Media Overload: Fact or Fiction and the Path Forward for Port Miami and Port Everglades

 AAPA Energy and Environmental Seminar
   September 15, 2016
Port of Miami and Port Everglades
Port of Miami Deep Dredge Phase III Project

- Construction cost $207 M
- 5 M total CY dredging
- Schedule: August 2013 – 2015
<table>
<thead>
<tr>
<th>Component 1:</th>
<th>Component 2:</th>
<th>Component 3:</th>
<th>Component 5:</th>
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<tbody>
<tr>
<td>Widen seaward portion of Cut-1 from 500 to 800 feet; deepen Cut-1 and Cut-2 from 44 to 52 feet</td>
<td>Add turn widener at the southern intersection of Cut-3 with Fisherman’s Channel and deepen to 50 feet</td>
<td>Increase Fisher Island turning basin from 1200 to 1500 feet; truncate NE section of the turning basin to minimize seagrass impacts; deepen from 42 to 50 feet</td>
<td>Expand berthing area by 60 feet and widen southern edge of Fisherman’s Channel 40 ft; reduce Lummus Island turning basin to a 1500 ft dia.; deepen from 42 to 50 ft</td>
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Marine Resources Affected and Mitigated
Port of Miami Timeline

1999-2005
• Turn-key EIS and Supporting Studies
• Mitigation Plans for Seagrass and Hardbottom

2004-2006
• Finalized EIS and Record of Decision
• Miami Harbor Phase II Dredging Environmental Management

2009
• Hardbottom Pilot Study for Pre-construction Baseline

2010
• Quantitative Hardbottom Baseline Study
• Interagency Coordination

2013-2015
• Construction – Mitigation and Monitoring for Reef and Seagrass

2015-2018
• Post Construction Reef, Seagrass and Mitigation Monitoring
Reef Monitoring Program
Environmental Monitoring

- Scientific Dive Team has safely completed 9,600 dives and more than 1,000 snorkels since September 2013
- 2016 >250 dives (YTD) and counting!
- 2015 3,857 dives
- 2014 4,991 dives
- 2013 765 dives
The “Murky” Headlines

Activists sue to stop Government Cut dredge and protect coral
BY JENNY STALETOVICH - JSTALETOVICH@MIAMIHerald.COM
10/01/2014 7:22 PM | Updated: 10/01/2014 7:22 PM

Bay activists warn Corps to clean up dredge
BY JENNY STALETOVICH
07/17/2014 7:52 PM | Updated: 07/17/2014 8:20 PM

Biscayne Bay coral at risk from sloppy dredge work
BY JENNY STALETOVICH - JSTALETOVICH@MIAMIHerald.COM
08/06/2015 6:50 PM | Updated: 08/06/2015 6:50 PM

Miami’s Choice: Bigger Ships or Coral Reefs?
BY Scott Wyland
For Miami Herald

Bay dredging project threatens vital Miami reefs

Environmentalists ready to sue over Miami port’s deep dredge

NOAA Says Port Miami Dredge Disaster For Reef
August 16, 2015 4:40 PM

NOAA Warns of "Rapid Deterioration" of Endangered Corals Due to Deep Dredge Sludge
By Michael E. Miller Thu., Sep. 18 2014 at 7:00 AM

Deep Dredge Critics File Emergency Demand to Stop “Destruction of Endangered Species”
LETTERS TO THE EDITOR
MARCH 17, 2016 8:31 PM

Dredging sediment killed our port coral

Environment AUGUST 17, 2015
PortMiami dredge damages more coral than feds expected

INTERNATIONAL BUSINESS TIMES
Massive PortMiami Dredge Project ‘Wiping Out’ Vast Coral Field

The New York Times
Despite Protections, Miami Port Project Smoothers Coral Reef in Silt
BY JORDAN P. NEWELL
November 10, 2015

Miami Herald

Local
The Hits Just Keep On Coming!

Prevent additional damage to coral reefs

South Florida reefs have reached the "tipping point."

NOAA says Corps of Engineers failed to protect reefs during PortMiami dredge

State, feds must get serious about monitoring future projects

ENVIRONMENTALISTS AGAIN WARN OF WIDESPREAD CORAL DAMAGE IN PORT EVERGLADES EXPANSION PROJECT

BY CHRIS JOSEPH

FRIDAY, SEPTEMBER 4, 2015 | 5 DAYS AGO
The only newspaper that got the story right was the Washington Post
Not the Miami Herald or Fort Lauderdale Sun Sentinel

Energy and Environment

Bleaching and disease are devastating the biggest coral reef in the continental U.S.

By Chelsea Harvey  October 26

The disease outbreaks have been especially severe in the area off the coast of Miami, where bleaching was particularly heavy, Morton said. While several different types of coral disease have been observed, a disease known as “white plague” has been the most prevalent.
Port of Miami NGO Interventions and Legal Action

- Local activist and NGO lawsuit and settlement prior to construction (2012)
- Same NGOs filed injunction during project to stop dredging (2014)
- Same NGOs allowed to reopen over listed coral issues, facilitation attempted and now heading to court against the USACE (2015 to present)
Lessons Learned

The temporal data tells the story!

One-Off Surveys vs. Repeated Measures

PortMiami dredge damages more coral than feds expected | Miami Herald August 17, 2015

Look familiar?
Lead with Science not Headlines
Lessons Learned

It’s important to understand what happened regionally.

2014-2015 were bad years for corals in southeast Florida due to thermal stress (bleaching) and disease.
Lessons Learned

Use data to explain observed patterns.
Lessons Learned

• The repeated measures monitoring of tagged corals at control and channel side sites provided the detailed information needed to assign the correct cause of mortality to corals in the project area as opposed to the undocumented assertions of project opponents who conducted one-off surveys.

• The actual monitoring results from the project emphasize the need to implement scientifically-based, not ideologically-based management of natural systems to best understand, sustain and protect our fragile coral resources for future generations.
Detecting sedimentation impacts to coral reefs resulting from dredging the Port of Miami, Florida USA

Margaret W Miller
Jocelyn Karazsia, Carolyn E Groves, Sean Griffin, Tom Moore, Pace Wilber, Kurtis Gregg

1 Southeast Fisheries Science Center, NOAA-National Marine Fisheries Service, Miami, Florida, United States
2 Southeast Regional Office, NOAA National Marine Fisheries Service, West Palm Beach, Florida, United States
3 Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, Miami, Florida, United States
4 NOAA-National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, Florida, United States
5 Restoration Center, NOAA National Marine Fisheries Service, St. Petersburg, Florida, United States
6 Earth Resources Technology, Inc., Laurel, Maryland, United States
7 Southeast Regional Office, NOAA National Marine Fisheries Service, Charleston, South Carolina, United States

Published without Peer Review


“The recent appearance of numerous ‘sham’ journals, promising speedy publication... is likely to further complicate the task of assessing the progress of science. Unsuspecting scientists fall victim. Unscrupulous ‘scientists’ take advantage of these outlets’ superficial legitimacy, and scientific reports that would not be accepted by the technical journals now get published. While I think most scientists can spot a sham journal when they see one, and while I hope the ‘sham’ journals will fade away in a few more years, for now they offer a growing set of articles of spurious validity that will be part of the literature that a reader is attempting to evaluate.”

Dr. Peter Sale – renowned coral reef biologist
http://www.petersalebooks.com/?p=2309
Lessons Learned

- Don’t forget your past
- Repeated measures design documented dredging and natural effects
- Improve communication of results based on data – real time would be optimal
- Better use of adaptive management measures
- More involvement by agencies during monitoring needed
- More transparency during dredging
- More robust monitoring program
Port Everglades Deepening Project

- Authorized in 1996
- FS/EIS 2001-2015
- Chiefs Report 6-2015
- ROD 1-16
- PED 2016-2018
- Construction 2019-2021
Port Everglades Deepening Project

Legend

Existing Channel
- Outer Entrance Channel (OEC) [45']
- Inner Entrance Channel (IEC) [42']
- Widener [42']
- Modified Main Turning Basin (MTB) [42']
- Southport Access Channel (SAC) [42']
- Turning Notch (Turning and Berthing) [42']
- Turning Notch (Turning only) [42']

[0'] Existing Channel Depths
50' Proposed Channel Depths
450' Channel Width/Length
12 Distance from Berth to Channel
26 Vessel Berth Number

The Port plans to expand the Turning Notch to increase berth capacity by 400 ft. This expansion includes the release of approximately 8.68 acres west of the Turning Notch from the existing 48.27-acre conservation easement, and deepening the entire notch to 42 ft MLLW.
Port Everglades Deepening Project
Applying Lessons Learned

- Interagency Working Group
- Evaluating dredging practices to further minimize TSS loading
- More robust baseline studies, sediment transport modeling, and monitoring program
- Transparency with public and agencies during construction using innovative technology
- Public outreach program working with NGO’s during PED and through construction
- Use of reef cams and mobile applications for public access during construction
Port Everglades Project Would Repeat Environmental Destruction Caused by PortMiami Dredging

SCUBA, Environmental Organizations Challenge Massive Dredging Project to Save Threatened Corals

Lawsuit Filed Over Coral Concerns At Port Everglades

By KATE STEIN • AUG 18, 2016

A planned expansion of Port Everglades involves dredging that environment groups fear will harm endangered corals.

PORT EVERGLADES/COURTESY
"Every challenge, every adversity, contains within it the seeds of opportunity and growth."
— Roy Bennett