



*Florida Department of
Environmental Protection*

Biscayne Bay Aquatic Preserves: Draft 10 year Management Plan

Florida Coastal Office

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Agenda

- Where we are
- Who we are
- What we do
- Miami's biggest secret ☺
- Management planning process
- 2014 is our 40th anniversary year!





In a nutshell...



... Biscayne Bay is the heart of our city.



“One way to open your eyes is to ask yourself, 'What if I had never seen this before? What if I knew I would never see it again?'" – Rachel Carson



Florida Department of Environmental Protection

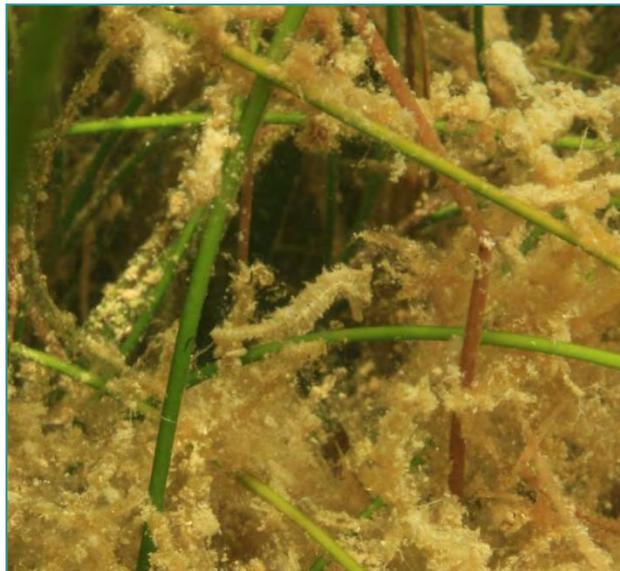
- DEP protects our air, water, and land.
- Three program areas:
 - Regulatory Programs
 - Land & Recreation
 - Water Policy and Ecosystem Restoration
- **Florida Coastal Office: 4 Million acres**
 - 41 aquatic preserves
 - Nat'l Estuarine Research Reserves
 - FL Keys Nat'l Marine Sanctuary
 - Coral Reef Conservation Program
 - Deep Water Horizon Fund
 - Outer Continental Shelf





The four long-term goals of CAMA's Aquatic Preserve Program are to:

- 1. Protect and enhance the ecological integrity of the aquatic preserves;





The four long-term goals of CAMA's Aquatic Preserve Program are to:

- 2. Restore areas to their natural condition;





The four long-term goals of CAMA's Aquatic Preserve Program are to:

- 3. Encourage sustainable use and foster active stewardship by engaging local communities in the protection of aquatic preserves; and





The four long-term goals of CAMA's Aquatic Preserve Program are to:

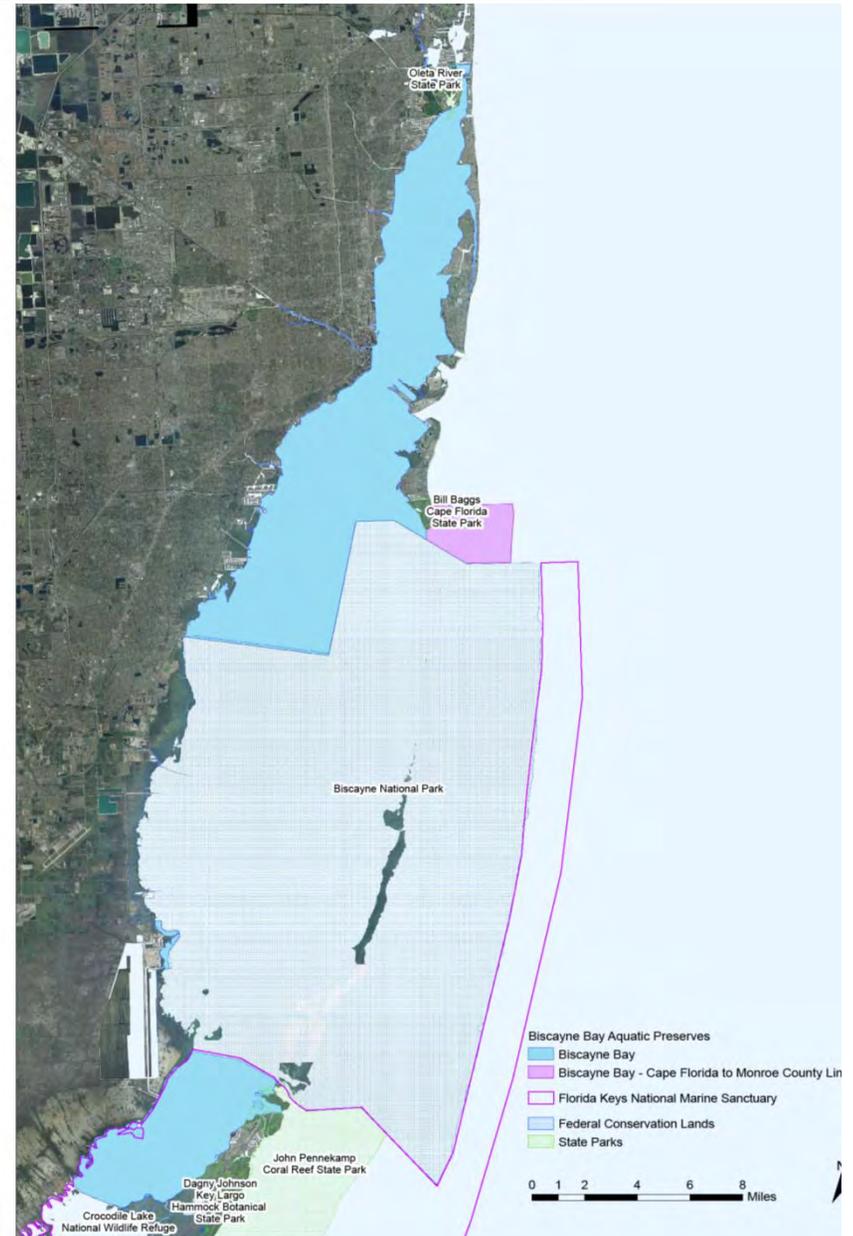
- 4. Improve management effectiveness through a process based on sound science, consistent evaluation, and continual reassessment.





About Biscayne Bay

- Serves the most populous county in Florida – 2.6 Million residents
- 35 miles long ; area = 428.6 sq miles
- 14 municipalities along border
- More than 30 islands (mostly spoil)
- Protected by both an aquatic preserve and a national park
- Part of the Kissimmee-Okeechobee-Everglades Watershed
- High diversity of species – and species unique to our area!





Our Story Begins in 1974

- Biscayne Bay Aquatic Preserve was “established for the purpose of preserving and enhancing Biscayne Bay . . . in an essentially natural condition” and
- “To preserve and promote indigenous life forms and habitats:
 - Sponges, soft corals & hard corals
 - Seagrasses, mangroves, mud flats
 - Marine reptiles
 - Game and non-game fish
 - Marine mammals
 - Tropical marine invertebrates
 - Birds
 - Shellfish.” --18-18.001 FAC





Seagrasses and Mangroves: Why should we care about their health?



- Provide habitat, shelter & food (especially juveniles)
- Cycle nutrients
- Stabilize shorelines
- Colonize sediment buildup
- Prevent erosion
- Oxygenate the water
- Remove carbon dioxide





Economic Drivers

- 75% of all recreationally important and 90% commercially important fish live at least part of their life cycle in mangrove habitat (NOAA);
- Seagrass communities in Miami-Dade supported **\$5million commercial harvest** of these crab, shrimp, lobster, and fish species (www.myfwc.com, 2010)
- Biscayne Bay Economic Study (2005):

Biscayne Bay Overall	Recreational component
\$13.7 B - output	\$4 B - output
\$6.9 B - income	\$2.2 B - income
143,000 jobs	58,800 jobs
\$686 M - tax revenue	\$272 M - tax revenue





Threats to Biscayne Bay

Habitat Loss



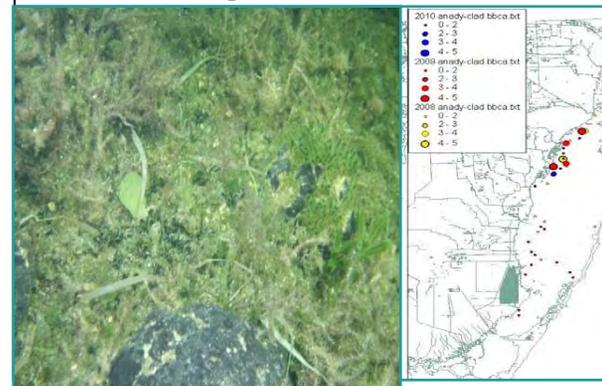
Water Quality & Quantity



Marine Debris



Algal Blooms





Threats to Biscayne Bay

Coastal Development



Overfishing



Derelict Vessels



Introduction of Marine Exotics



(c) Miami-Dade County RER

Global Change Events





Biscayne Bay Aquatic Preserves: DRAFT Management Plan

- First-ever management plan
 - We turn 40 next year!
- Public-review
- Approval by ARC and **BOT**

http://dep.state.fl.us/coastal/sites/biscayne/pub/Biscayne_Bay_AP_Management_Plan.pdf

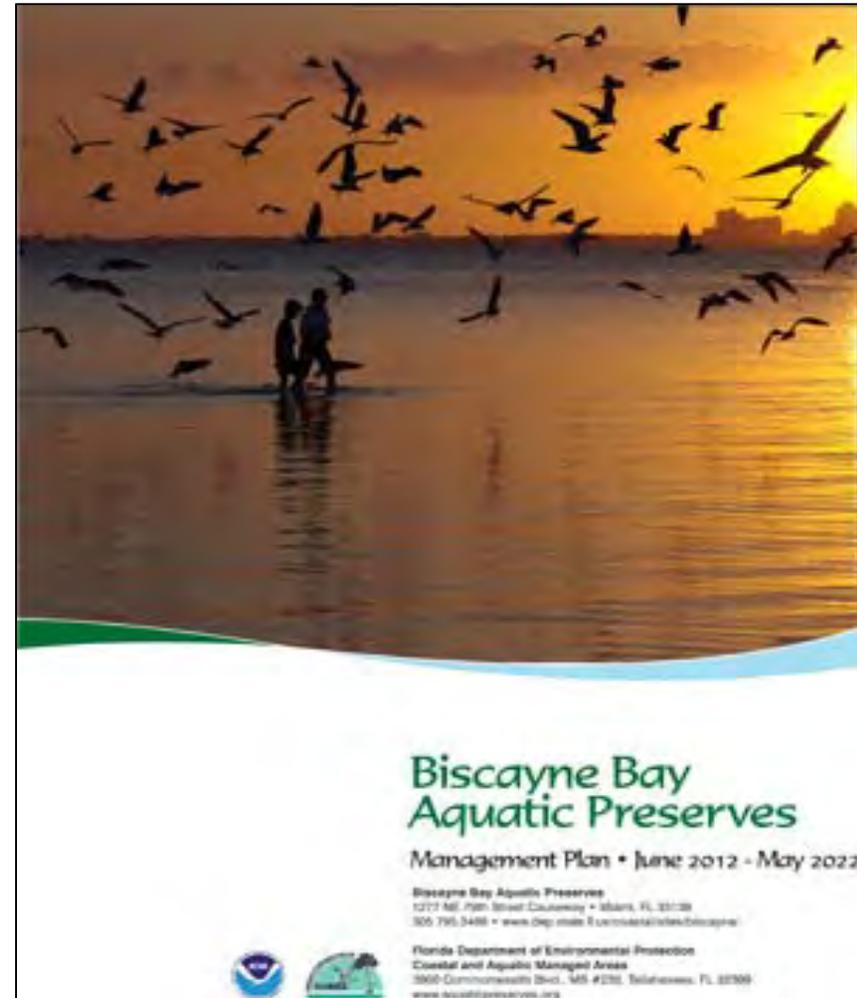


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The plan consists of seven chapters. It also includes:

- Appendices:
 - Species List
 - Acronyms
 - Cultural and historical resources
 - References
 - Legal documents
 - List of maps
 - Budget info
 - Record of public process



Advisory Committee

Sunshine Law applies to this body because it “applies to any board or commission of any state agency” and as such advisory boards created pursuant to law.

www.myflsunshine.com

Name	Organization
Charles Munroe	Friends of Biscayne Bay, Inc.
Captain Dan Kipnis	Recreational angler
Phil Everingham	Miami Marine Council
Honorable Harvey Ruvin	Miami-Dade County Clerk of Court
Dr. Rick Alleman	SFWMD
Steve Blair	Miami-Dade DERM
Superintendent Mark Lewis	Biscayne National Park Superintendent
Dr. Joan Browder	NOAA NMFS
Pete Harlem	FIU
Adam Belden	Oleta River State Park
Ron Mezich	FWC
Jill King	DEP Southeast District
Dr. Tom Lodge	Tropical Audubon Society





Chapter 5: Issues

- Issue 1: Water Quality and Quantity
- Issue 2: Habitat Loss
- Issue 3: Obstacles to Natural Resource Management
- Issue 4: Public Awareness, Access, and Use
- Issue 5: Sustainable Economic Use and Viability

- Issue
 - Goals
 - Objectives
 - Integrated Strategies
 - Performance Measures





Management Planning Process

- Draft management plan is developed by staff following general outline
- Staff organizes an advisory committee comprised of key stakeholders
- Staff advertises and conducts one or more public meetings to receive input from stakeholders on the concerns and perceived issues affecting the site
- **Input is used in the development of a revised draft management plan that is reviewed by FCO staff and the advisory committee**
- Final draft submitted to Division of State Lands
- Reviewed and approved by Acquisition and Restoration Council (ARC)
- BBAP and FCO staff attend ARC meeting where plan will be discussed – June 15 & 16 of this year





Management Plan Tracking

BBAP Integrated Workplan 2012-2013	Duration of Initiative	Strategies Initiated/Completed OR Not Initiated (I/C or NI)
Issue One: Water Quality and Quantity		
Goal 1: Maintain and improve water quality within and entering the preserves to meet the needs of the natural resources.		
Objective 1: Support local, state and federal efforts to produce a status and trends analysis of water quality in Biscayne Bay.		
Ecosystem Science		
Strategy 2: Support and assist in the improvement of the existing water quality monitoring network to ensure that monitoring provides sufficient quality and quantity of data.	R	I
Strategy 3: Identify sources of pollutants and sources of turbidity impacting BBAP and its tributaries, with specific focus on the Miami River.	R	I
Resource Management		
Strategy 5: Support the development of total maximum daily load levels for Biscayne Bay its tributaries.	3	NI
Strategy 6: Support the development of nutrient criteria protective of Biscayne Bay and Card Sound.	3	I
Strategy 9: Partner with DEP's Coral Reef Conservation Program to support and promote marine debris and land based sources of pollution projects.	R	I
Objective 2: Reduce water quality impacts to surface water and groundwater caused by stormwater and septic system sources within the watershed.		
Resource Management		
Strategy 1: Facilitate the inventory of stormwater drains and identify future improvement needs and incorporate data into GIS map.	4	NI
Strategy 3: Facilitate the inventory of existing municipalities or portions thereof still using septic systems and incorporate data into GIS map.	4	I
Strategy 4: Partner with the DEP Coral Reef Conservation Program's watershed management project to target stormwater management issues and relevant best management practices.	R	NI
Objective 3: Preserve natural shorelines and restore armored shorelines adjacent to the aquatic preserve to maintain or restore water quality and natural resources.		
Resource Management		
Strategy 2: BBAP staff can support the regulatory permitting process by informing decisions made by regulatory staff regarding resources present in the AP.	R	I





Management Plan Tracking

BBAP Management Plan Tracking Sheet

FY 2012-2013

Issue Topic	Strategies Identified	Strategies Initiated or Complete	Strategies Not Initiated	Percent Initiated or Complete	Strategies Deemed NA	Overall Percent Complete ((Initiated/Identified-NA)X100))
Water Quality and Quantity	13	10	3	77%	0	77%
Habitat Loss	4	3	1	75%	0	75%
Obstacles in Natural Resources Management	7	6	1	86%	0	86%
Public Awareness, Access, and Use	4	3	1	75%	0	75%
Sustainable Economic Use and Viability	1	1	0	100%	0	100%
Overall	29	23	6	79%	0	79%





Arc GIS Online

ArcGIS Biscayne Bay Aquatic Preserves

New Map My Content Help

Details Add Edit Basemap Save Share Print Measure Bookmarks Find address or place

Contents

- Map Notes
- Kayak Launches
- Boat Ramps
- Critical Wildlife Area (NOTE: No Entry)
- Clean (Green) Marinas
- Spoil Islands
- Biscayne Bay Aquatic Preserves Borders
- Lobster Sanctuary (NOTE: No Take Zone)
- Land Use
- Seagrass NOTE: May be found outside preserves too
- Seagrass Prop Scars in North Biscayne Bay
- Severity of Seagrass Scarring in N. Biscayne Bay
- Artificial Reefs
- Salinity Network Sites
- Biscayne Bay Epibenthic Monitoring

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FRIENDS OF BISCAYNE BAY
supporting miami's aquatic preserve

LINK:
<http://bit.ly/yNxuQh>
OR: enter "Biscayne Bay arcgis" on Google

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Where to find addition information

Biscayne Bay Aquatic Preserves

- www.aquaticpreserves.org
- Click on “Aquatic Preserves” and look for Biscayne Bay

Seagrass Outreach Partnership

- http://www.flseagrass.org/facts_news.php

Changing Seas

- <http://www.changingseas.tv/episode203.html>

Think Green

- <http://www.miamigov.com/evideo/pages/>

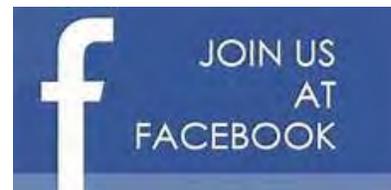




We're turning 40!



- **Sunday, October 5th: “Soiree on the Bay” @ The Deering Estate, early evening**
- **Saturday, October 25th: Adventure Paddle, leaving BBAP office**



LIKE us on Facebook
and Twitter

LIKE the Friends of
Biscayne Bay!





These resources are yours to enjoy and protect



“In the end, we will conserve only what we love. We love only what we understand. We will understand only what we are taught.”

--Baba Dioum, Senegalese ecologist





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