

South Lake Worth Inlet: Life Cycle of an IMP Update



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Inlet Management Plan (IMP) Implementation



Inlet Management Studies



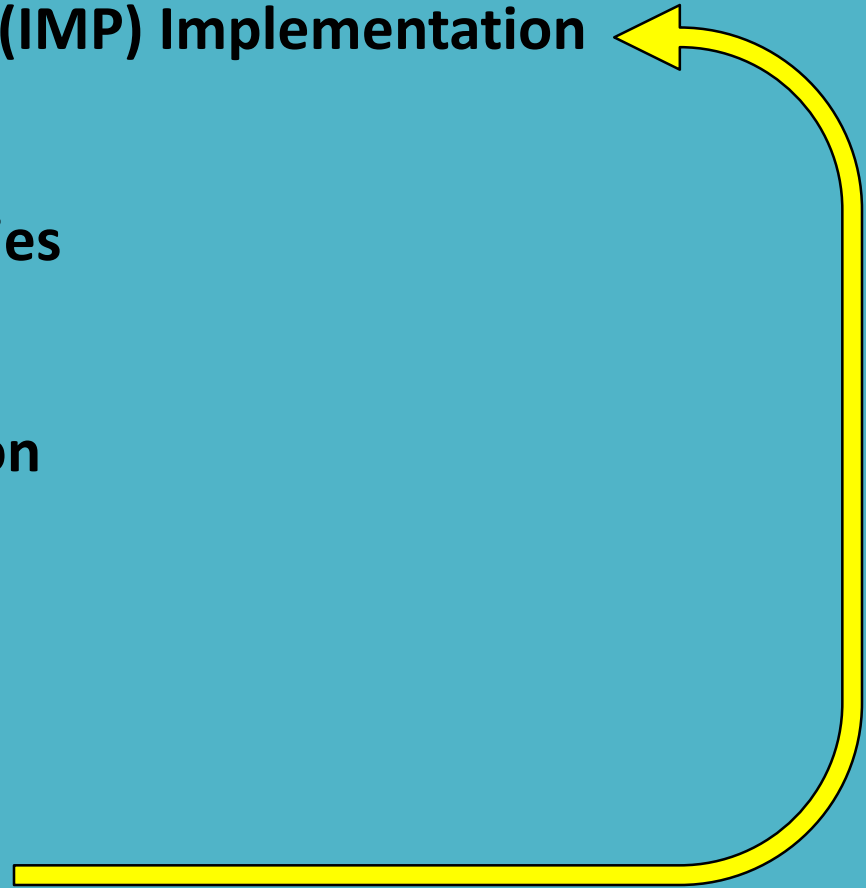
Stakeholder Coordination



Updated Strategies



IMP Update Adoption



IMP Implementation



1999 Plan

WHEREAS the implementation plan is consistent with the Department's program objectives under Chapter 161, Florida Statutes,

The Department does hereby adopt the following implementation actions:

1) Continue to bypass suitable sediment to the downdrift beaches.

As a first priority, place material on the beach in areas most in need and environmentally suited. As a minimum, bypassing of material shall meet average annual placement objectives as stated in the sediment budget. The sediment budget contained in the study report is adopted as an interim measure and shall be formally validated or redefined in subsequent revisions of the plan based on a comprehensive monitoring plan by December 31 2001.

2) Implement the sand transfer plant protocols subject to verification by the findings of the monitoring program.

Average annual bypassing of a minimum of 60,000 cubic yards should be conducted by the sand transfer plant in order to achieve a portion of the mechanical bypassing objective and to maintain a portion of the beach restoration project. The bypassing by the sand transfer plant shall not exceed an amount necessary to maintain the shoreline in Manalapan. Multiple discharge points for the sand transfer plant should be added to optimize performance of the beach restoration project.

3) Construct the expansion of the Interior Deposition Basin to facilitate bypassing objectives as stated above.

4) Implement a comprehensive beach and offshore monitoring program subject to the approval of the Department.

The program will be used to identify beach placement locations for future bypassing efforts and to revalidate the sediment budget.

IMP Implementation



1. Continue to bypass suitable sediment to the downdrift beaches.



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IMP Implementation



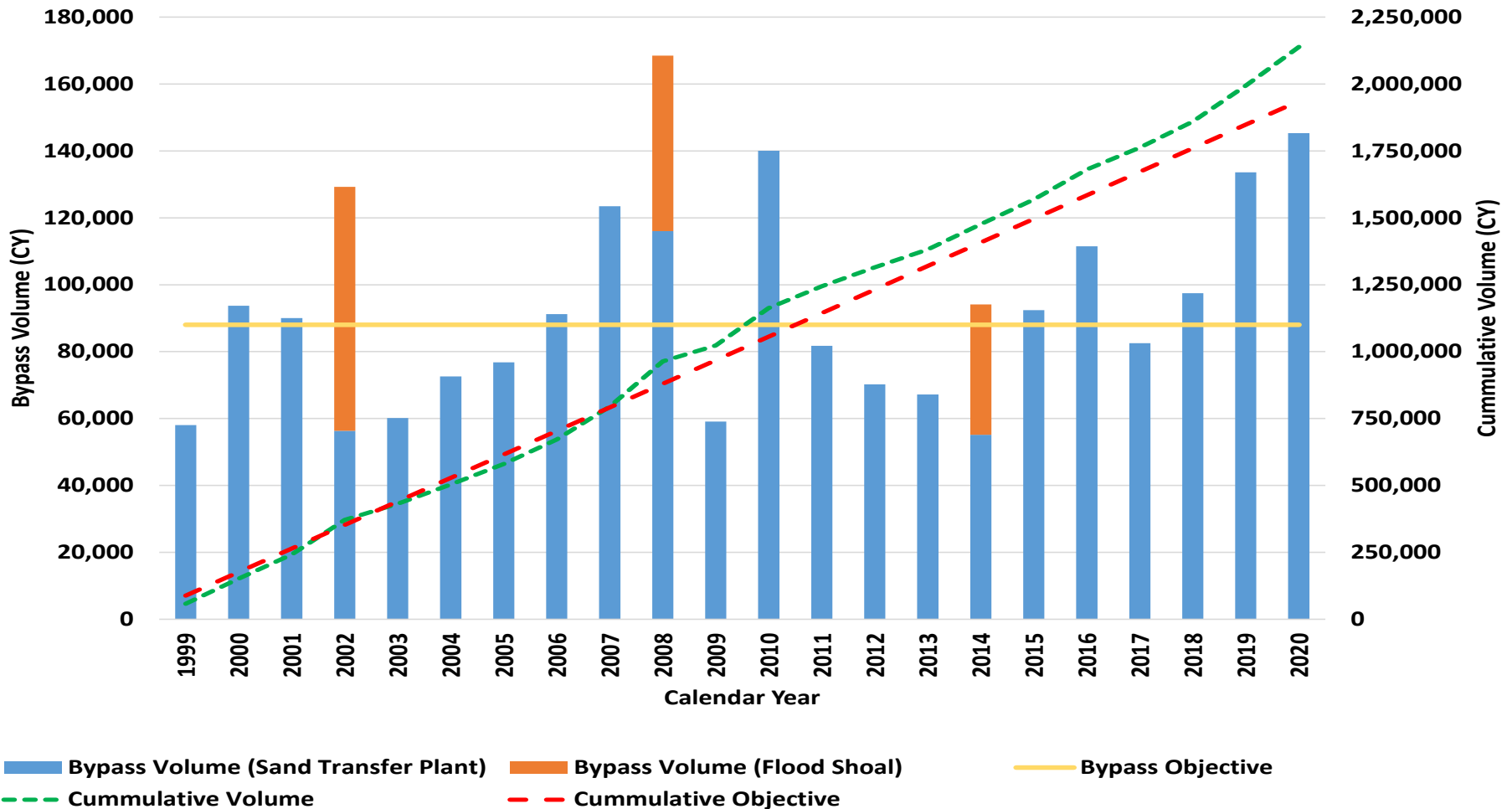
2. Implement the sand transfer plant protocols subject to verification by the findings of the monitoring program.



IMP Implementation



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IMP Implementation



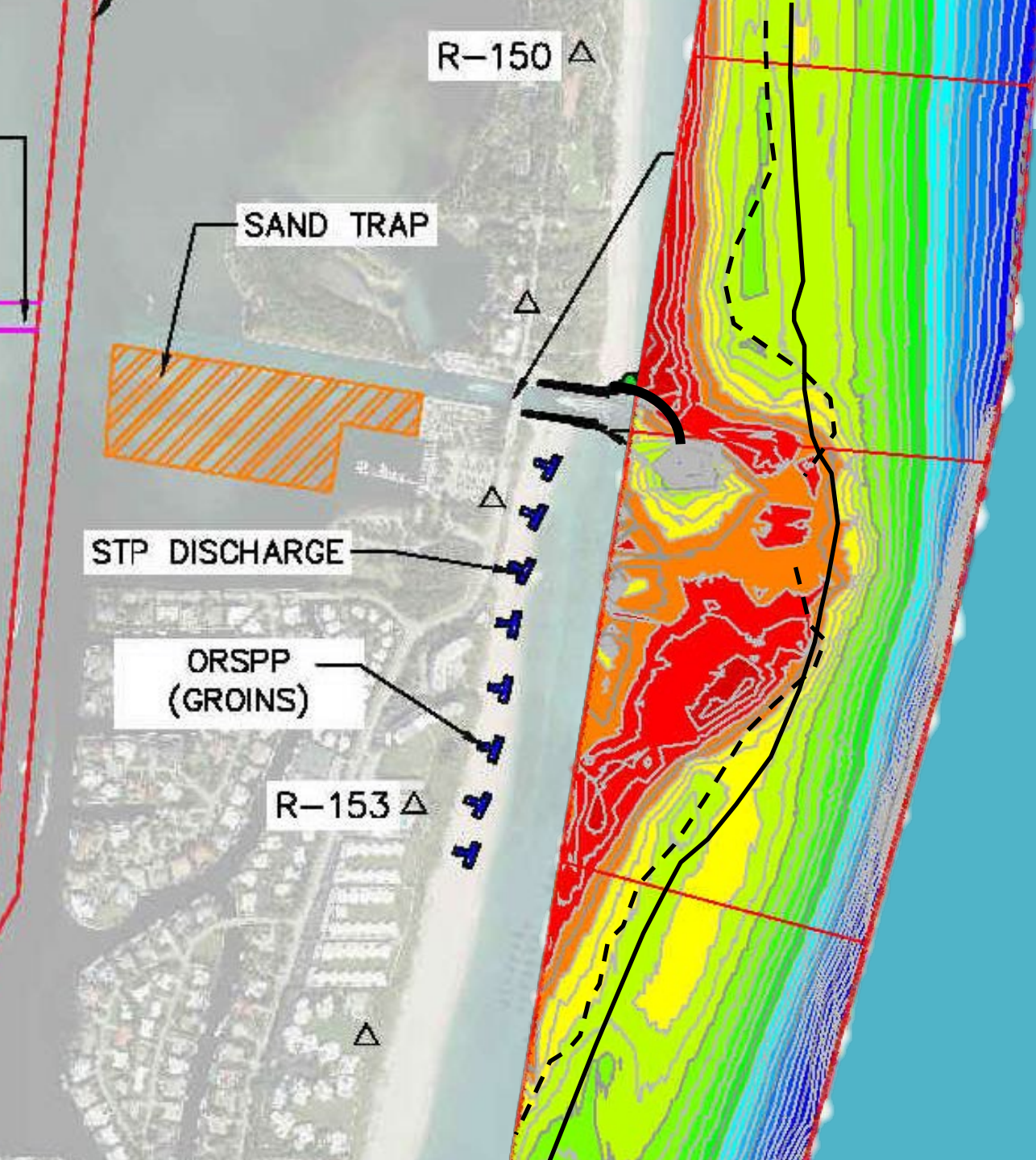
3. Construct the expansion of the interior deposition basin to facilitate bypassing objectives.



IMP Implementation



4. **Implement a comprehensive beach and offshore monitoring program subject to the approval of the Department.**



Ebb Shoal

2011

2013

2015

2017

2019

2021

Inlet Management Studies



- Sediment budget updated...2004 and 2021...net and gross transport evaluated
- 2021 conclusion... management activities are preventing impacts to downdrift beaches



Stakeholder Coordination



- **Technical Advisory Committee (TAC)**

 - FDEP*

 - Town of Manalapan*

 - Town of Ocean Ridge*

 - Palm Beach County + APTIM Environmental & Infrastructure*

- **TAC meetings held as 2021 study progressed...4 total**

IMP Update Adoption



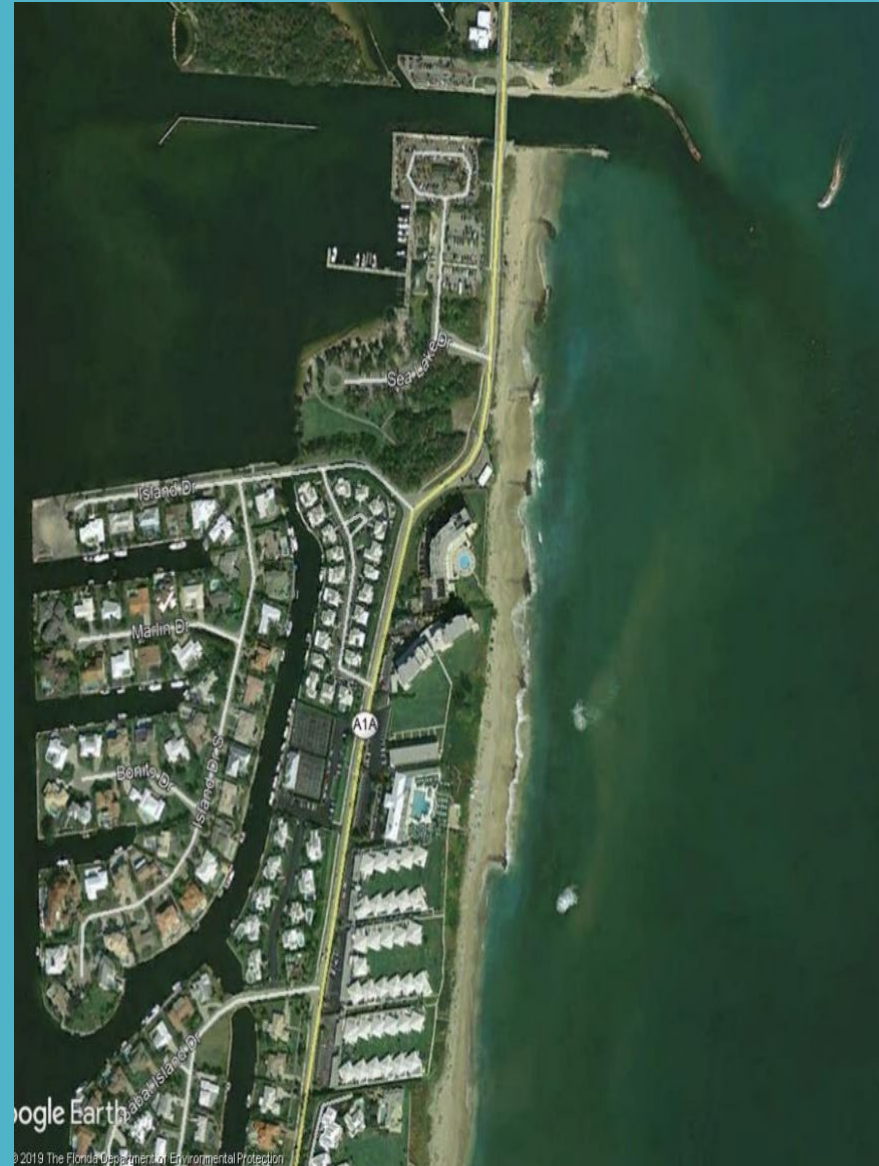
- Consistency review
- Formal agency adoption

- **Benefits**

Satisfies FDEP statutory requirements

Provides a basis for implementation (e.g. construction projects, improvements, and maintenance activities)

Establishes LGFR funding eligibility



What composes an Inlet Management Plan?

1) History: Documents the history of an inlet in its coastal setting.

- *Structural modification*
- *Shoreline changes*
- *Notable events*

2) Analysis: Summarizes pertinent inlet studies.

- *Historical Studies*
- *IMS*

3) Strategies: Establishes IMP objectives and procedures.

- *Target bypassing objective*
- *Monitoring protocol*

2022 Preliminary IMP Strategies



#1) Sand bypassing shall be performed from the inlet system to the adjacent Atlantic-fronting beaches between the south jetty (R-152) and R-159.

Shores from R-152 to R-168 (3.3. miles south of the inlet) are critically eroded

Historical record of severe erosion downdrift of the inlet

Statutory Intent:

161.142 “Accordingly, the Legislature finds it is in the public interest to replicate the natural drift of sand which is interrupted or altered by inlets to be replaced and for each level of government to undertake all reasonable efforts to maximize inlet sand bypassing to ensure that beach-quality sand is placed on adjacent eroding beaches.”

2022 Preliminary IMP Strategies



#2) A comprehensive beach and inlet hydrographic monitoring program shall be conducted.

Beach and nearshore surveys between R-146 and R-159

Periodic inlet, ebb & flood shoal hydrographic surveys

Potential for hydraulic monitoring

Statutory Intent:

161.142 (2) "... *The department shall, with the assistance of university-based or other contractual resources that it may employ or call upon, maintain a current estimate of such quantities of sand for purposes of prioritizing, planning, and permitting.*"

2022 Preliminary IMP Strategies



#3) On an average annual basis, the target inlet sand bypassing quantity shall be 115,000 cubic yards per year to the south.

Bypassing objectives informed by the most recent sediment budget

Minimum four years of additional monitoring data to modify

	1999 IMP	2022 Draft IMP
Total Bypassing Objective	88,000 cy/yr	115,000 cy/yr
Minimum from Sand Transfer Plant	60,000 cy/yr	70,000 cy/yr

Statutory Intent:

161.142 “... Such activities cannot make up for the historical sand deficits caused by inlets but shall be designed to **balance the sediment budget of the inlet** and adjacent beaches and extend the life of proximate beach-restoration projects so that periodic nourishment is needed less frequently.”

#4) The source of sediment for meeting the target sand bypassing quantities in Strategy #3 shall be the inlet sand transfer plant or as otherwise authorized by permit.

Supplementary methods of mechanical sediment bypassing include:

- Maintenance dredging of navigation channel*
- Dredging of flood shoal*
- Upland sand mines*
- Offshore sediment sources*

Annual maintenance dredging supplied 3,000 cy/yr

Statutory Intent:

161.142 (1) "All construction and maintenance dredging of beach-quality sand are placed on the adjacent eroding beaches unless, if placed elsewhere, an equivalent quality and quantity of sand from an alternate location is placed on the adjacent eroding beaches."

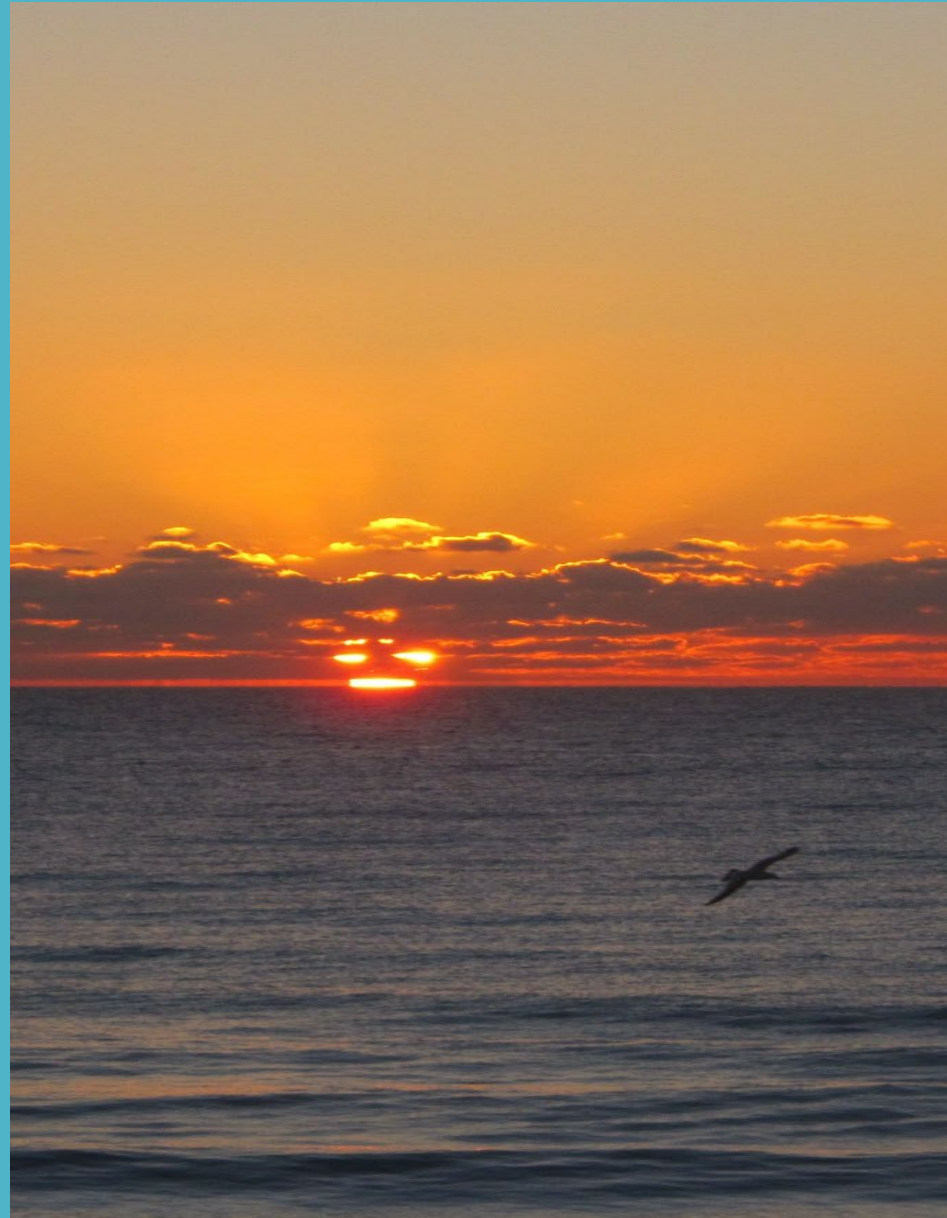
Summary



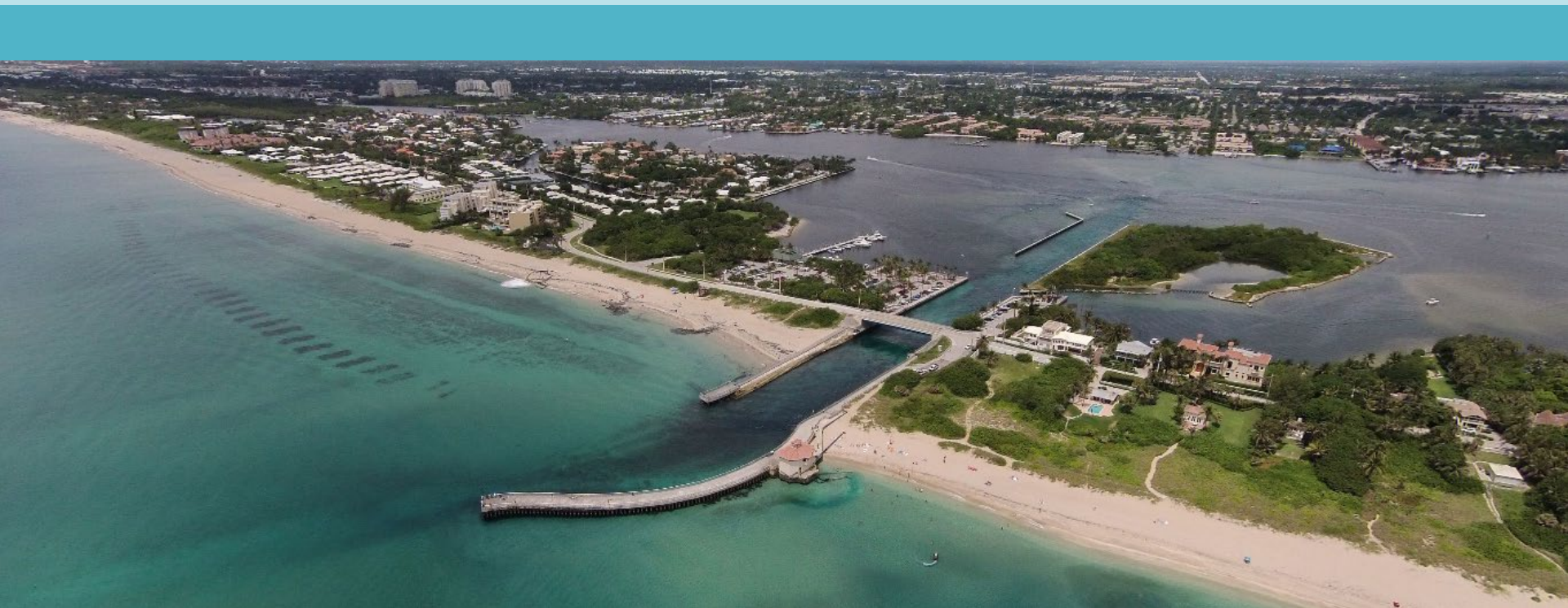
Studies and IMP updates are driven by science and supported by statute

IMP updates “pay” future dividends and provide a variety of benefits

The life cycle of an IMP is a continuous marathon



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Thanks!

Questions?