

# Regional Update State of Maryland

27<sup>th</sup> International Submerged  
Lands Management Conference  
October 26-29, 2008

# Blue Crab Management

- Chesapeake Baywide
- Historical Agreement between MD and VA
- Closure of winter dredging in VA
- Reduction in female crabs that can be harvested in the fall by watermen
- Recreational crabbers are prohibited from possession of any female crabs except soft crabs
- Size increase from 5 inch to 5 ¼ inches during the 2008 season

# Energy Projects

- Nuclear
  - Calvert Cliffs
- Natural Gas
  - Cove Point
    - Pipeline
    - Terminal
  - AES Proposed Plant
- Electric Utilities
  - Mid-Atlantic Power Project
- Wind
- Telecommunications Projects

# Mid-Bay Island Restoration

- Poplar Island
  - 1,140 Acres
  - Add an additional 1,000 +/- Acres
- James Island
  - 2,072 Acres
- Barren
  - 72 Acres
- 90-95 Million Cubic Yards
- Approximately 30 Years of Capacity

# MD Artificial Reef Initiative

- Program Inception MARI
  - January 1, 2007
- Reef Management Plan
  - Site Criteria
  - Site Construction and Materials
  - Site Monitoring Requirements
  - Reef Characteristics
- Woodrow Wilson Bridge Project
  - 50 Barge Loads (June 2006 to Present)
  - 65 Thousand TONS of Concrete
  - Three existing sites and one newly created
- Atlantic Ocean
  - 44 New York Subway Cars
  - US Navy Radford (564 ft.)
    - MD, DE and NJ

# Application Fees

- Application Fees
  - \$750 flat fee (up to 5,000 sq. ft.)
- Increase fee structure
  - \$1,500 (1/4 acre)
  - \$3,000 (1/2 acre)
  - \$4,500 (3/4 acre)
  - \$6,000 (1 acre)
  - \$7,500 (over an acre/per acre)
- Exemptions to Applications Fees
  - Governments
  - Agriculture BMP
  - Forestry BMP for NTW
  - Environmental Restoration Projects
- Minor Modifications
  - \$500
- Fees Generated based on FY 2006 Applications
  - 2.6 million and 33 new positions

Submerged Lands Conference

Atlantic Coast Report  
2008

*A Virginia Perspective*





# Rising Issues Facing Atlantic Coast Managers

Offshore Energy Resources

Sea Level Rise – Coastal Flooding Impacts on

Submerged Aquatic Vegetation & Tidal Wetlands

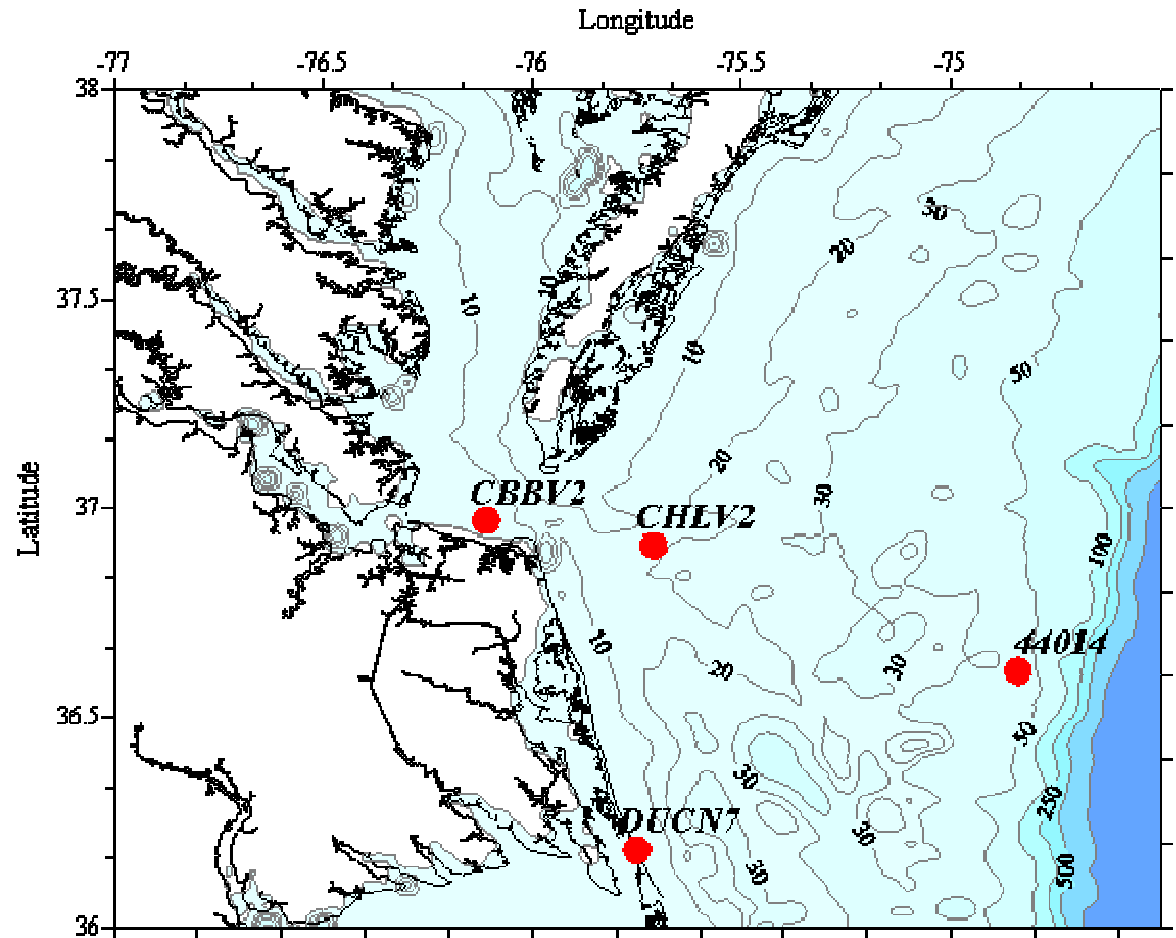
# Virginia Offshore Renewable Energy

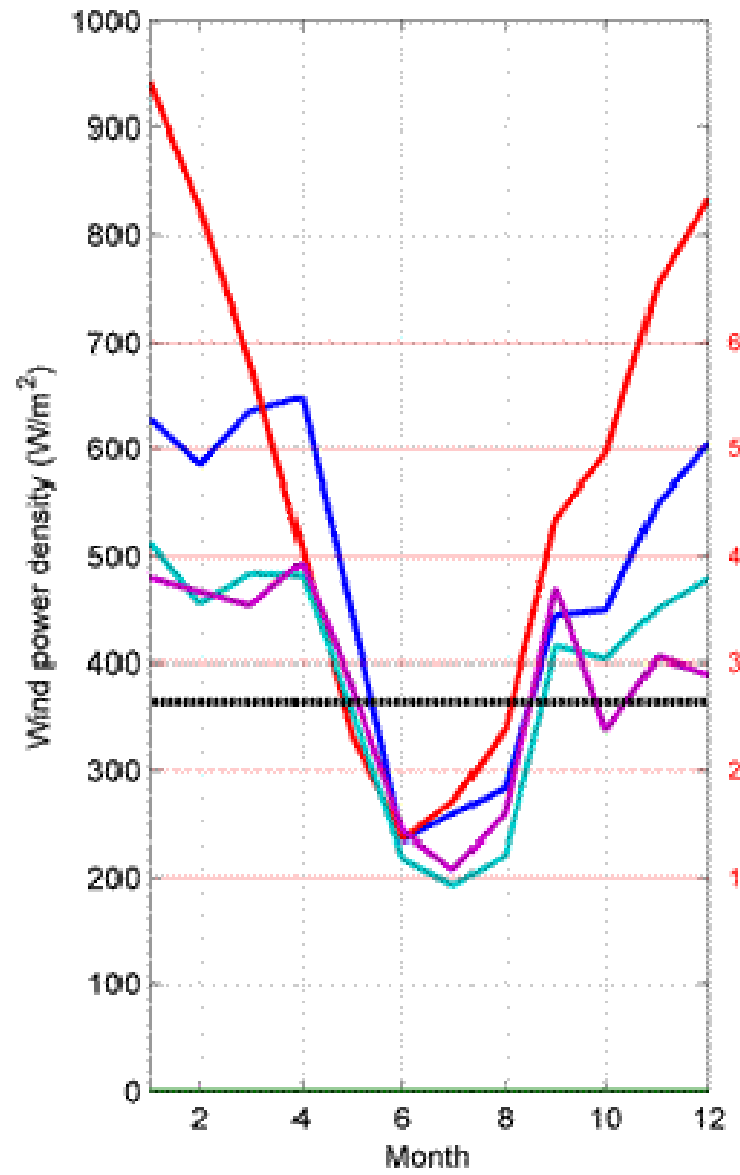


# Wind Data

Chesapeake Bay Bridge Tunnel  
Chesapeake Light Tower  
Buoy 64 nm off Virginia Beach  
Duck Pier, North Carolina

<http://ccpo.edu/~jlblanco/windenergy/wind11.htm>

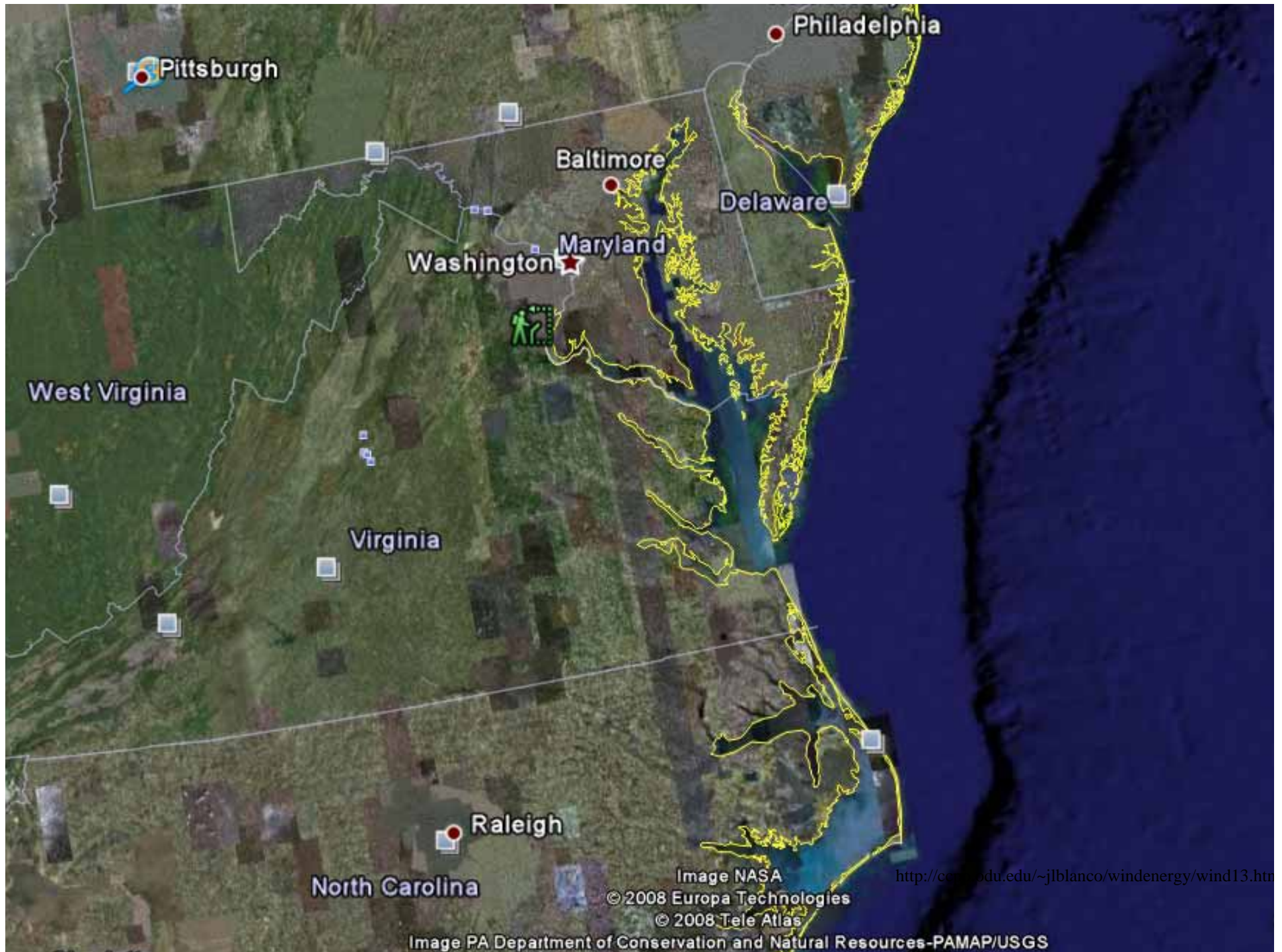




Wind class

- Buoy 44014
- CHLT
- CHBBT
- DUCN7





# OFFSHORE DRILLING

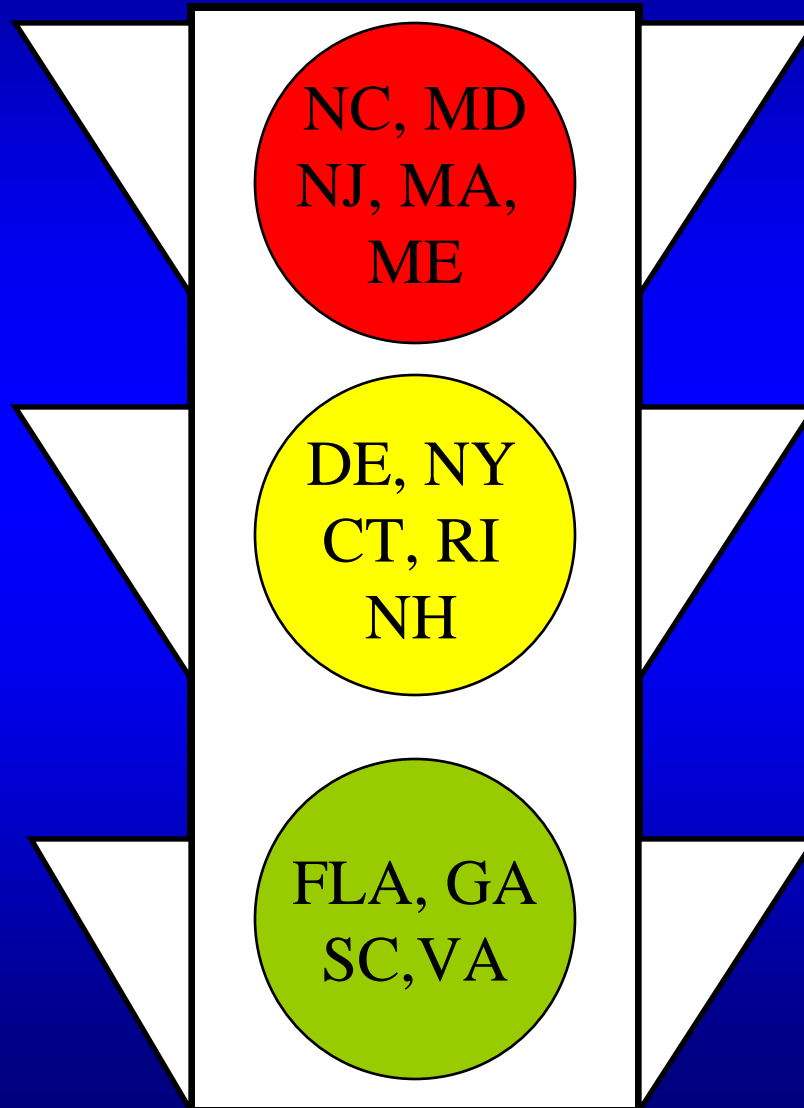


17.8 billion barrels oil  
76 trillion ft<sup>3</sup> natural gas  
*Minerals Management Service*

# OFFSHORE DRILLING

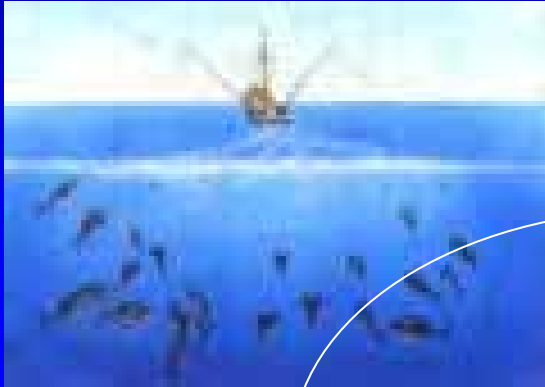


# Atlantic Coast States' Positions on Offshore Drilling



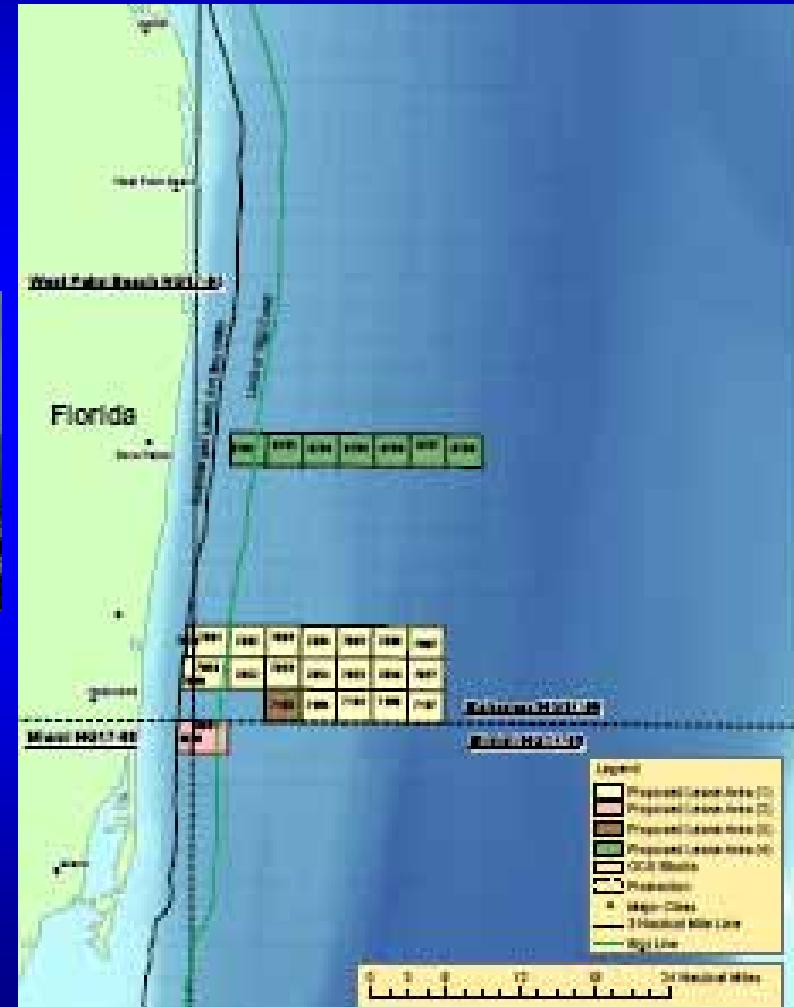
# Offshore Energy Resources

VS



# Offshore Energy Resources

VS

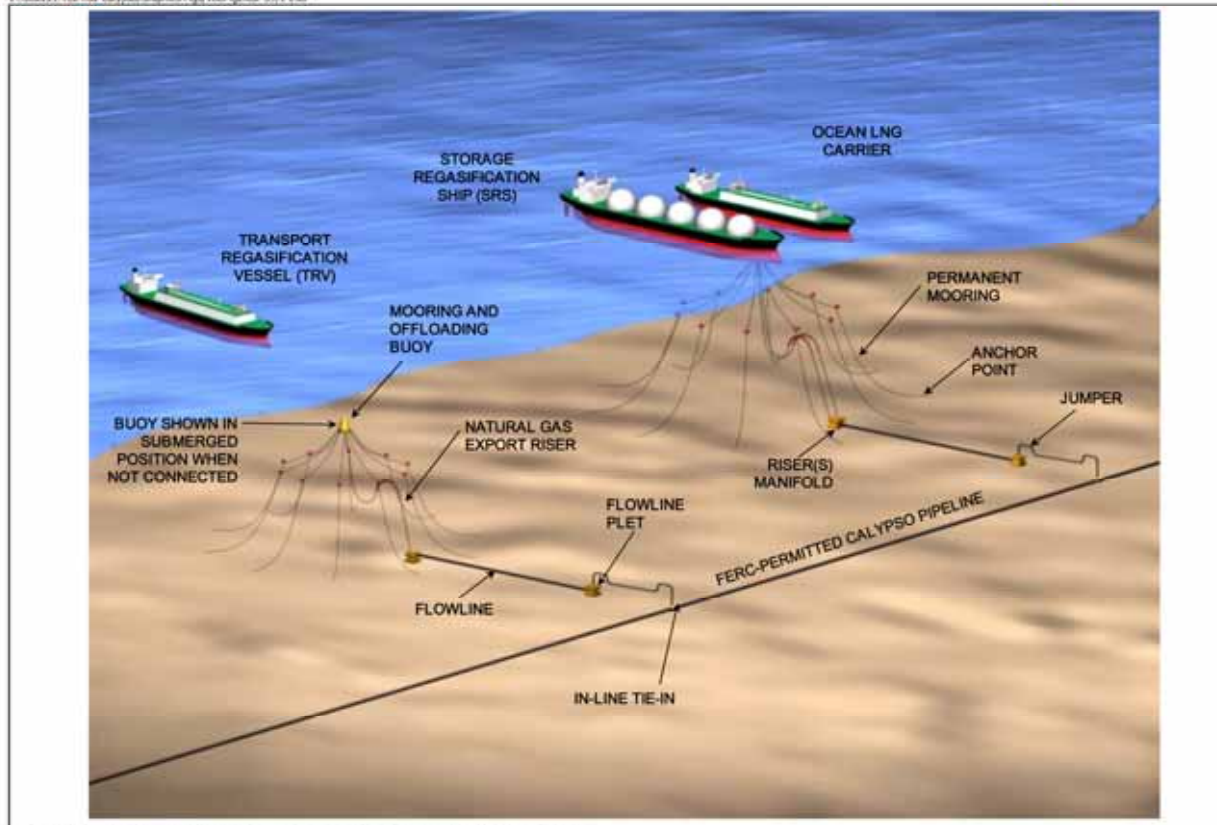


# Offshore Energy Resources VS

Calypso

14-002221\_TU04.02\_Calypso\_Graphics\_Figs/VedFig2\_09-09/14/06

Ecology and environment, inc.



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Figure 2 Deepwater Port Isometric View

# Sea Level Rise – Coastal Flooding

The College Of  
**WILLIAM & MARY**

*Seeking knowledge and solutions through coastal marine science...*

**VIRGINIA INSTITUTE of MARINE SCIENCE**

**VIMS**

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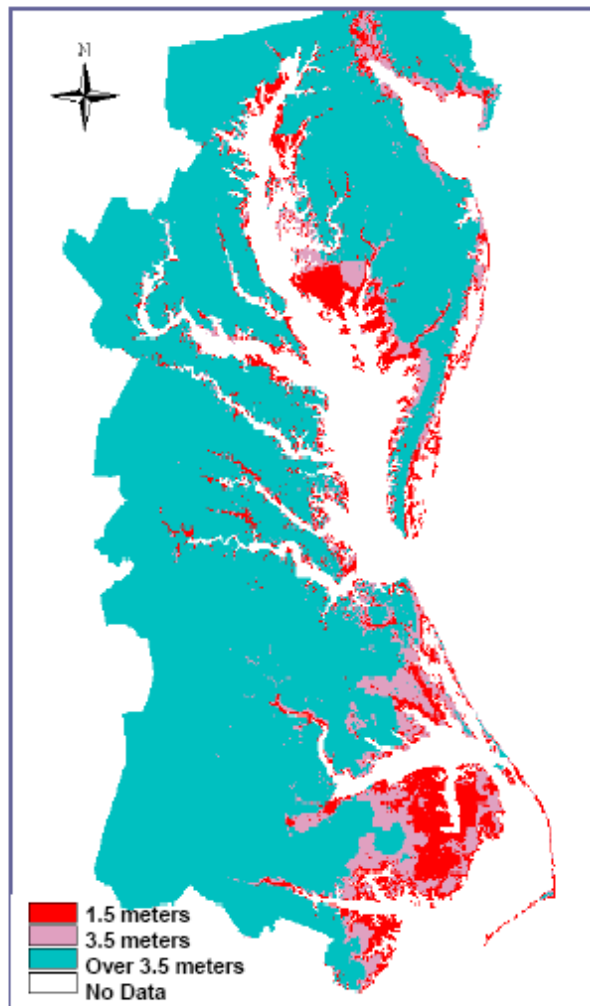
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and Advisory Service*

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# Sea Level Rise – Coastal Flooding



(From EPA, Mid-Atlantic Integrated Assessment)

## Lands Vulnerable to Sea-Level Rise in the Mid- Atlantic Region

*Along most of the  
U.S. coast, sea level  
has risen 2.5-3.0  
mm/year (10-12  
inches/century)*

# Sea Level Rise – Coastal Flooding

## VIMS Conference May 2007



How global warming and climate change  
may be accelerating losses of  
Chesapeake Bay seagrasses.

Dr. Ken Moore

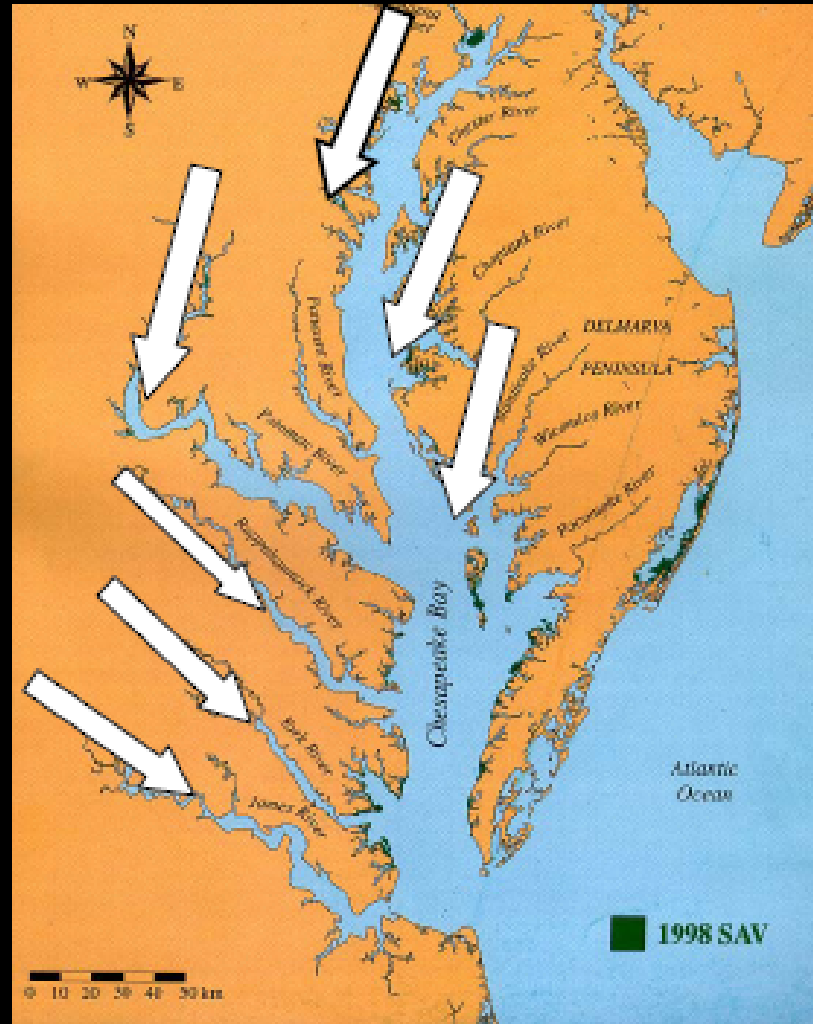
The Virginia Institute of Marine Science  
School of Marine Science  
College of William and Mary  
Gloucester Point, VA USA

# Chesapeake Bay SAV Losses

Underwater  
grasses have  
declined in the  
Chesapeake Bay  
over the past 60  
years.

Less than 50%  
present today  
compared to  
1950s

Eelgrass  
populations have  
also declined



# Sea Level Rise – Coastal Flooding

## Impacts to SAV

### Summary

- The remaining eelgrass beds have been experiencing increasing frequency of summertime diebacks in shallow and deep regions.
- Global warming and climate change can affect Chesapeake Bay eelgrass survival through multiple ways:
  - Elevated temperatures can stress growth
  - Increased frequency and intensity of storms
- Given the long term effects of increases in temperature and turbidity due to global warming and climate change are problematic for continued success of eelgrass populations in this system ....

# Sea Level Rise – Coastal Flooding



Drowning Marsh, steep slope behind prevents marsh retreat



Marsh Retreat. Salt bush now at waters edge, marsh extending landward behind the salt bush

# Sea Level Rise – Coastal Flooding



# Sea Level Rise – Coastal Flooding



# Sea Level Rise – Coastal Flooding



# Sea Level Rise – Coastal Flooding



Questions?



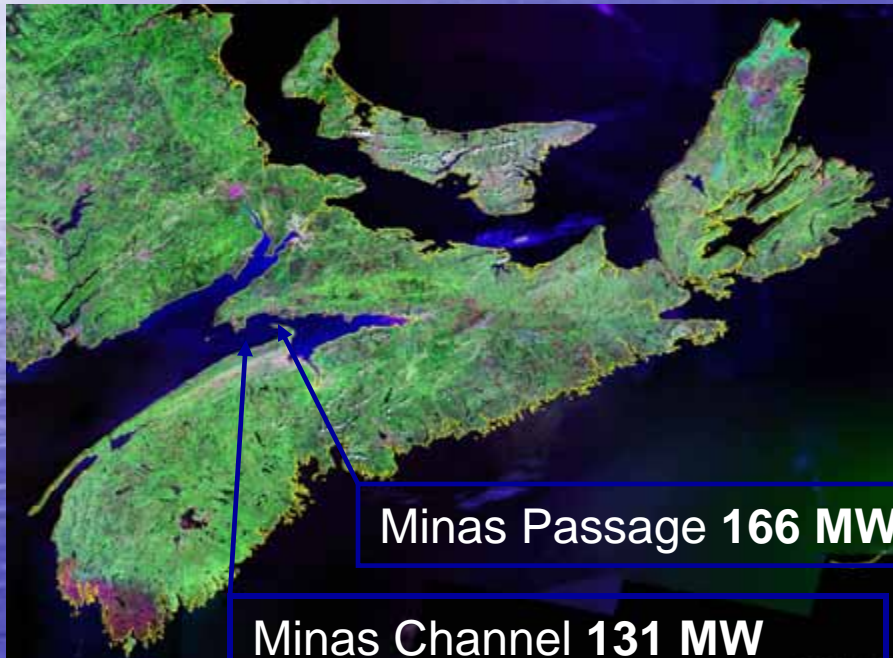
# Nova Scotia Update

Melanie Ryan

Crown Land Disposals & Coastal Permits Section  
Nova Scotia Department of Natural Resources

October 29, 2008

# Bay of Fundy



# Nova Scotia's Annapolis Tidal Generating Station

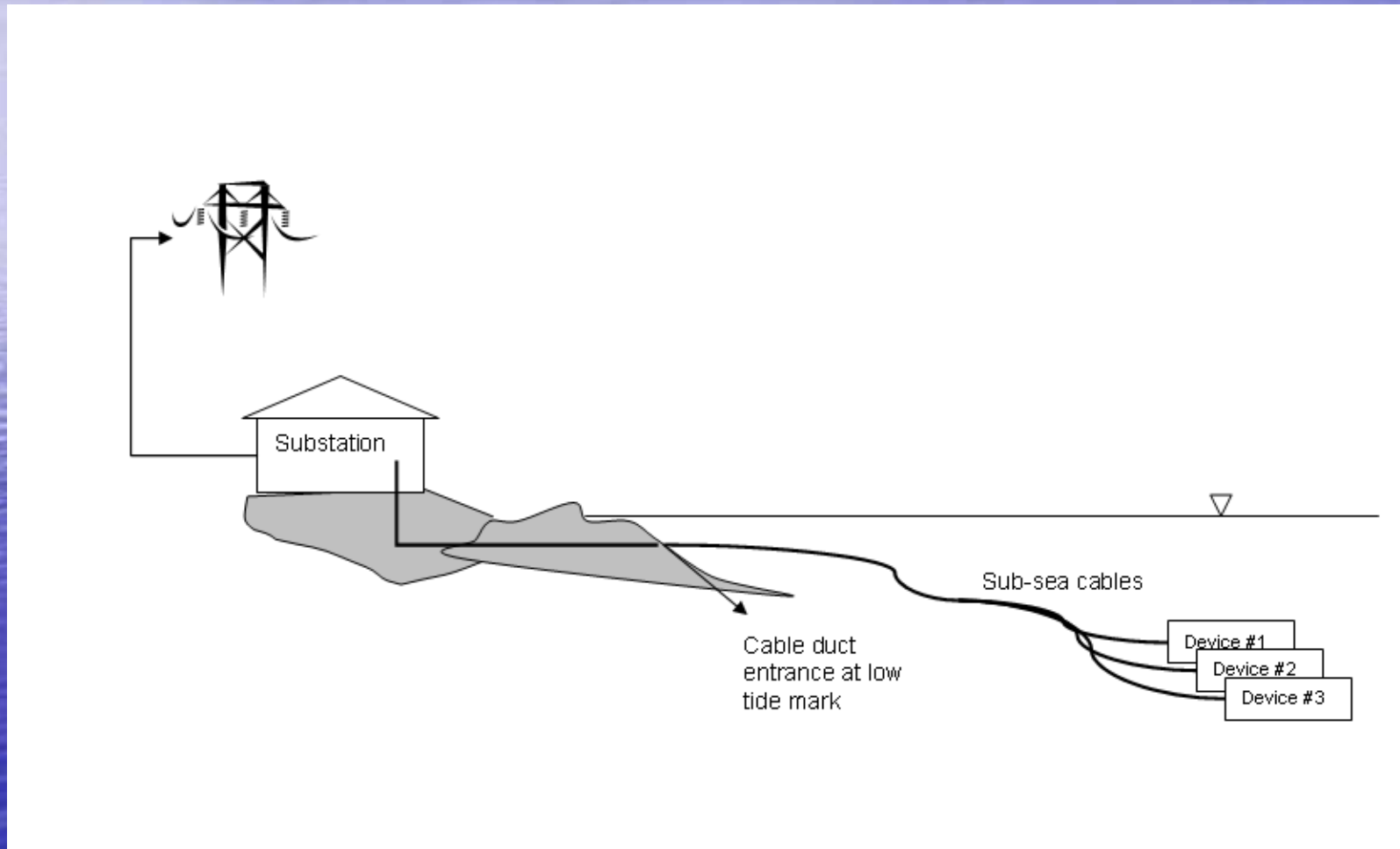


# Strategic Environmental Assessment

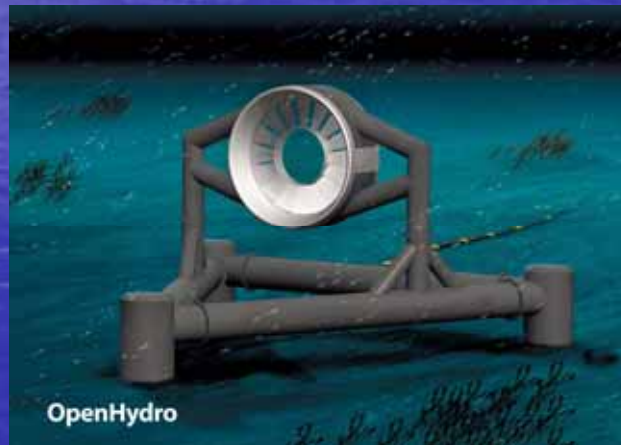
- Strategic environmental assessment (SEA) has been completed
- Opportunities for communities
- Supply/Build turbines and equipment from NS
- Learning opportunity for everyone
- Recommended that the Province proceed with demonstration project



# Demonstration Project Fundy Tidal Energy Centre



# First Devices

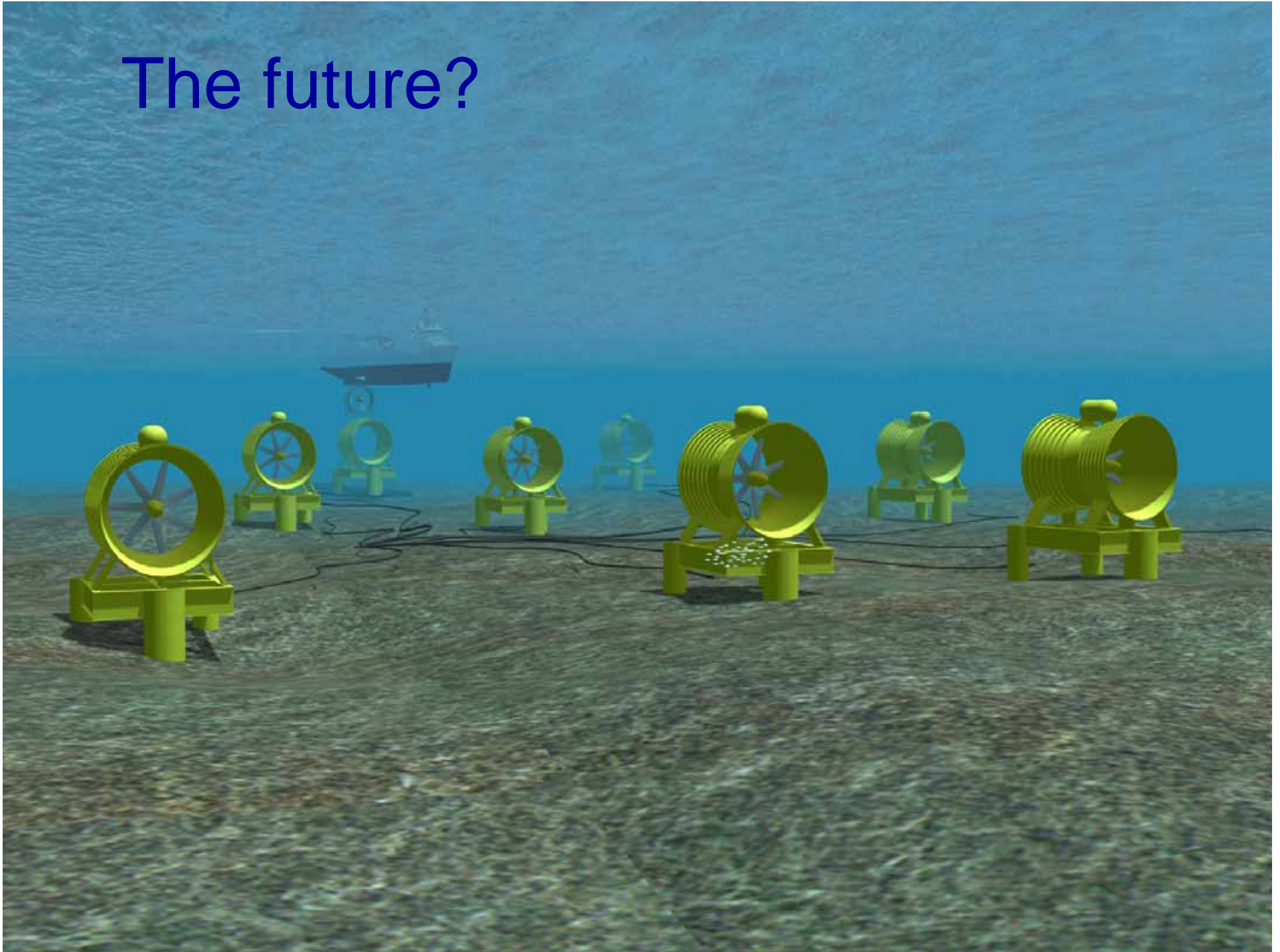


# Potential Impacts

- Aquatic Life
- Fisheries
- Navigation
- Tourism and Recreation
- Local Communities
- Underwater Cables



The future?



# Tidal Lagoon



# Coastal Management Framework

- Coastal Development Strategy
- Coastal Web Portal
- Public Education and Awareness
- Coastal Research Network
- MOU with Federal Government
- LIDAR Mapping



# New Shoreline Protection Policy





**The End**

**questions?**