



Biscayne Bay: Status, Coordination, Funding

**Biscayne Bay Commission (DEP)
Jan. 4, 2022**

**Irela Bagué
Chief Bay Officer**

**Pamela Sweeney
Senior Manager
Water Resources Section (RER -DERM)**

Julia Tuttle Basin- Seagrass Die Off



2020 Fishkill | Algae Bloom | 2021: Fishkill



Courtesy of Waterkeeper



Courtesy of Waterkeeper



Courtesy of Waterkeeper



Biscayne Bay Collapse – What are the Issues?

Stormwater Runoff

- Pet waste.
- Gas and oil.
- Landscape waste.
- Trash.
- Industrial uses.
- Agriculture.
- Construction.

Wastewater

- Aged sanitary sewer lines .
- Septic systems .

Canal Runoff

Fertilizer & other chemicals

Non-compliance & illicit issues

Nutrient
Enrichment

We Now Know That What Happens
on the Land Ends Up In Our Bay!

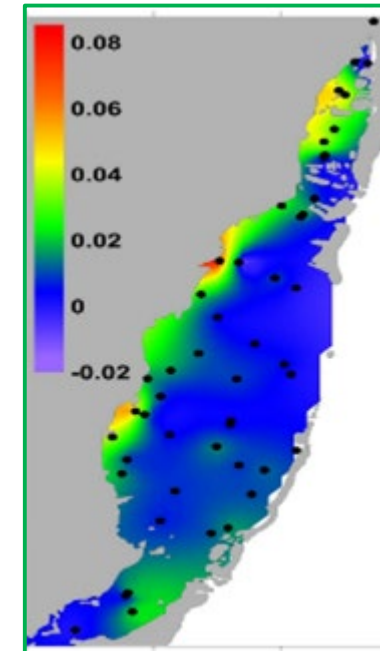
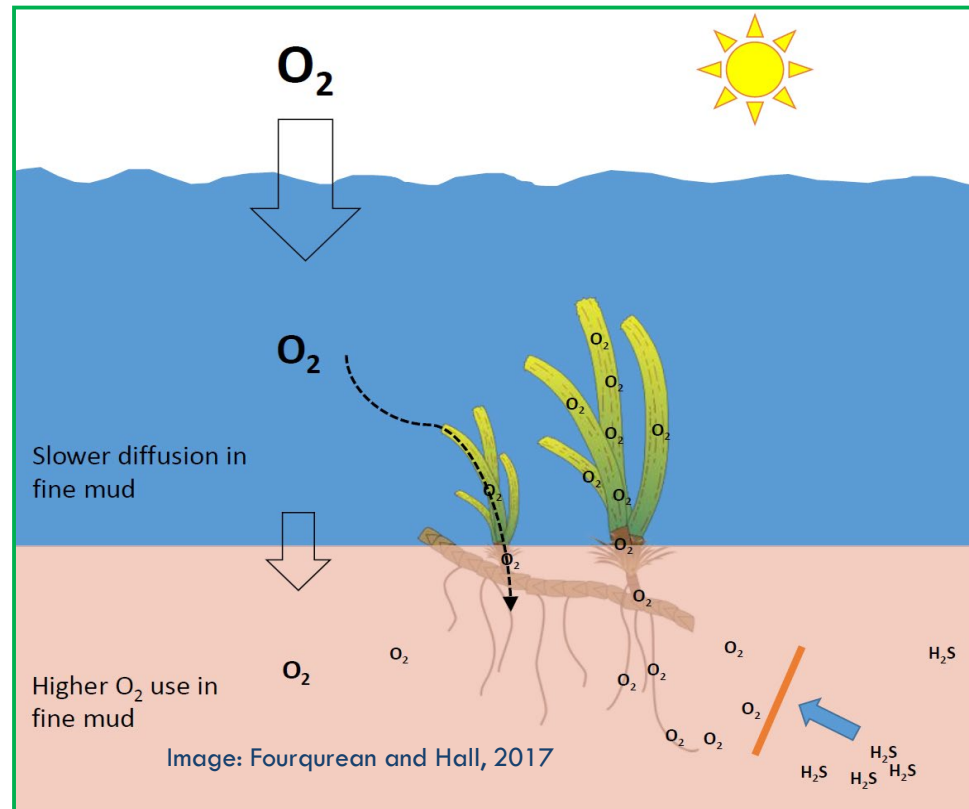


To succeed, we need to collaborate and
coordinate with all levels of government,
stakeholders and the public.

Biscayne Bay Recovery – Water Quality Impacts and Why it Matters

- Nitrogen.
- Phosphorus.
- Bacteria.
- Heavy metals.
- Herbicides.
- Environmental Pollutants of Concern.

Nutrient
Enrichment &
Pollutants



Contributing to

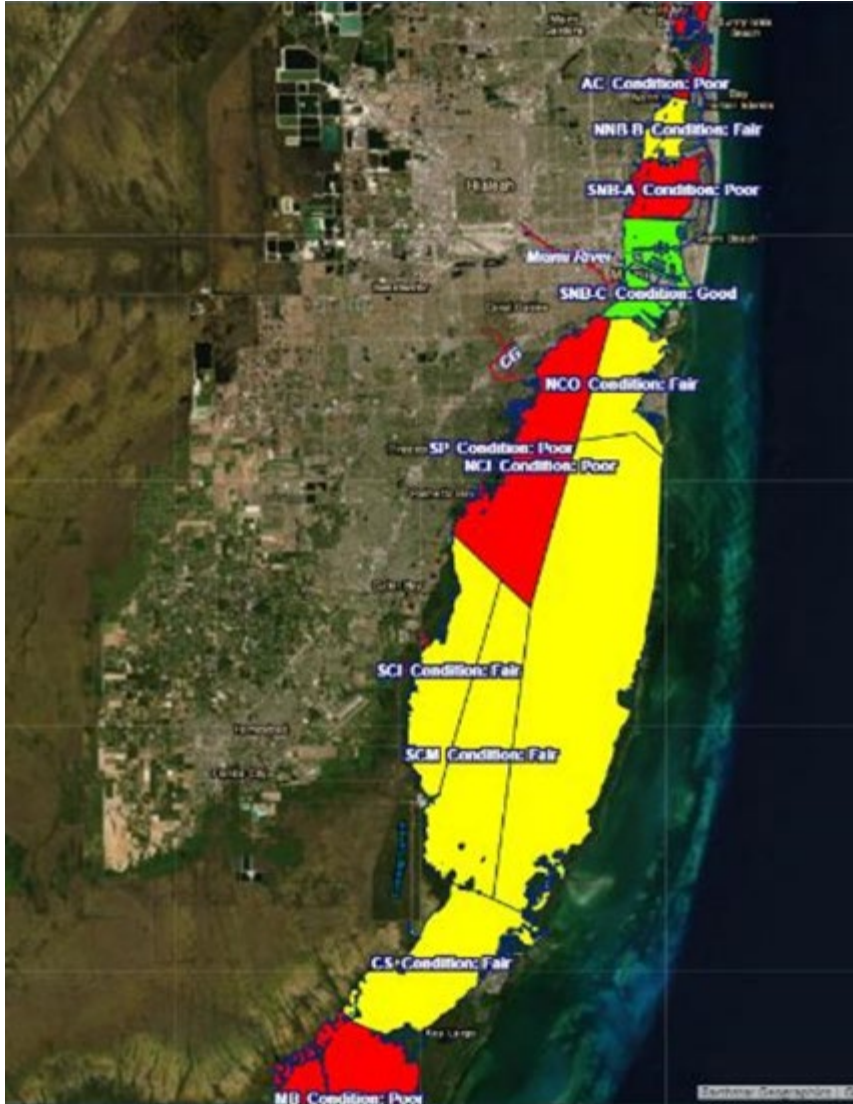
Seagrass Die-offs

Algal Blooms

- Micro (phytoplankton) & Macro.
- Transition to an algal-dominated system.

Fish Kills

Biscayne Bay – Water Quality Hotspots



Snapshot of the Biscayne Bay 2020 Report Card

- Most regions received a “Fair” or “Poor” score.
- Visit www.miamidade.gov/BiscayneBay.

How are nutrients available in the system?

Three main sources of freshwater received by the bay:

- Canal discharge (~40%).
- Submarine groundwater discharge (~10%).
- Precipitation (~50%).

Snake Creek, Little River, and Miami River delivered more than 50% of the bay’s total freshwater contribution from 1994-2002 (Caccia and Boyer, 2007).



Miami-Dade County Biscayne Bay Task Force



In memory of **Alyce Robertson** for her valuable contribution to the Biscayne Bay Task Force and her dedication to public service and love of our natural environment.

Biscayne Bay Task Force Recommendations



Water Quality



Governance



Infrastructure



Watershed Habitat Restoration
and Natural Infrastructure



Marine Debris



Education and Outreach



Funding



A Unified Approach to Recovery
for a Healthy & Resilient Biscayne Bay

Biscayne Bay Task Force Report and Recommendations
June 2020

Biscayne Bay Task Force Members

Irela Bagué, Task Force Chairperson, President, Bagué Group
David Martin, Task Force Vice Chairperson, President, Terra Group
Lynette Cardoch, Ph.D., Director of Resilience & Adaptation, Moffatt & Nichol
Lee Helty, Director, Division of Environmental Resources Management, Miami-Dade County
James Murley, Chief Resilience Officer, Office of Resilience, Miami-Dade County
John Pistorino, P.E., Principal, Pistorino and Alam
Alyce Robertson, Executive Director, Downtown Development Authority
Steve Sault, Biscayne Bay Marine Health Summit Steering Committee Member
Tiffany Trowler, Ph.D., Director of Science, Sea Level Solutions Center, Florida International University

Biscayne Bay Task Force Report – Accomplishment Highlights

June 2020



Completed
Biscayne Bay Task Force report

December 2020



Partnered
\$10M State & \$10M County
match for Biscayne Bay recovery

April 2021



Created
Biscayne Bay Website
& Report Card

June 2021



Applied
2021-22 FDEP
Water Protection Grants

August 2021



Budgeted
For update 2005 Biscayne Bay
Economic Study in partnership
with SFWMD

Released

Plan of Action to prioritize
septic to sewer conversions

Hired

Mayor Levine Cava appoints
Chief Bay Officer

Enacted

Countywide Fertilizer Ordinance
May 15th – Oct 31st

Created

“Protect Biscayne Bay”
specialty license plate

Established

Biscayne Bay Watershed
Management Advisory Board



December 2020



January 2021



April 2021



June 2021



November 2021

Accomplishments through Collaboration

**At-Risk Vessel Task Force
Marine Law Enforcement**



**51 Derelict Vessels Removed
FWC + FIND**



**Manatee Education & Enforcement
FWC + MDPD**



Academic Partnerships



Water Quality Monitoring FDEP



**Spoil Island Coordination
FDEP & Cities**



Funding Partnership with FDEP

2020 Coral Reef Protection Grant (\$10M Florida + \$10M Miami-Dade)

Water Quality Hot Spot Investigations

- Miami River | Little River | Biscayne Canal.

Wastewater Improvements

- Septic to sewer conversions & education.
- “Smart” manhole cover.

Stormwater Improvements

- Stormwater Innovations.
- Pilot Projects (New Blue Technology).
- Enhanced Maintenance.

Habitat Restoration

- Living Shorelines Guidance Document.
- Pilot Sponge Restoration.

2021-22 FDEP Water Protection Grants

Applied for Biscayne Bay Water Quality Improvement Grants

2022-23 FDEP Statewide Flooding and Sea Level Rise Resilience Grant

Awarded projects in Miami-Dade to benefit Biscayne Bay include land acquisition, stormwater improvements, and pump upgrades.





Biscayne Bay Watershed Management Advisory Board

Advises Mayor & County Commission on Bay related issues.

Makes recommendations for a new watershed management plan.

Collaborates with Biscayne Bay Commission (FDEP).



Local / State Partnership

Recovery Plan Coordination

Project Funding



Biscayne Bay Commission

Receives and reviews Biscayne Bay plans and project priorities from Miami-Dade County.

Ensures plans and projects are funded and implemented timely.

Submits semiannual report on accomplishments and status of pending tasks.

Top Items for Support and Collaboration

Septic to Sewer Legislative Priority

- Funding Opportunities.

Marine Law Enforcement

- Additional Staff Resources, Derelict Vessels & Gear, Manatee Protection, Signage, Illegal Charters.

Water Quality

- Increased Monitoring Stations .
- Canal Maintenance.
- Innovative Tech Solutions.

Land Management

- Spoil Island Maintenance.
- Land Acquisition for Green Infrastructure.



A scenic view of Biscayne Bay with a rocky shoreline in the foreground, blue water, and a city skyline in the background under a clear blue sky.

Thank you Together We Can!

Biscayne Bay information & updates:
www.miamidade.gov/biscaynebay