



Deepwater Horizon Restoration

In the Barataria-Terrebonne NEP

NOAA Restoration Center
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Deepwater Horizon



The Beginning

At 9:45pm on April 20th, 2010, the Deepwater Horizon Oil Rig exploded and sank nearly a mile below the Gulf's surface. Eleven workers were killed and the the largest marine oil spill in U.S. history began.

BTNEP Response



Protecting Projects



Responding to Oiled Wildlife

BTNEP Response



Oil Spill Selfies

The Aftermath



Leaked petroleum formed a slick over more than 57,500 square miles of the Gulf of Mexico.

More than 1,300 miles of oiled Shoreline

More than one third of federal Gulf waters were closed to fishing at the peak of the spill; fishing, tourism, and other industries struggled to survive.

“Basically everywhere the oil went, it created harm.”

-DONALD BOESCH,
President of the
University of Maryland

DEEPWATER HORIZON OIL SPILL

ASSESSING THE IMPACTS OF OIL

Who is assessing the impacts of oil?

Efforts to understand the impacts of oil on ocean life, coastal habitats, and human use began shortly after the spill through the **Natural Resource Damage Assessment (NRDA)** process.

Through NRDA, state and federal partners called "trustees" are examining oil in the open water, near shorelines, and on land to assess the scope and scale of the damage.

Together the trustees will determine how much work is necessary to restore the Gulf of Mexico.



OIL IN THE OPEN WATER

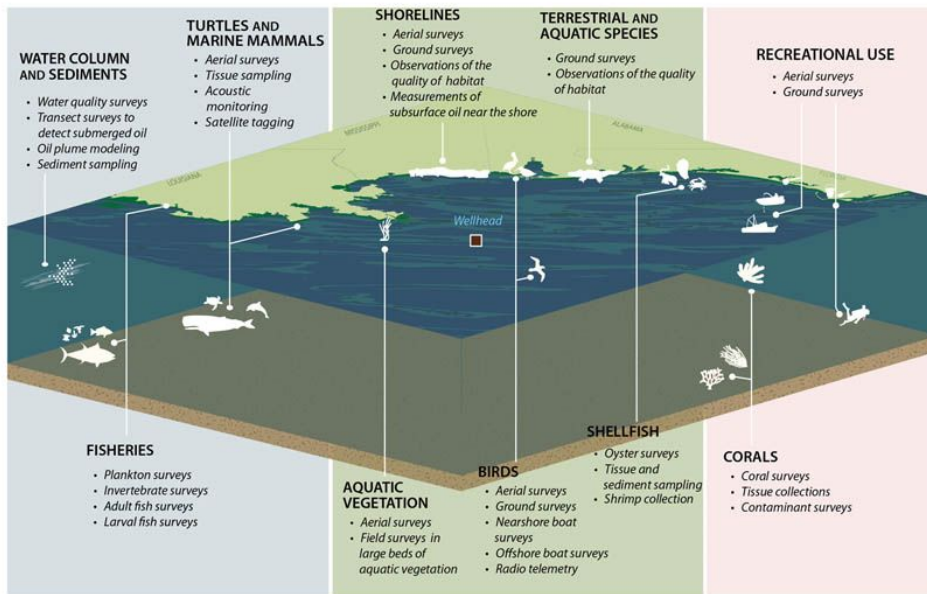
Oil in the open water may affect the health of microscopic plants and animals that form the basis of the oceanic food web. The eggs and larvae of shrimp, fish, and other commercially and recreationally important species are at risk, as are adult fish, sea turtles, marine mammals, and ocean-going birds. Far beneath the surface, corals and other deep water communities also might be affected.

OIL IN NEARSHORE HABITATS

Sensitive nearshore communities such as oyster beds and shallow-water corals may lie directly in the path of underwater oil and surface mousse riding the waves to the shore. When the oil does hit land, it can severely impact coastal habitats including marshes, mudflats, mangrove stands, and sandy beaches. Organisms that use these habitats, such as birds, crabs, turtles, and other aquatic and terrestrial species also are at risk.

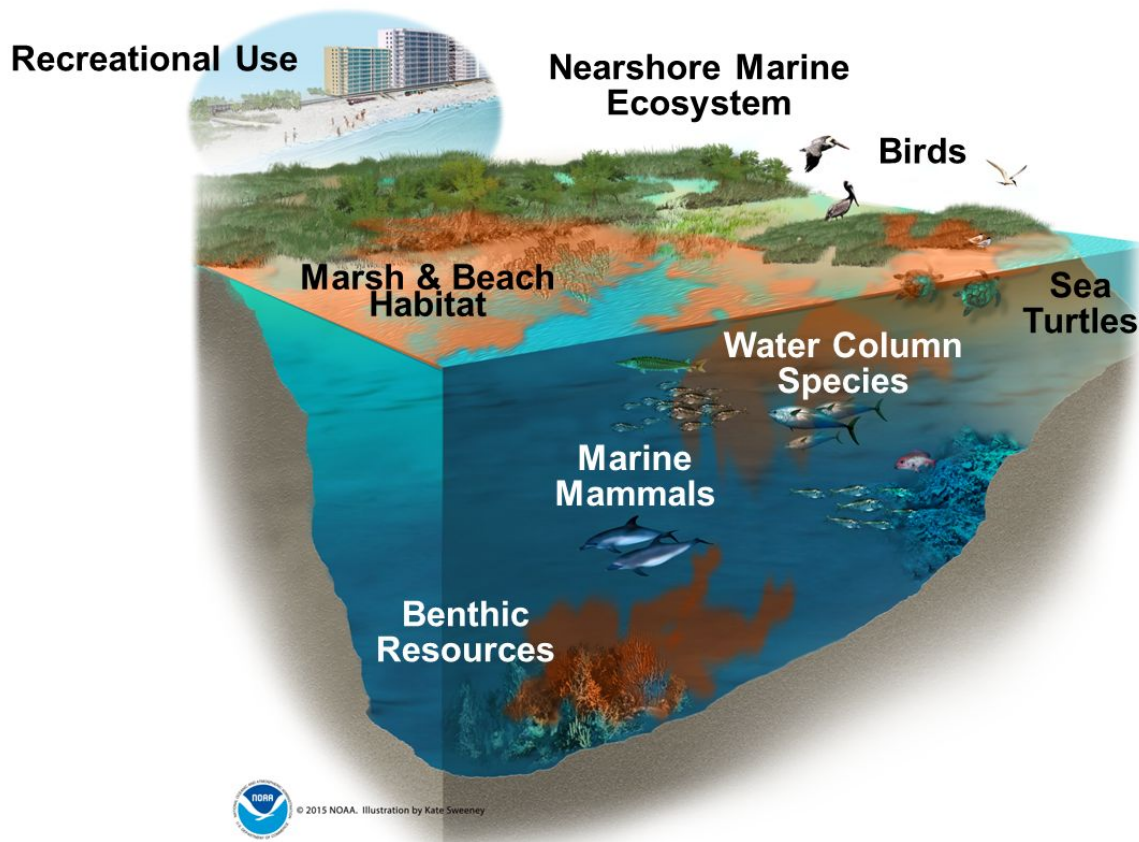
OIL AND RECREATIONAL USE

Oil from the spill may prevent people from enjoying recreation such as fishing, watersports, sunbathing, and bird-watching.

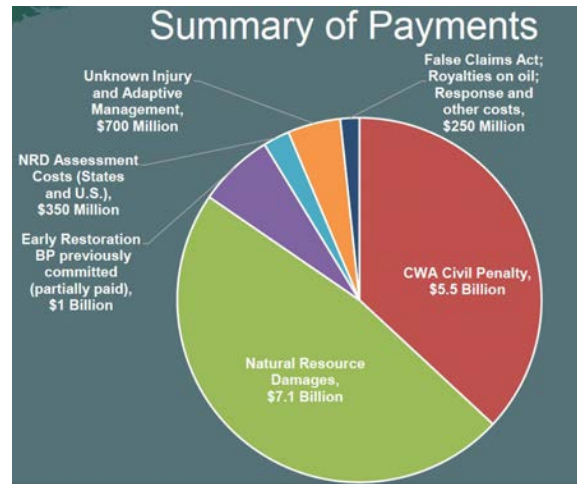
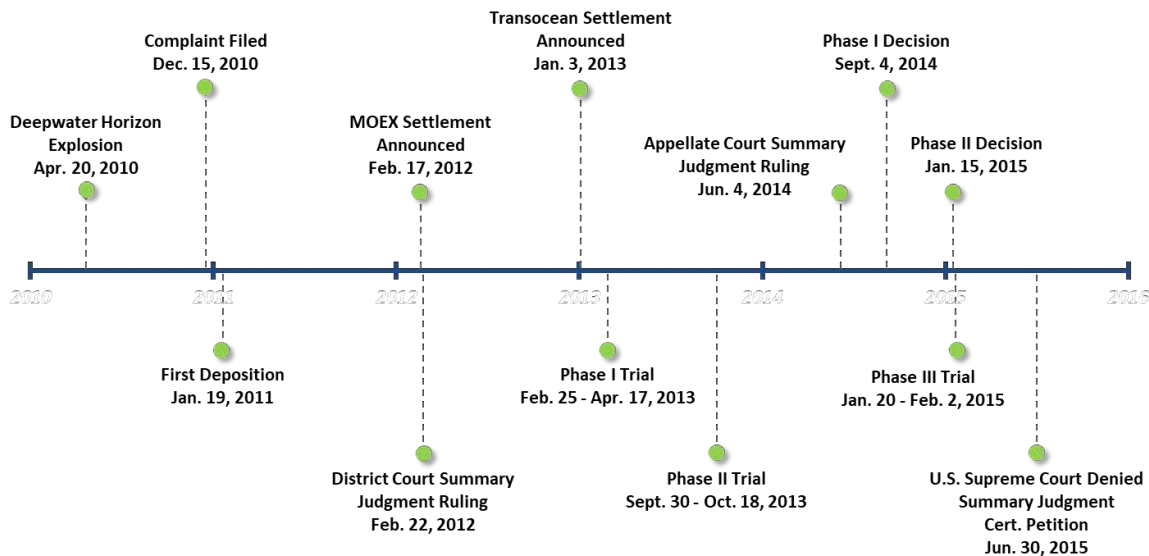


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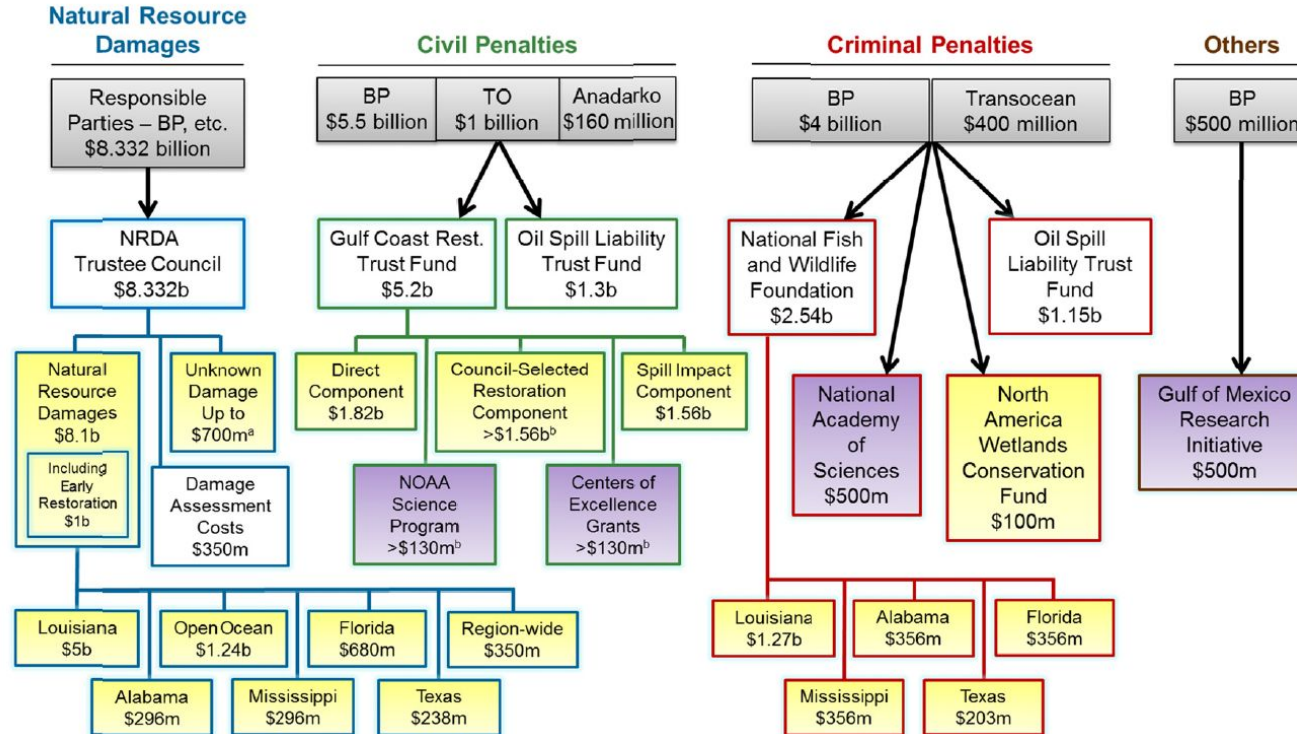
The Impact



The Settlement(s)



Funding



Payments

Table 1: Payment Schedule for Civil Penalty

Payment Date	Assumed Year	Amount
Anniversary of the Effective Date	2017	\$379,310,345
Anniversary of the Effective Date	2018	\$189,655,172
Anniversary of the Effective Date	2019	\$379,310,345
Anniversary of the Effective Date	2020	\$379,310,345
Anniversary of the Effective Date	2021	\$379,310,345
Anniversary of the Effective Date	2022	\$379,310,345
Anniversary of the Effective Date	2023	\$379,310,345
Anniversary of the Effective Date	2024	\$379,310,345
Anniversary of the Effective Date	2025	\$379,310,345
Anniversary of the Effective Date	2026	\$379,310,345
Anniversary of the Effective Date	2027	\$379,310,345
Anniversary of the Effective Date	2028	\$379,310,345
Anniversary of the Effective Date	2029	\$379,310,345
Anniversary of the Effective Date	2030	\$379,310,345
Anniversary of the Effective Date	2031	\$379,310,343
Total:		\$5,500,000,000

Table 2: Payment Schedule for \$7.1 Billion Payment for Natural Resource Damages

Payment Date	Assumed Year	Amount
Anniversary of the Effective Date	2017	\$489,655,172
Anniversary of the Effective Date	2018	\$244,827,586
Anniversary of the Effective Date	2019	\$489,655,172
Anniversary of the Effective Date	2020	\$489,655,172
Anniversary of the Effective Date	2021	\$489,655,172
Anniversary of the Effective Date	2022	\$489,655,172
Anniversary of the Effective Date	2023	\$489,655,172
Anniversary of the Effective Date	2024	\$489,655,172
Anniversary of the Effective Date	2025	\$489,655,172
Anniversary of the Effective Date	2026	\$489,655,172
Anniversary of the Effective Date	2027	\$489,655,172
Anniversary of the Effective Date	2028	\$489,655,172
Anniversary of the Effective Date	2029	\$489,655,172
Anniversary of the Effective Date	2030	\$489,655,172
Anniversary of the Effective Date	2031	\$489,655,178
Total:		\$7,100,000,000

DWH Project Tracker



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DWHPT Overview

PROVIDING TRANSPARENCY AND TRACKING OF DEEPWATER HORIZON OIL SPILL RESTORATION

The Deepwater Horizon Project Tracker allows users to:

SEARCH a comprehensive list of funded projects

VISUALIZE project locations, and

DOWNLOAD detailed project data for analysis and research.

THE TRACKER AIMS TO IMPROVE:

Strategic Planning

Geospatial information of restoration and research projects helps organizations assess where and how to focus their work.

Collaboration

A readily accessible map of projects facilitates collaboration among agencies, organizations, and states.

Transparency

An easy-to-navigate online web portal makes it easy for anyone to see which projects are being implemented, where, and why.

<https://dwhprojecttracker.org/>

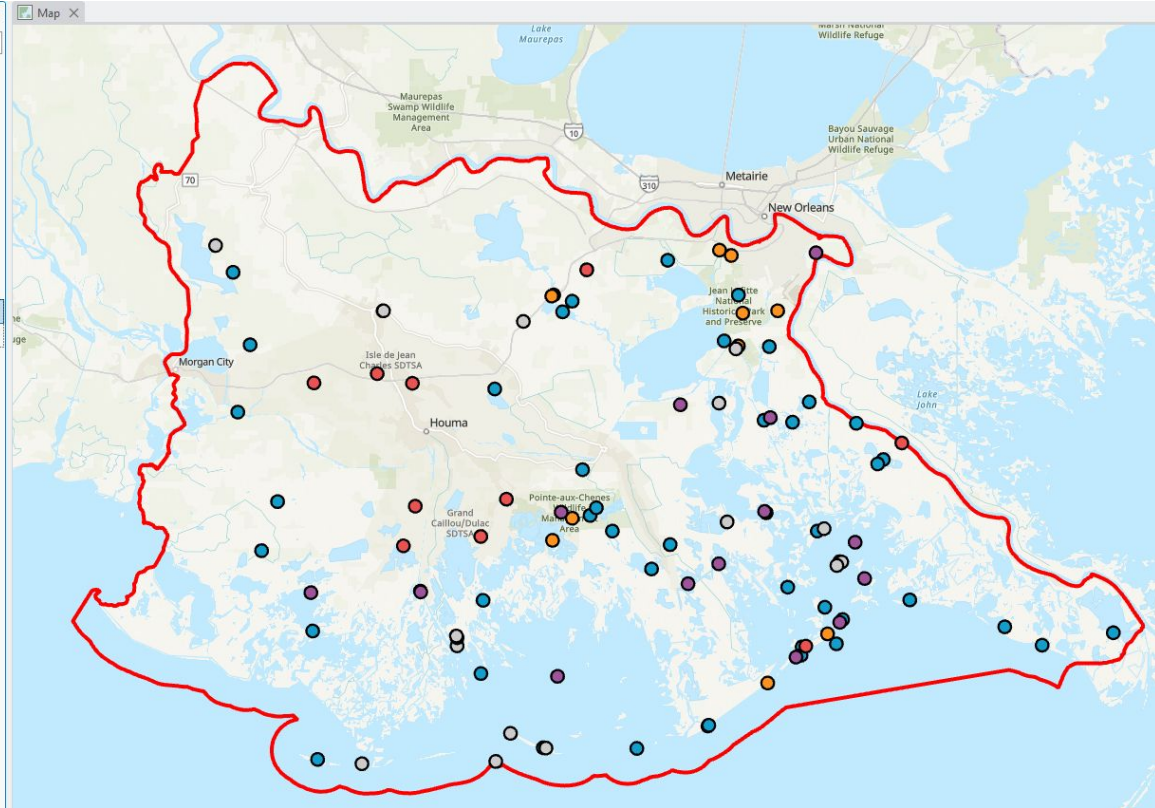
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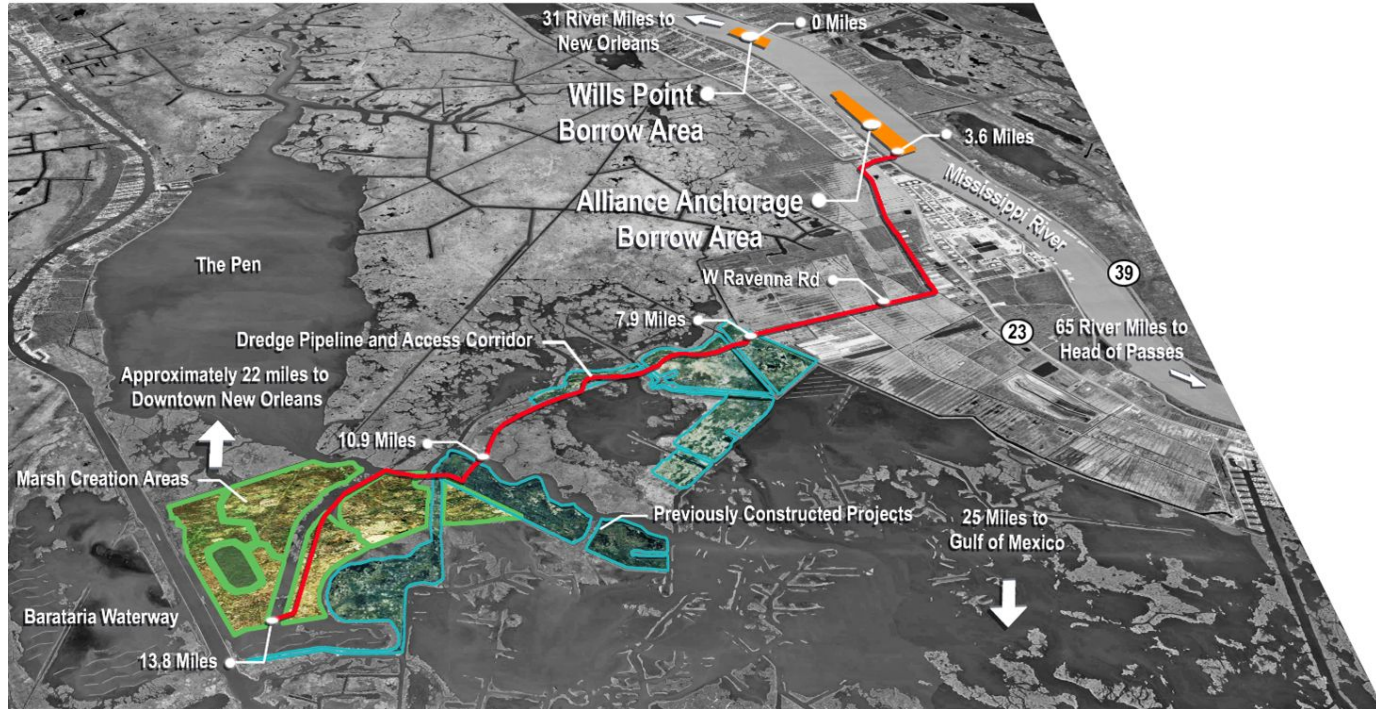
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- ☒ World Hillshade
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Investment in the Barataria & Terrebonne Basins

62	1205	169	Nutrient Reduction on Cropland and Grazing Land in Bayou Folse	The project	Environment	Water Quality Restoration and N Water Quality	Wetlands/Marshes/Estuaries			Wetlands, Natural Re	\$	3,000,000	0	Natural		
62	1219	187	LA TIG Restoration Plan #5: Living Coastal and Marine Resources (LCMR) – Marine Mammals and	This project	Other	Planning	Planning	Marine Mammals		Oysters/Reefs	Marine Mammals	\$	441,497	0	Natural	
63	1237	205	Louisiana Secretive Marsh Bird Habitat Relationships and Distributions in Selected Coastal Louisiana	This project	Science	Monitoring and Observations	Monitoring	Other		Other	Natural Re	\$	1,441,421	0	Natural	
64	1244	213	Belle Chasse Walker Road Boat Launch Improvements	This project	Recreation	Engineering and/or Construction	Engineering	Recreational Resources		Recreation	Natural Re	\$	250,000	0	Natural	
65	1245	214	LA TIG Restoration Plan #6: Wetlands, Coastal, and Nearshore Habitats	The Louisii	Other	Planning	Planning	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	293,717	0	Natural		
66	1246	215	Wetlands Harbor Activities Recreational Facility, Phase 1	The project	Recreation	Engineering and/or Construction	Engineering	Recreational Resources		Recreation	Natural Re	\$	995,000	0	Natural	
67	1249	218	LA TIG Phase II Restoration Plan #33: Large-Scale Barataria Marsh Creation: Upper Barataria Con	Tiering fro	Other	Planning	Planning	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	254,067	0	Natural		
68	1440	243	LA TIG Restoration Plan-Environmental Assessment #7: Birds and Wetlands, Coastal, and Nearsh	This Plan v	Other	Planning	Planning	Birds/Bird Habitat		Wetlands/Marshes/Estuari	Birds / Bird Natural Re	\$	628,329	0	Natural	
69	1439	245	West Grand Terre Beach Nourishment and Stabilization	The project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	92,500,000	0	Natural		
70	1499	250	Des Allemands Boat Launch	The Des Al	Recreation	Engineering and/or Construction	Engineering	Recreational Resources		Recreation	Natural Re	\$	1,841,116	0	Natural	
71	1500	251	The Wetlands Center	The Wetla	Recreation	Engineering and/or Construction	Engineering	Recreational Resources		Recreation	Natural Re	\$	2,000,000	0	Natural	
72	1501	252	Recreational Use Improvements at Barataria Marshes in Jefferson Parish - Jean Lafitte National	This project	Recreation	Engineering and/or Construction	Engineering	Recreational Resources		Recreation	Natural Re	\$	1,284,062	0	Natural	
73	1503	254	Hatchery-Based Oyster Restoration	This project	Environment	Species Restoration	Species Re	Oysters/Reefs		Oysters / F	Natural Re	\$	5,850,000	0	Natural	
74	1505	256	Louisiana Enhanced Marine Mammal Strandings Program	This project	Environment	Species Restoration	Species Re	Marine Mammals		Marine Mammals	Natural Re	\$	3,095,628	0	Natural	
75	1519	GNTPSP20L	Grand Bayou Freshwater Reintroduction Project (Design)	This project	Environment	Planning	Planning	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	599,386	0	Gulf Co		
76	1512	263	Grande Cheniere Ridge Marsh Restoration	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	65,000,000	0	Natural		
77	1514	265	Terrebonne HNC Island Restoration	This project	Environment	Species Restoration	Species Re	Birds/Bird Habitat		Wetlands, Natural Re	\$	38,400,000	0	Natural		
78	1565	2E+09	Early Career Research Fellowship Program	This project	Education and Outreach	Education and Outreach	Human and/or	Capacity		Human and/or	NASEM Gu	\$	76,000	0	The Na	
79	1602	GNSSP21L	Houma Navigation Canal Lock Complex (Implementation)	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	189,853,512	0	Gulf Co		
80	1594	267	LA TIG Restoration Plan #4: Coastal, and Nearshore Habitats	This project	Other	Planning	Planning	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	312,007	0	Natural		
81	1613	269	Lower Trophic Level Monitoring Program in the Mississippi River Delta	This project	Science	Monitoring and Observations	Monitoring	Other		Natural Re	\$	8,387,458	0	Natural		
82	1638	LA-COE_RI	Quantify marsh edge erosion and sediment dynamics and nutrients	This project	Science	Environment	Erosion Pri	Monitoring		Wetlands, Natural Re	\$	497,849	0	The U.S.		
83	1644	LA-COE_RI	Ecological and Social Ridge Dynamics in the Terrebonne Basins	This project	Science	Environment	Social Scie	Environment		Wetlands, Natural Re	\$	495,368	0	The U.S.		
84	608	IAACP170L	Bayou Dularge Ridge Restoration, Phase 1 (Tribal Partnership)	This project	Other	Planning	Engineering	Monitoring		Wetlands, Natural Re	\$	4,260,677	0	Gulf Co		
85	601	GNTCP16L	West Grand Terre Beach Nourishment and Stabilization	This project	Other	Planning	Engineering and/or	Construction		Wetlands, Natural Re	\$	3,608,221	0	Gulf Co		
86	717	GNTPSP17L	Adaptive Management	This project	Environment	Monitoring and Observations	Monitoring	Human and/or		Wetlands, Natural Re	\$	60,124,929	0	Gulf Co		
87	805	GNTPSP18L	Houma Navigation Canal Lock Complex (Planning)	The project	Other	Planning	Planning	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	18,520,214	0	Gulf Co		
88	1747	299	Monitoring the Effects of Coastal Wetland Restoration on Invertebrates	This project	Science	Monitoring and Observations	Monitoring	Other		Natural Re	\$	5,327,350	0	Natural		
89	1749	301	Monitoring Approaches for Bottlenose Dolphin Restoration in Louisiana	This project	Science	Monitoring and Observations	Monitoring	Other		Natural Re	\$	641,966	0	Natural		
90	1753	306	Characterizing the Barriers to Marsh Restoration	This project	Science	Monitoring and Observations	Monitoring	Other		Natural Re	\$	703,592	0	Natural		
91	1862	320	Bayou Dularge Ridge and Marsh Restoration	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	57,500,000	0	Natural		
92	1895	78560	Mid-Barataria Sediment Diversion	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	660,000,000	0	Nation		
93	1896	RDCGR36C	Multiyear Implementation Plan Update for the Houma Canal	The Multiy	Other	Planning	Planning	Human and/or		Human an	The RESTC	\$	50,000	0	The U.S.	
94	1897	RDCGR45C	Hollywood Road Extension Bridge Over the Houma Canal	The Hollyv	Human an	Engineering and/or Construction	Engineering	Infrastructure		Infrastruct	The RESTC	\$	3,240,326	0	The U.S.	
95	1909	322	Raccoon Island Restoration	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	8,200,000	0	Natural		
96	1988	344	Louisiana Data Management Interop	This project	Science	Monitoring and Observations	Monitoring	Other		Other	Natural Re	\$	1,021,762	0	Natural	
97	1989	345	Quantifying Restoration Impacts On Wetland Ecosystem Health and Carbon Export	The object	Science	Monitoring and Observations	Monitoring	Other		Other	Natural Re	\$	4,088,097	0	Natural	
98	1990	346	Documenting Sea Turtle Nesting in Louisiana	This activit	Science	Monitoring and Observations	Monitoring	Other		Other	Natural Re	\$	2,618,000	0	Natural	
99	2013	343	Louisiana Colonial Waterbird Aerial Photographic Surveys	This Projec	Science	Monitoring and Observations	Monitoring	Other		Other	Natural Re	\$	5,783,900	0	Natural	
100	2105	A-507368C	Anticipating Challenges to Today's Offshore Safety Management Framework Caused by Gulf Ener	Lessons fri	Human an	Oil System Safety Research	Oil System	Other		Community and Human He	Other Con	NASEM Gu	\$	368,622	0	The Na
101	2106	A-0051494	Using Safety Culture Assessment Data to Enhance Safety and Environmental Management System	This project	Human an	Oil System Safety Research	Oil System	Other		Community and Human He	Other Con	NASEM Gu	\$	724,512	0	The Na
102	2150	LA-COE_RI	Developing methods to measure floatant marsh extent and stability in the Barataria-Terrebonne Es	This project	Science	Environment	Monitoring and Obser	Environment		Wetlands, Natural Re	\$	521,810	0	The U.S.		
103	2153	380	Strategic Priorities for Marine Mammals in Louisiana	The projec	Other	Planning	Planning	Marine Mammals		Marine Mammals	Natural Re	\$	925,000	0	Natural	
104	2164	RDCGR32C	Grand Isle Area Drainage Improvements Project	The Grand	Human an	Engineering	Water Quality Restor	Engineering		Infrastruct	The RESTC	\$	3,580,000	0	The U.S.	
105	2174	390	Barataria Basin Conceptual Ecological Model and Ecosystem Modeling Support	This project	Environment	Habitat Restoration and Enhanc	Habitat Re	Wetlands/Marshes/Estuaries		Wetlands, Natural Re	\$	384,609	0	Natural		
106	2181	RDCGR38C	The Des Allemands Boat Launch	Purpose TI	Recreation	Engineering	Tourism Developmen	Engineering		Recreation	The RESTC	\$	514,009	0	The U.S.	

Upper Barataria Marsh Creation



Upper Barataria Marsh Creation



Taken 12/12/2021
Patrick M. Quigley
www.gulfcoastairphoto.com
A SDAV owned small business.

Upper Barataria Marsh Creation



Upper Barataria Marsh Creation



Construction, maintenance, and monitoring to cost up to **\$151 million**



Provide more than **140 construction-related jobs**



Sediment is pumped **over 13 miles** from the Mississippi River borrow area dredging to the marsh creation area

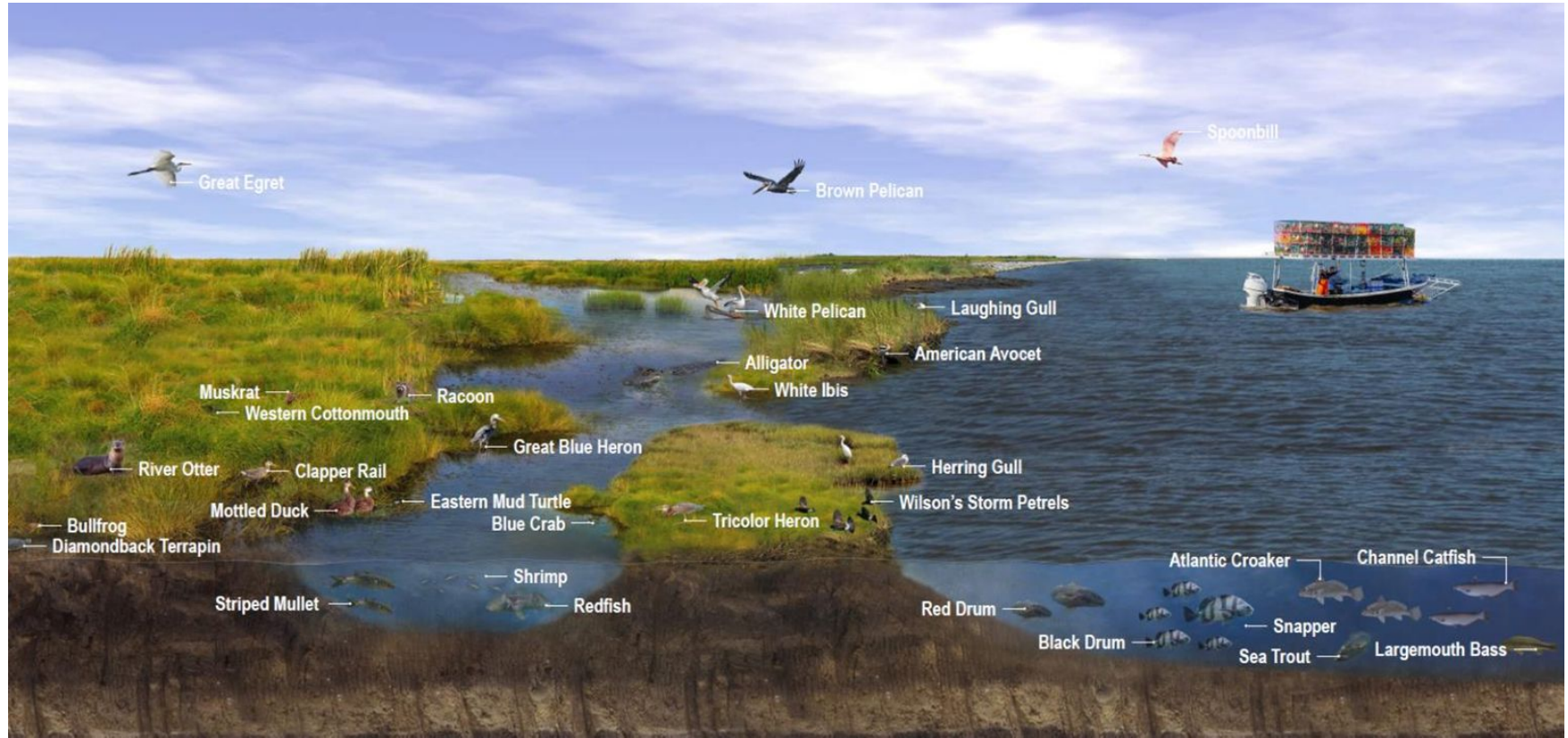


Fill marsh creation areas with approximately **8.4 million cubic yards** of sediment

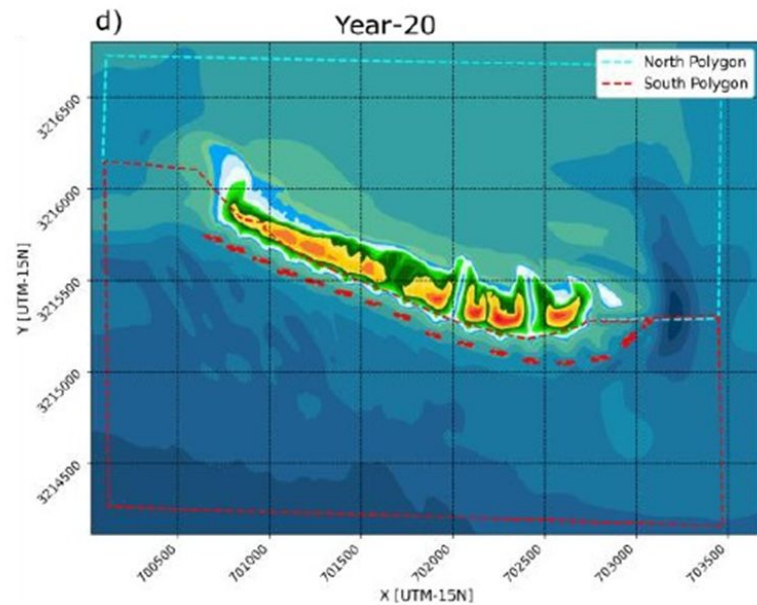
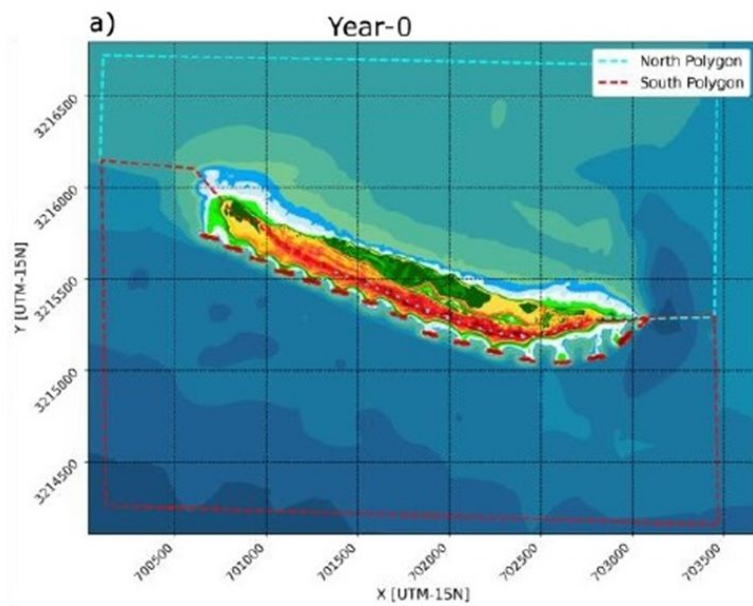


Create up to **1,183 acres** of intertidal wetlands and marsh

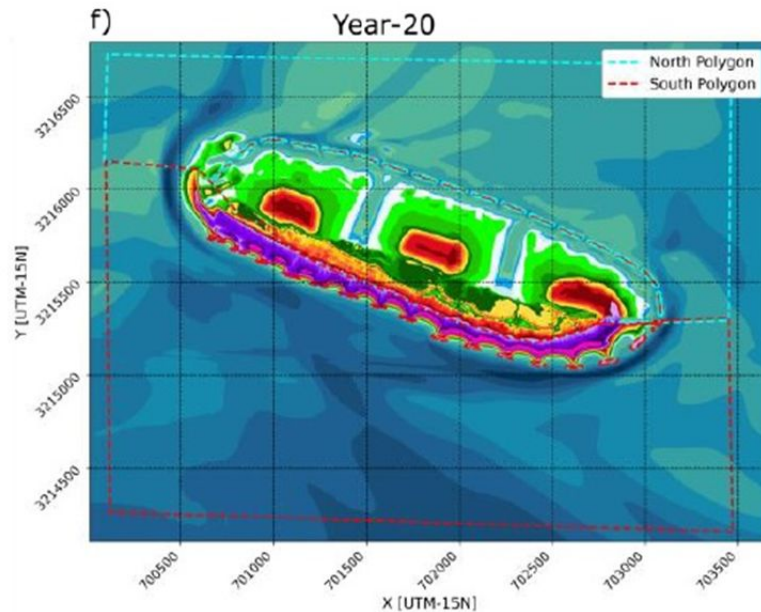
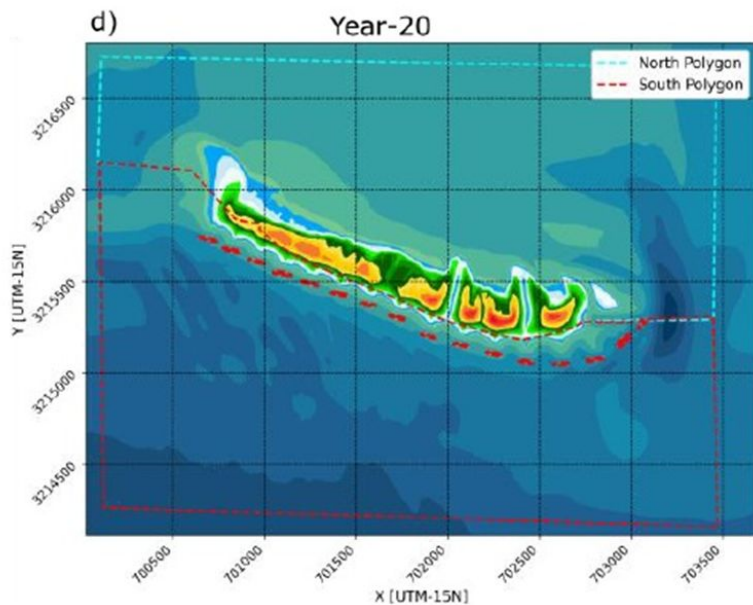
Upper Barataria Marsh Creation



Raccoon Island - Future Without Project



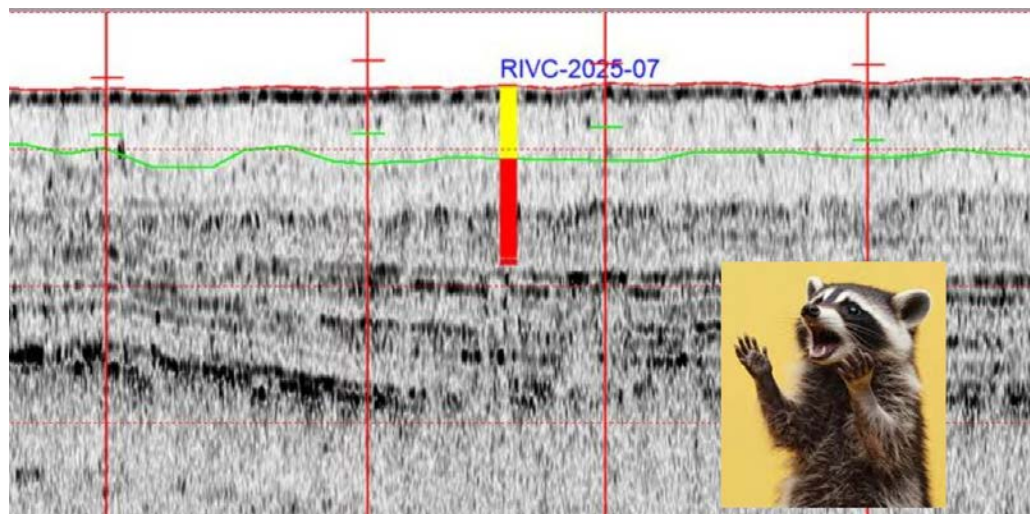
Raccoon Island - Future With Project



Raccoon Island - Future With Project



Raccoon Island - Sediment Source

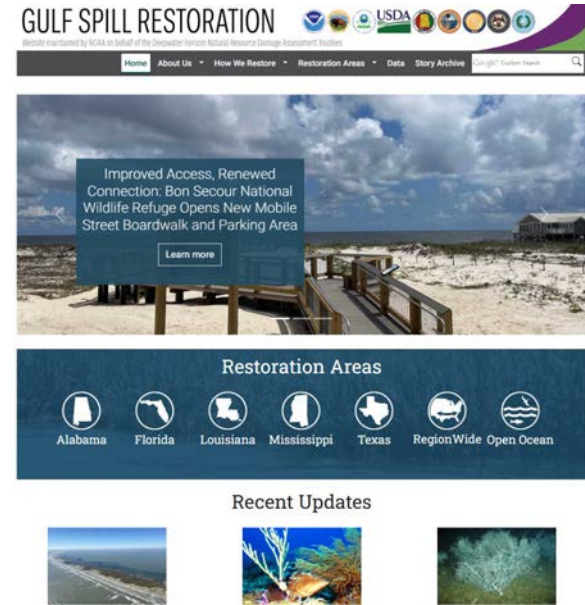


Raccoon Island - Next Steps

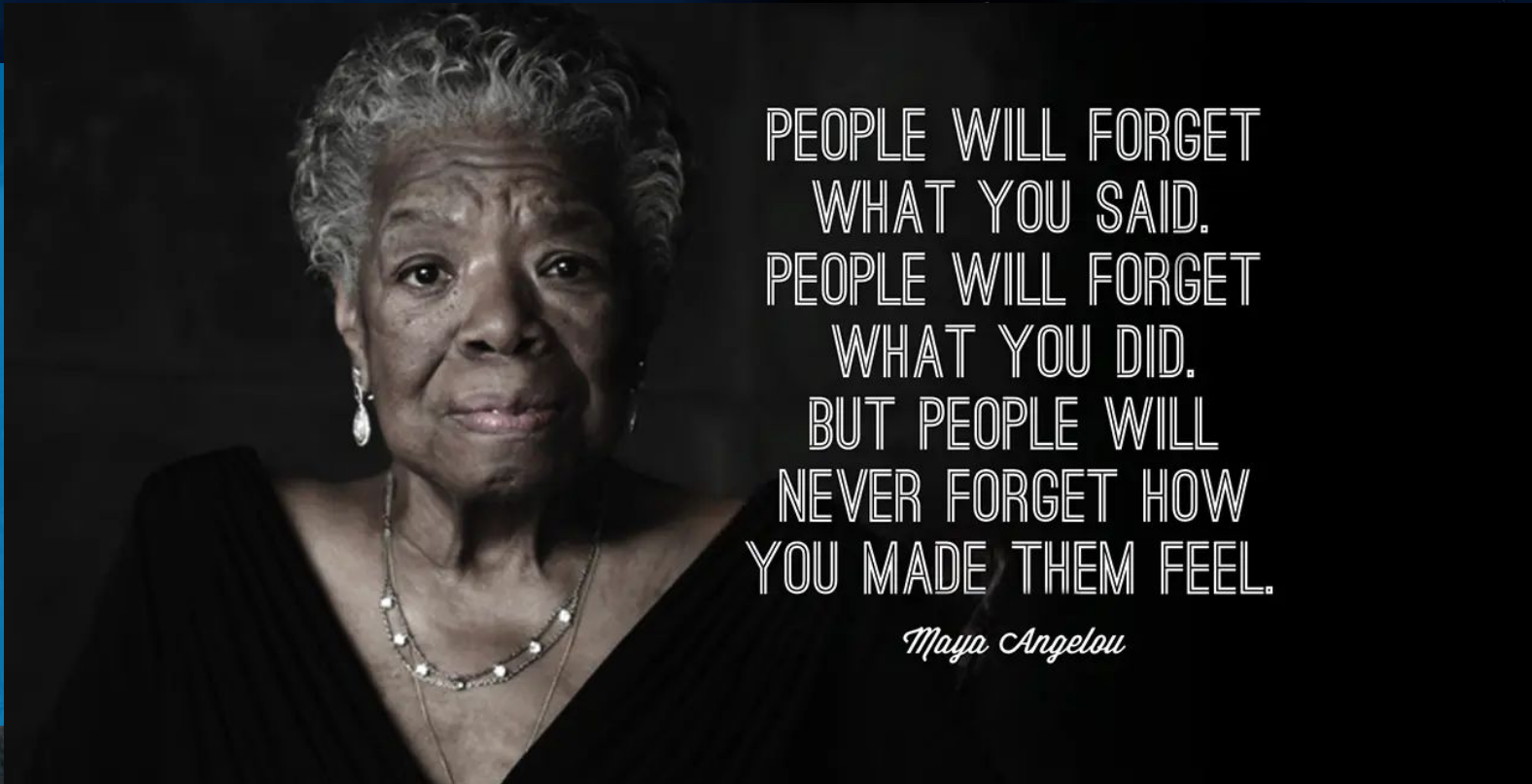


- **Start RP/EA – Summer 2025**
- **Complete 30% Design Data Acquisition – September 2025**
- **30% Design Report and Review Meeting – late 2025***
- **95% Design Report – June 2026***

The Future



GulfSpillRestorato.in.NOAA.gov



PEOPLE WILL FORGET
WHAT YOU SAID.
PEOPLE WILL FORGET
WHAT YOU DID.
BUT PEOPLE WILL
NEVER FORGET HOW
YOU MADE THEM FEEL.

Maya Angelou



Questions?