

# State of Florida Artificial Reef Program Perspective 2010-2014

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Florida Fish and Wildlife Conservation Commission

Division of Marine Fisheries Management

# Topics of Discussion

- Brief reef program status report
- Note some selected observed trends in statewide reef activities since 2010
- Review artificial reef management activities related to artificial reef planning, siting and construction best management practices
- Discuss the importance of reef monitoring and research with some examples.



# State Artificial Reef Program Status since the 2010 Reef Summit

- Biological administrator and two fisheries biological scientists, all grant funded through the USFWS Federal Aid in Sport Fish Restoration (SFR)
  - Staffing levels unchanged since 1992
- Funding since 2010 has included annual appropriations of \$500,000 (federal grant), and \$300,00 saltwater fishing license revenues
  - During 2013 and 2014 an additional \$500,000 each year legislatively appropriated



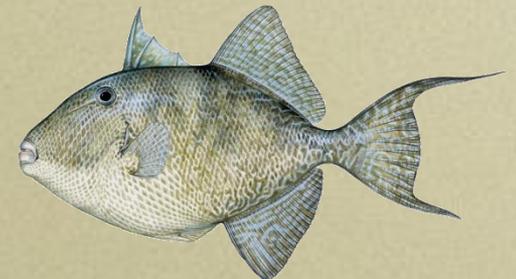
# State Artificial Reef Program Activity Status (continued)

- Rely heavily on longstanding partnerships with Florida Sea Grant, coastal local governments, state universities, reef associated nonprofit organizations, regulatory agencies and volunteers
- Coastal local governments continue important responsibility of securing and managing all of Florida's artificial reef permitted areas
- Marine contractors and reef manufacturing companies have maintained excellent safety records and have demonstrated creativity and pro-active innovation in modular reef design development



# Statewide artificial reef trends 2010-2014

- Modest increase in memorial reefs donated to county reef programs
- Explosive increase of lionfish populations, on both natural and artificial reefs, since 2009
- Re-establishment of Goliath grouper into their former range with selective preference in some cases for larger artificial reef structures like vessels



# State wide artificial reef trends 2010-2014, (continued)

- Lack of availability of large Navy or U.S. Maritime Administration Vessels for reefing since 2009
- Innovative reef marketing concepts
- Shift of reef construction from sites in federal waters to smaller sites in state waters
  - Potential management implications?
- No hurricane direct hits on Florida since 2005



# State wide artificial reef trends 2010-2014, (continued)

- Planned large scale British Petroleum funded projects in NW and SW Florida
- Ongoing regulatory permit challenges
- Geographic, political and cultural attitude differences related to legal and illegal artificial reef activity



# Artificial Reef Management Issues: Best Management Practices

## Guidelines and Management Practices for Artificial Reef Siting, Usage, Construction and Anchoring in Southeast Florida

- Southeast Florida Coral Reef Initiative (SEFCRI)
- Completed June 2011



# Artificial Reef Management Issues: Reef Planning Components and Primary Questions

- Concept: Is the idea of the reef valid and realistic?
- Ecosystems: How will the artificial reef and surrounding ecosystem interact?
- Objectives: The reason for building the reef in very specific terms
- Planning: The approach for turning the concept into reality
- Design: The technical specifications of the reef as determined by its purpose and setting



# Artificial Reef Management Issues: Follow up Evaluation to Measure Objectives Success- Is it Happening?

- 2,900 recorded public artificial reefs in state and federal waters, depths 12 to 400 feet
- 20-25% not recently ground-truthed to assess location or condition, including whether they still exist.
- For monitoring and evaluation, even fewer resources leveraged to measure objectives



# Running Aground on Uncharted Objectives while Navigating Expectations

- Resource allocation tension between artificial reef research and long term monitoring funding needs vs. the desire to pour all financial resources into putting more artificial reefs in the water
- Some stakeholder expectations that monitoring, or formal research to generate the best available science for reef planning is not needed. “More reefs mean more fish. Build it and they will come”



# Deepwater Horizon Oil Spill- The Case for Long Term Monitoring

- April 20, 2010 the Deepwater Horizon oil spill
  - Prior baseline studies of artificial reef modules in federal waters off Escambia County since 2004 provided important baseline information to assess post 2010 changes in these patch reef communities



# Best Available Science

- “Best Available Science” is science that maximizes the quality, objectivity, and integrity of information, including statistical information; uses peer-reviewed and publicly available data; and clearly documents and communicates risks and uncertainties in the scientific basis for such projects – RESTORE Act Sept. 2012



# The Importance of the Use and Generation of Best Available Science

- Continued funding of reef assessment and research projects through University and other research partners is an important way to seek and pursue the use of Best Available Science in artificial reef management



# FWC Research Projects Funded During 2010-2014

- Evaluation of boat visitation rates using acoustic detection devices (USF)
- Comparison of food webs (NOVA Southeastern)
- Integration of basic and applied ecology using paired artificial-natural reef systems (e.g. FSU, USF, USA-DISL)



# FWC Research Projects Funded During 2010-2014 (continued)

- Invasive lionfish on panhandle artificial reefs-trends, effects and potential mitigation measures (UWF, USA-DISL)
- Acoustic arrays to track daily movements of reef fish around panhandle reefs (UWF, USA-DISL)
- Construction designed for long term monitoring and research of gag grouper off the Florida Big Bend (UF)



# In Conclusion...

- If a reef manager uses Best Available Science, recognizes the importance of scientific research, adheres to Best Management Practices, recognizes the importance of clear objectives with the ability to measure them, then ideally the result will be in the words of this recently observed bumper sticker:

***“IF ANYTHING CAN GO RIGHT IT WILL”***

