



RESTORE Council

Management Requirements & Opportunities

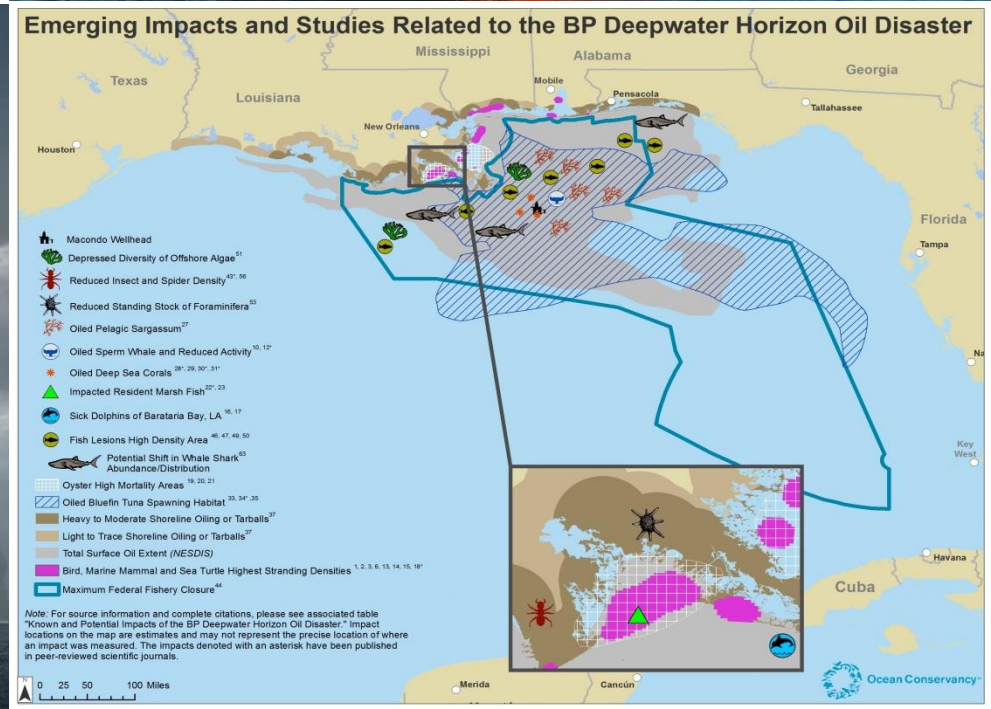
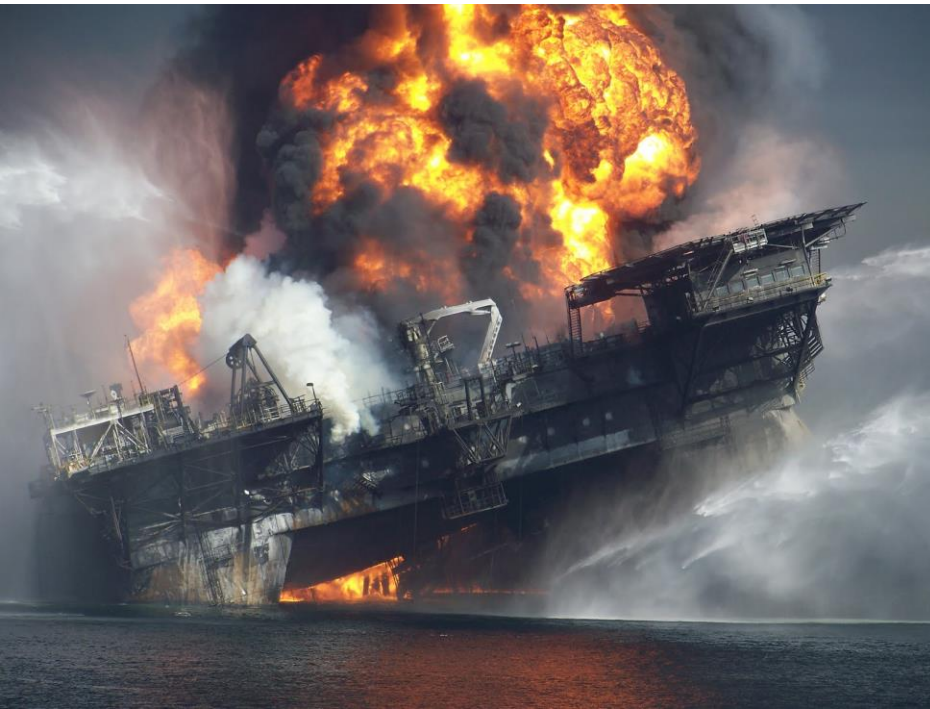
Council Monitoring & Assessment Program

Steve Giordano & Mark Monaco, National Oceanic & Atmospheric Administration

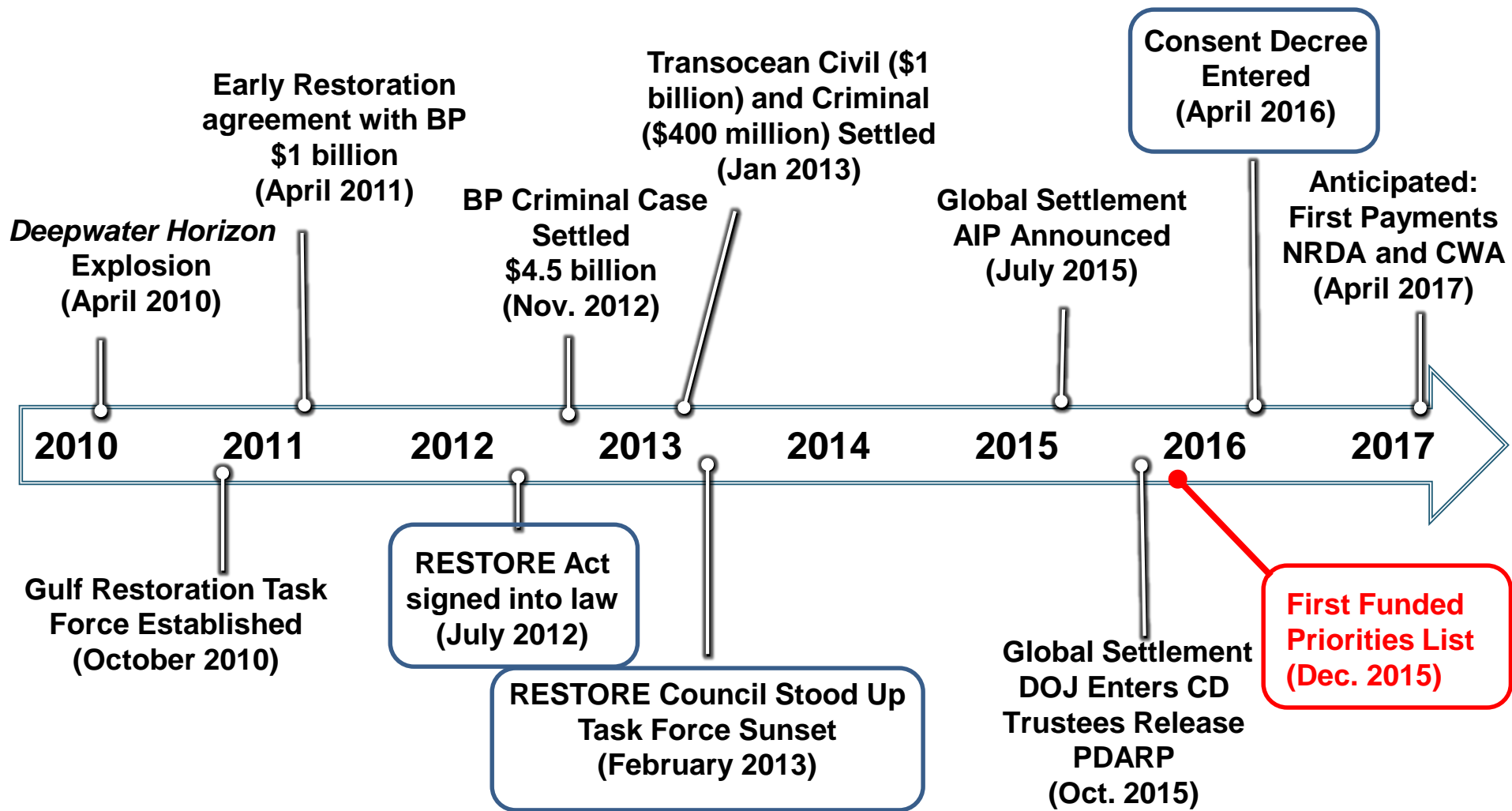
Greg Steyer & Mike Lee, U.S. Geological Survey

Alyssa Dausman & Jessica Henkel, RESTORE Council

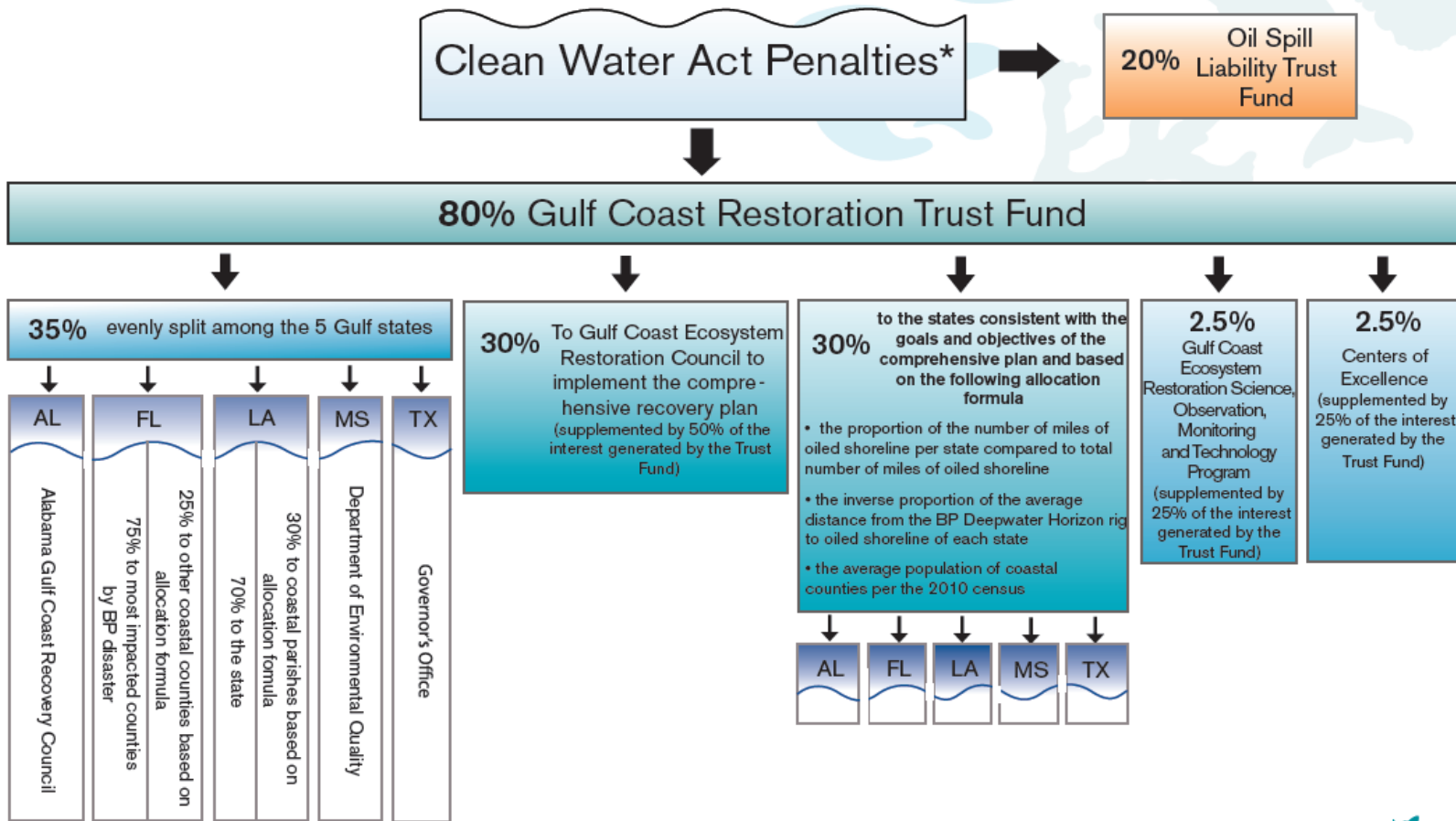
Deepwater Horizon Explosion & Loss – April 2010



Deepwater Horizon Timeline



Distribution of Clean Water Act penalties to Gulf recovery per the RESTORE Act



* Clean Water Act penalties are a per barrel penalty of \$1100 for release of pollution into the environment. If 'gross negligence' is determined in release of the pollution, the penalty per barrel increases to \$4300. In the case of the BP Deepwater Horizon incident the following are estimates:

\$1100 X (4.9 million barrels of oil released into the environment) = approx \$5.39 billion

\$4300 X (4.9 million barrels of oil released into the environment) = approx \$21.07 billion [gross negligence]

All amounts are subject to negotiation via a settlement between the government and responsible parties.

RESTORE Council

<https://www.restorethegulf.gov/>

- Settlement includes \$4.4 Billion in Clean Water Act Civil Penalties
 - Payout is over 15 years, starting in 2017
 - Bucket 1: \$1.54 Billion, Five States Share
 - \$308 Million Each
 - **Bucket 2: \$1.32 Billion Plus 50% of Interest**
 - **Council Approves Projects**
 - **Bucket 3: \$1.32 Billion, Five States Share per Proposed Formula**

| | |
|----------------------------------|------------------------------------|
| Alabama 20.40% (\$269 Million) | Mississippi 19.07% (\$251 Million) |
| Florida 18.36% (\$242 Million) | Texas 7.58% (\$100 Million) |
| Louisiana 34.59% (\$465 Million) | |
 - Bucket 4: \$110 Million Plus 25% of Interest
 - NOAA Restore Act Science Program
 - Bucket 5: \$110 Million Plus 25% of Interest
 - 5 State Centers of Excellence
 - \$22 million Each



Comprehensive Plan

Key Goals

- **Goal 1: Restore and Conserve Habitat**
 - Restore and conserve the health, diversity, and resilience of key coastal, estuarine, and marine habitats;
- **Goal 2: Restore Water Quality and Quantity**
 - Restore and protect the water quality and quantity of the Gulf Coast region's fresh, estuarine, and marine waters;
- **Goal 3: Replenish and Protect Living Coastal and Marine Resources**
 - Restore and protect healthy, diverse, and sustainable living coastal and marine resources

Comprehensive Plan

Key Objectives

- **Objective 1:** Restore, Enhance, and Protect Habitats
- **Objective 2:** Restore, Improve, and Protect Water Resources
- **Objective 3:** Replenish and Protect Living Coastal and Marine Resources
- **Objective 7:** Improve Science-Based Decision-Making Processes

Comprehensive Plan

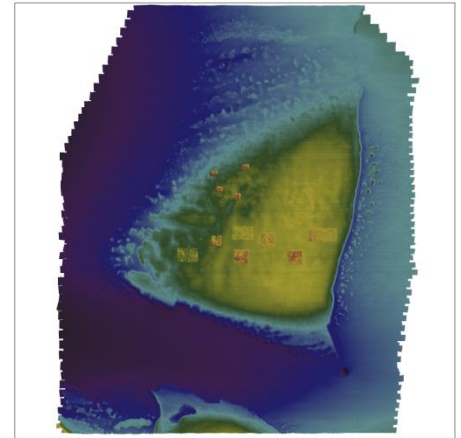
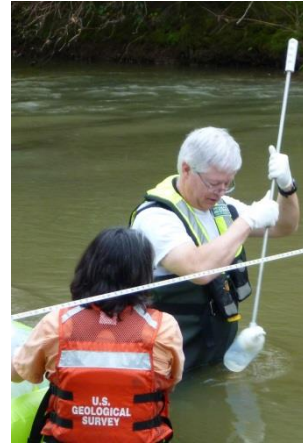
Council Commitments

- *Commitment to a Regional Ecosystem-based Approach to Restoration*
- *Commitment to Leveraging Resources and Partnerships*
 - Coordinating, Collaborating and Connecting Gulf Restoration Activities
 - *Partnerships and Leveraging*
 - *Coordination/Collaboration with other ongoing Restoration Efforts*
- *Commitment to Science-Based Decision-Making*
 - Planning, Design, Implementation, Adaptive Management
- *Commitment to Delivering Results and Measuring Impacts*
 - Measuring and Ensuring Success

Implementation

Coordinated monitoring is needed to support:

- Science-based decision-making
- Measurement of restoration and management outcomes
 - Project scale
 - Basin/watershed scale
 - Regional scale
- Evaluation of progress towards comprehensive ecosystem restoration objectives
- Reporting to stakeholders

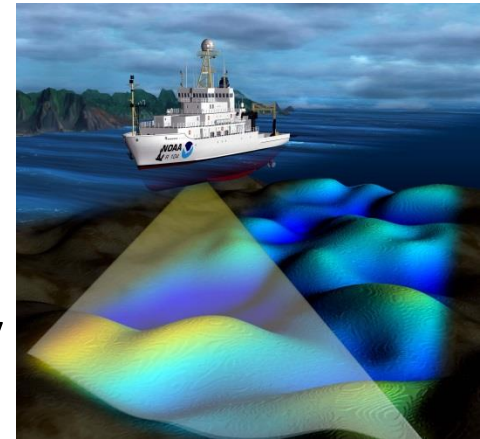
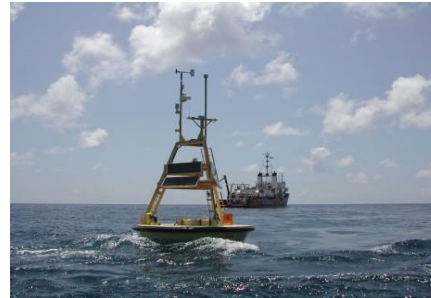


Implementation

Council Monitoring and Assessment Program

Approach: build a network using the numerous existing monitoring activities & programs in the Gulf

- Identify, catalogue, and understand historic and ongoing monitoring activities and associated data
 - Measurements taken
 - Location
 - Timing
 - Methods/Protocols
- Improve coordination of regional capabilities and capacity
- Develop and ensure consistent methods and protocols
- Develop data quality, management, and accessibility standards
- Monitor at different scales (project, basin, state, Gulf-wide)
- Identify and address information gaps



Questions

Steve Giordano

Ecosystem Restoration Prgm Mgr NMFS/SER

steve.giordano@noaa.gov

Mark Monaco

Director, Centers for Coastal Monitoring & Assessment

mark.monaco@noaa.gov

Greg Steyer

USGS Gulf Science Advisor, Southeastern Region

steyerg@usgs.gov

Mike Lee

Coastal Science Coordinator, USGS Texas WSC

mtlee@usgs.gov

Alyssa Dausman

*Science Director,
Gulf Coast Ecosystem Restoration Council*

alyssa.dausman@restorethegulf.com

Jessica Henkel

*Science Policy Fellow,
NAS/Gulf Coast Ecosystem Restoration Council*

jessica.henkel@restorethegulf.com

Backup/Background

Background

Originally 2 independent proposals submitted for funding for The RESTORE Council's first **Funded Priorities List (FPL)**:

Gulf of Mexico Habitat Mapping and Water Quality Monitoring Network:

- Supplement and refine observations and monitoring systems to fill gaps with available capabilities and capacity of regional partners
- Marine and coastal habitat focus

Adaptive Management and Technical Assistance in Support of Gulf Ecosystem and Economic Restoration:

- Adaptive management framework to help design and execute technically sound and sustainable restoration projects
- Deliver local to regional-scale assistance including: guidance for consistent and integrated monitoring practices; tools to assess and increase restoration project sustainability; and valuation of ecosystem services and economic impacts



Deliverables and Timelines

| ACTIVITY | | DELIVERABLES | TIMELINE |
|----------|------------------------------|---|----------------------------------|
| 1 | Inventories | Monitoring program inventory | Years 1 & 2 (updated thereafter) |
| | | Protocol Library | Years 1 & 2 (updated thereafter) |
| | | Existing monitoring program QA/QC review | Years 1 & 2 (updated thereafter) |
| 2 | Minimum monitoring standards | Restoration performance evaluation assessment | Year 2 |
| | | Guidelines on metrics, protocols, data | Year 2 |
| | | Council recommendation | Year 2 |
| 3&5 | Data gap assessment | Data gap assessment | Year 2 |
| | | Council recommendation | Year 2 |
| 4 | Database & management | FGDC compliant metadata | Years 1, 2 & 3 |
| | | On-line mapping applications of monitoring products | Years 1, 2 & 3 |
| | | Searchable databases of monitoring products | Years 1, 2 & 3 |
| 6 | Baseline conditions | Status and Trends literature review | Year 1 |
| | | Baseline habitat conditions | Years 1, 2 & 3 |
| | | Baseline water quality conditions | Years 1, 2 & 3 |
| 1 & 5 | Workshops | Management/science needs & priorities | Year 1 |
| 1,3 & 5 | | Inventory & gap analysis | Year 1 |
| 2 | | Minimum monitoring standards (2) | Year 2 |
| 6 | | Baseline assessments (2) | Years 2 & 3 |

Proposed Program Activities

(1) Inventory existing habitat/water quality monitoring programs

- Building on and reconciling earlier efforts, catalogue existing monitoring activities, programs and available data

(2) Determine minimum monitoring standards

- Survey and evaluate methods, protocols, and data management standards of existing monitoring activities and programs
- Make recommendations to the Council for standard operating procedures, protocols, data management standards, and reporting

(3) Evaluate suitability of inventoried programs to support Council monitoring needs

(4) Develop searchable monitoring information databases

- Information will support project and program-level monitoring planning and evaluations for Council member use
- Initiate integrated data management structure

Proposed Program Activities

(5) Identify information gaps from inventory

- Anticipate significant gaps in data, even from State's with system-wide assessment and monitoring programs (LA) – non-tidal freshwater habitats, riverine conditions, natural resources
- Prepare recommendation to the Council on additional monitoring data that may be needed to support Council needs

(6) Document existing baseline conditions using existing data and analyses

- Baseline conditions serve as basis for measuring change/progress after restoration

(7) Fill data gaps (future phase(s))

- Coordinate and integrate appropriate existing observations and monitoring systems and develop an integrated data management structure
- Conduct additional data collection as required to support Council needs

Program Structure

- **Program Advisory Team (PAT)**
 - 4 member team-NOAA, USGS, Council Science Advisor, 1 State
 - Discuss options for accomplishing activities based on existing capabilities and leveraging opportunities
 - Prepare recommendations to present to CMAWG for discussion/comments
 - NOAA and USGS responsible to the Council for program administration and implementation, execution, oversight & accountability
- **Council Monitoring & Assessment Work Group (CMAWG)**
 - 11 representatives – 1 representative per Council member
 - Coordination of and reach-back to available monitoring capacities and information
 - Program Advisory Team leads discussions of implementation activities, approaches, and sharing to generate recommendations to the Council
- **Monitoring Coordination Committee (MCC)**
 - Representatives include Program Management Team, NOAA RESTORE Science, NFWF, NAS, Centers of Excellence, others (The MCC will take over the role of the Monitoring Ad Hoc Working Group that was initially established under the Ad Hoc Funders Forum, and take advantage of Gulf Restoration Science Programs Ad Hoc Coordination)
 - Ensures connectivity between other monitoring funding sources in the Gulf region
- **Monitoring Community of Practice (CoP)**
 - Composed of Gulf of Mexico Alliance Priority Issue Teams as directed by Program Advisory Team
 - Lead workshops to provide feedback and input into establishment of Council minimum monitoring standards and protocols and to review existing baseline data and assessments

Communication Engagement & Leveraging Opportunities

- **Monitoring Program Structure**
 - Links to GOMA Priority Issue Teams, Alliance Management Team, Research Funders Forum, GOMRI, and others
 - Links to Gulf Restoration Science Programs Ad Hoc Coordination, MCC would be a subgroup
- **NOAA RESTORE Science Program**
 - Coordination with funded ecosystem indicators and monitoring projects
- **NAS Gulf Restoration Program**
 - Discussions on data synthesis grants
 - Collaboration to develop “Effective approaches for monitoring & assessing GOM restoration activities”
- **Natural Resource Damage Assessment & Restoration - NRDAR**
 - Coordination on minimum monitoring standards, performance measures, data sharing, collection, and management
- **National Fish & Wildlife Foundation - NFWF**
 - Work on Gulf Restoration Science Program’s ad hoc monitoring working group to discuss common monitoring requirements – metrics, standards, etc.
 - Coordinate with NFWF-funded projects with monitoring components

Examples of Possible CMAWG Recommendations

- Cross-Program Coordination Plan (Divide and Conquer where possible)
- Monitoring & Adaptive Management (MAM) plan content and standardized formats for all Gulf Restoration Programs
- Review and approval of FPL MAM plans
- Minimum monitoring standards & requirements on Council-funded Projects
- Data management & delivery standards and reporting requirements
- Priorities to fill identified habitat and water quality data gaps
- Establishment of analytical and other support teams
- Programmatic monitoring objectives
- Peer-review processes

Biggest Challenges

- Communicating and coordinating across programs
- Herding cats
- Delineating responsibilities
- Adoption of common standards
- Enforcement of minimum monitoring standards & requirements
- Linking data acquisition for monitoring and modeling for tool development
- Data management
- Monitoring design for holistic ecosystem restoration – scaling

Status & Next Steps

- Program selected for funding
- DWH Settlement w/BP codified by Consent Decree (April '16)
- Execute Interagency Agreements and Secure Funding
- Complete Monitoring Program Inventory/Gap Analysis
- Hold working meetings to build Monitoring Community of Practice
- Convene Network Governance Bodies