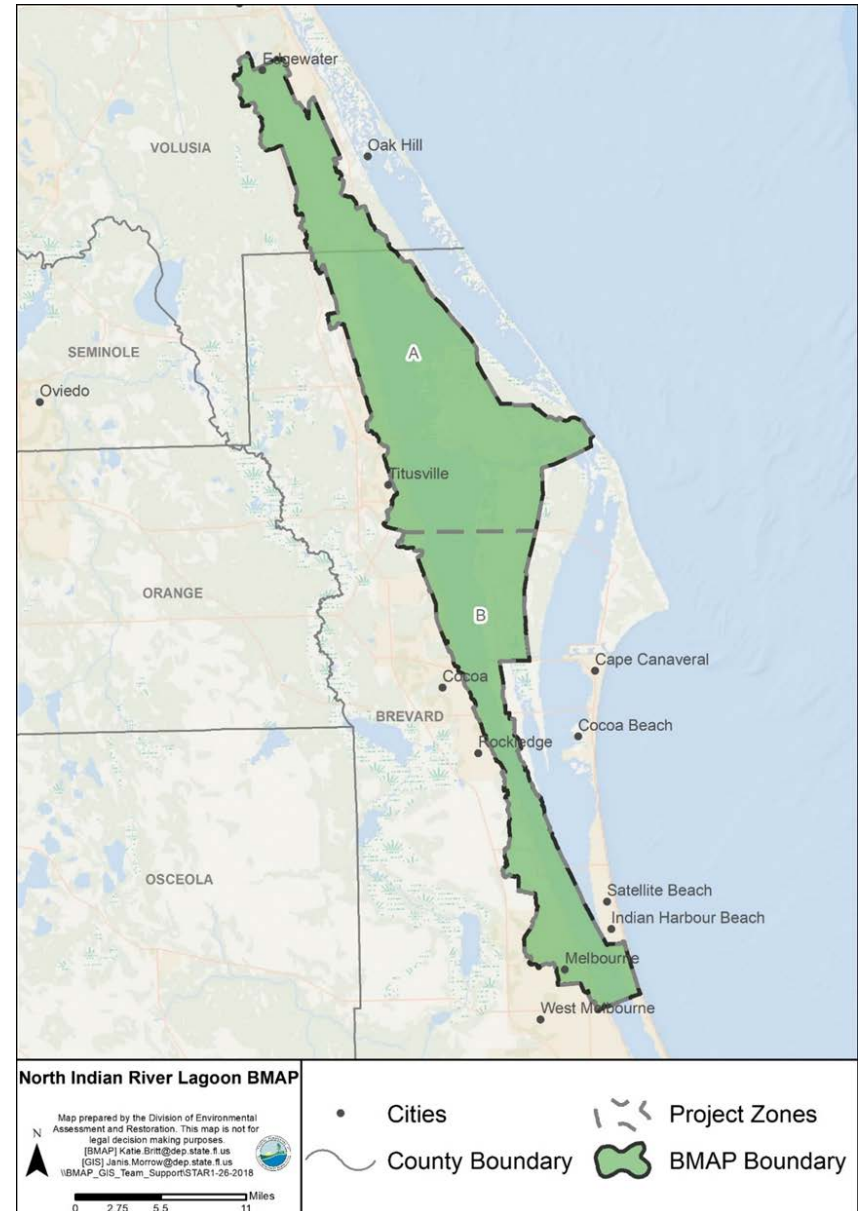
- TMDLs adopted in 2009
 - Total nitrogen (TN) reductions
 - Total phosphorous (TP) reductions
- BMAPs adopted in 2013
 - Banana River Lagoon (BRL)
 - Project Zone A: No Allocations to date
 - Project Zone B: Required Allocations
 - Central Indian River Lagoon (CIRL): No Allocations to date
 - North Indian River Lagoon (NIRL): Required Allocations
- First Statewide Annual Report (STAR) compiled
- Reporting period:
January 2017 – December 2017



North IRL

Stakeholders:

- Agriculture/Florida Department of Agriculture & Consumer Services (FDACS)
- Brevard County
- City of Cocoa
- City of Edgewater
- City of Melbourne
- City of Rockledge
- City of Titusville
- Florida Department of Transportation (FDOT) District 5
- Kennedy Space Center
- Town of Indialantic
- Town of Palm Shores
- Volusia County
- SJRWMD



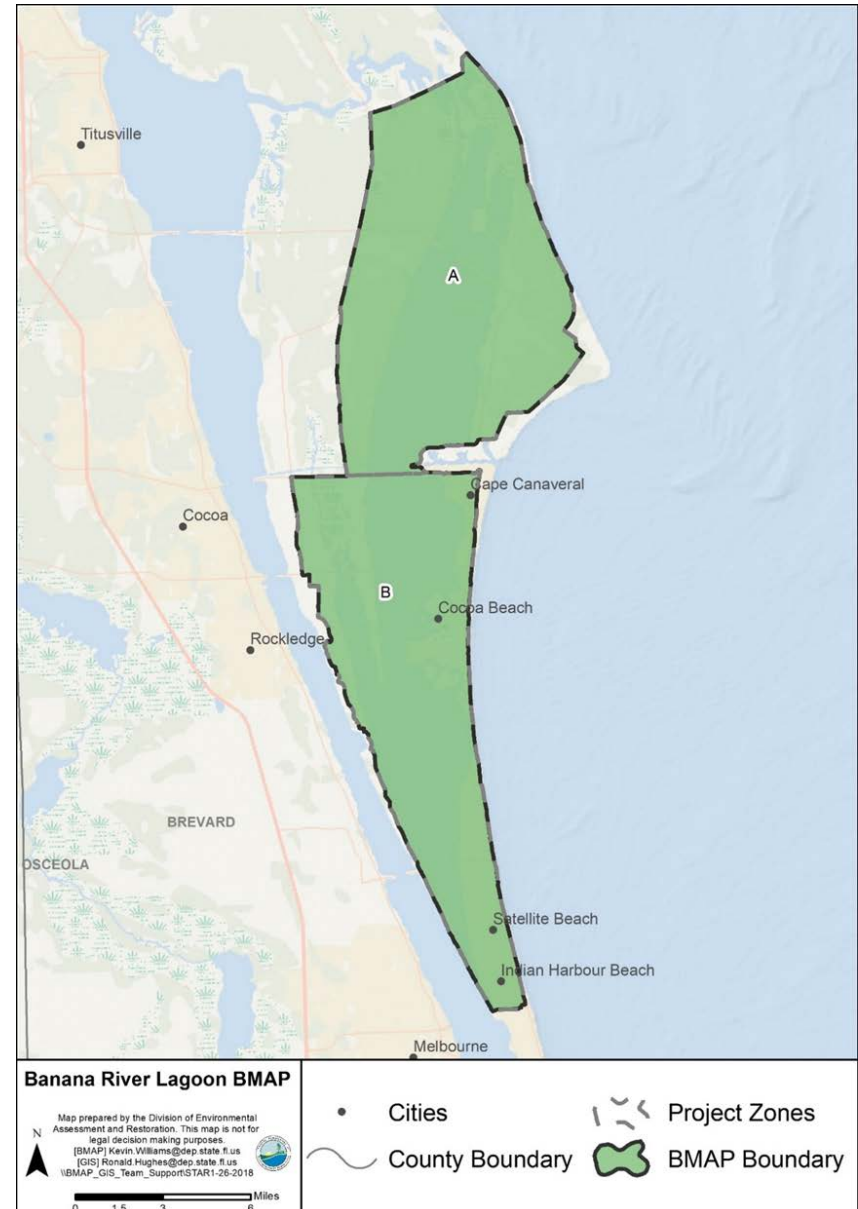
12/11/2018



Banana River Lagoon

Stakeholders:

- Agriculture/FDACS
- Brevard County
- Cape Canaveral Air Force Station
- City of Cape Canaveral
- City of Cocoa Beach
- City of Indian Harbor Beach
- City of Satellite Beach
- FDOT District 5
- Kennedy Space Center
- Patrick Air Force Base
- SJRWMD



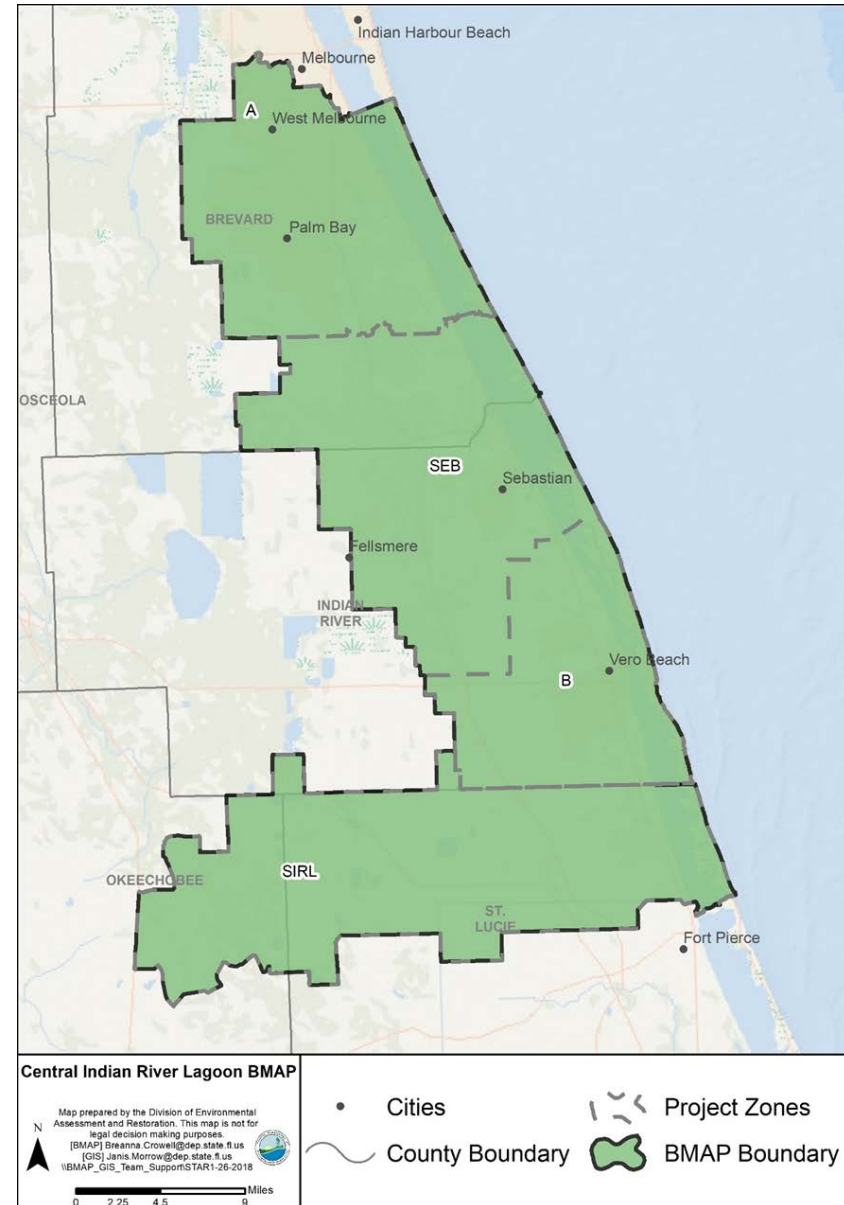
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Central IRL

Stakeholders:

- Agriculture/FDACS
- Brevard County
- City of Fellsmere
- City of Fort Pierce
- City of Melbourne
- City of Palm Bay
- City of Sebastian
- City of Vero Beach
- City of West Melbourne
- Fellsmere Joint Venture
- Fellsmere Water Control District (WCD)
- FDOT Districts 4 & 5
- Indian River County
- Indian River Farms WCD
- Melbourne-Tillman WCD
- North St. Lucie River WCD
- St. Lucie County
- St. Lucie Village
- SFWMD
- SJWMD
- Town of Indialantic
- Town of Indian River Shores
- Town of Melbourne Beach
- Town of Melbourne Village
- Town of Orchid
- Turnpike Enterprise



12/11/2018



Statewide Annual Report (STAR)

STAR Background

STAR 2018 Progress

STAR 2019 Timeline



STAR Background

- Requirement under Section 403.0675 Florida Statutes (F.S.) to provide an annual update to the Governor and Legislature
- Summarizes accomplishments in the BMAPs statewide
- Reports on restoration projects and management strategies
- All BMAP reporting periods align with calendar year
- Submitted to the Governor and the Legislature by July 1 of each year
- Annual meetings → opportunity to highlight stakeholder activities



STAR 2018

**First STAR submitted to the
Governor and the Legislature
June 29, 2018**

<https://floridadep.gov/STAR>

***Florida Statewide Annual Report on
Total Maximum Daily Loads, Basin
Management Action Plans, Minimum
Flows or Minimum Water Levels, and
Recovery or Prevention Strategies***

**Florida Department of Environmental Protection
Division of Environmental Assessment and Restoration
and
Office of Water Policy**

June 2018

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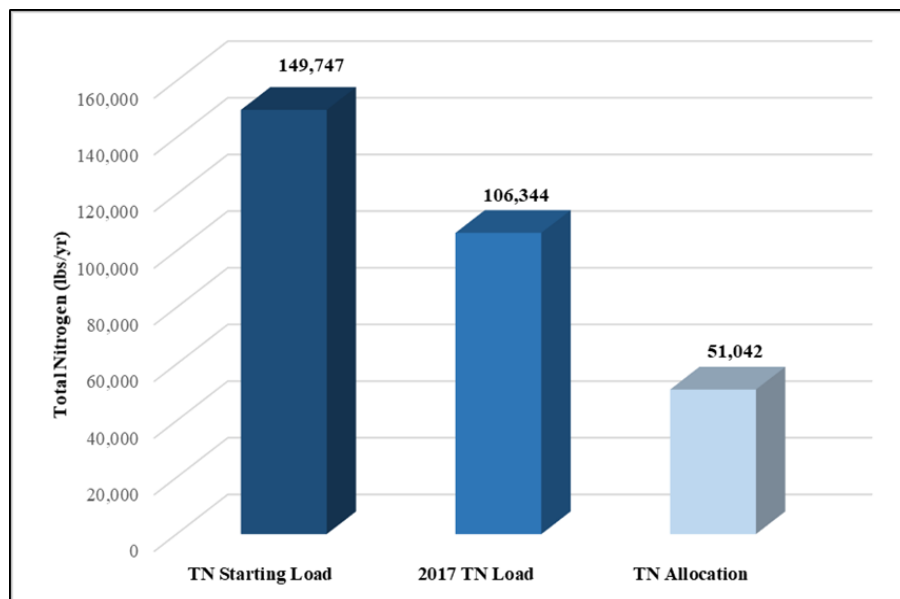




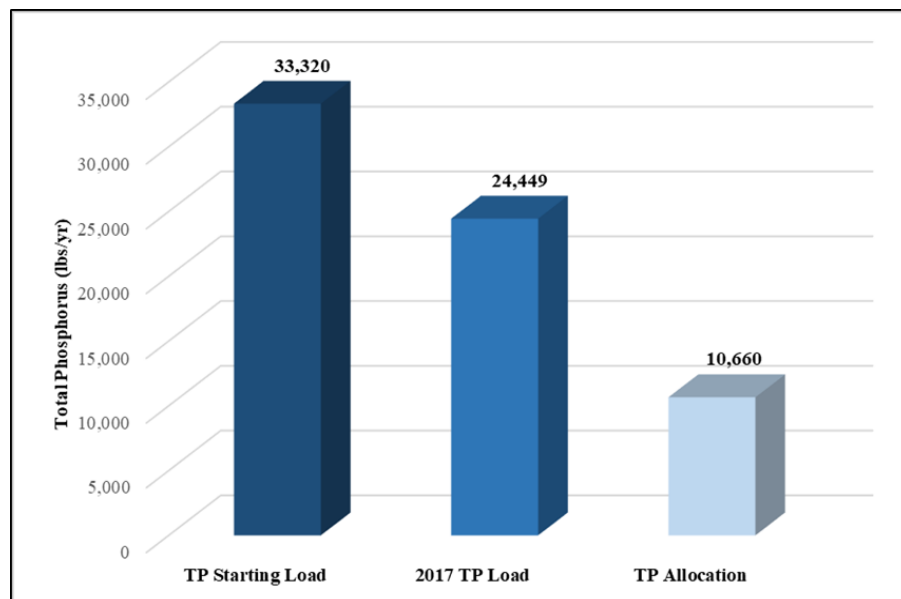
Progress Toward the TMDLs

Banana River Lagoon – Project Zone B

TN



TP



- 194 completed projects
- 39 underway/planned projects
- TN: 43,403 pounds per year lbs/yr estimated reductions
- TP: 8,871 lbs/yr estimated reductions



Progress Toward the TMDLs

Central IRL

- 242 completed projects
- 51 underway/planned projects
- TN: TBD
- TP: TBD

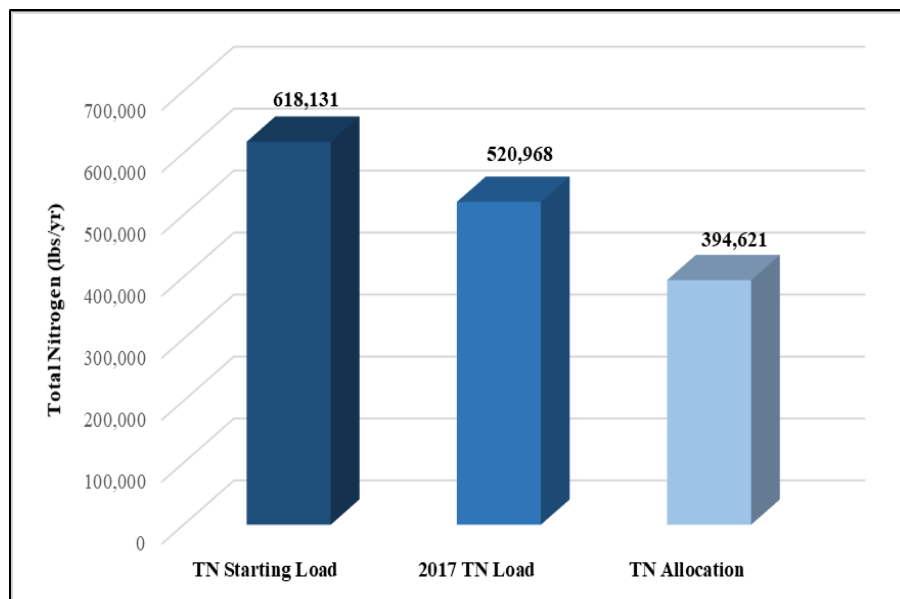




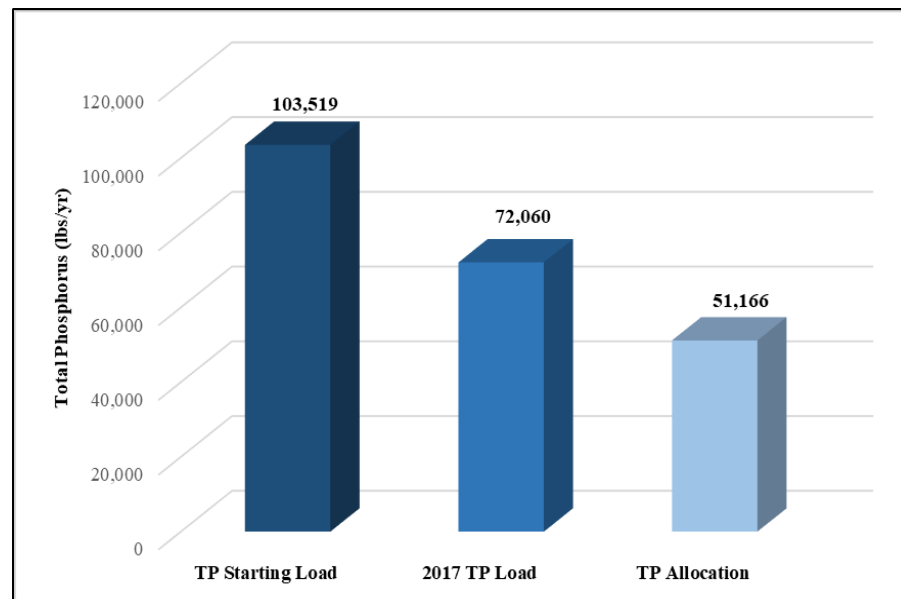
Progress Toward the TMDLs

North IRL

TN



TP



- 168 completed projects
- 60 underway/planned projects
- TN: 97,163 lbs/yr estimated reductions
- TP: 31,459 lbs/yr estimated reductions



STAR 2019 Timeline





SJRWMD Water Quality Monitoring Update & Review

Chuck Jacoby - SJRWMD



Seagrass Mapping & Compliance

Seagrass Restoration Target Methodology

Seagrass Compliance Results Summary

Results by BMAP and Project Zone



Seagrass Compliance

- Restoration Target
 - Seagrass recovery based on depth at the deep-edge of the union coverage of mapping years 1943-1999.
 - TMDL depth limit defined for each Project Zone based on 90% of the union coverage.
- Current Seagrass Depth
 - Data from SJRWMD IRL Seagrass Mapping Contract
 - Aerial photo interpretation and ground-truthing
 - Produce spatial coverage of seagrass beds every 2 years
 - Compliance with the TMDL seagrass depth limit target assessed using latest four years of mapping data
- Two-step Evaluation Process
 - **Step 1:** TMDL Restoration Target cumulative frequency distribution curve (cfdc) **vs.** Current 4-year union coverage cfdc
 - **Step 2:** TMDL Restoration Target coverage median value **vs.** each assessment year median value



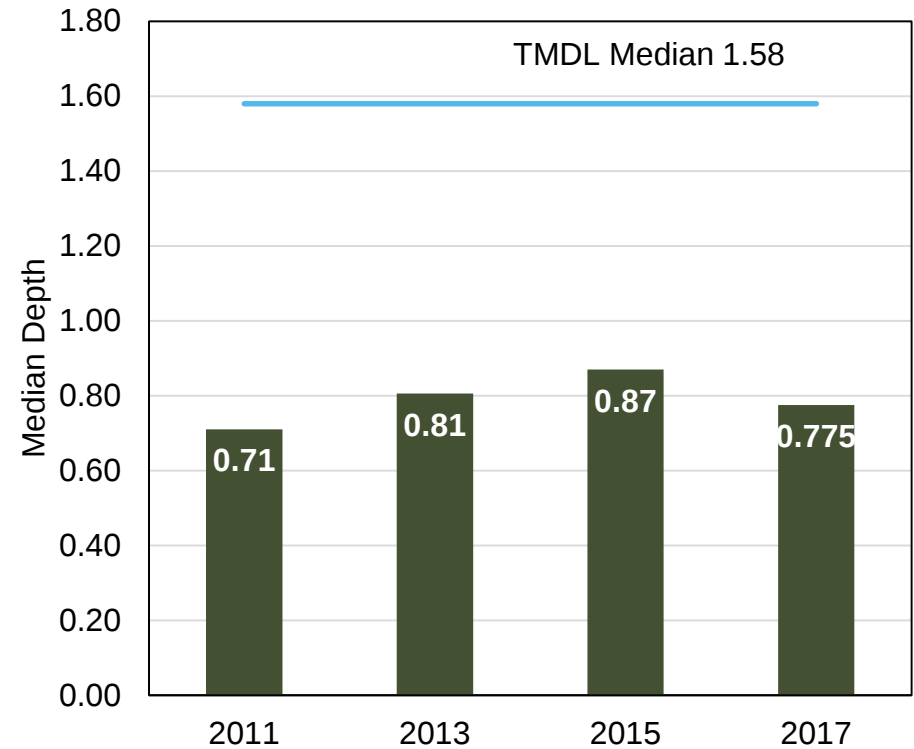
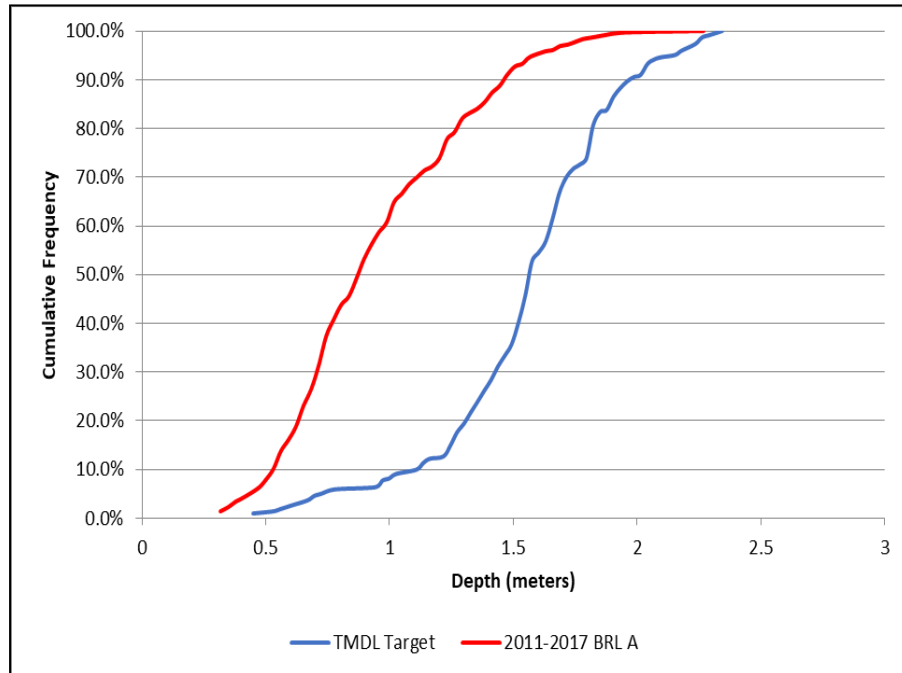
Seagrass Compliance

BMAP	Project Zone	Step 1 Compliance	Step 2 Compliance
Banana Indian River Lagoon	A	No	No
	B	No	No
Central Indian River Lagoon	A	No	No
	SEB	No	No
	B	Yes	No
North Indian River Lagoon	A	No	No
	B	No	No

Two-step compliance results listed above are based on seagrass mapping data from 2011-2017.

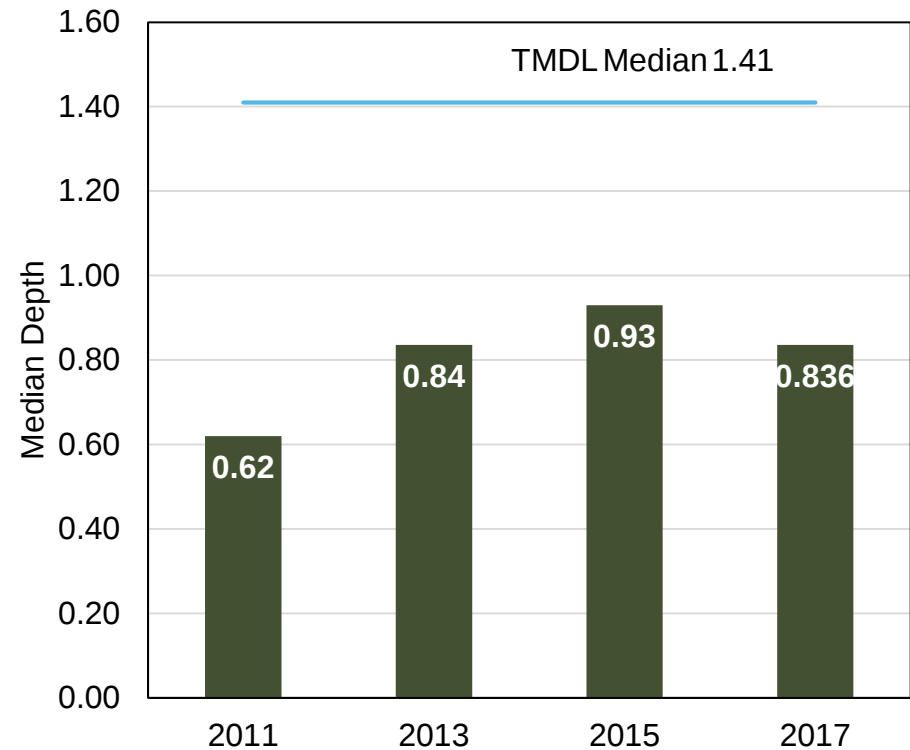
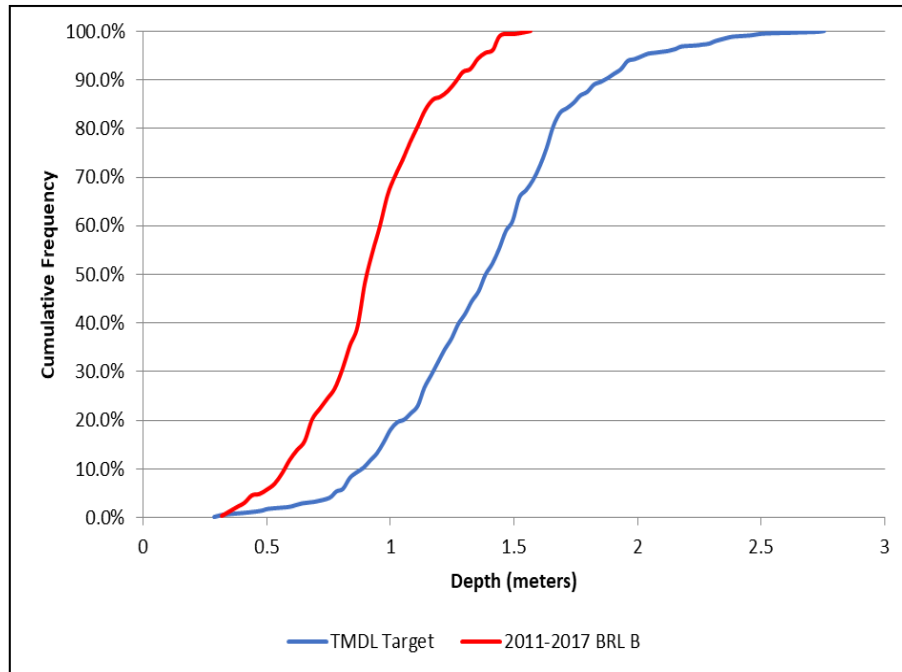


Seagrass Compliance – BRL A



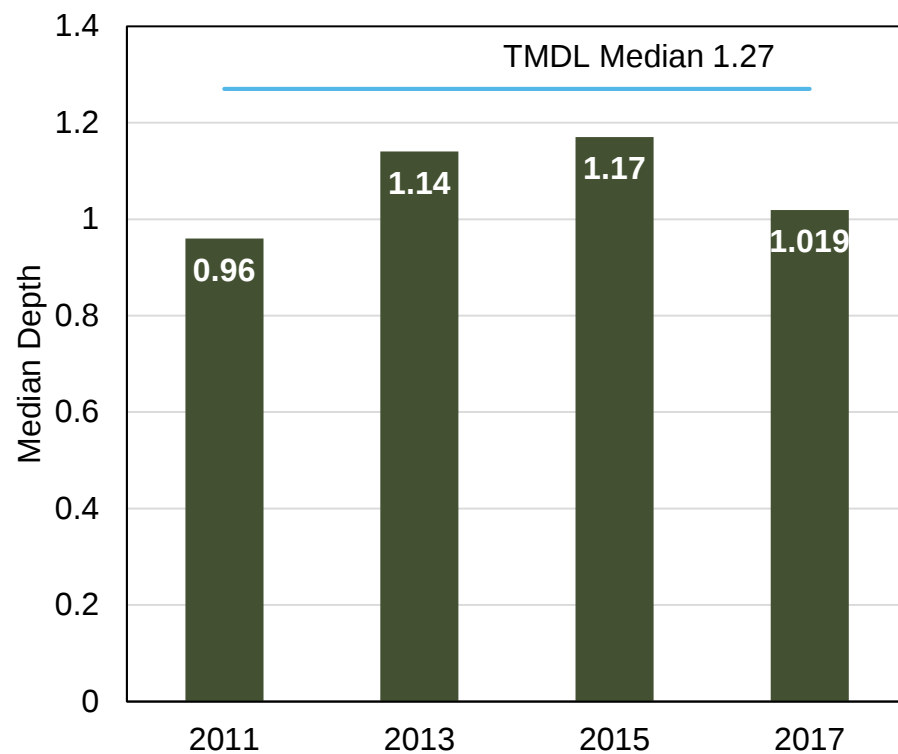
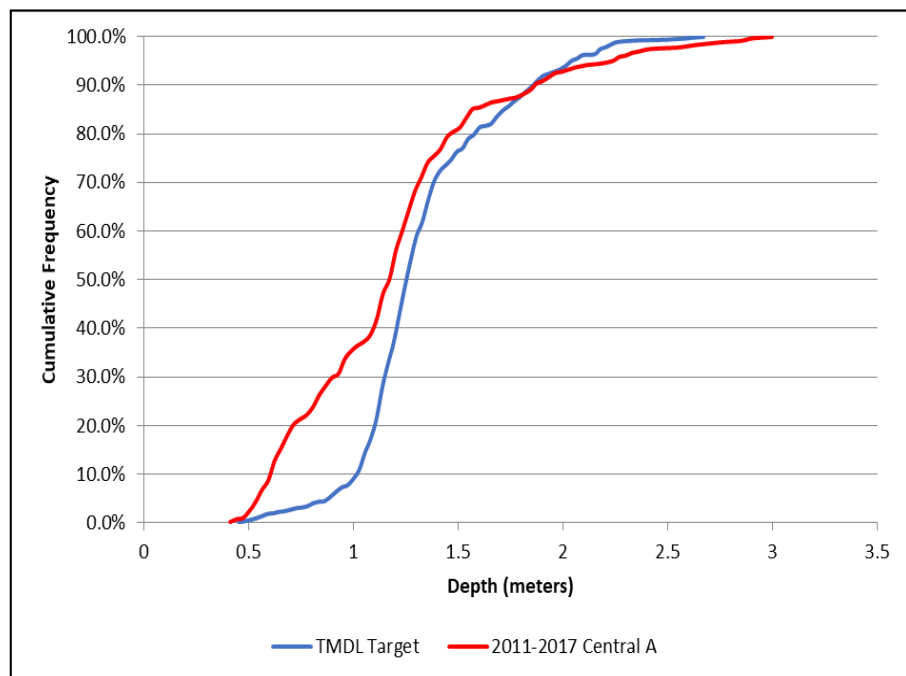


Seagrass Compliance – BRL B



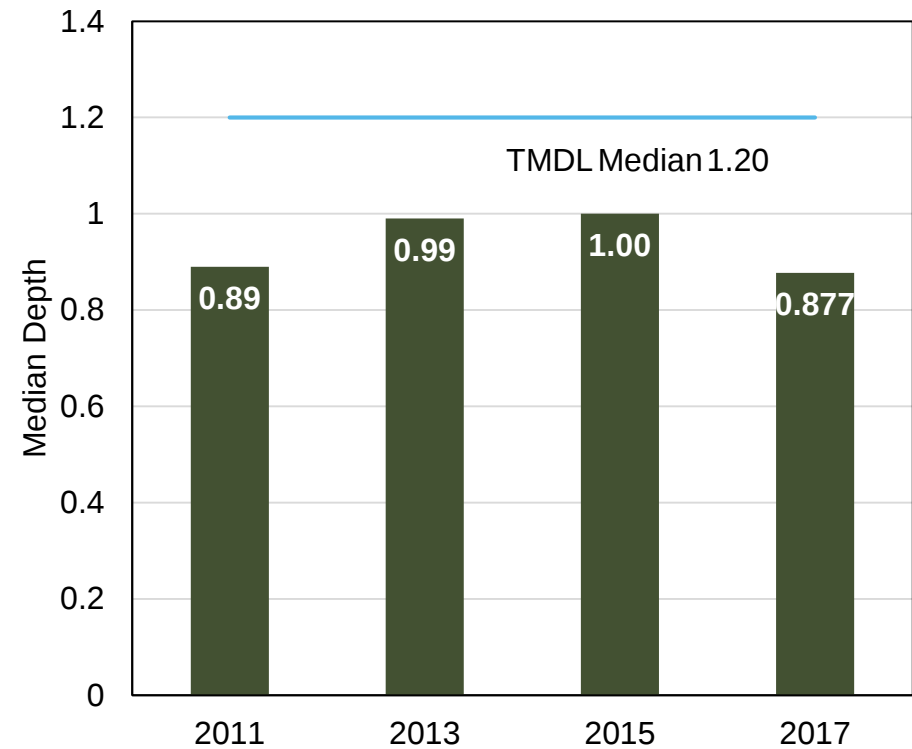
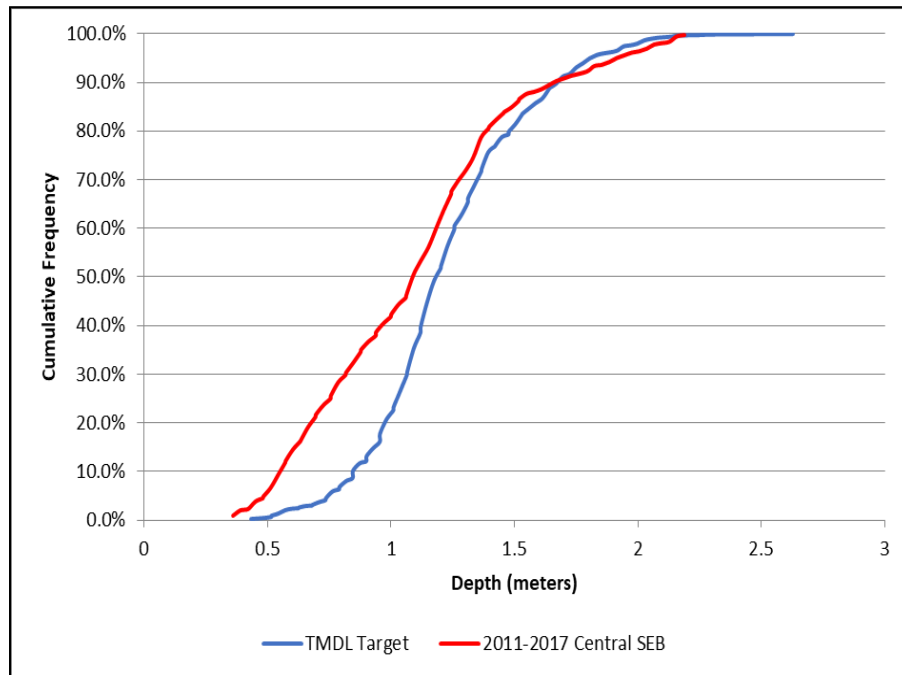


Seagrass Compliance – CIRL A



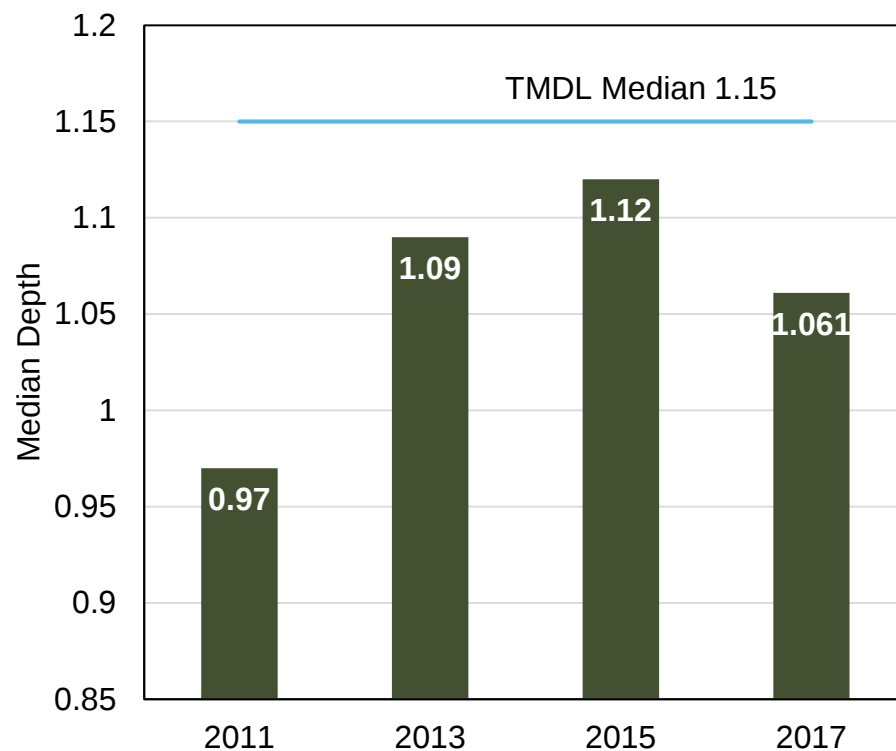
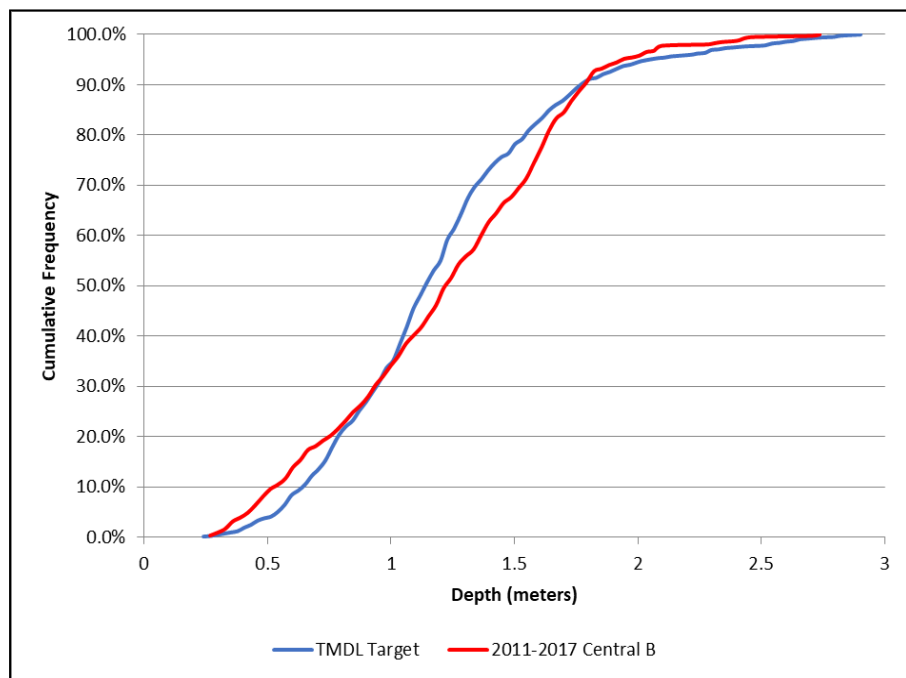


Seagrass Compliance – CIRL SEB



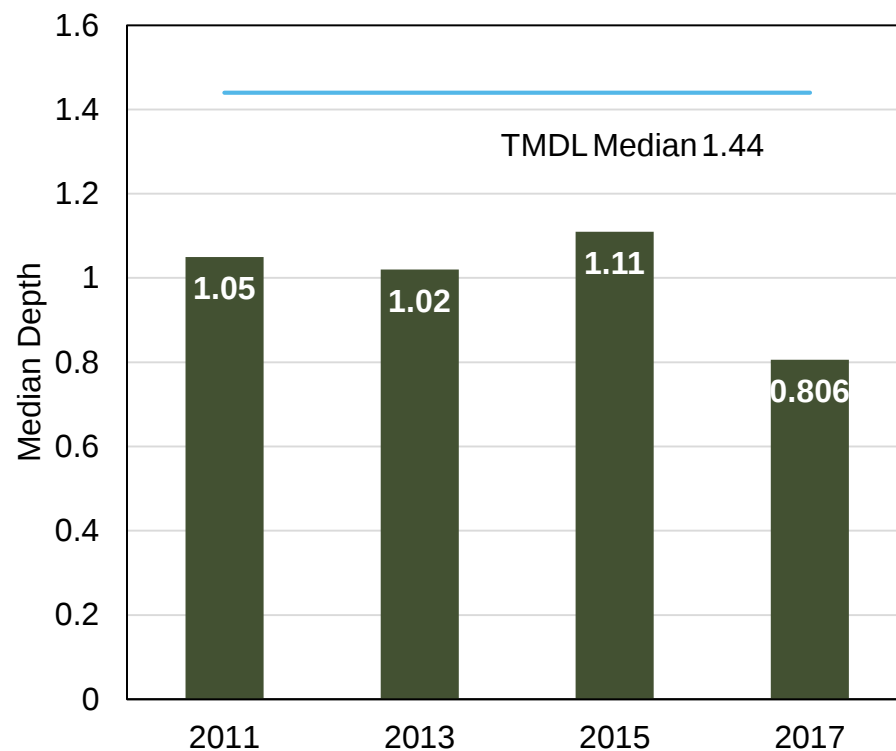
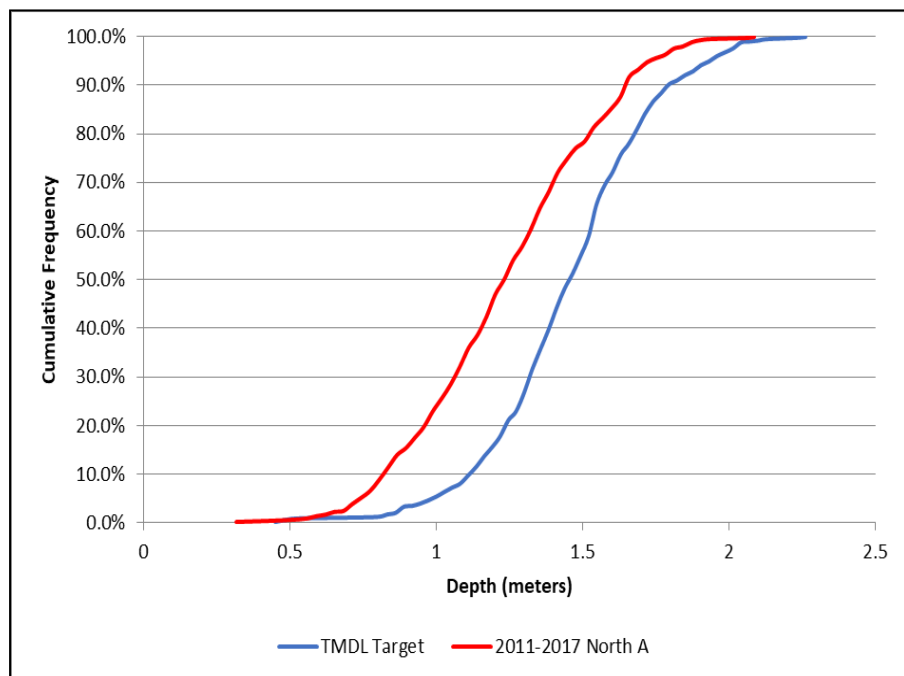


Seagrass Compliance – CIRL B



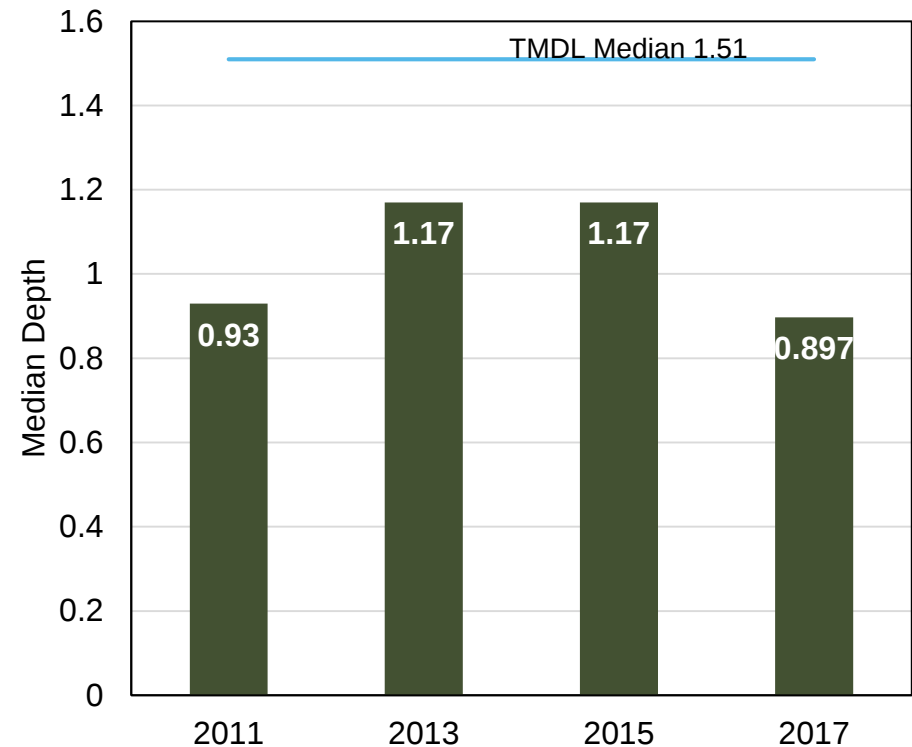
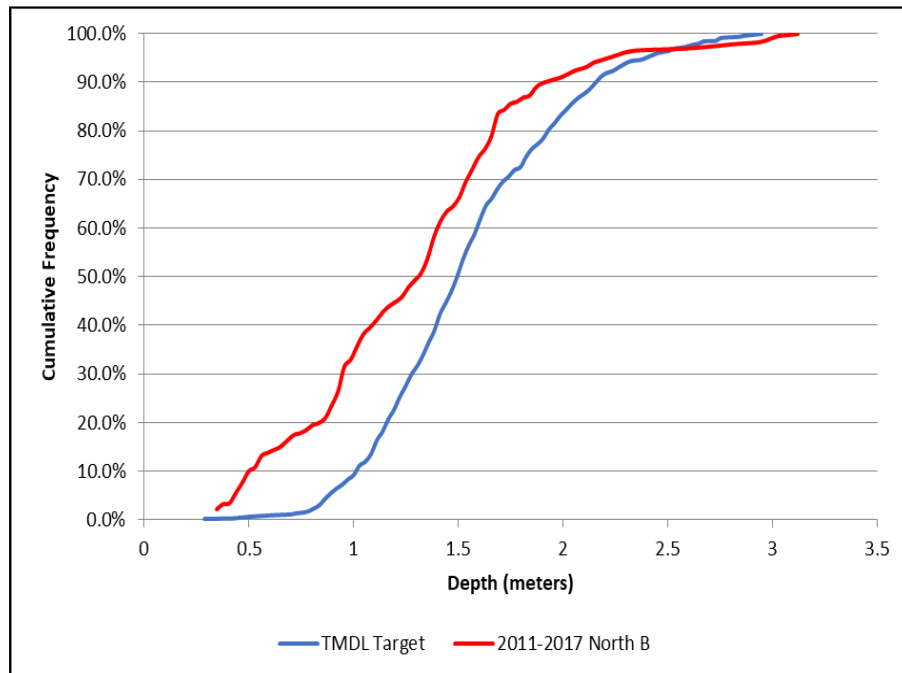


Seagrass Compliance – NIRL A





Seagrass Compliance – NIRL B





Path Forward

Upcoming Updates

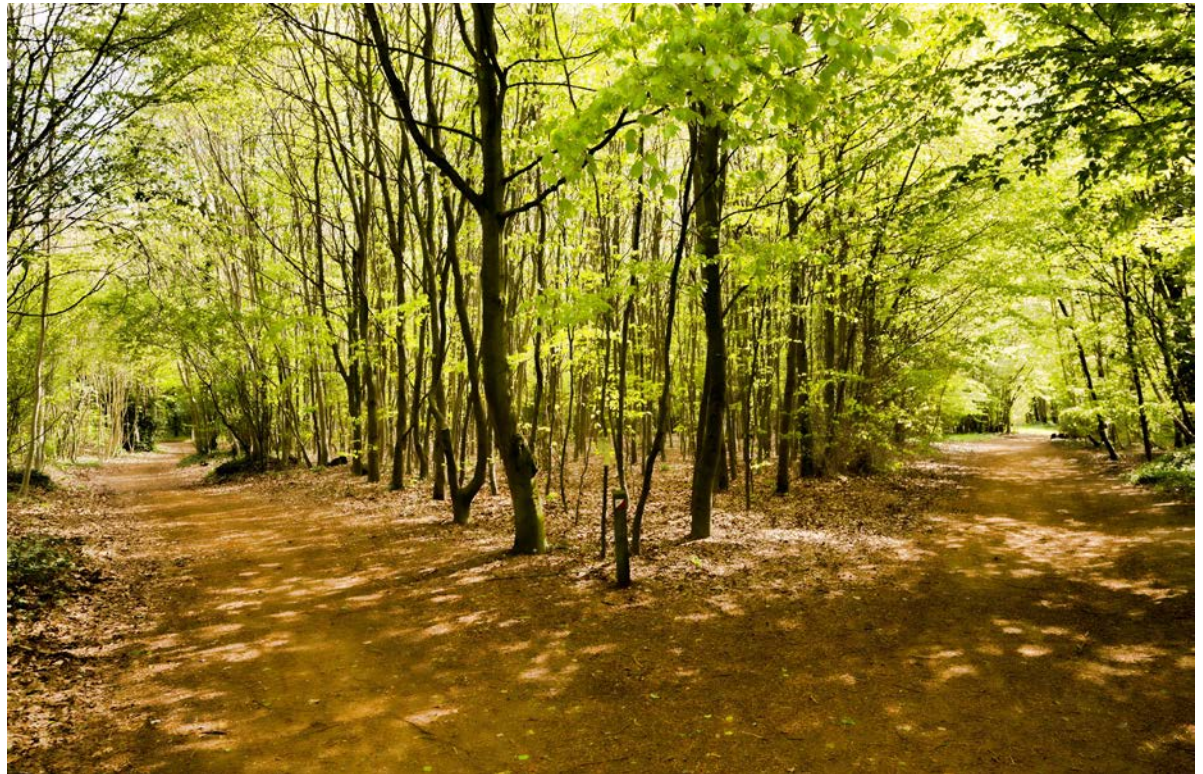
Load Estimation and Allocations

Boundary Changes



Upcoming Updates

- 5-years after adoption
 - Opportunity for Updates
- Allocations
 - Update for all entities
 - Develop for BRL (A) and Central/South
 - SWIL model
 - TMDL percent reductions
- Boundary Changes
 - Project Zones
 - BMAP Boundary
 - SIRL





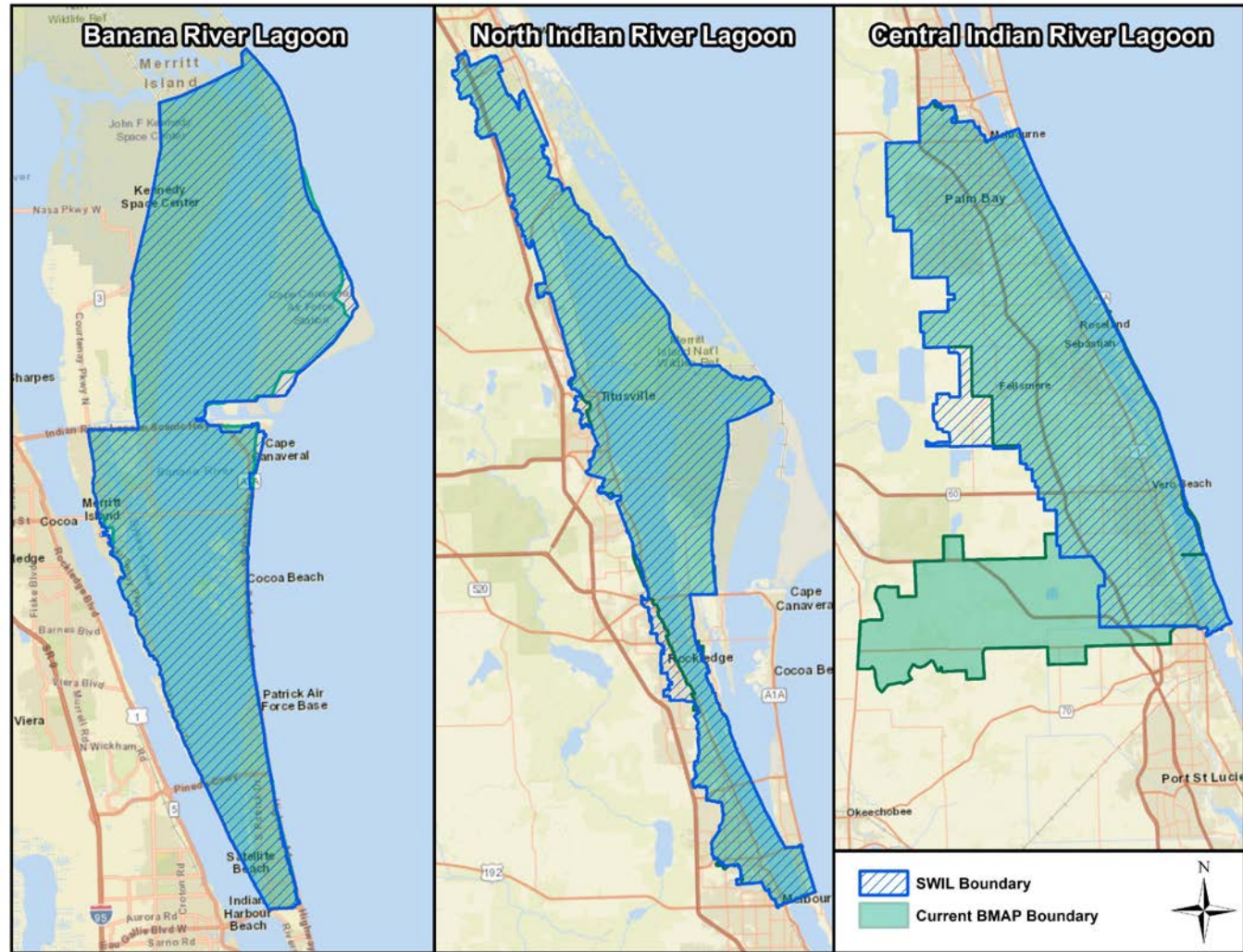
Load Estimations and Allocations

- Update for all entities
- Develop for BRL (A) and Central/South
- SWIL model
- TMDL percent reductions



Boundary Changes

- Boundary Changes
 - Project Zones
 - SIRL
 - BMAP Boundary





Next Steps

- *Submit STAR project updates by January 15th*
- *Use SWIL for BMAP allocations*
 - Update BMAP boundary
 - Develop load estimations and allocations
 - Additional public meetings in 2019
 - BMAP amendment in 2019



Contact Information

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