



AMERICA'S UNDERWATER TREASURES

Flower Garden Banks National Marine Sanctuary Expansion

G.P. Schmahl
Sanctuary Superintendent

Gulf of Mexico Fishery Management Council

April 1, 2015





FEDERAL REGISTER

The Daily Journal of the United States Government

Sign in Sign up

Proposed Rule

Revisions of Boundaries for Flower Garden Banks National Marine Sanctuary; Intent To Prepare Draft Environmental Impact Statement

A Proposed Rule by the National Oceanic and Atmospheric Administration on 02/03/2015



Federal Register Vol. 80, No. 22 / February 3, 2015

“Notice of Intent” – Public Scoping / Draft EIS

- New Orleans, LA – March 3rd / Airport Hilton
- Houston, TX – March 5th / Bayland Community Center
- Galveston, TX – March 11th / FGBNMS Office

Public Comment period closes: April 6, 2015

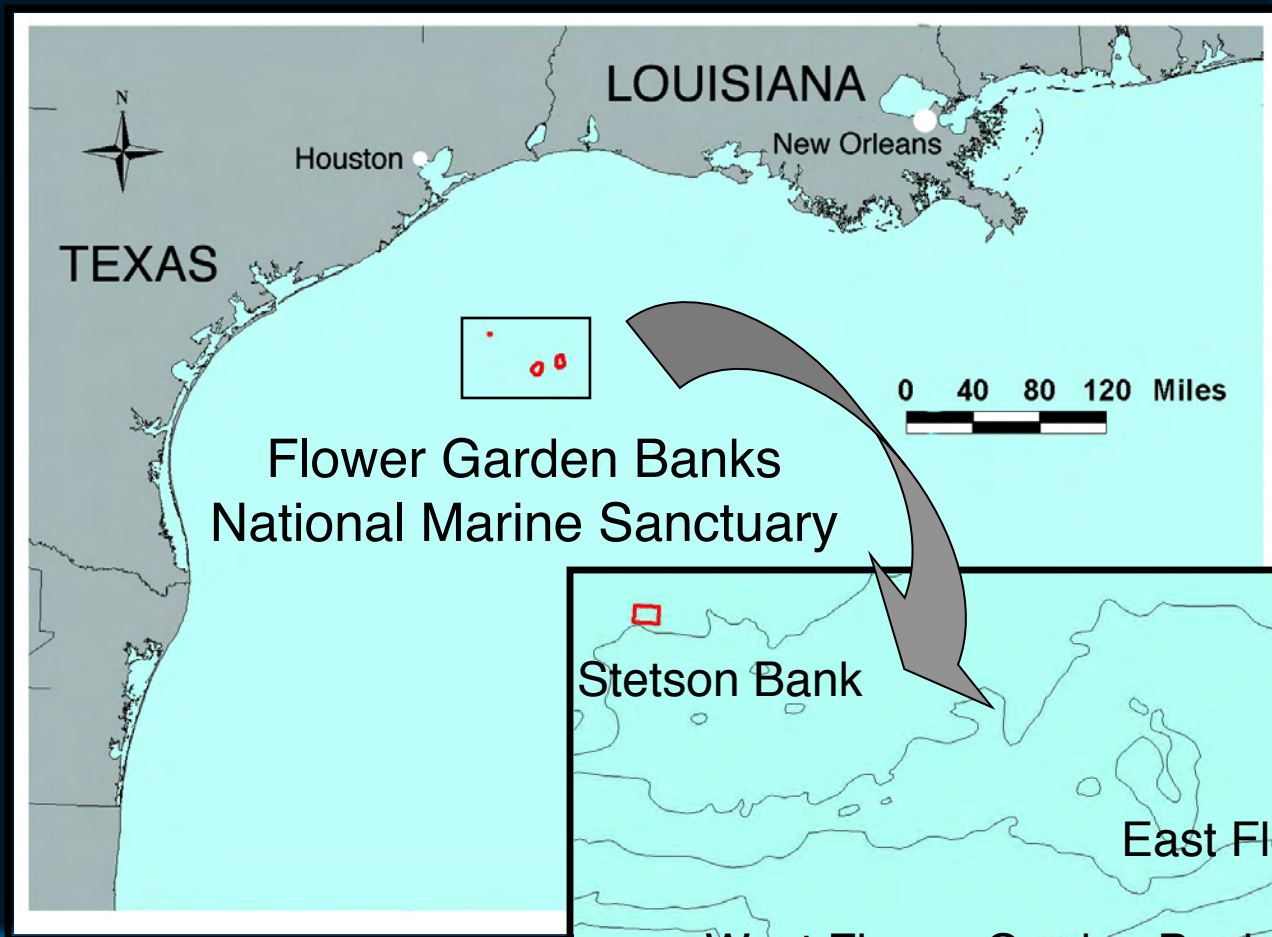


Our National Marine Sanctuaries



● National Marine Sanctuary

★ Marine National Monument

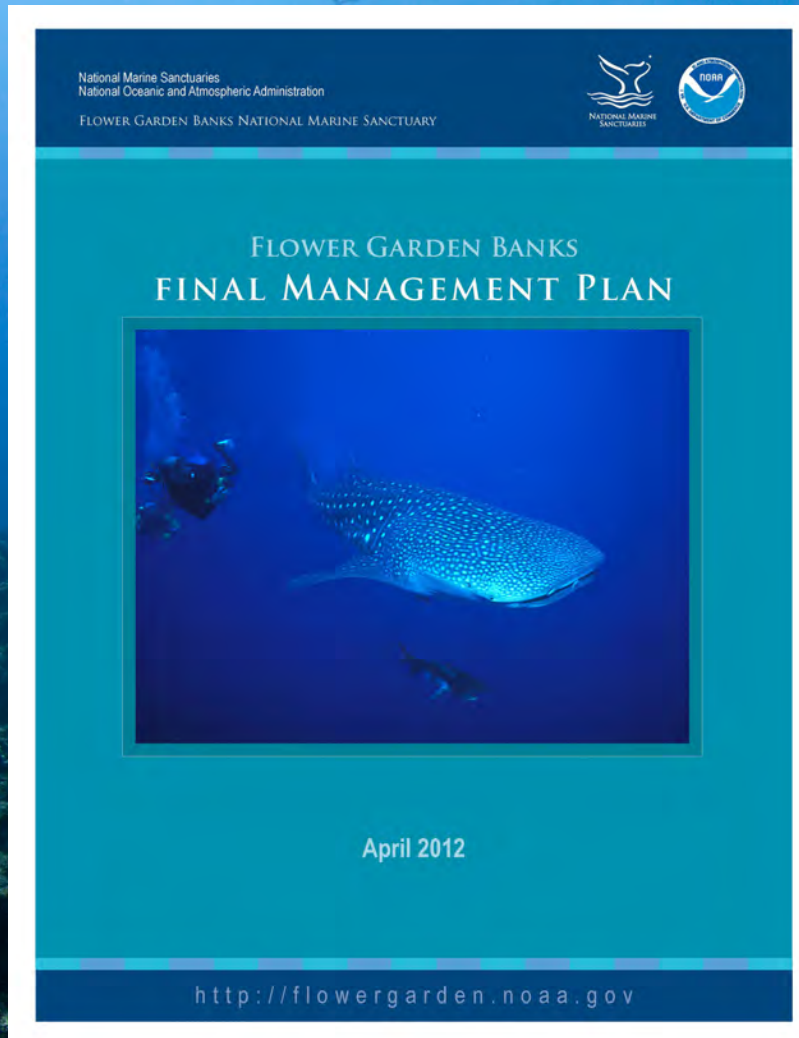


Remarkable Reefs of the Flower Garden Banks



Regulated Activities

- Anchoring - all anchoring prohibited
 - Mooring buoys provided on coral reef cap
 - Vessels over 100 ' cannot use mooring buoys
- Discharges - prohibited, with some exceptions
- Taking coral or invertebrates - prohibited
- Fishing - only hook and line fishing allowed
 - Spearfishing is prohibited
 - Possession of unauthorized gear prohibited
 - Vessels with unauthorized gear (shrimpboats, longliners) cannot stop or moor within the sanctuary



Flower Garden Banks National Marine Sanctuary Revised Management Plan April 2012

- **Sanctuary Expansion**
- Education and Outreach
- Research and Monitoring
- Resource Protection
- Visitor Use
- Operations and Administration

“Action Plan” Implementation

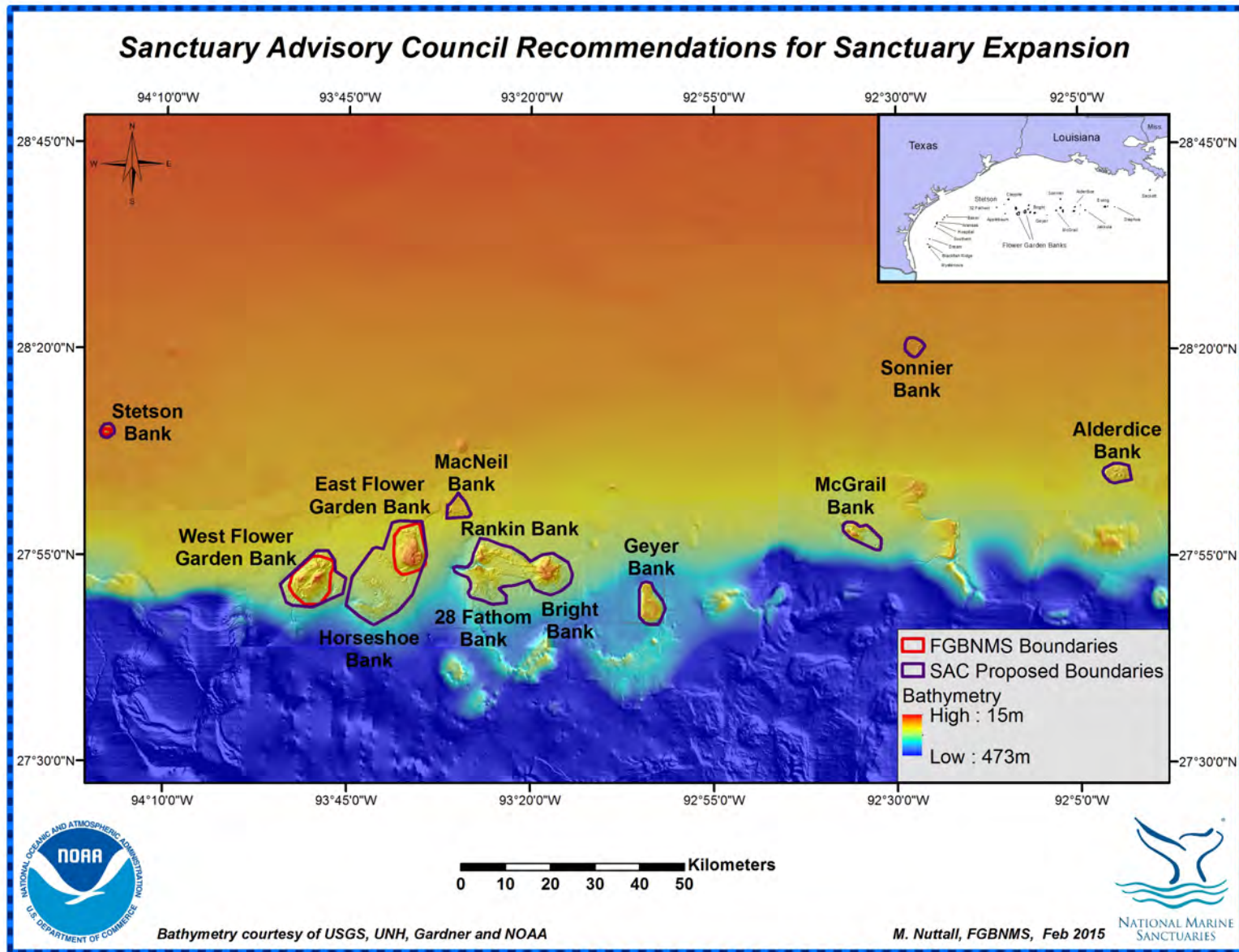
Sanctuary Expansion Action Plan

Strategy: SE.1 “Evaluate and expand, as appropriate, the network of protected areas within the sanctuary to include 5-12 additional reefs and banks, and to modify the existing boundary of East and West Flower Garden and Stetson Banks to include critical adjacent habitat.”

Activity: 1.1 “Develop a draft environmental impact statement (DEIS) to evaluate alternatives for incorporating additional reefs and banks in the northwestern Gulf of Mexico into FGBNMS, and identify a preferred alternative.”

Regulatory: This activity implemented through a public rule-making process, and must follow NEPA guidelines.

Flower Garden Banks NMS Management Plan



Sanctuary Advisory Council

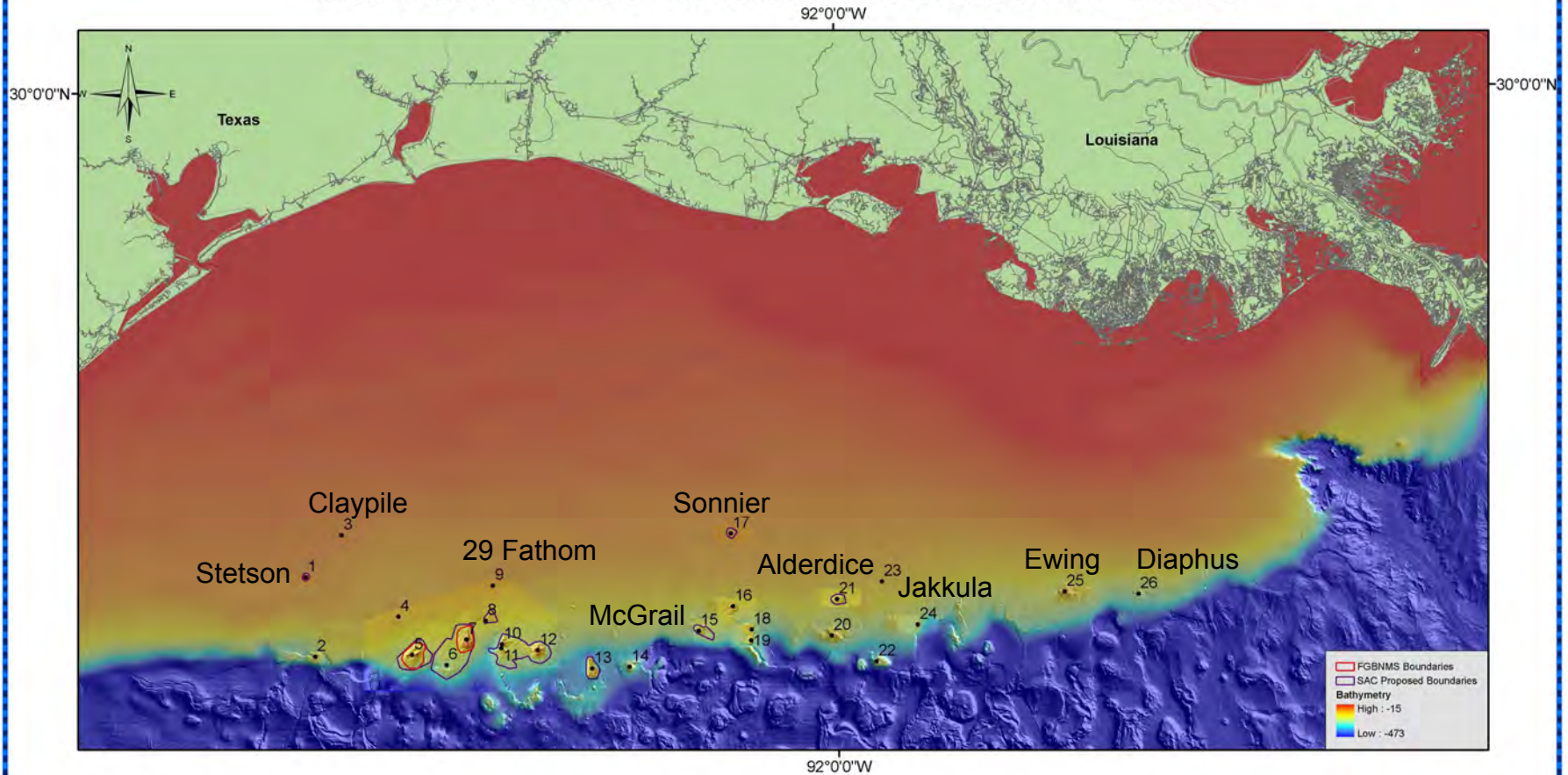
- Recreational Diving
- Dive Operators
- Oil and Gas Industry
- Recreational Fishing
- Commercial Fishing
- Education
- Research
- Conservation



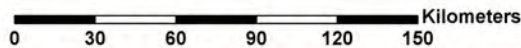
AGENCY (NON-VOTING)

- NOAA Fisheries
- Bureau of Ocean Energy Management
- Bureau of Safety & Environmental Enforcement
- U.S. Coast Guard
- NOAA Law Enforcement

Reefs and Banks in the Northwestern Gulf Of Mexico



1. Stetson Bank, 2. Applebaum Bank, 3. Claypile Bank, 4. Coffee Lump Bank, 5. West Flower Garden Bank, 6. Horseshoe Bank, 7. East Flower Garden Bank, 8. MacNeil Bank, 9. 29 Fathom Bank, 10. Rankin Bank, 11. 28 Fathom Bank, 12. Bright Bank, 13. Geyer Bank, 14. Elvers Bank, 15. McGrail Bank, 16. Bouma Bank, 17. Sonnier Bank, 18. Rezak Bank, 19. Sidner Bank, 20. Parker Bank, 21. Alderdice Bank, 22. Sweet Bank, 23. Fishnet Bank, 24. Jakkula Bank, 25. Ewing Bank, 26. Diaphus Bank,



Bathymetry courtesy of USGS, UNH, Gardner and NOAA

M. Nuttall, FGBNMS, July 2010



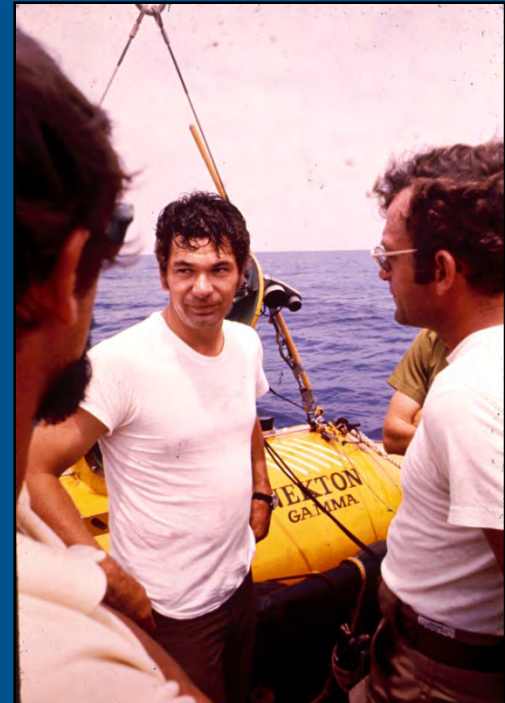
Reefs and Banks of the Northwestern Gulf of Mexico

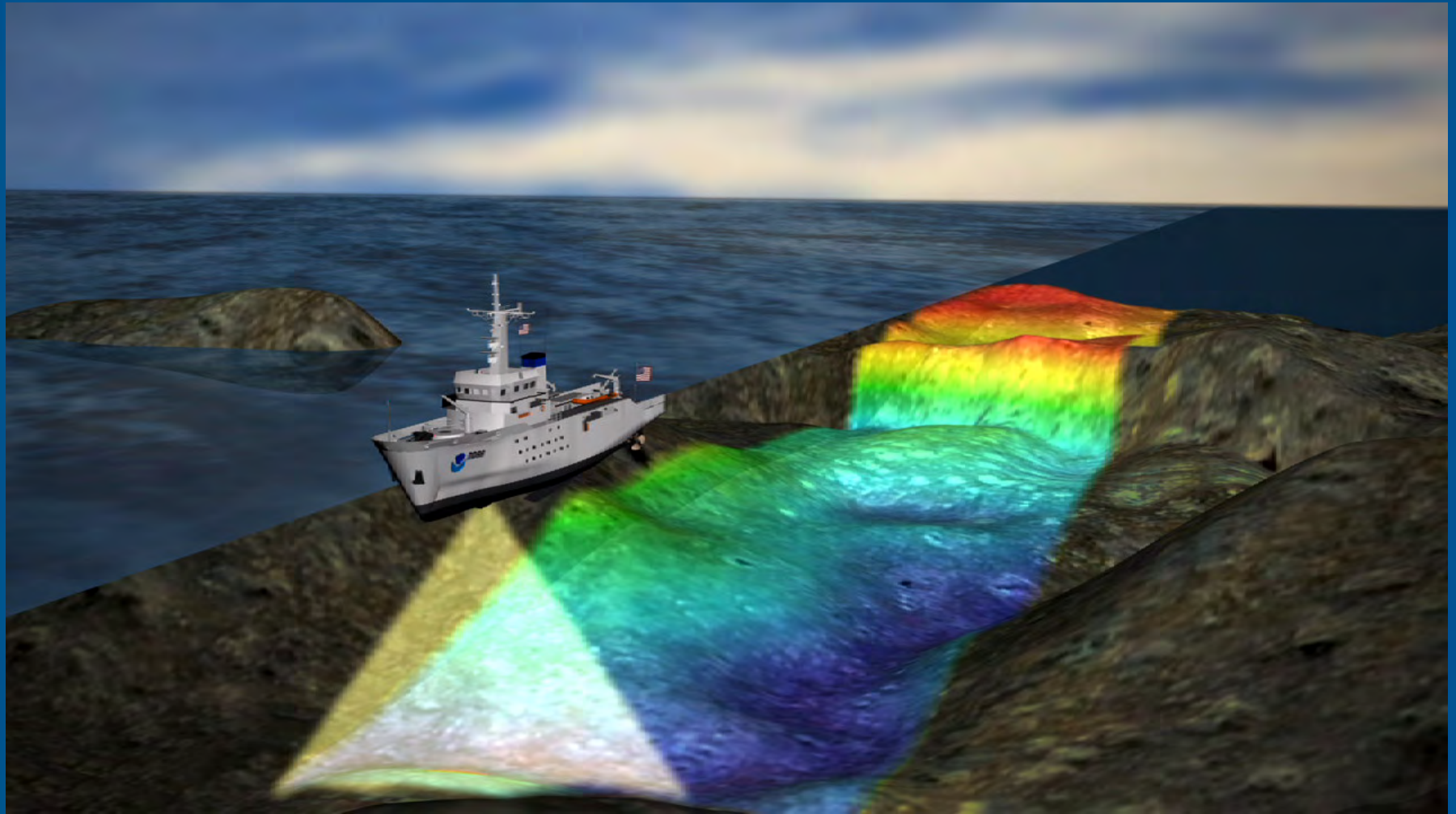


Reefs and Banks of the Northwestern Gulf of Mexico

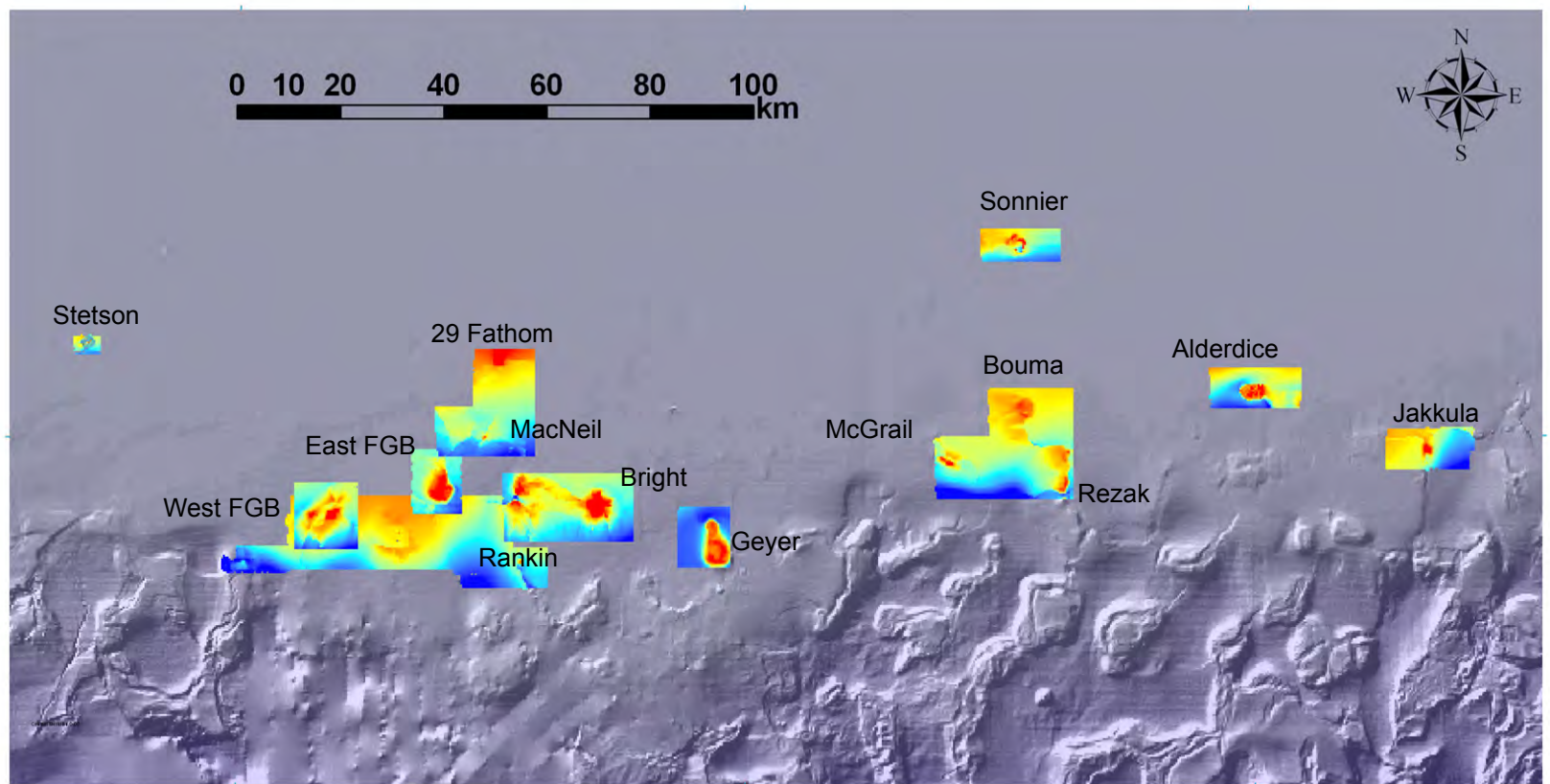
Their Geological, Biological,
and Physical Dynamics

Richard Rezak, Thomas J. Bright,
and David W. McGrail



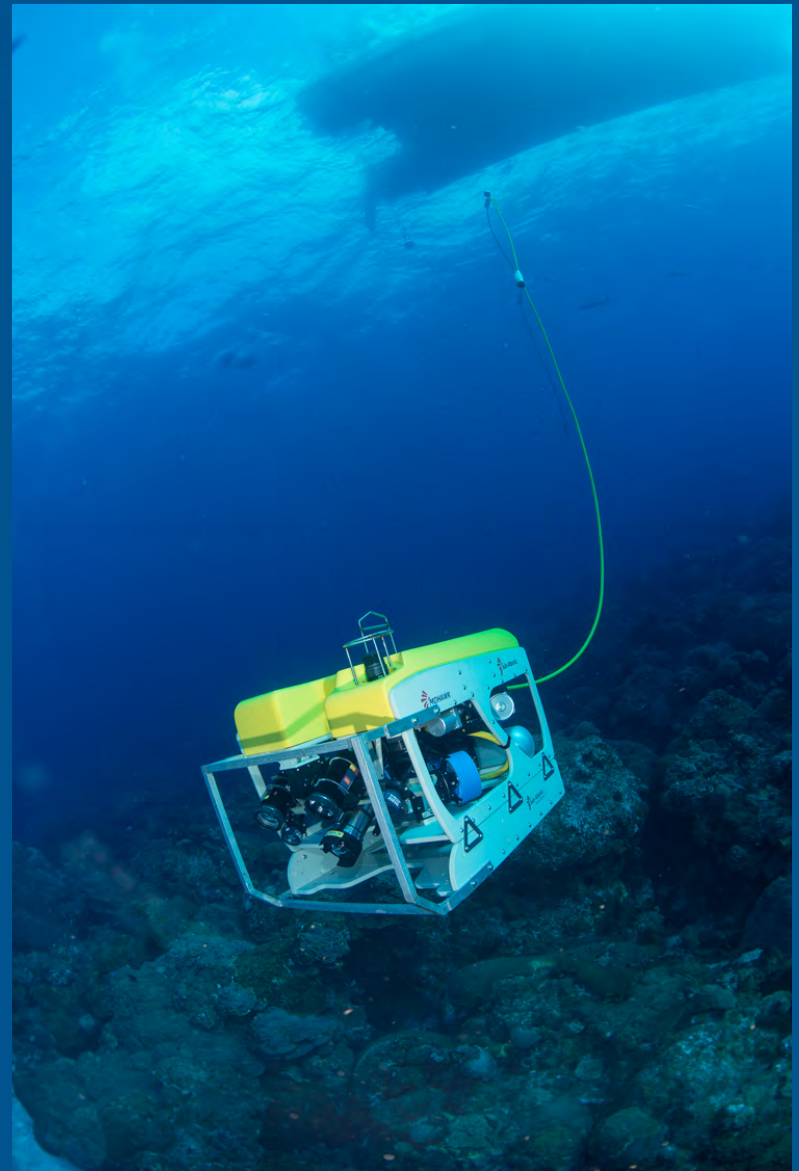
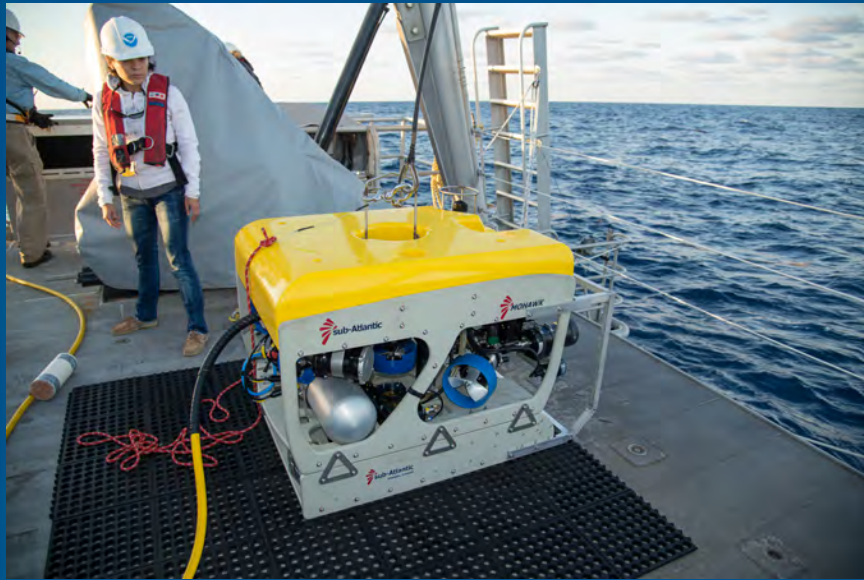


Seafloor Mapping – “Multibeam Bathymetry”



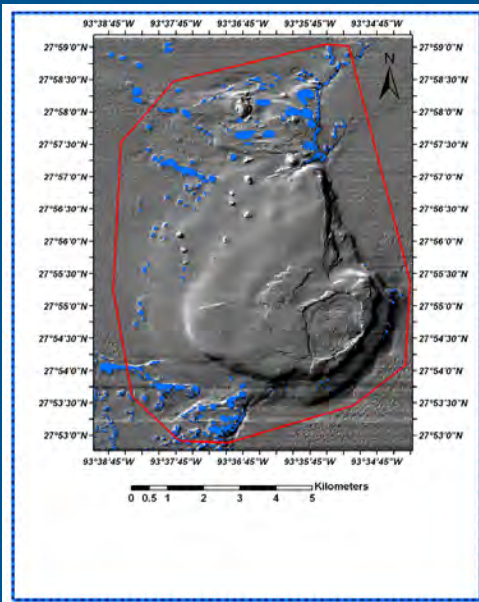
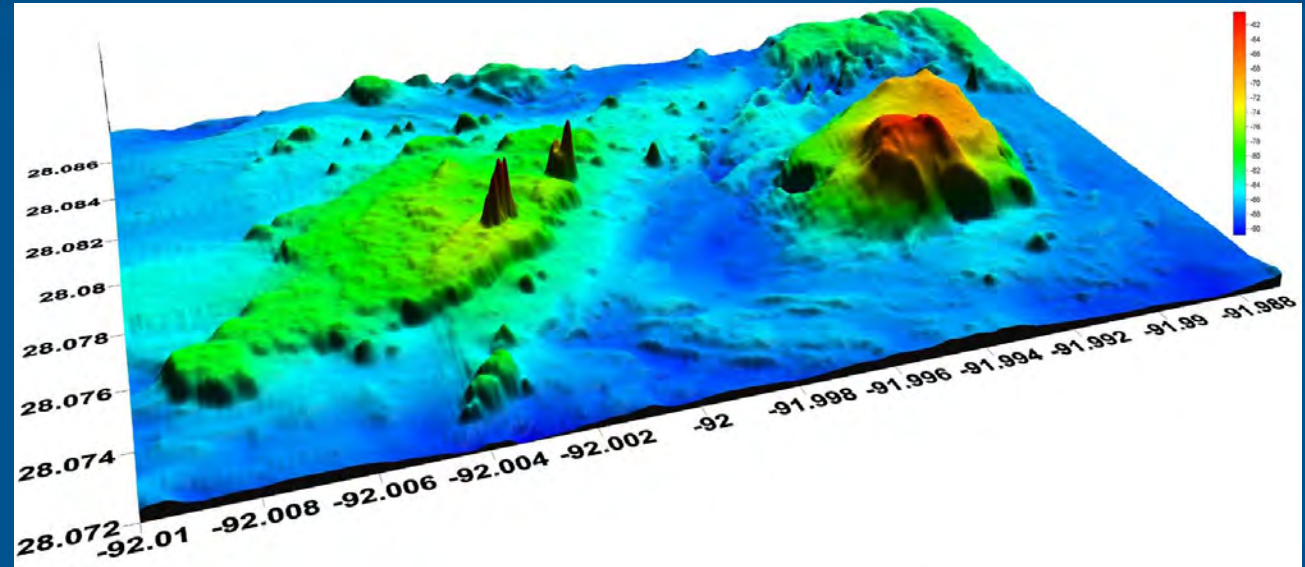
Reefs and Banks of the Northwestern Gulf of Mexico

High-resolution multibeam mapping, 2001-2007



Mohawk ROV at East Flower Garden Bank, November 2013

Mapping

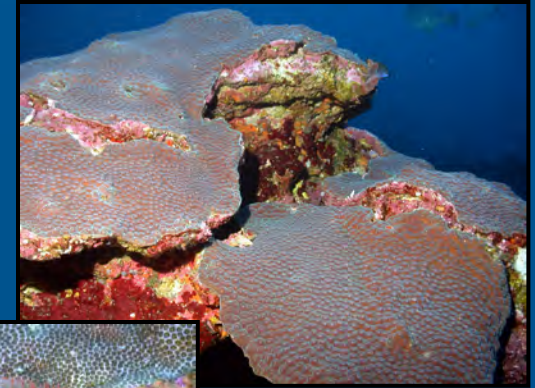
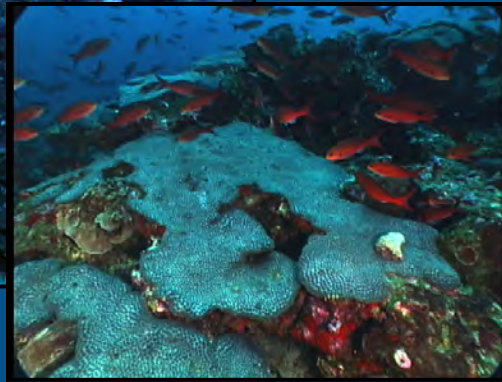
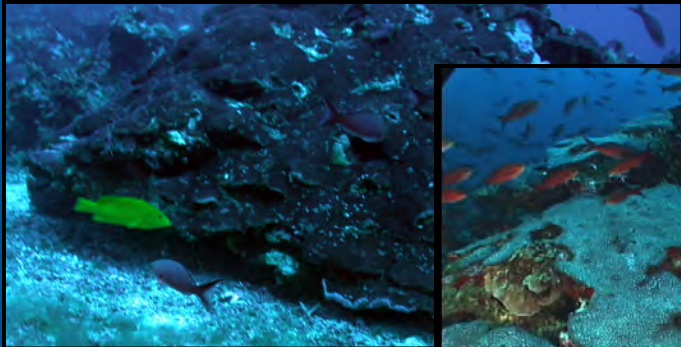


Habitat
Characterization

Coral communities in the NW Gulf of Mexico

McGrail Bank - 10 species

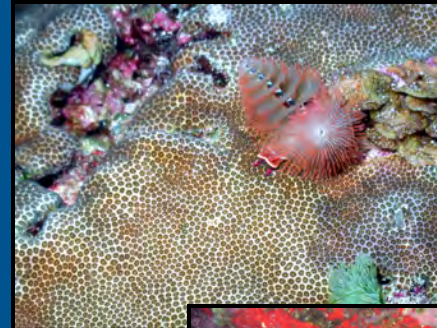
Approx. 24% coverage in some areas



Bright Bank

6 species

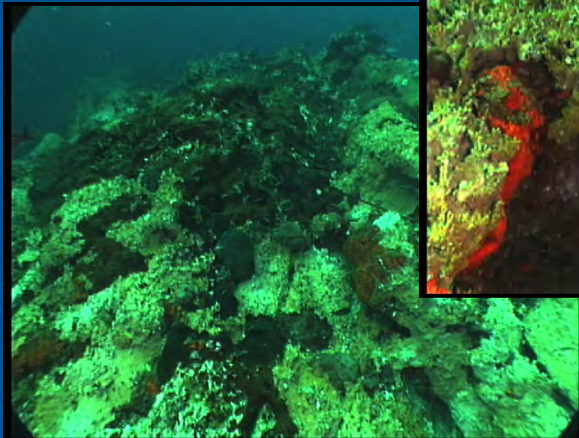
34-43m

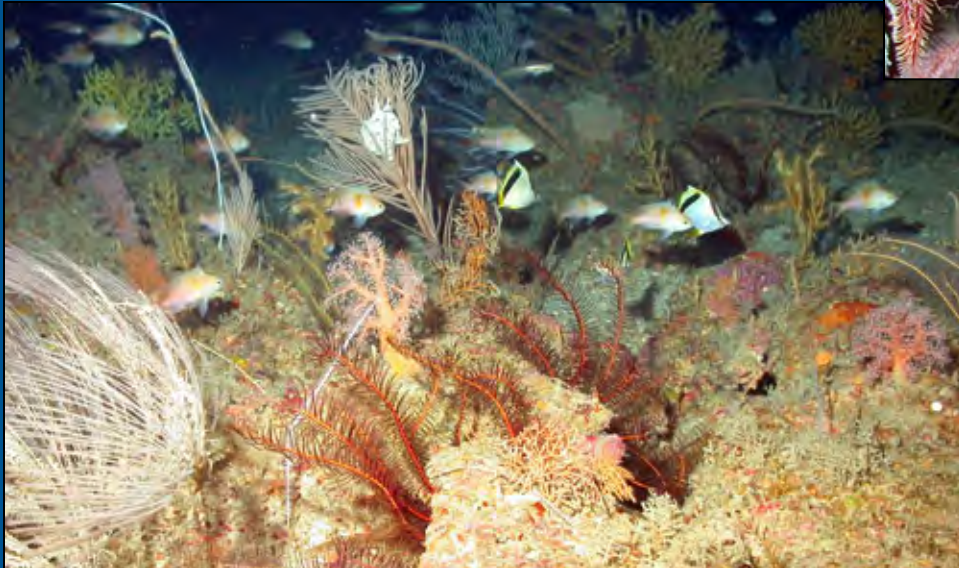


Sonnier Bank

8 species

20 - 52m





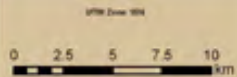
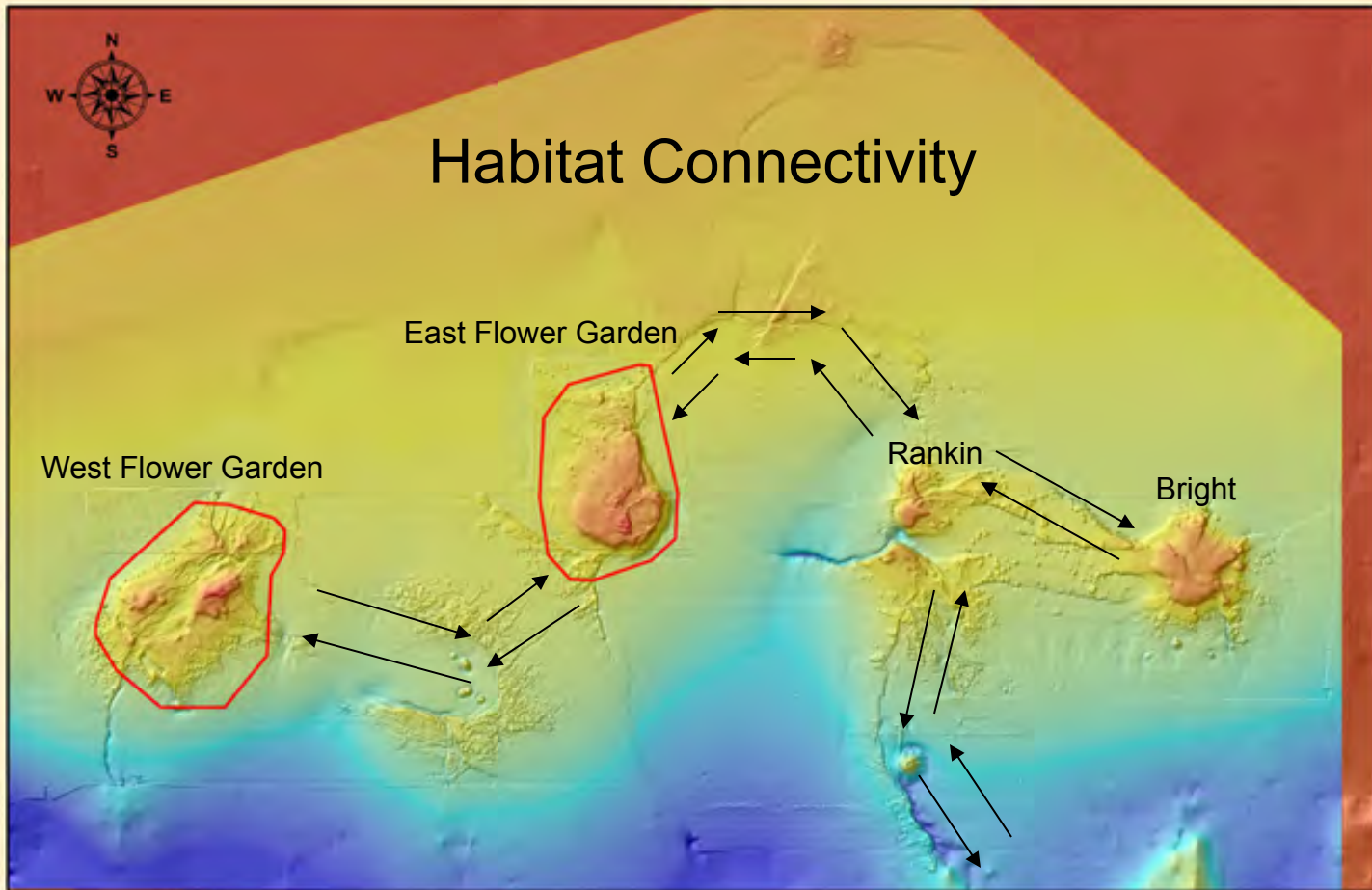
Deep / Mesophotic
Coral Communities of
the northwestern Gulf
of Mexico

Boundary Expansion Ranking Criteria

- **Resource Significance**
 - Coral reef, deepwater coral, geological feature
- **Structural Connectivity**
 - Physical connectedness (ridges, scarps, faults)
- **Biological Connectivity**
 - Distance from nearest neighbor (larval dispersal)
- **Potential or Perceived Threat**
 - Anchoring, high use, historical resource recovery
- **Public and Scientific Priority**
 - Popular diving site, high research interest



Habitat Connectivity



Flower Garden Banks Region

Flower Garden Banks NMS Research Team
July 2005

Data Sources: USGS, NOAA

Contact: doug.winner@noaa.gov

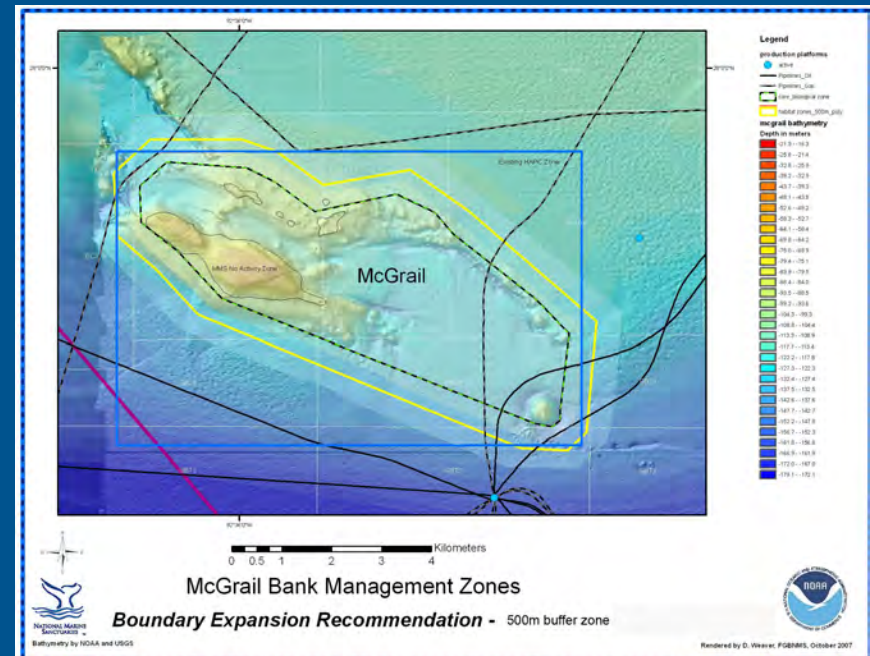


Area or Bank	Zone Priority Index	Structural Connectivity Index	Biological Connectivity	Threat Index	Public and Sanctuary priority	Overall ranking	Nearest Neighbor Distance (km)
Stetson Ring	3	3	3	3	3	12	23.3
McGrail	3	1	2	3	3	11	15.8
Geyer	3	1	2	3	3	11	18.25
Bright	3	2	2	3	3	11	14.8
Sonnier	3	1	1	3	3	10	29.8
"Horseshoe reef"	2	2	3	2	3	10	9.5
Alderdice	3	1	2	2	2.5	9.5	15.7
Rezak	1	1	3	1	2	7	5.9
Sidner	1	1	3	1	2	7	5.9
Rankin	1	2	3	1	1	6	3.4
28 Fathom	1	2	3	1	1	6	3.4
MacNeil	1	2	3	1	1	6	8.5
Bouma	1	1	2	1	1	5	11
Jakkula	1	1	1	1	1	4	23.1
Florida Middle Grounds	2	0	0	2	0	4	115
Alabama Pinnacles	1	0	0	1	0	2	219
Madison/Swanson	1	0	0	1	0	2	115

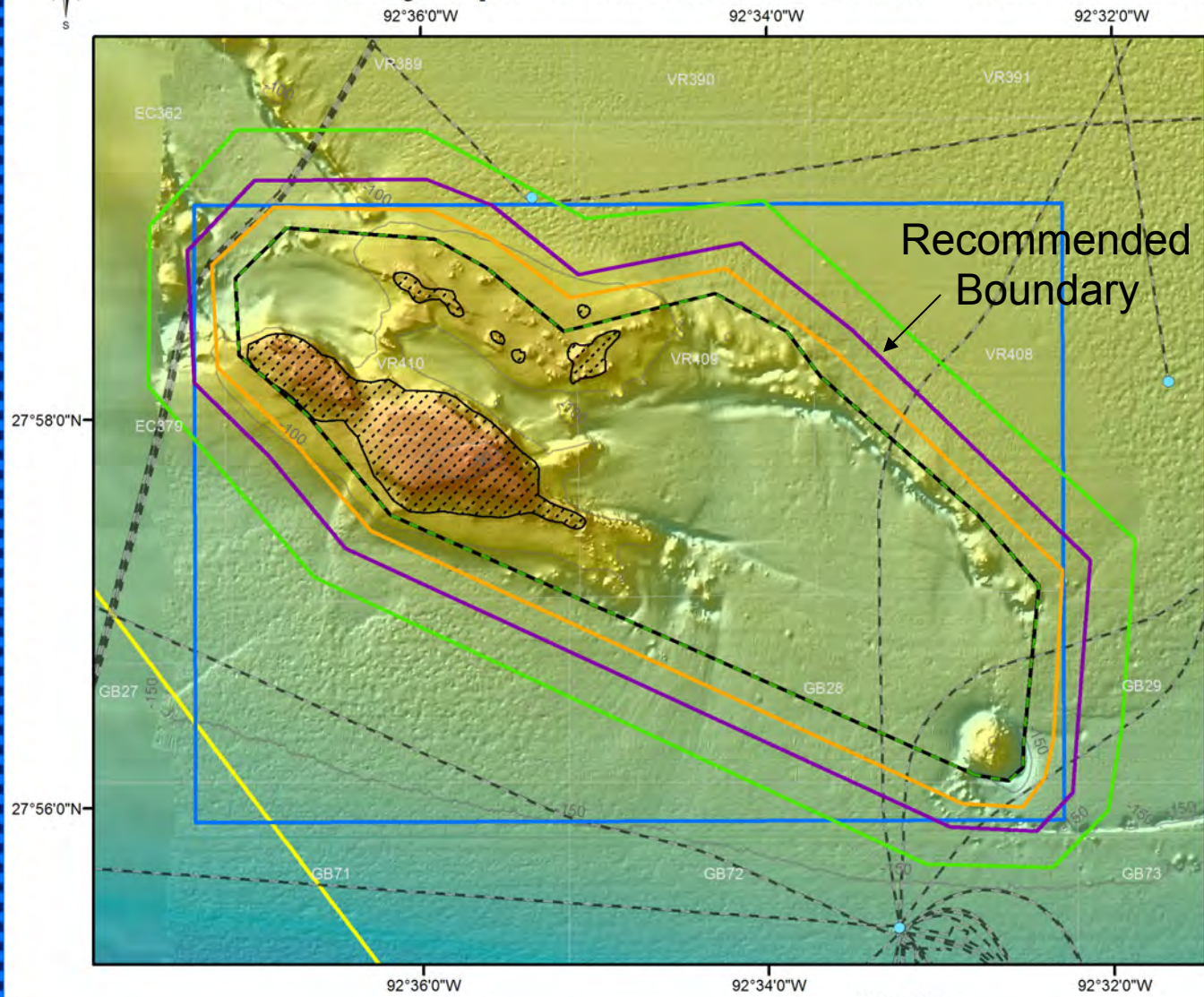
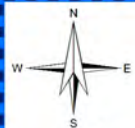
Boundary Expansion Criteria Matrix

BOUNDARY SELECTION CRITERIA

- Seafloor Topography
- Biological communities
- Oil and gas infrastructure
- Bureau of Ocean Energy Management (BOEM) regulations
- Gulf of Mexico Fishery Management Council “HAPC” designations
- Shipping Fairways



EXAMPLE Sanctuary Expansion Recommendation - McGrail Bank



Legend

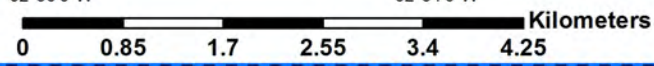
- Core Biological Zone
- 250 Boundary
- 500 Boundary
- 1000 Boundary
- FGBNMS Boundaries
- HAPC
- Platform
- No Activity Zone
- Pipeline
- Shipping Fairway
- Lease Blocks
- Contour (m)

Bathymetry

- High : 15m
- Low : 473m

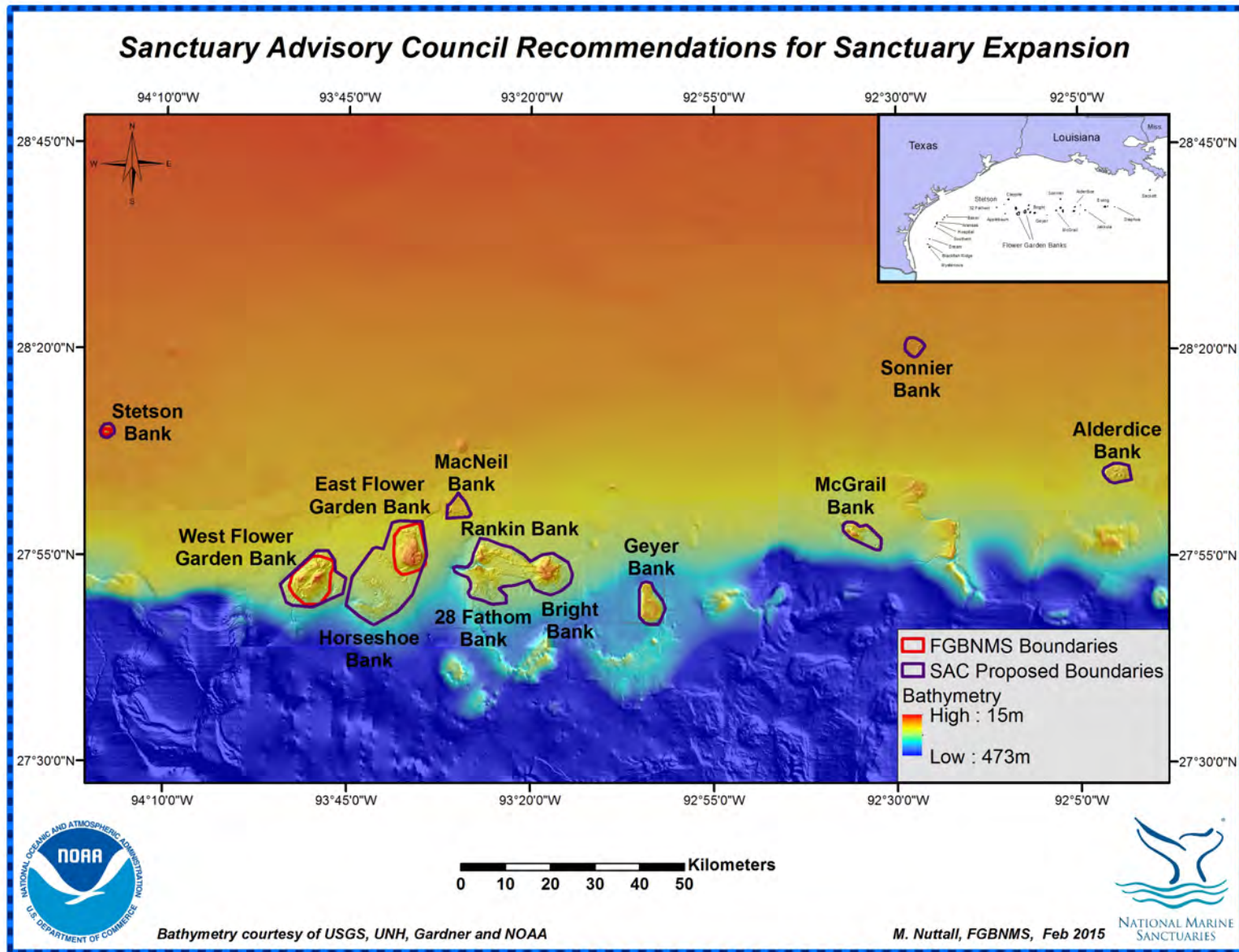


Bathymetry courtesy of USGS, UNH, Gardner and NOAA



M. Nuttall, FGBNMS, Feb 2015

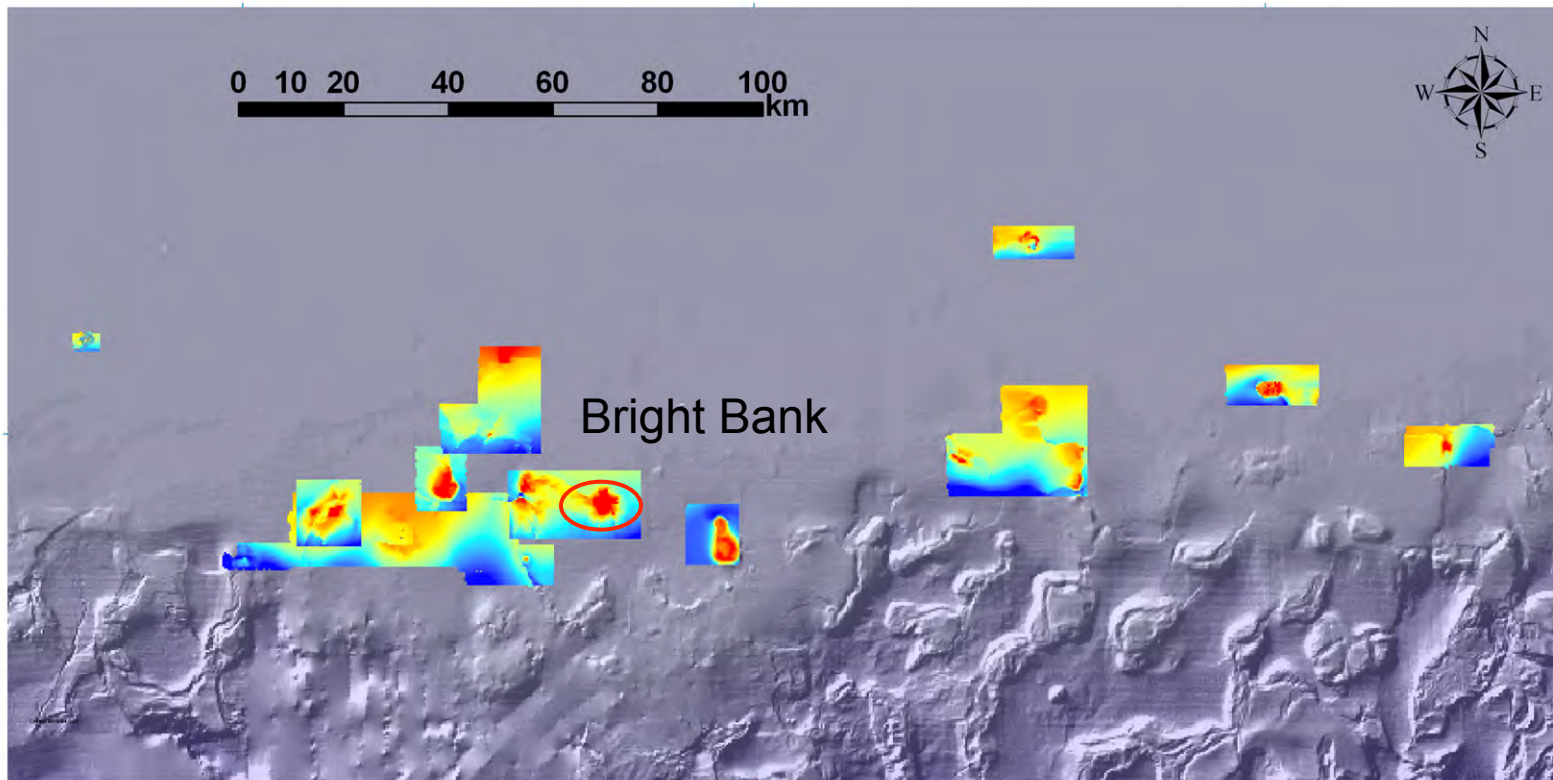
Flower Garden Banks NMS Management Plan

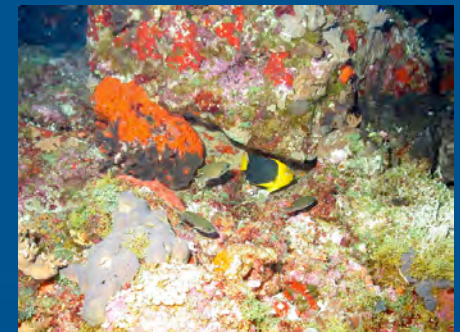
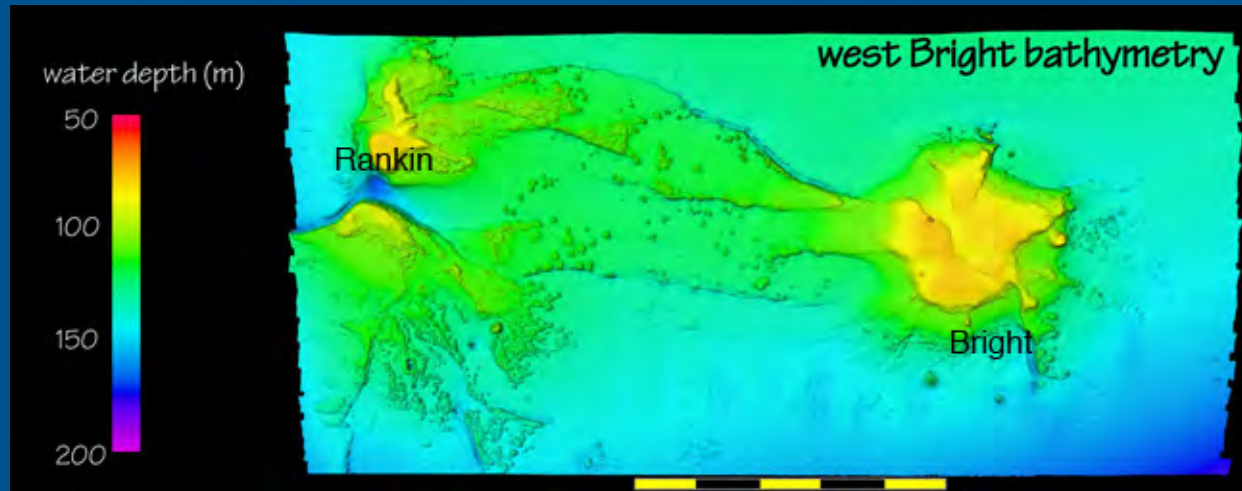


0 10 20 40 60 80 100 km



Bright Bank







Bright Bank – “Treasure”
salvage activities



Large Vessel Anchoring

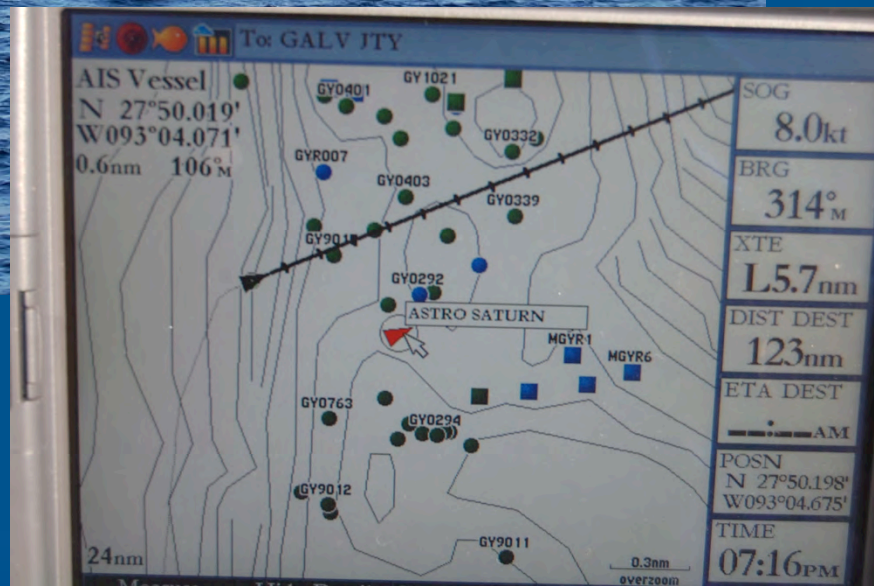
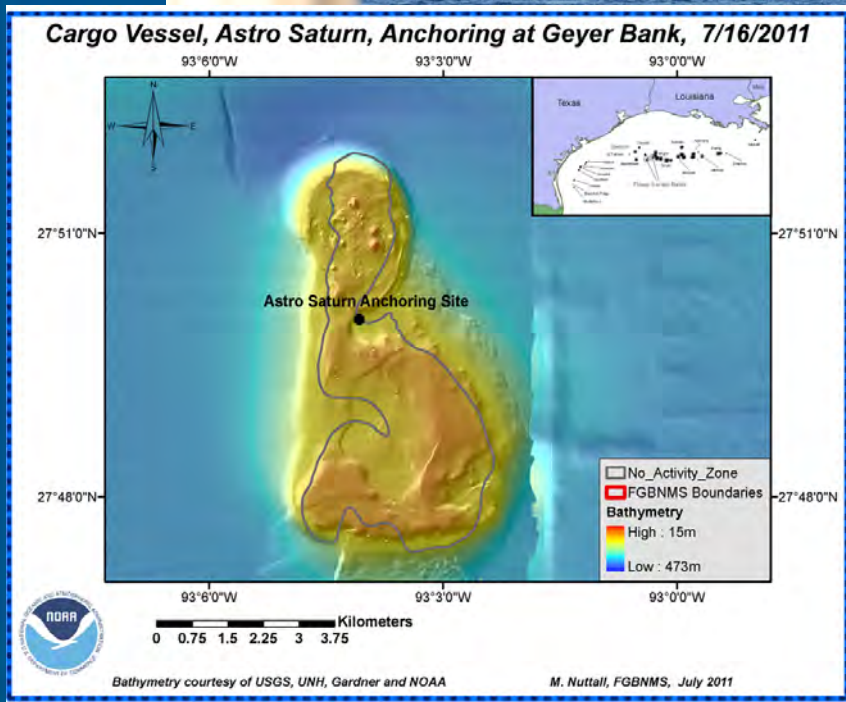
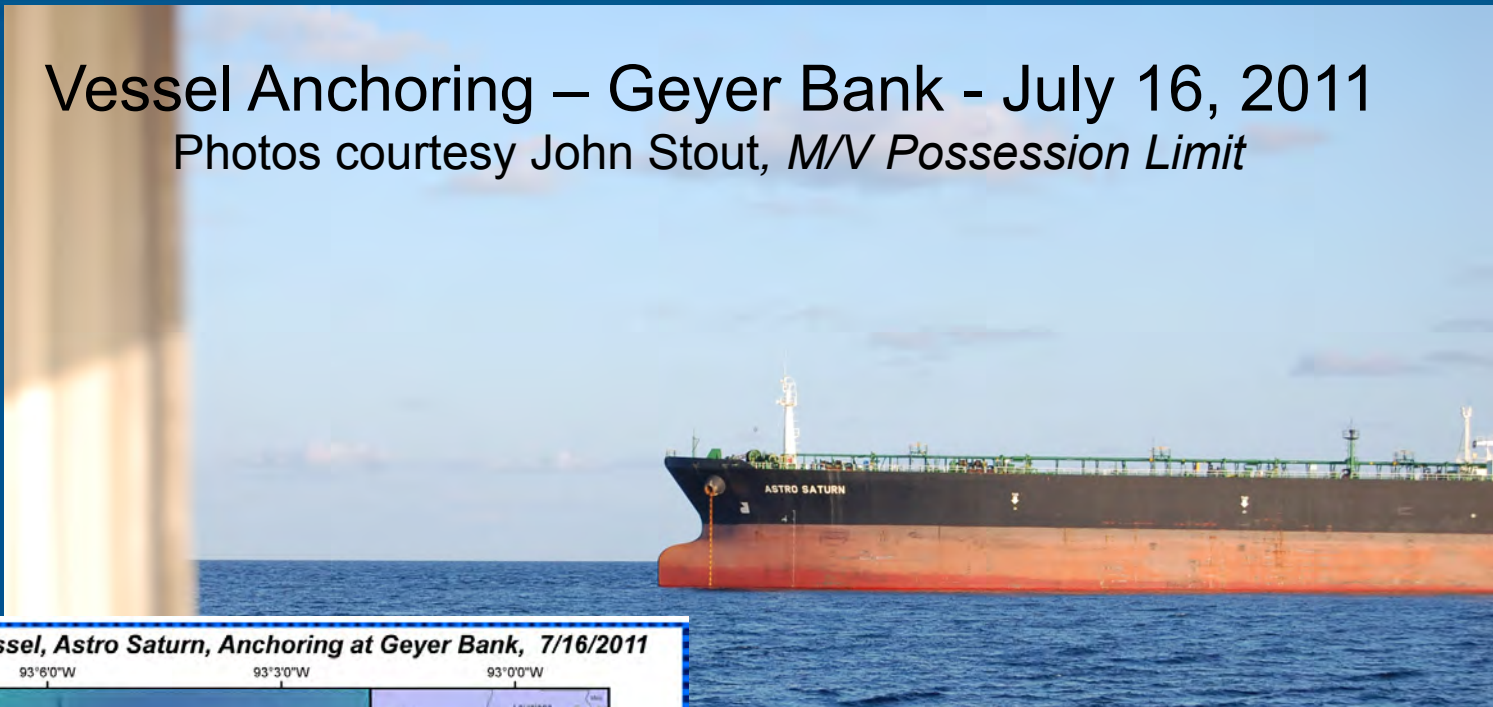


Dry Tortugas, Florida

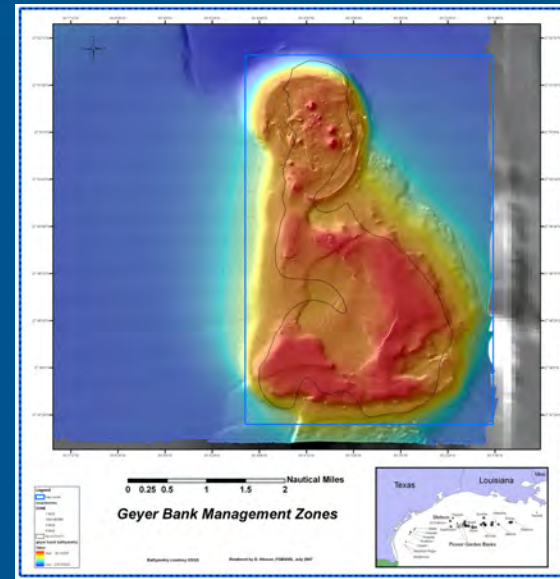


Vessel Anchoring – Geyer Bank - July 16, 2011

Photos courtesy John Stout, *M/V Possession Limit*



Geyer Bank



NATIONAL MARINE SANCTUARY ACT (16 U.S.C. 1431)

SECTION 304 (a) (5):

FISHING REGULATIONS - “The Secretary shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare draft regulations for fishing within the Exclusive Economic Zone as the Council may deem necessary to implement the proposed designation.”

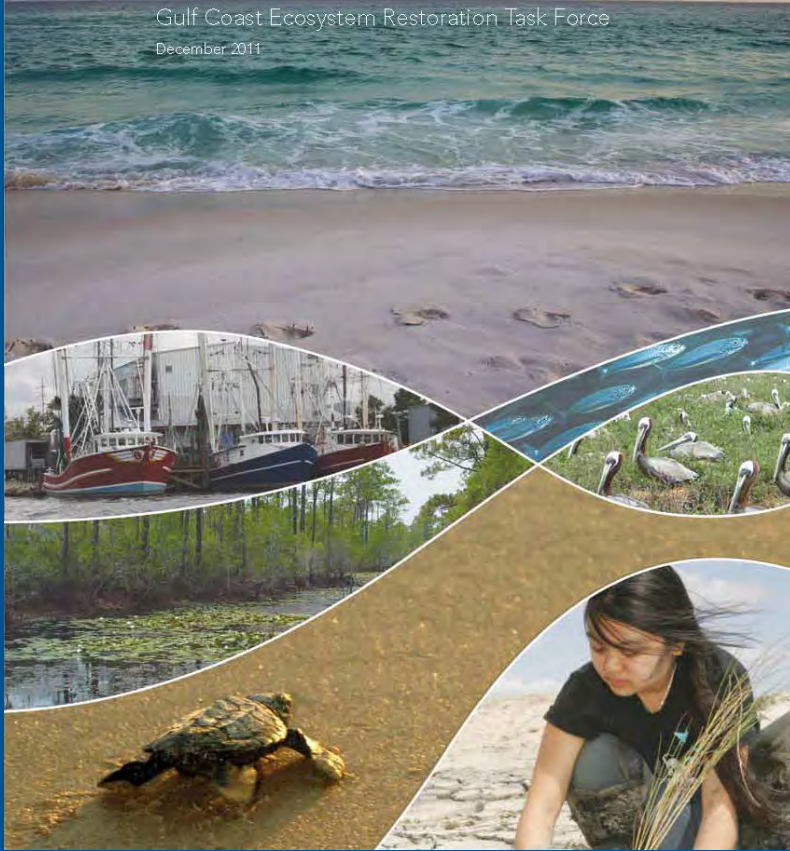
In preparing the draft regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act (16 U.S.C. 1851) to the extent that the standards are consistent and compatible with the proposed designation.



Gulf of Mexico Regional Ecosystem Restoration Strategy

Gulf Coast Ecosystem Restoration Task Force

December 2011



data are frequently cited as a major challenge in achieving sustainability and maximizing economic benefits to recreational and commercial fisheries.

- Explore opportunities to enhance depleted fishery stocks through reintroductions, and/or develop and expand capabilities to re-stock native species of fish, shellfish, plants and wildlife.
- Identify beach-nesting bird colonies (e.g., least terns, black skimmers) and solitary nesting species (e.g., piping plover, American oystercatcher).
- Investigate the impacts of mechanical disturbance of subsurface habitat on the sustainability of living coastal and marine resources.

Conserve and protect offshore environments

One hundred fifty million years of biological and geological history have created numerous banks, escarpments and hard grounds that rim the continental margin of the Gulf of Mexico. These hardbottom features are relatively rare, highlighting the importance of conserving these habitats where they do exist. The sea floor environments formed by these features are home to dense communities of corals, sponges and other invertebrates. They also attract resident and migratory fish species, including snapper, grouper, sharks and rays, as well as marine mammals and sea turtles. These ecologically important places extend into deep areas of the Gulf where dense assemblages of deepwater coral species and seeps of methane support unique and biologically rich marine communities. The deep-water environments of the Gulf support schools of squid, which are food sources for many whales, swordfish and marlin. Furthermore, the offshore environment serves as a critical component of the life cycles of many vertebrate and invertebrate species (e.g., white and brown shrimp, Gulf menhaden), so its health is integral to species' survival.

The unique hard-bottom structures found throughout the Gulf (such as the Florida and Texas Snapper Banks, the Alabama Pinnacles, the Alabama Alps, the Florida Middle Grounds and Pulley Ridge, and the Texas and Louisiana Flower Garden Banks) support prolific invertebrate communities and important reef fish spawning areas. Pulley Ridge is a series of drowned barrier islands on the southwest Florida Shelf, which are the deepest known light-dependent coral reefs in the United States. Throughout the Gulf, extensive offshore mats of *Sargassum* provide shelter, nursery habitat and food for deepwater species, including sea turtles. These highly diverse concentrations of marine life are essential to maintaining the Gulf's biodiversity and the productivity of its commercial and recreational fisheries.

The health of these environments, and of all the coastal and offshore habitats of the Gulf of Mexico, relies on the physical and biological connections that link the places and their communities to each other and to the wider Gulf and Caribbean region. Therefore, protecting and managing a network of ecologically significant offshore sites will be important to the Gulf's overall biological productivity and resilience.

“Therefore, protecting and managing a network of ecologically significant offshore sites will be important to the Gulf’s overall biological productivity and resilience.” (p. 39)

The Sanctuary Nomination Process

New Sites for Future Generations: A Community Approach

For the first time in 20 years, NOAA's Office of National Marine Sanctuaries:

- Re-establishes the process by which **the American public nominates** special places as new National Marine Sanctuaries
 - Nominations should be based on criteria directly connected to the National Marine Sanctuaries Act
 - Nominated areas should include nationally-significant resources and habitats, as well as economic incentives and collaborative partnerships

www.nominate.noaa.gov



The Road to Nomination

For the first time in two decades, NOAA invites communities across the nation to nominate their most treasured places in our marine and Great Lakes waters for consideration as national marine sanctuaries.

In response to ongoing widespread interest from the public, NOAA has launched a new, locally driven sanctuary

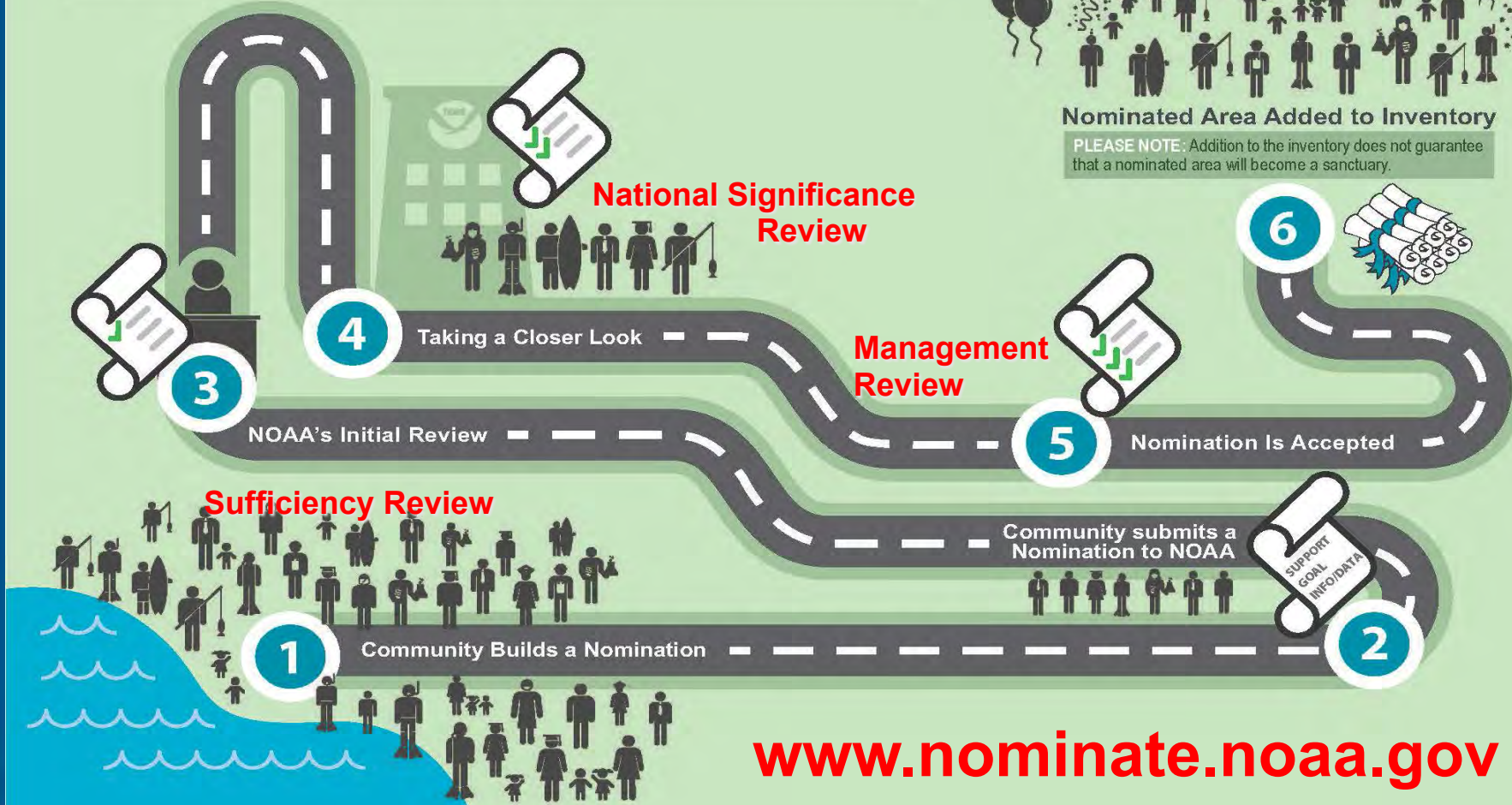
nomination process developed with input from more than 18,000 public comments. Throughout the nomination process, NOAA will be available to answer questions and provide guidance to nominating communities and other interested parties. NOAA will also update nominators on the progress of the agency's review of their nomination.

PLEASE NOTE: Nomination is not the same thing as sanctuary designation. Designation occurs as a separate process that by law, is highly public and participatory and often takes several years to complete.



Nominated Area Added to Inventory

PLEASE NOTE: Addition to the inventory does not guarantee that a nominated area will become a sanctuary.



www.nominate.noaa.gov

National Marine Sanctuaries
National Oceanic and Atmospheric Administration



NATIONAL MARINE
SANCTUARIES

FLOWER
GARDEN BANKS

<http://flowergarden.noaa.gov>