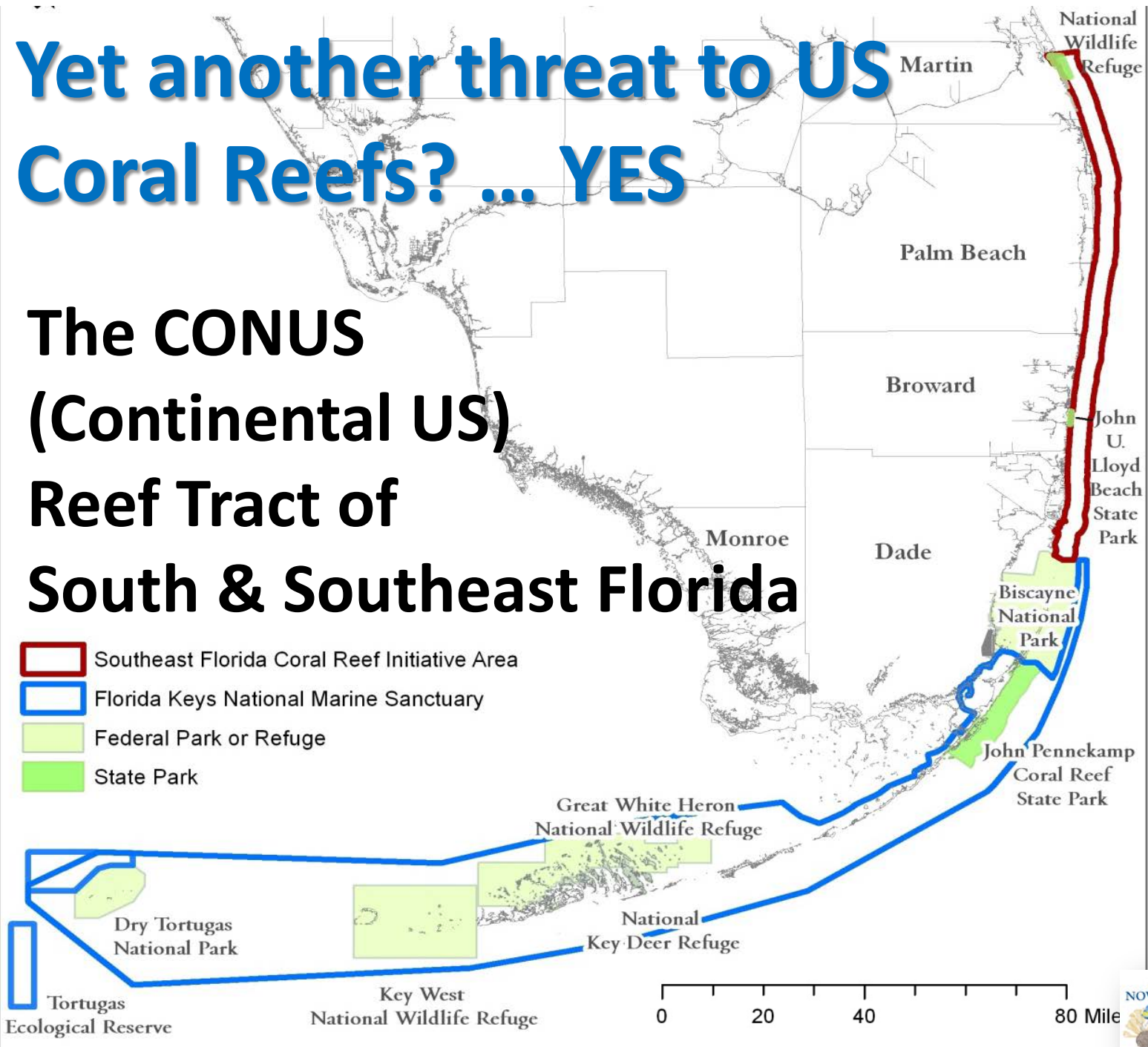


Yet another threat to US Coral Reefs? ... YES

The CONUS Reef Tract of South & Southeast Florida

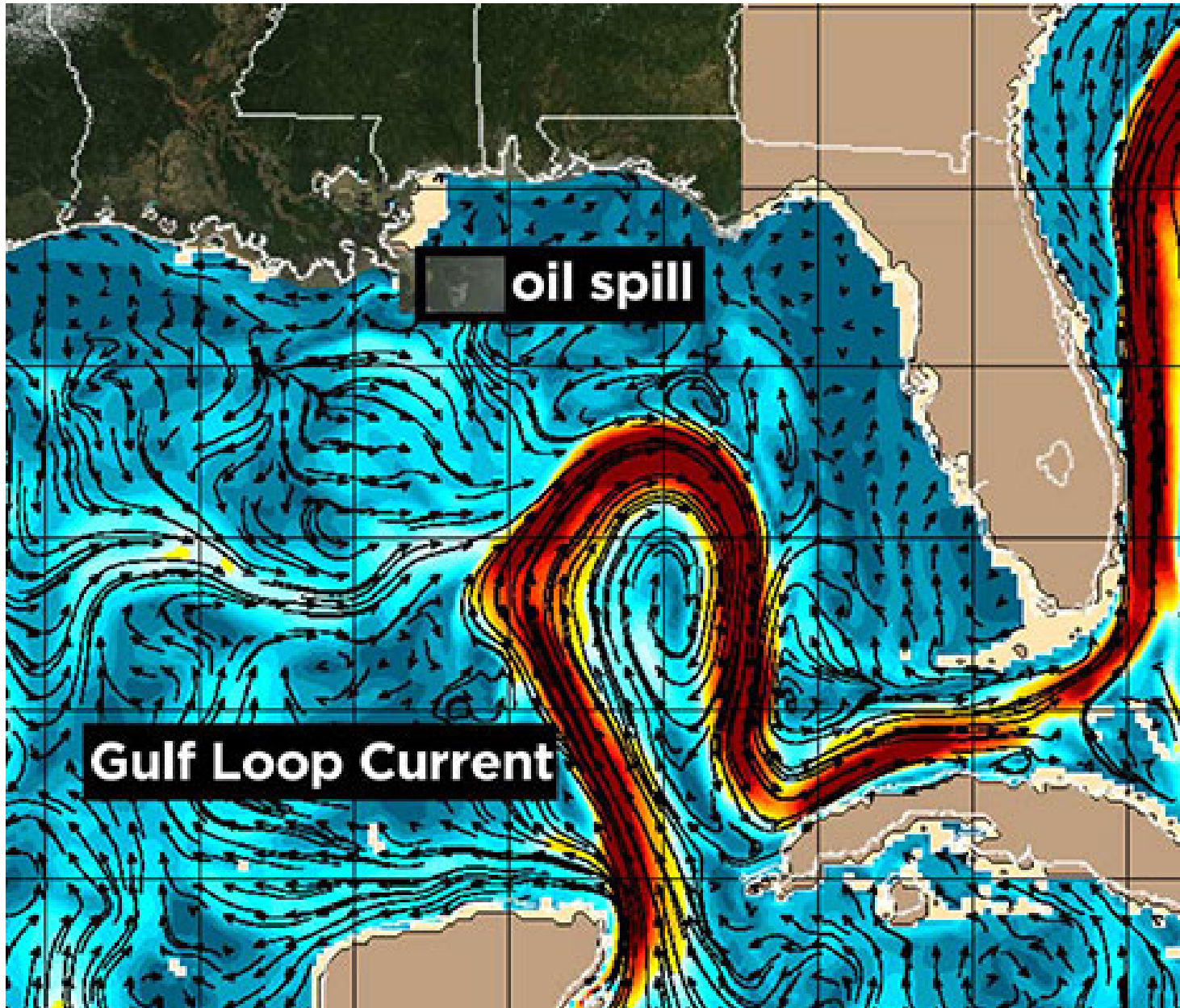


Only a year ago, the DWH Oil Spill was the largest in US History: ~5 M barrels of crude



Sources: ESRI, NOAA. Graphics reporting by **LEA DUNSEITH**

Thanks to the loop Current



**US Coral
Reefs
Dodged
an OIL
BULLET**

BUT the Future is Different as....

sun-sentinel.com/fl-cuba-drilling-rig-florida-20111014,0,1265901.story

South Florida Sun-Sentinel.com

Cuba prepares for oil drilling

By William E. Gibson, Washington Bureau
October 14, 2011

WASHINGTON —

“A giant Chinese-built oil rig is slowly heading across the ocean toward Cuban waters, fueling fears that offshore oil exploration north of Havana could jeopardize South Florida's fragile ecosystem and lead to environmental disaster....”



CINDY JONES-HULFACHOR/STAFF ARTIST

Repsol plans drilling to begin Jan, 2012

US Coral Reefs Are At Risk !

- **FLOATING &**
- **SUBMERGED**
- **Entrained in:**
 - **Loop Current**
 - **Fla Current**
 - **Gulf Stream**
- **Impacts to Shallow & Deep Reef Ecosystems of the Nation: Keys & SE Florida**



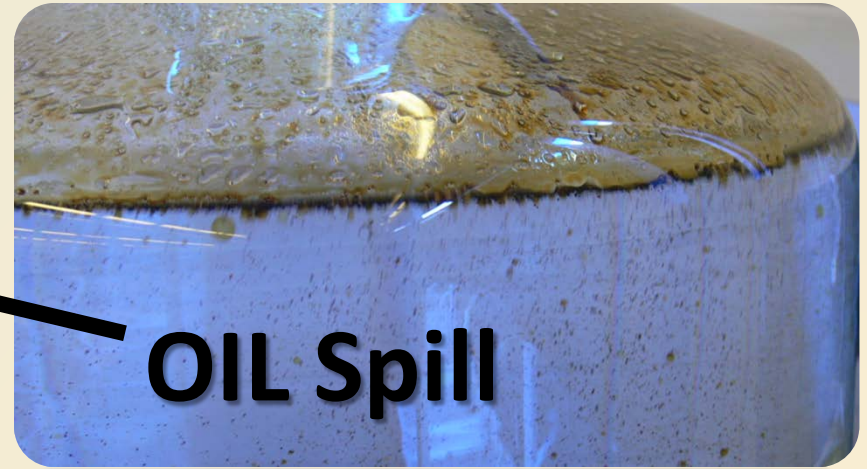
Source: Lippert & Partridge et al., "The impact of the Red Tide in South Carolina Coastal waters." University of North Carolina Coastal Program. In: J. J. Partridge, "Red Tide in South Carolina Coastal waters." University of North Carolina Coastal Program. In: J. J. Partridge, "Red Tide in South Carolina Coastal waters." University of North Carolina Coastal Program. In: J. J. Partridge, "Red Tide in South Carolina Coastal waters." University of North Carolina Coastal Program.

Coral Reefs Are Already in Trouble



<http://media.economist.com/images/20090516/D2009WW0.jpg>

On top of multiple existing stressors, will Oil Impacts be the straw that...?

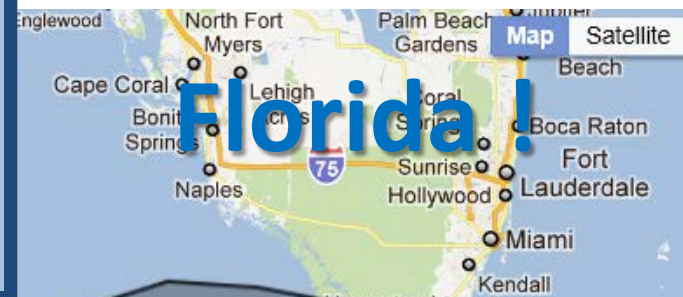


Reefs

N GULF of Mexico Coast



Size of the
DWS spill if
in



<http://www.ifitwasmyhome.com/>

IF DWS size spill were here!



CUBA

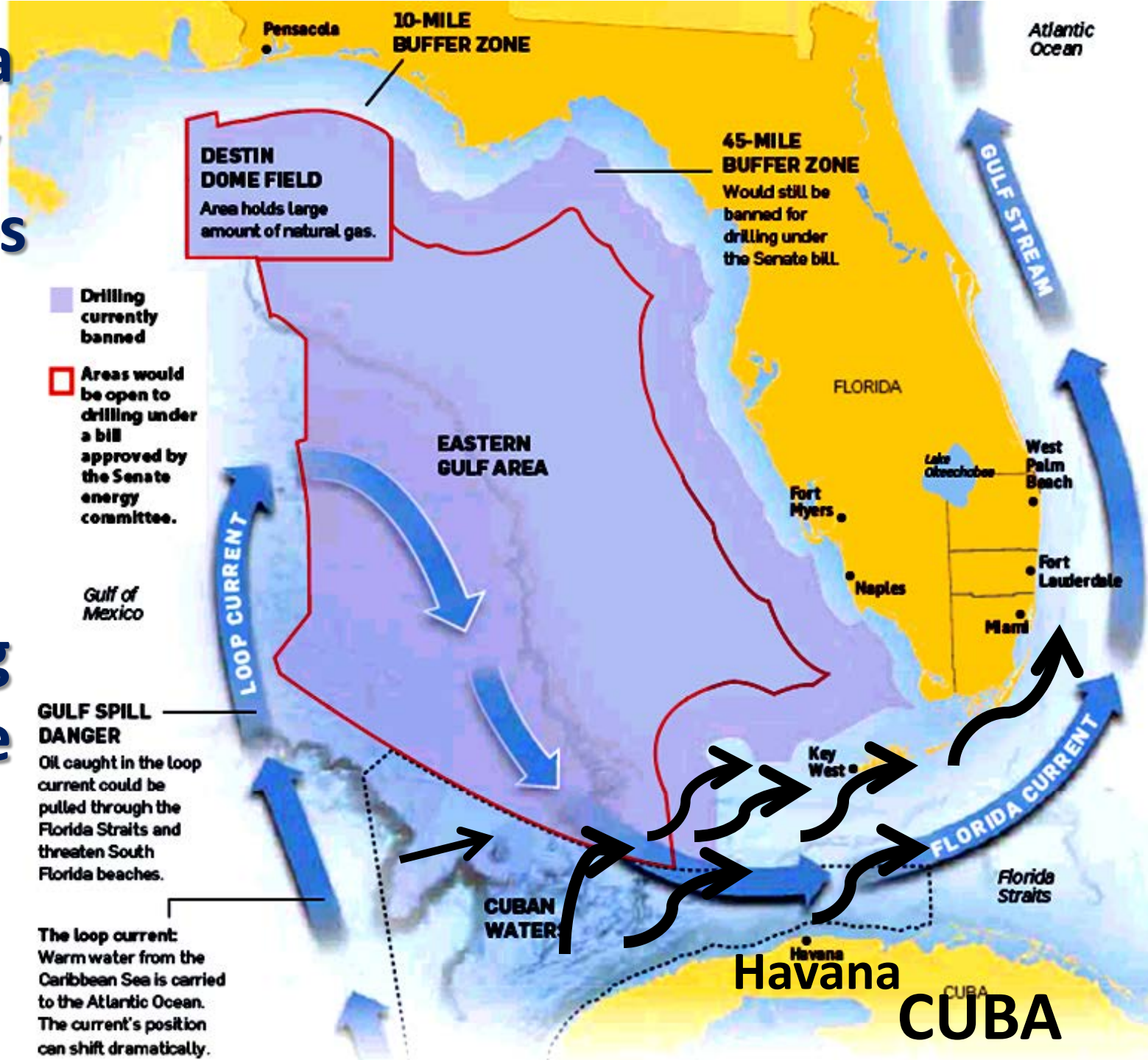
Oil and Corals Do Not Well Mix

- Short exposure to floating oil survivable
- Longer and/or chronic oil exposure leads to:
 - ✓ Excessive mucous production
 - ✓ Behavioral changes
 - ✓ Reproductive failure
 - ✓ Tissue Bleaching
 - ✓ Morality
- Dispersed Oil (Dispersant and Oil) are especially toxic & onerous for Coral Reefs
- Mangroves & Seagrass at risk too!



Havana
is only
90 miles
from
Key
West.

Drilling
may be
within
50
miles!



SO: To Follow up on Governor Tulafono's "Natural Disaster Response" question:

And the Task Force's charge to:

- ID Agency tools and resources to facilitate more effective and proactive response to emergency events in coral reef jurisdictions**

Recommendations to the TF

- **Realize the seriousness of threat & the need for preparation; Agency Support...:**
- **Monitoring of Drilling for Early Warning**
- **Baseline Assessments (oceanography & ecosystems) in anticipation**
- **Toxicology Research to predict effects**
- **Oceanography to predict trajectories**
- **Planning can help provide best Management / Mitigation / Conservation in order to: =====>**

Mangroves

Avoid This!

Seagrasses

Coral Reefs



Thank you

Cuba Oil Spill Industry Academic Consortium: COSIAC

The CONUS (Continental US) Reef Tract of South & Southeast Florida

-  Southeast Florida Coral Reef Initiative Area
-  Florida Keys National Marine Sanctuary
-  Federal Park or Refuge
-  State Park

