



# RESTORE Council Monitoring & Assessment Program Development

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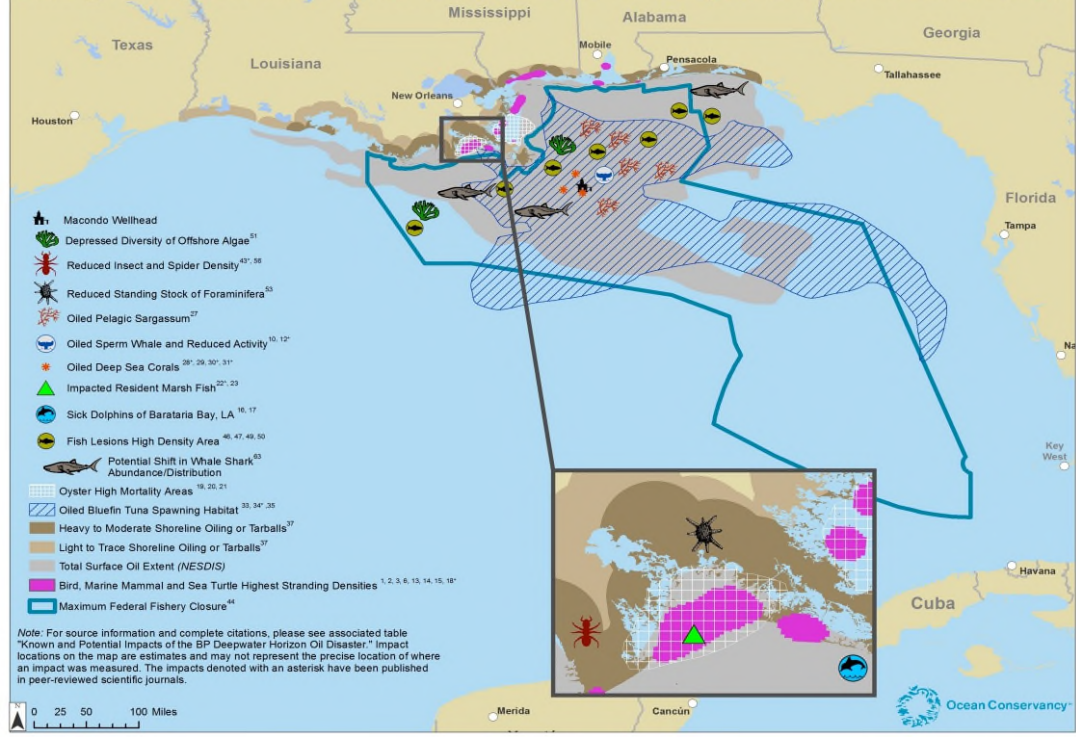
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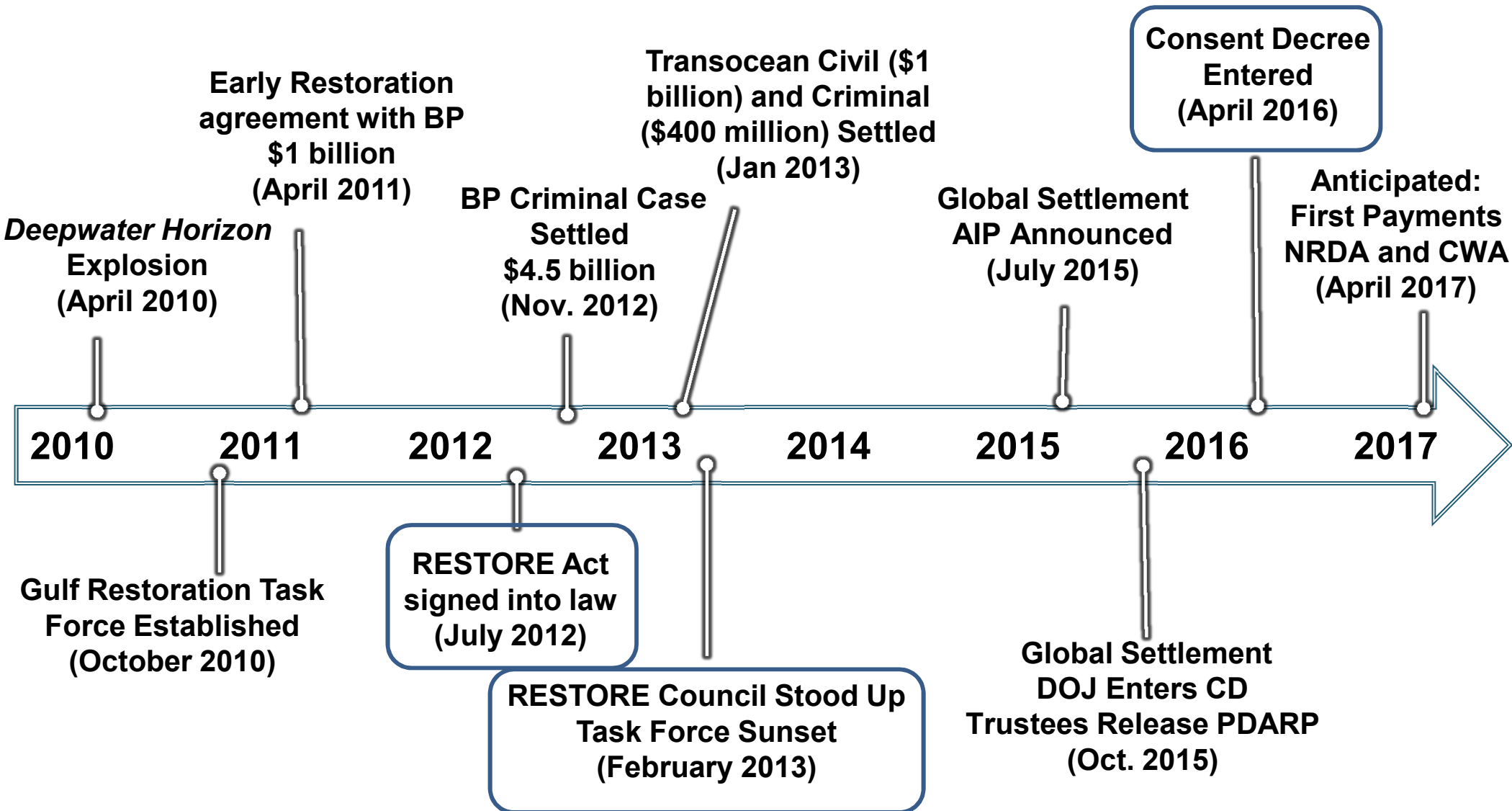
# Deepwater Horizon Explosion & Loss – April 2010



## Emerging Impacts and Studies Related to the BP Deepwater Horizon Oil Disaster



# Deepwater Horizon Timeline



# RESTORE Council

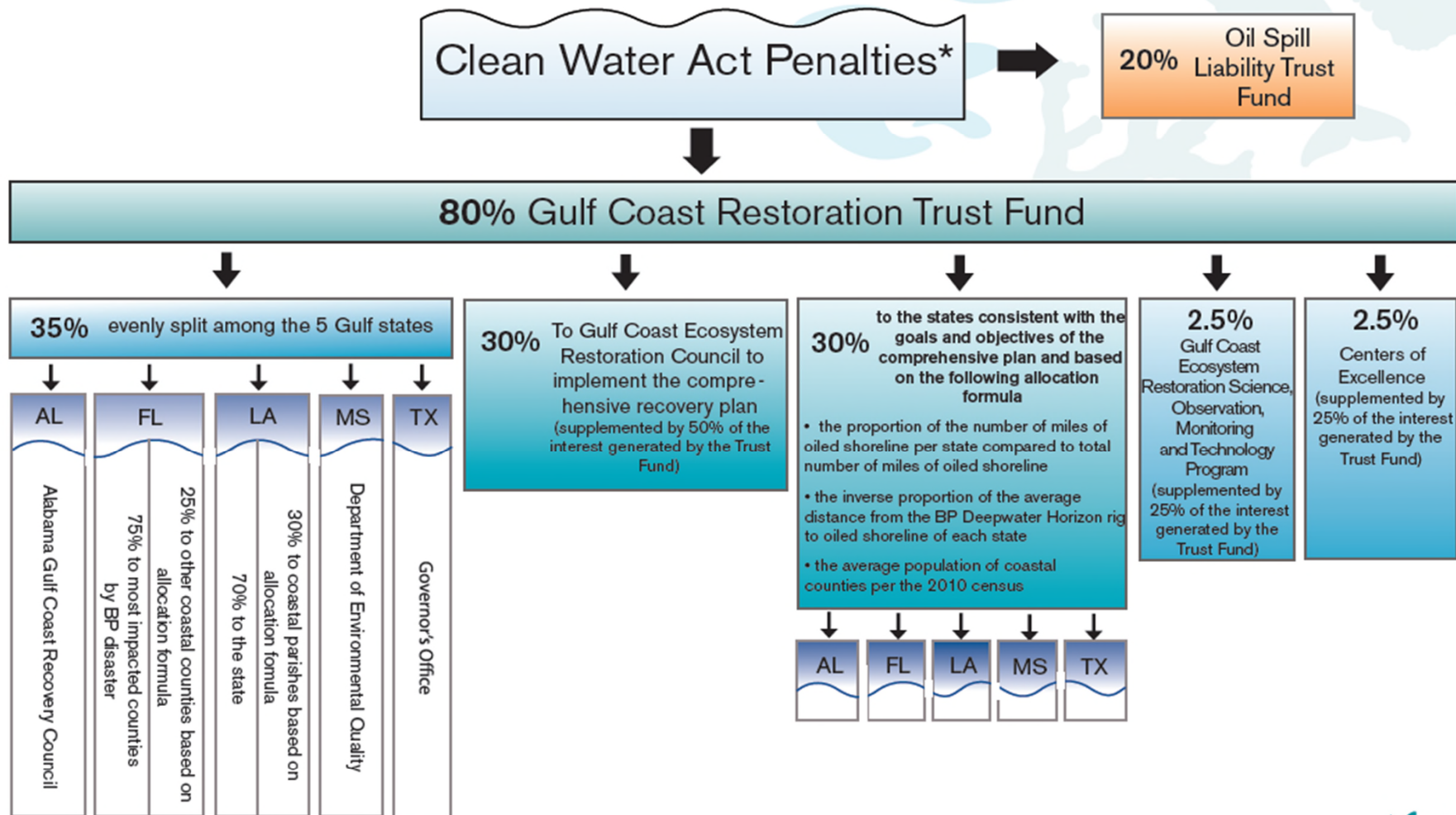
<https://www.restorethegulf.gov/>

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- The 11-member RESTORE Council is comprised of:
  - Five affected Gulf States, each with one vote
    - Alabama
    - Florida
    - Louisiana
    - Mississippi
    - Texas
  - Six federal agencies, collectively with one vote
    - Department of Commerce (Chair)
    - Department of Agriculture
    - Department of the Army
    - Environmental Protection Agency
    - Department of Homeland Security
    - Department of the Interior



# 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.

# Financial Terms of the Global Settlement

• <b>CWA Civil Penalty</b>	<b>\$5.5 billion</b>
• <b>Natural Resource Damages</b>	<b>\$7.1 billion</b>
• <b>NRD Early Restoration (partially paid)</b>	<b>\$1 billion</b>
• <b>NRD Unknown Conditions</b>	<b>\$700 million</b>
• <b>NRD Unpaid Assessment Costs</b>	<b>\$350 million</b>
• <b>False Claims Act &amp; Royalties on Oil</b>	<b>\$82.6 million</b>
• <b>Response and Other Unpaid Costs</b>	<b>\$167.4 million</b>
• <b>State Economic Claims</b>	<b>\$4.9 billion</b>
• <b>Local Economic Claims</b>	<b>\$1 billion</b>
• <b>Total:</b>	<b>\$20.8 billion</b>

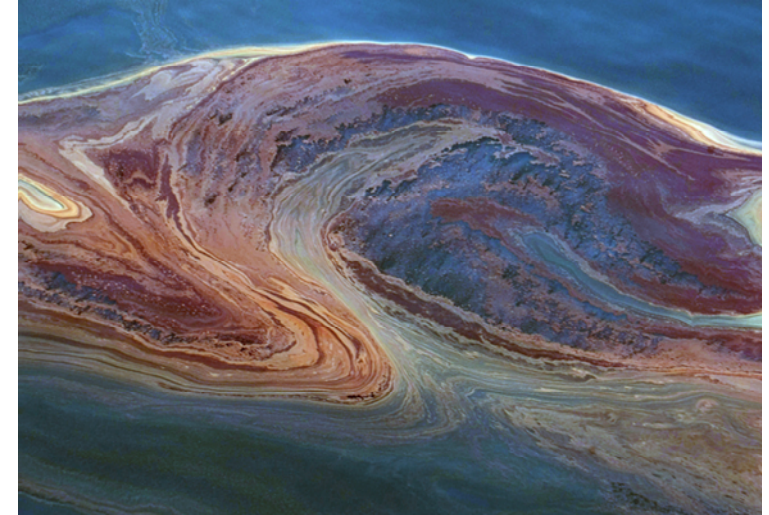
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# RESTORE Council

<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

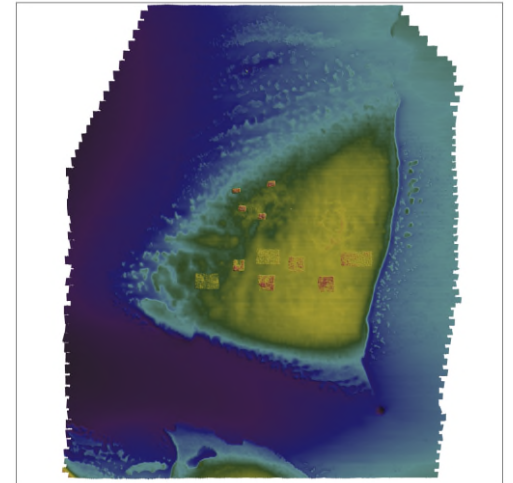
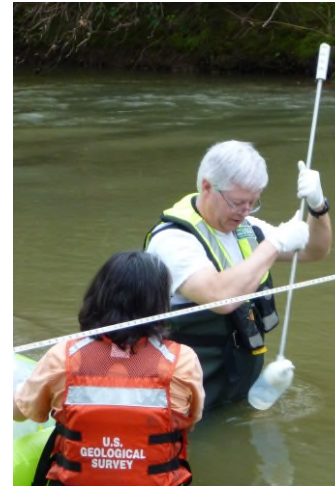




# Background

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





# Background

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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

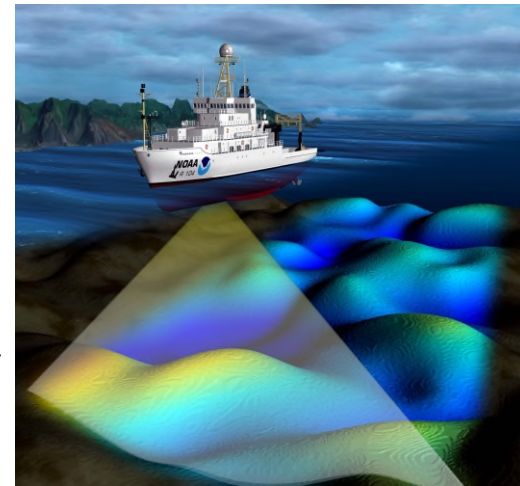
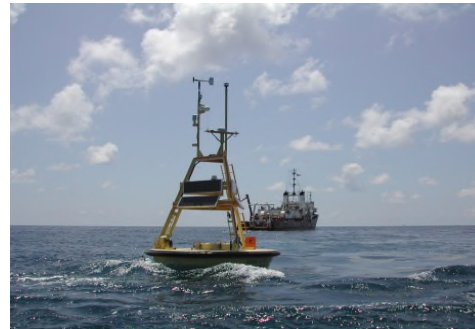


# Background

## Council Monitoring and Assessment Program

Approach: use and build on 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



# Proposed Program Activities

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## (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

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## (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

# Fundamental Monitoring Elements



# Program Structure

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- **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

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- 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

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- 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

# 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



# Biggest Challenges

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- 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

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- 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

# Questions

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