

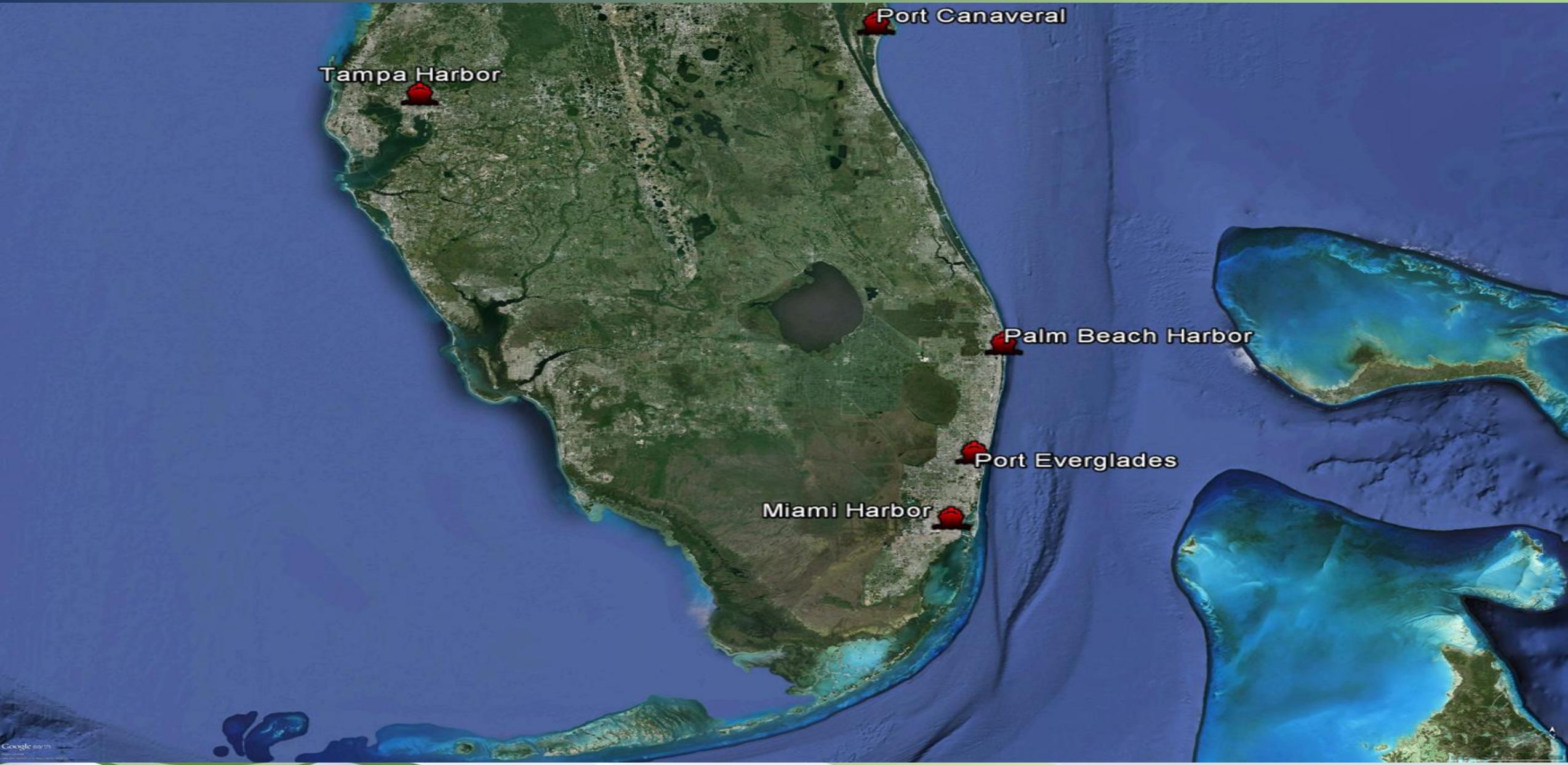


**DIAL CORDY**  
AND ASSOCIATES INC  
*Environmental Consultants*

# 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



# AUTHORIZED PROJECT



--- Existing Federal Channel

## Component 1:

Widen seaward portion of Cut-1 from 500 to 800 feet; deepen Cut-1 and Cut-2 from 44 to 52 feet

## Component 2:

Add turn widener at the southern intersection of Cut-3 with Fisherman's Channel and deepen to 50 feet

## Component 3:

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

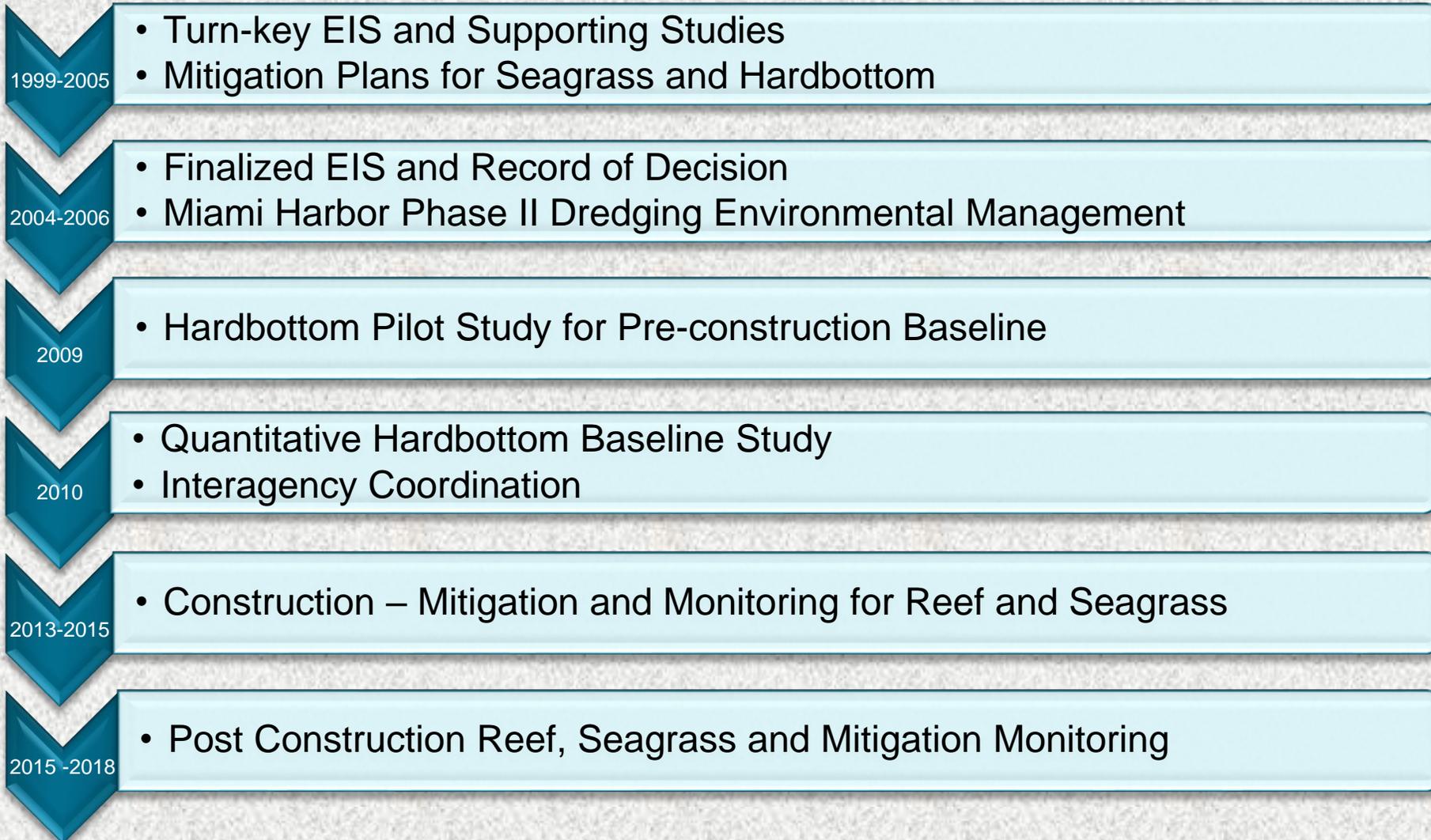
## Component 5:

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

# Marine Resources Effected and Mitigated



# Port of Miami Timeline





# 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

## Voices: A fragile environment pays the price for Miami's growth spurt

Alta Gomez, USA TODAY 4:04 p.m. EST December 27, 2013

## Bay activists warn Corps to clean up dredge

BY JENNY STALETOVICH  
07/17/2014 7:52 PM | Updated: 07/17/2014 8:20 PM

Miami-Dade County

**Miami Herald**

## Biscayne Bay coral at risk from sloppy dredge work

BY JENNY STALETOVICH - JSTALETOVICH@MIAMIHERALD.COM  
02/05/2015 4:50 PM | Updated: 02/05/2015 6:24 PM

The New York Times <http://ny5.ms/1A19KJc>

## Despite Protections, Miami Port Project Smothers Coral Reef in Silt

By LIZETTE ALVAREZ MARCH 17, 2015

TRUE STORY  
APRIL 17

CBS NEWS / July 17, 2014, 8:43 AM

## Bay dredging project threatens vital Miami reefs

## Environmentalists ready to sue over Miami port's deep dredge

REUTERS By Zachary Fagenon  
August 28, 2014 7:45 PM

## Miami's Choice: Bigger Ships or Coral Reefs?

*Dredging in Biscayne Bay inflicts heavy damage on North America's only coral reef tract.*

By Scott Wyland  
for National Geographic

## INTERNATIONAL BUSINESS TIMES

Twitter Rumor: 1D Fans Supposedl...

Massive PortMiami Dredge Project 'Wiping Out' Vast Coral Field

Local

## NOAA Says Port Miami Dredge Disaster For Reef

August 18, 2015 4:40 PM

## Miami port dredging damaging sea life, state inspectors say

BY JENNY STALETOVICH  
08/19/2014 6:36 PM | Updated: 08/19/2014 8:54 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

8 Comments

Environment AUGUST 17, 2015

## PortMiami dredge damages more coral than feds expected

Florida – 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

# The Hits Just Keep On Coming!

5/5/2016

Prevent additional damage to coral reefs | Miami Herald

**EDITORIALS** MAY 4, 2016 7:11 PM

## Prevent additional damage to coral reefs

### HIGHLIGHTS

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

BROWARD PALM BEACH  
**New Times**

## 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

**The Washington Post**

Energy and Environment

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

By **Chelsea Harvey** October 26

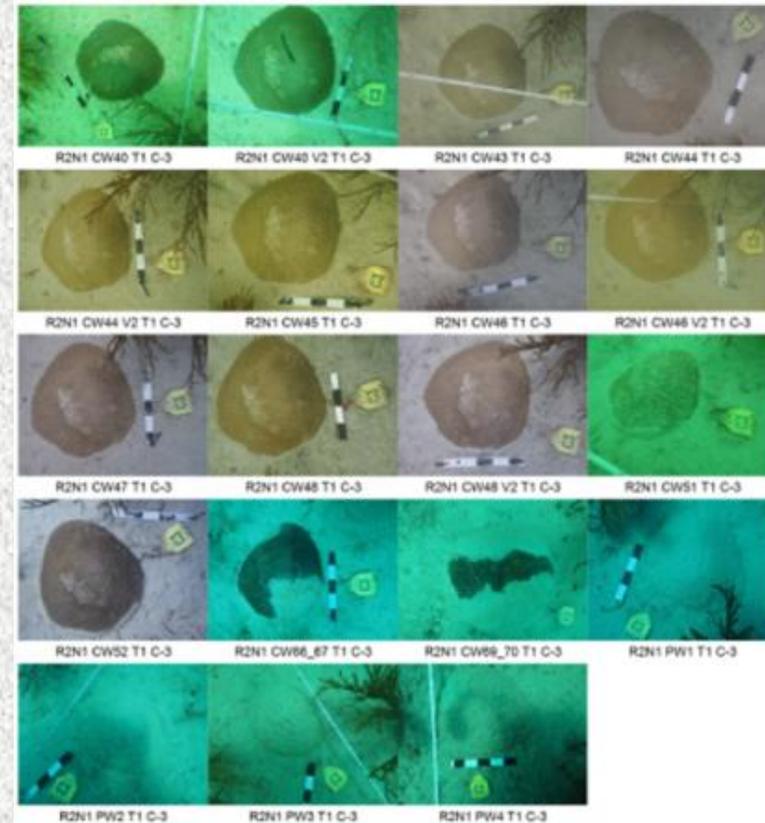
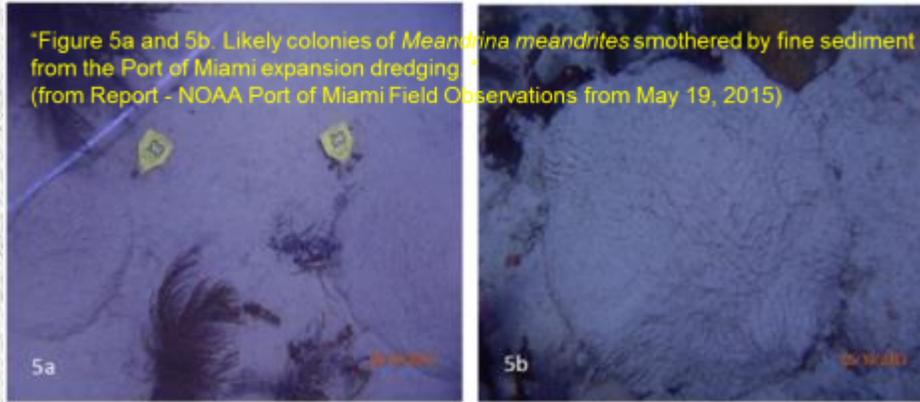
The disease outbreaks have been especially severe in the area off the coast of Miami, where bleaching was particularly heavy, Morton said. While several different types of coral disease have been observed, a disease known as “white plague” has been the most prevalent.

# 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

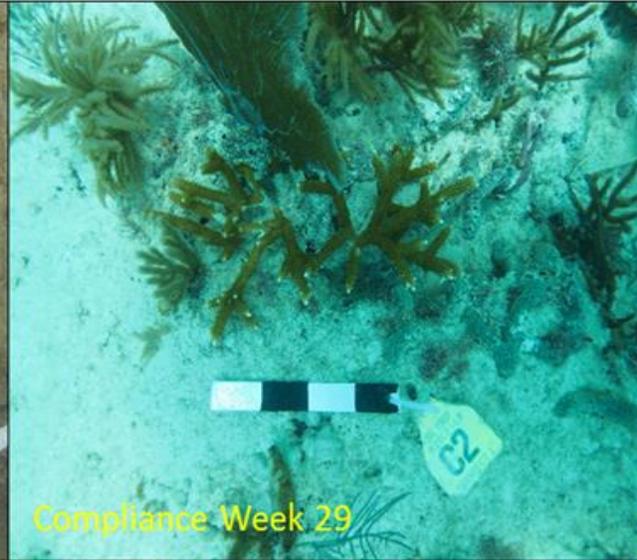


vs. Repeated Measures

Look familiar?

# Lead with Science not Headlines

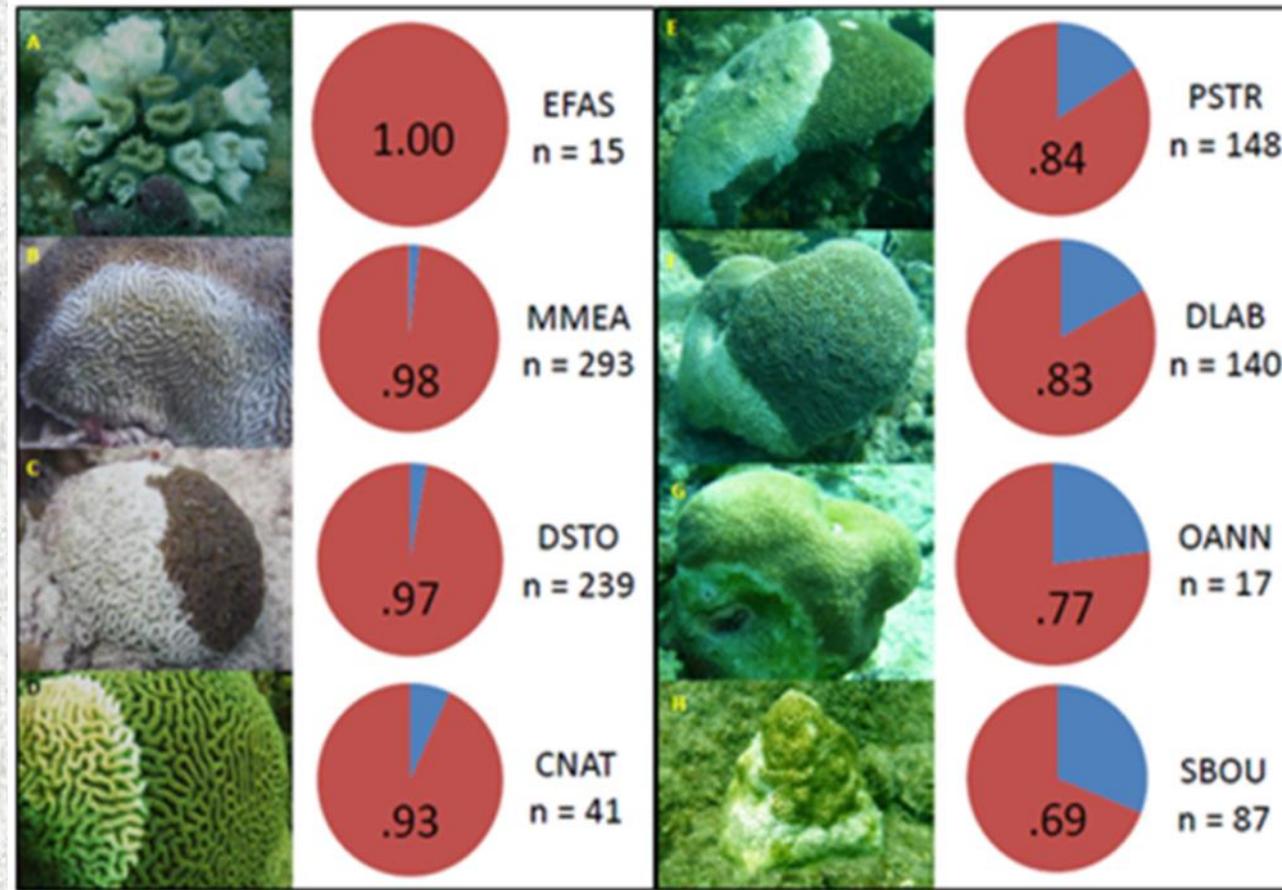
R2SC2 T1 C2



LEAD WITH SCIENCE NOT HEADLINES

# Lessons Learned

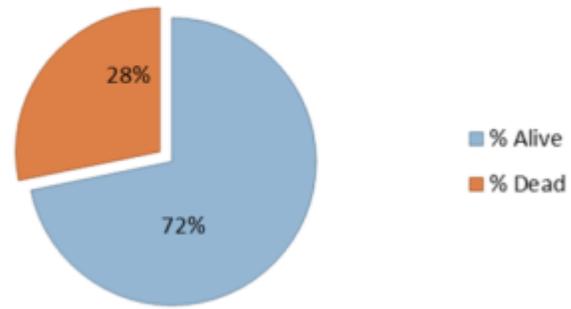
It's important to understand what happened regionally.



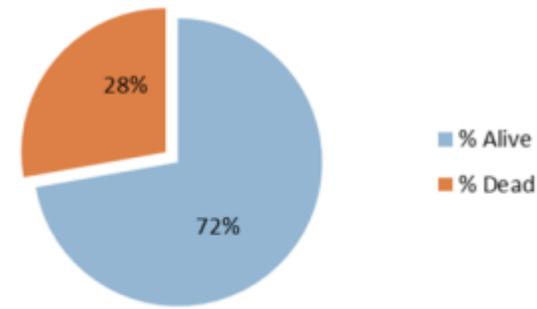
2014-2015 were bad years for corals in southeast Florida due to thermal stress (bleaching) and disease.

# Lessons Learned

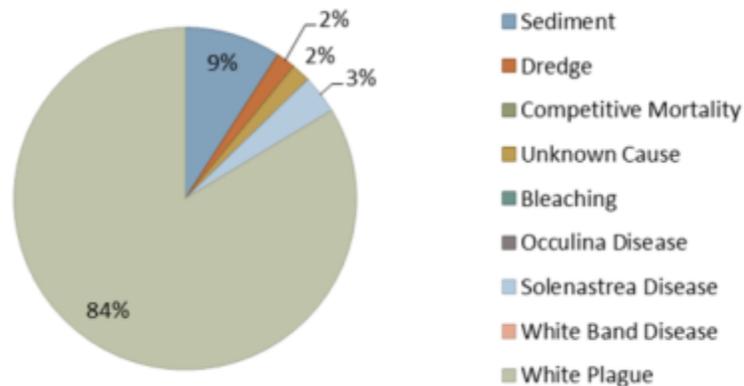
**Middle and Outer Reef Channel-side (Baseline-Post)**



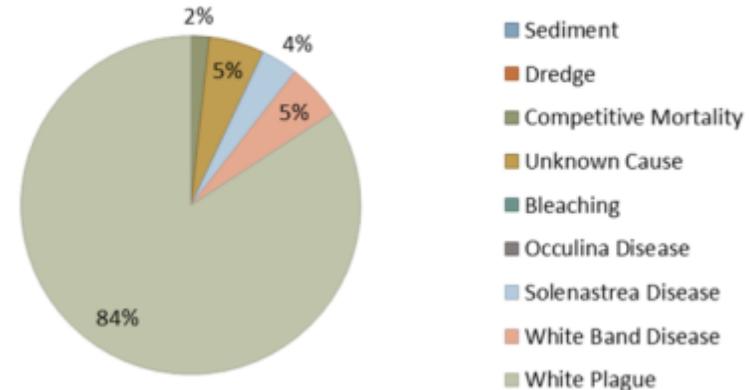
**Middle and Outer Reef Controls (Baseline-Post)**



**Causes of Mortality: Channel-side**



**Causes of Mortality: Controls**



**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.

# Published without Peer Review

PeerJ Preprints

NOT PEER-REVIEWED



## **Detecting sedimentation impacts to coral reefs resulting from dredging the Port of Miami, Florida USA**

**Margaret W Miller** <sup>Corresp.</sup> <sup>1</sup> , **Jocelyn Karazsia** <sup>2</sup> , **Carolyn E Groves** <sup>3,4</sup> , **Sean Griffin** <sup>5,6</sup> , **Tom Moore** <sup>5</sup> , **Pace Wilber** <sup>7</sup> , **Kurtis Gregg** <sup>2,6</sup>

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<sup>6</sup> Earth Resources Technology, Inc., Laurel, Maryland, United States

<sup>7</sup> Southeast Regional Office, NOAA National Marine Fisheries Service, Charleston, South Carolina, United States

# Peer Review

**Precht, W.F.**, Gintert, B.E., Robbart, M.L., Fura, R. and van Woesik, R. Unprecedented Disease-Related Coral Mortality in Southeastern Florida. Scientific Reports [www.nature.com/articles/srep31374](http://www.nature.com/articles/srep31374)

**Precht, W.F.** Can coral reefs survive large-scale dredging projects? Portside Caribbean 1(6):26-27  
<http://www.kelmanonline.com/httpdocs/files/PMAC/portsidecaribbean-june2016/index.html>

Hanson, W, H., **Precht, W.F.** Can coral reefs and large-scale dredging projects coexist? Abstract 13th International Coral Reef Symposium, Honolulu, Hawaii (June 2016)  
<https://www.sgmeet.com/icrs2016/viewabstract.asp?AbstractID=28986>

**Precht, W.F.** Gintert, B.E., Jordan-Sellers, T., and Robbart, M.L. Deciphering between project-related and regional impacts to coral reef communities near the Miami Harbor dredging project - the science behind the story. National Conference on Ecosystem Restoration, Coral Springs, FL (April 2016)  
[http://ifasgallery.ifas.ufl.edu/oci/NCER2016/videos/15\\_1630\\_Precht.mp4](http://ifasgallery.ifas.ufl.edu/oci/NCER2016/videos/15_1630_Precht.mp4)

Gintert, B., **Precht, W.**, Croop, J., Conner, A., Fura, R., Jobert, H., Marmet, C., Precht, L., Rogers, K., Schroeder, A., Shelley, T., Strueben, M., Jordan-Sellers, T., and Robbart M. (2016) Deciphering patterns of coral health and mortality using a repeated measures monitoring protocol – lessons from Miami Harbor. National Conference on Ecosystem Restoration, Coral Springs, FL (April 2016)  
[http://www.conference.ifas.ufl.edu/ncer2016/docs/NCER\\_2016\\_Program\\_&\\_Abstract\\_Book.pdf](http://www.conference.ifas.ufl.edu/ncer2016/docs/NCER_2016_Program_&_Abstract_Book.pdf)

# Peer Reviewed Science

“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

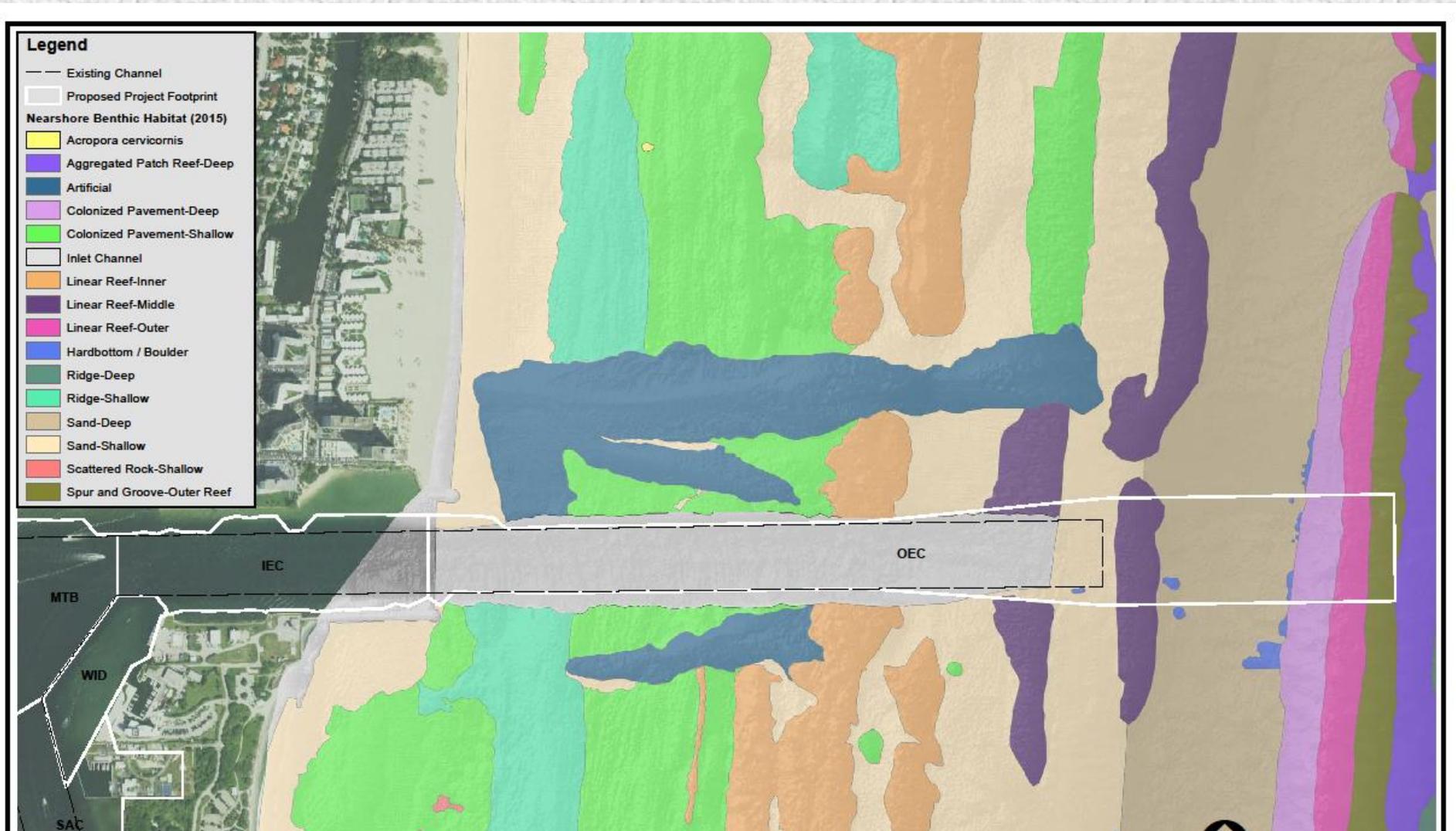
# Port Everglades Deepening Project

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





# Port Everglades Deepening Project



# 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

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*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**

