

Gulf Coast Ecosystem Restoration Science, Observation,
Monitoring, and Technology Program



NOAA RESTORE Act Science Program:

Advancing a Holistic Understanding of the Gulf of Mexico

Conference on Ecological and Ecosystem Restoration

July 29, 2014

Julien Lartigue



Outline

- Authorization and Legislative Requirements
- Funding
- Coordination
- Program Organization and Administration
- Science Planning
 - Vision and Mission, Goal, Priorities
- Initial Federal Funding Opportunity
- Challenges and Opportunities



What is the Program?

- RESTORE Act of 2012

- Section 1604 authorizes NOAA to establish a Gulf Coast Ecosystem Restoration Science, Observation, Monitoring, and Technology Program (NOAA RESTORE Act Science Program)

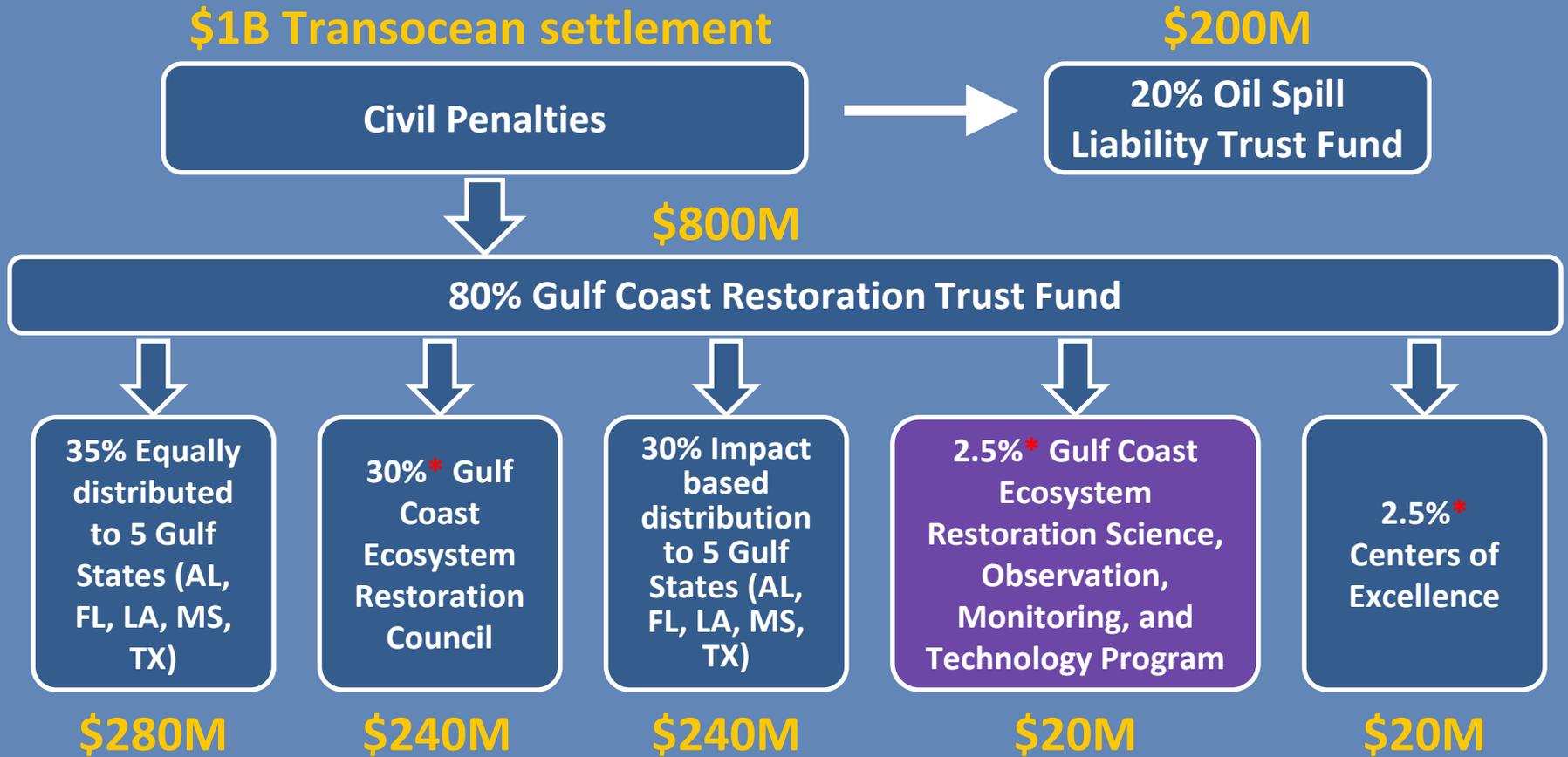
- *“...to carry out research, observation, and monitoring to support, to the maximum extent practicable, the long-term sustainability of the ecosystem, fish stocks, fish habitat, and the recreational, commercial, and charter fishing industry in the Gulf of Mexico.”*



Legislative Requirements

- Coordinate with the United States Fish and Wildlife Service (USFWS)
- Consult with Gulf States Marine Fisheries Commission (GSMFC) and Gulf of Mexico Fishery Management Council (GMFMC)
- Priority shall be given to integrated, long-term projects that address management needs
- Funds may not be used for
 - any existing or planned research led by NOAA,
 - implementation or initiation of new NOAA regulations, and
 - development of or approval of a fisheries catch share program.

Distribution of Clean Water Act Civil Penalties per the RESTORE Act



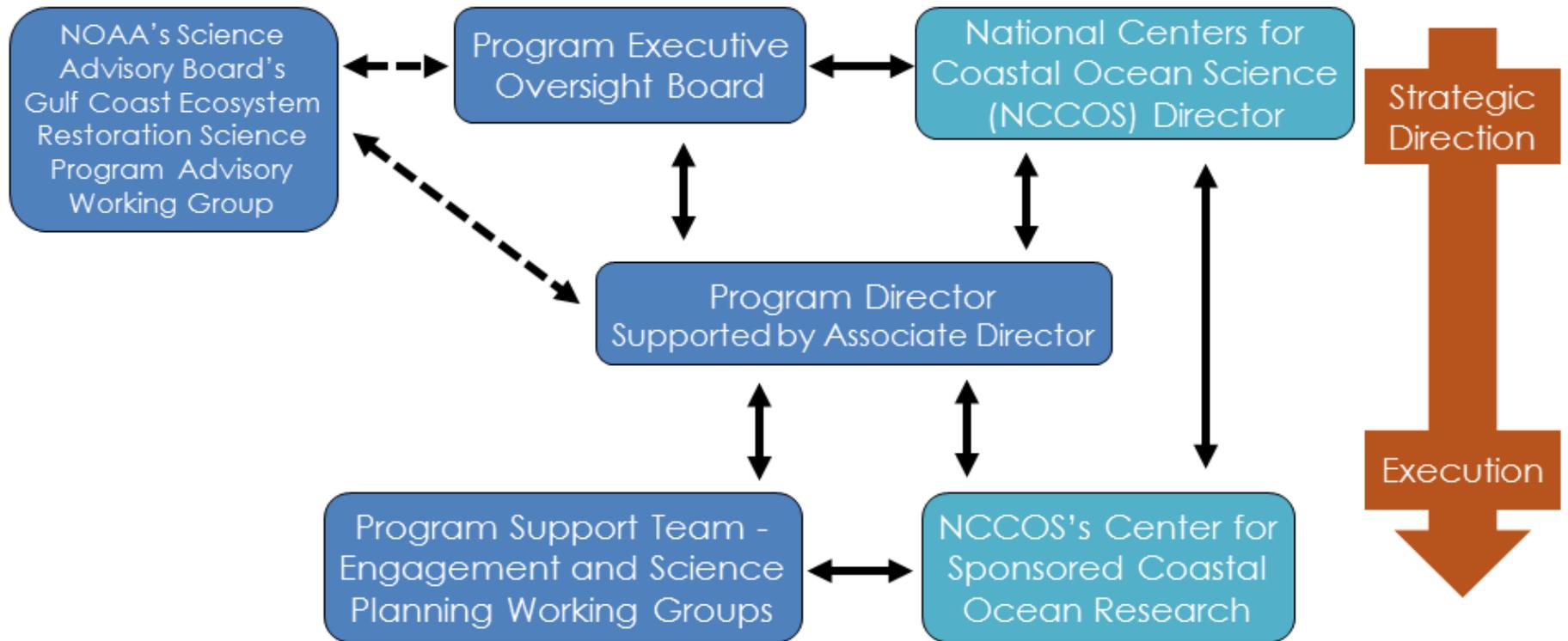
*Supplemented by interest generated by the Gulf Coast Restoration Trust Fund

(50% to Gulf Coast Ecosystem Restoration Council, 25% to Science Program,

25% to Centers of Excellence)

NOAA RESTORE Act Science Program

Planning and Execution Organizational Structure



Color Key:

■ NOAA Infrastructure Support

— Reporting

■ NOAA RESTORE Act Science Program

- - Advisory



Why the focus on engagement?

- To be successful, this program must support high-quality research that addresses the knowledge gaps and management needs in the Gulf of Mexico.
- Frequent and constructive engagement with the larger research and resource management community is required to identify these gaps and needs and attract high-quality proposals to address them.

Science Planning

Science Plan
Framework



Science Plan

- Provides a foundation for developing a robust Science Plan

- Communicates the intent, purpose, and rationale for execution of the Program

Vision

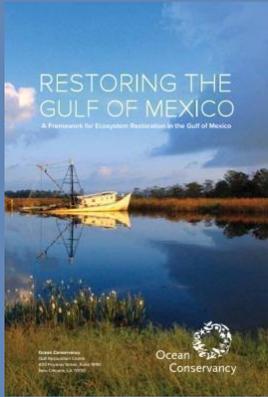
Long-term sustainability of the Gulf of Mexico ecosystem and the communities that depend on it.

Mission

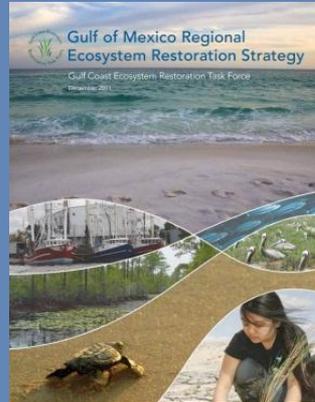
To initiate and sustain an integrative, holistic understanding of the Gulf of Mexico ecosystem and support, to the maximum extent practicable, restoration efforts and the long-term sustainability of the ecosystem, including its fish stocks, fishing industries, habitat, and wildlife through ecosystem research, observation, monitoring, and technology development.

Building the Science Program on a Strong Foundation

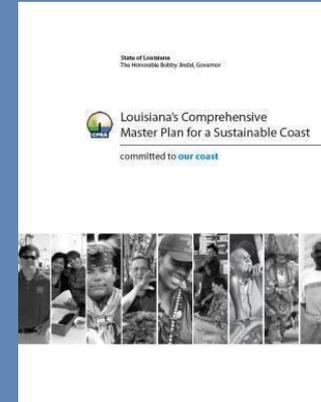
Science Planning, Engagement, and Coordination



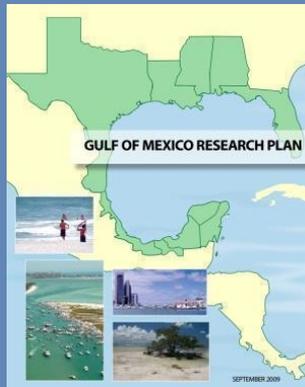
The Ocean Conservancy



The Gulf Coast Ecosystem Restoration Task Force

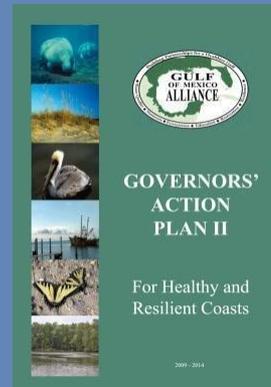


Louisiana Comprehensive Master Plan

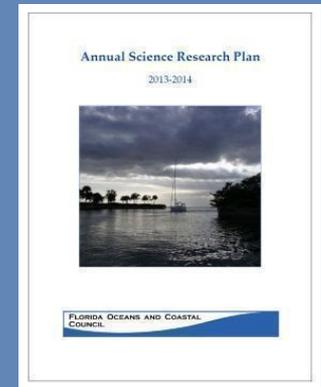


Sea Grant Research Plan

Gulf Governors Action Plan



Florida Ocean Council – Annual Science Research Plan



The direction of the program has and will continue to be informed by stakeholder input, existing plans and activities addressing the Gulf of Mexico ecosystem, and by the science needs of our partners.



Goal

Support the science necessary for better understanding and management of the Gulf of Mexico ecosystem, specifically:

- healthy, diverse, sustainable, and resilient **estuarine, coastal and marine habitats;**
- healthy, diverse, sustainable, and resilient **coastal and marine resources, including fisheries;**
- resilient and **adaptive coastal communities.**

Priority Identification Process

- Reviewed existing documents to identify research needs
- Consolidated priorities
- Identified management needs supported by each priority
- Identified key activities and anticipated outputs and outcomes

Science Plan (Draft) Priorities

- Forecasting, analysis and modeling of **climate change and weather effects** on the sustainability and resiliency of Gulf ecosystems.
- Construct **accurate, actionable and accessible ecosystem models** for the Gulf of Mexico.
- Quantify **sediment, nutrients, contaminants, and water flow** interrelationships, variability and consequent impacts to health and function of coastal habitats.
- Provide a more comprehensive understanding of **life histories of living marine resources, food web dynamics, and habitat utilization** (e.g., connecting habitats, ontogeny, and food webs) as guidance for living marine resources management.

Science Plan (Draft) Priorities

- **Coordinate and integrate existing Gulf monitoring** to develop a network of living marine resources monitoring systems including fisheries dependent and independent data collection.
- Develop and implement **advanced engineering, tagging and biological technologies** to improve monitoring.
- **Collect information and develop decision support tools** needed to implement, monitor and adaptively manage habitat including coastal and marine protected areas.

Science Plan (Draft) Priorities

- Create an **integrative, unified, and easily accessible data framework** that tabulates, synthesizes and provides opportunity for analysis of new and existing social and environmental data in order to develop long-term trend information.
- Develop a better understanding of **ecosystem services and other determinants of resilience** for coupled social and ecological systems.
- Identify or develop **state of health indicators** for the Gulf of Mexico ecosystem, including the socio-economic component.

Initial Federal Funding Opportunity (FFO): Short-term Priorities

- Comprehensive inventory and assessment (i.e., strengths/weaknesses) of ongoing ecosystem modeling efforts (conceptual and quantitative);
- Identification of currently available health/condition indicators of Gulf of Mexico ecosystem components, including humans, followed by comparative analysis of strengths and weaknesses and design/testing of additional indicators;
- Assessment of monitoring and observation needs and development of recommendations to build off existing assets to establish a Gulf wide monitoring and observation network.

Challenges and Opportunities

- The funding uncertainties necessitate that we take a tiered and iterative approach.
- There are several new science initiatives focused on the Gulf of Mexico which when combined with existing science activities represent an extraordinary opportunity.
 - Coordination is key.
- This program is a science initiative *within* the RESTORE Act, not the science initiative for the RESTORE Act.
- There are many research needs in the Gulf of Mexico and this and other related programs will have to prioritize these needs.
 - We need our partners' wisdom and an open process.

Questions?

E-mail:

noaarestorescience@noaa.gov

Website:

restoreactscienceprogram.noaa.gov

BACKUP SLIDES

Current Activities

Complete draft science plan

Finalize initial FFO around short-term priorities

Future Activities

Science plan public comment period and engagement sessions

Release initial FFO

Finalize science plan

NOAA RESTORE Act Science Program Contact Information

NCCOS Director – Ms. Mary Erickson (mary.erickson@noaa.gov)

Program Director (Acting) – Mr. Russ Beard (russ.beard@noaa.gov)

Associate Program Director – Vacant

Science Plan Working Group Lead – Dr. Becky Allee
(becky.allee@noaa.gov)

Engagement Working Group Lead – Dr. Julien Lartigue
(julien.lartigue@noaa.gov)

Focus Areas



“Ecosystem processes, functioning and connectivity” through integrative field and laboratory studies



“Holistic approaches to observing & monitoring” with advanced technologies to monitor fisheries & other natural resources, & data integration tools focused on the observing needs in the Gulf of Mexico



“Integrated analysis and synthesis of existing and new data” to advance the state of ecological knowledge through the search for patterns and principles



“State of Health” of the Gulf, incorporating environmental, socio-economic, & human well-being benefits & elements