

Indian River Lagoon Basin Management Action Plan

IRL BMAP Kickoff Meeting
June 12, 2009



Meeting Overview

1. Components of a BMAP
2. BMAP Process
3. IRL Total Maximum Daily Loads
4. Approach for the IRL BMAP
5. Next Steps

Components of a BMAP



<http://www.sjrwmd.com/itsyourlagoon/index.html>

Key BMAP Components

- I. TMDLs being addressed
- II. Assumptions
- III. Considerations identified for next iteration
- IV. Future growth
- V. Allocations to responsible sources
- VI. Projects to meet the TMDL
 - Individual or regional
 - Structural or nonstructural
 - Must be maintained as permitted

Key BMAP Components, cont'd

VII. Funding sources

VIII. Monitoring plan (water quality and project efficiency)

IX. Process to monitor progress towards the TMDL

X. Implementation timeline and commitments

XI. Appendices with supporting information

BMAP Process



Courtesy of Robert Day

BMAPs

- Basin Management Action Plan = BMAP
- A BMAP is developed collaboratively with stakeholders to meet provisions in Section 403.067(7) F.S.
- Point Sources: BMAPs are enforceable through wastewater and MS4 NDPES permits
- Nonpoint Sources: BMAP projects are enforceable
- Agriculture: BMPs or monitoring is required
- BMAPs are adopted by FDEP Secretarial Order

BMAPs continued

- The BMAP must include a complete plan to show how the TMDL will be met.
 - The IRL BMAP will be phased.
 - Timeline for BMAP implementation has not been determined yet.
- Considerations for improving the TMDL and BMAP in the next iteration should be identified.



Agriculture

- Agriculture will be assigned its own load reduction.
 - Producers will be required to implement appropriate BMPs or monitoring plan, developed by DEP, to show producer not having an impact.
- FDACs is a partner in the BMAP process.
- In the main stem, agricultural land use makes up:
 - 8.9% of land use in North IRL;
 - 26.9% in Central IRL; and
 - 0.5% in Banana River Lagoon.

BMAP Responsibilities

- Responsibility for reductions can apply to all sources:
 - Wastewater treatment facilities;
 - Phase I and Phase II MS4s;
 - Urban areas outside of an MS4;
 - Nonpoint sources;
 - Federal facilities;
 - Agriculture; and
 - Power plants.



Courtesy of Robert Day

BMAP Responsibilities, cont'd

- Lack of funding does not mean “no action required.”
- Facilities that have already upgraded may need to do more.
- Current available BMPs alone may not result in the reductions we need:
 - Potential use of regional or cooperative projects.
 - Water retention.
 - Ideas for projects and innovations are welcome.

IRL Total Maximum Daily Load



Courtesy of Robert Day

What is a TMDL?

- A TMDL is the maximum amount of a pollutant that a waterbody can assimilate and still meet water quality standards.
- TMDLs are developed for waterbodies that have sufficient data to demonstrate they are not meeting applicable water quality standards.

Components of a TMDL

- There are two parts to a TMDL:
 1. A target based on water quality standards; and
 2. Load reduction(s) for pollutant(s) that are necessary to ensure that the established target is met.



Target for IRL TMDL

- Florida narrative nutrient criteria (water quality standards) require nutrient concentrations that allow a balanced ecosystem.
- For IRL, the target is the historical distribution of seagrasses as a measure of a balanced ecosystem (less 10% of seaward extent of seagrasses).

IRL Load Reductions

- Based on statistical relationships between the distribution of seagrass and land-based nitrogen and phosphorus loads per acre (pounds/acre/year).
- Relationships based on best available data and rigorous, standardized statistical methods.

IRL Load Reductions, cont'd

- Are determined for WBIDs or combinations of adjacent WBIDs.
- Were summarized for the three major parts of the IRL in the TMDL:
 - North IRL
 - Central IRL
 - Banana River Lagoon



<http://www.sjrwmd.com/itsyourlagoon/index.html>

Required IRL Nitrogen Reductions

Location	Existing Loading (lbs/yr)	Target Loading (lbs/yr)	Required Reduction (lbs/yr, %)
North IRL	886,257	687,044	199,213 (22%)
Central IRL	1,961,103	962,988	998,115 (51%)
Banana River Lagoon	484,462	291,755	192,707 (40%)

Required IRL Phosphorus Reductions

Location	Existing Loading (lbs/yr)	Target Loading (lbs/yr)	Required Reduction (lbs/yr, %)
North IRL	100,919	56,550	44,369 (44%)
Central IRL	314,148	165,193	148,955 (47%)
Banana River Lagoon	61,900	23,253	38,647 (62%)

Approach for the IRL BMAP

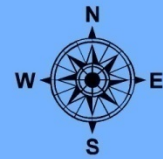


Courtesy of Robert Day

BMAP Approach

- Divide IRL Basin into three (3) subbasins.
 - North IRL, Central IRL, Banana River Lagoon (BRL)
- Three separate BMAPs will be created for each of the subbasins.
 - The actions listed in all three BMAPs must achieve the TMDLs.
- Specific tributary load reductions will be added to the subbasins once the tributaries TMDLs are complete.

Indian River Lagoon North BMAP



0 3 6 12 Miles

Legend

- NPDES Facilities in TMDL
- IRL North Waterbodies in BMAP
- Federal Property
- Brevard County, District 5 FLR04E024
- City of Cocoa,
- City of Indian Harbour Beach,
- City of Melbourne,
- City of Titusville,
- Town of Indialantic,
- Town of Rockledge,
- Volusia County, District 5 FLR04E024

Incorporated Places

NAME

- Cocoa
- Indialantic
- Indian Harbour Beach
- Melbourne
- Palm Bay
- Palm Shores
- Rockledge
- Titusville

DOTDIST

- 5



WBIDs in the North IRL BMAP

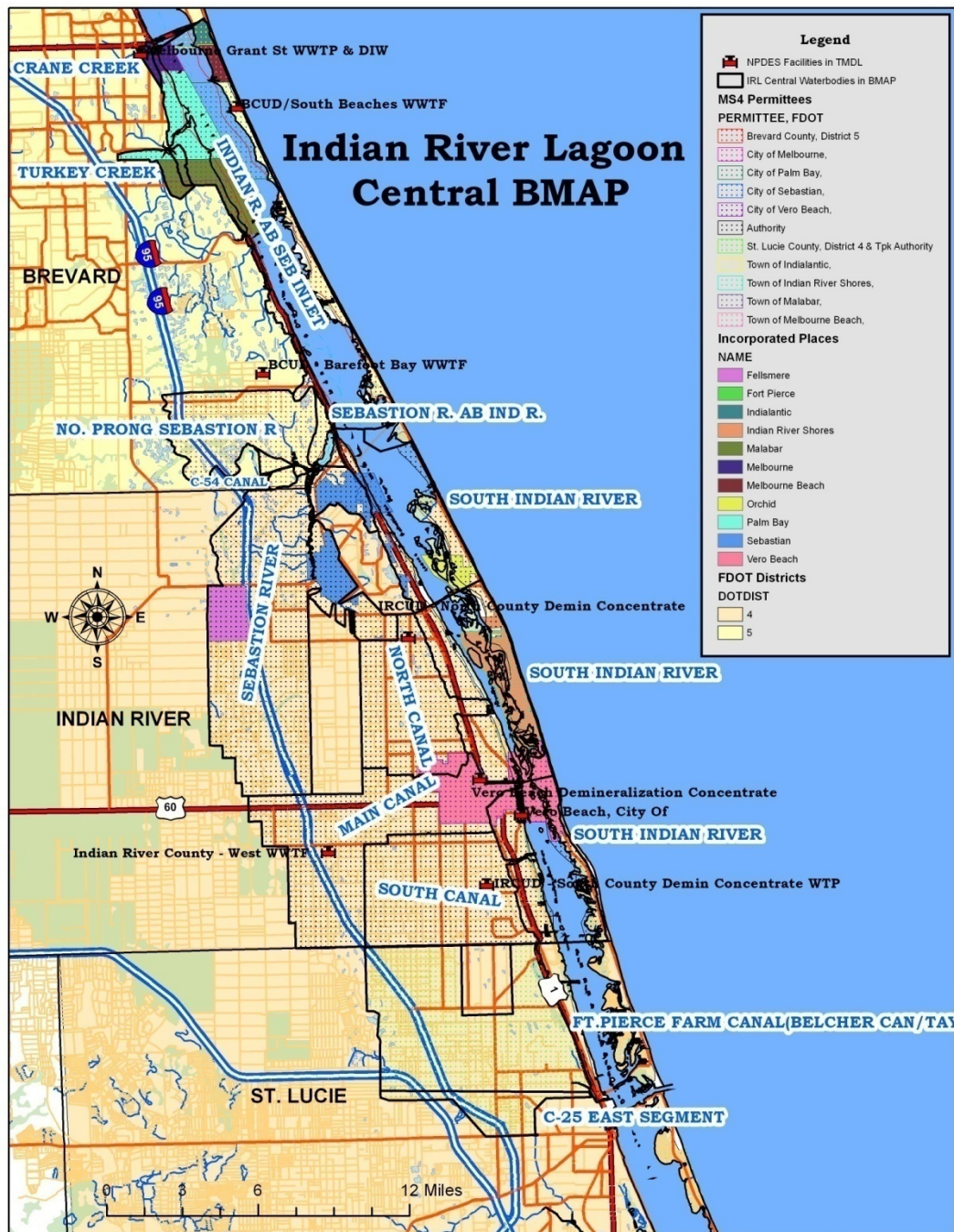
- 2963B Indian River above Melbourne Causeway
- 2963C Indian River above Melbourne
- 2963D Indian River above 520 Causeway
- 2963E Indian River above NASA Causeway
- 2963F Indian River above M. Brewer
- 3028 Addison Creek (Tributary)
- 3082 Eau Gallie River (Tributary)

NPDES Facilities in the North IRL BMAP

- Cocoa/J. Sellers
- Cape Canaveral Power Plant
- Reliant Energy
- Rockledge
- Melbourne RO
- Additional facilities may be added with the tributaries

MS4s in the North IRL BMAP

- FDOT, District 5
- Brevard County
- City of Cocoa
- City of Indian Harbor Beach
- City of Melbourne
- City of Titusville
- Town of Indialantic
- Town of Rockledge
- Volusia County
- Additional MS4s may be added with the tributaries



WBIDs in the Central IRL BMAP

- 2963A Indian River above Sebastian Inlet
- 3085A Crane Creek (Tributary)
- 3098 Turkey Creek (Tributary)
- 3128 North Prong Sebastian River (Tributary)
- 3129A Sebastian River above Indian River (Tributary)
- 3129B Sebastian River (Tributary)
- 3135 C-54 Canal (Tributary)
- 3147 North Canal (Tributary)
- 3153 Main Canal (Tributary)
- 3158 Main Canal (Tributary)
- 3163 Fort Pierce Farm Canal (Tributary)
- 3163B C-25 East Segment (Tributary)
- 5003B South Indian River
- 5003C South Indian River
- 5003D South Indian River

NPDES Facilities in the Central IRL BMAP

- South Beaches, WWTF
- Melbourne Grant, WWTP
- Barefoot Bay, WWTF
- Vero Beach, City of
- Vero Beach, RO
- Indian River County West, WWTF
- Indian River County South RO
- Additional facilities may be added with the tributaries

MS4s in the Central IRL BMAP

- FDOT, District 4 & 5
- Turnpike Authority
- Brevard County
- City of Melbourne
- City of Palm Bay
- City of Sebastian
- City of Vero Beach
- St. Lucie County
- Town of Indialantic
- Town of Indian River shores
- Town of Malabar
- Town of Melbourne Beach
- Indian River County
- Additional MS4s may be added with the tributaries

Banana River BMAP



0 2 4 8 Miles

Legend

- NPDES Facilities in TMDL
- Banana Waterbodies in BMAP
- Federal Property

Banana BMAP

MS4 PERMITTEES

- Brevard County
- City of Cape Canaveral
- City of Cocoa Beach
- City of Indian Harbour Beach
- City of Satellite Beach
- Patrick AFB

Incorporated Places

NAME

- Cape Canaveral
- Cocoa Beach
- Indian Harbour Beach
- Melbourne
- Satellite Beach

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WBIDs in the BRL BMAP

- 3044A Newfound Harbor
- 3057A Banana River below Mathers
- 3057B Banana River above 520 Causeway
- 3057C Banana River above Barge Canal

NPDES Facilities in the BRL BMAP

- Morton Salt
- Cape Canaveral
- Cocoa Beach

MS4s in the BRL BMAP

- Brevard County
- City of Cape Canaveral
- City of Cocoa Beach
- City of Indian Harbor Beach
- City of Satellite Beach
- Patrick Air Force Base

Groups and Meeting Format

- Technical meetings
- Basin Working Group meetings
- One-on-one meetings



Courtesy of Robert Day

Technical Meetings

- Separate technical meetings will be held for each of the three subbasins.
- Each subbasin will meet once every three months, resulting in monthly meetings.
 - Meeting locations may rotate around each subbasin.
- Purpose of the meetings is for fact-finding by technical staff to provide supporting information for the BMAP.
- All technical meetings will be noticed in the FAW and open to the public, in conformance with the Sunshine Law.

Basin Working Group

- A Basin Working Group (BWG) will be formed as the “voting group” to provide recommendations to FDEP.
- The BWG will consist of management level representatives.
- The BWG(s) may function as the Management Committee to the IRL NEP.
- All BWG meetings will be noticed in the FAW and open to the public.
- The BWG is subject to all of the provisions of the Sunshine Law, including limits on communications among members.

Sunshine Law

- Florida's Government-in-the-Sunshine Law provides a right of access to governmental proceedings.
- The Sunshine Law is intended to expose government's *entire* decision-making process to the public.
- The law is applicable to any gathering of two or more members of the same board or commission to discuss some matter on which foreseeable action will be taken by the board or commission.
- Technical meetings are public meetings under the Sunshine law but do not have designated members.

Sunshine Law, continued

- The Sunshine law requires that:
 - Meetings must be open to the public;
 - Reasonable notice of such meetings must be given; and
 - Minutes of the meeting must be taken.
- Technical meetings – must be publicly noticed and meeting minutes taken.
- BWG meetings – must be publicly noticed, meeting minutes taken, and two or more representatives cannot discuss BMAP items outside of a noticed meeting.

Next Steps



Courtesy of Robert Day

Homework Assignments

- Review Sunshine Law to help identify appropriate representatives for the BWG.
- Identify any stakeholders that were missing from the meeting.
- Wait for specific FDEP guidance before compiling project lists.

Next Meeting

- Next meeting date: July 10, 2009.
 - Ideas for a meeting location?
- Possible agenda topics:
 - Review list of missing stakeholders.
 - BMAP implementation timeline and milestones.
 - Potential allocation approaches and issues.
 - Overview of the types of projects eligible for credit.
 - Discussion of regional projects and ideas.

Questions?

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