

# Louisiana Outer Coast Restoration

## 2018 Annual Report

## PROJECT SUMMARY

This project involves the restoration of beach, dune, and back-barrier marsh habitats, as well as brown pelicans, terns, skimmers, and gulls at four barrier island locations in Louisiana: Chenier Ronquille, Shell Island, North Breton Island, and Caillou Lake Headlands (also known as Whiskey Island on Ilse Dernieres State Refuge). The State of Louisiana, National Oceanic and Atmospheric Administration (NOAA), and Department of the Interior (DOI) are working cooperatively on this project. Construction is complete on Chenier Ronquille, Shell Island, and Calliou Lake Headlands. Breton Island is currently in the design phase.

<b>Trustee Implementation Group(s)</b>	Louisiana
<b>Implementing Trustee(s)</b>	Department of the Interior (DOI), Louisiana Coastal Protection and Restoration Authority (CPRA), Louisiana Department of Environmental Quality (LDEQ), Louisiana Department of Natural Resources (LDNR), Louisiana Department of Wildlife & Fisheries (LDWF), Louisiana Oil Spill Coordinator's Office (LOSCO), National Oceanic and Atmospheric Administration (NOAA)
<b>Restoration Type(s)</b>	Birds, Wetlands, Coastal and Nearshore Habitats
<b>Project Status</b>	In Progress
<b>Restoration Phase</b>	Early Restoration Phase 3
<b>Multiple Component Project?</b>	Yes
<b>General Location(s)</b>	Louisiana

# Louisiana Outer Coast Restoration

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### KEY PHOTO



# Louisiana Outer Coast Restoration

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### BUDGET SUMMARY

		Total
Wetlands, Coastal and Nearshore Habitats	Authorized Budget	\$ 246,466,000.00
	Funds Received	\$ 246,466,000.00
	Expended	\$ 222,163,295.33
	Funds Received Balance Remaining	\$ 24,302,704.67
Birds	Authorized Budget	\$ 71,897,000.00
	Funds Received	\$ 71,897,000.00
	Expended	\$ 5,853,800.17
	Funds Received Balance Remaining	\$ 66,043,199.83
Project Totals	Authorized Budget	\$ 318,363,000.00
	Funds Received	\$ 318,363,000.00
	Expended	\$ 228,017,095.50
	Funds Received Balance Remaining	\$ 90,345,904.50

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### BUDGET SUMMARY

		Louisiana TIG
		DOI
Wetlands, Coastal and Nearshore Habitats	Authorized Budget	\$ 0.00
	Funds Received	\$0.00
	Expended	\$ 0.00
	Funds Received Balance Remaining	\$ 0.00
Birds	Authorized Budget	\$ 71,897,000.00
	Funds Received	\$ 71,897,000.00
	Expended	\$ 5,853,800.17
	Funds Received Balance Remaining	\$ 66,043,199.83
Project Totals	Authorized Budget	\$ 71,897,000.00
	Funds Received	\$ 71,897,000.00
	Expended	\$ 5,853,800.17
	Funds Received Balance Remaining	\$ 66,043,199.83

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### BUDGET SUMMARY

		Louisiana TIG
		CPRA
Wetlands, Coastal and Nearshore Habitats	Authorized Budget	\$ 211,424,746.00
	Funds Received	\$ 211,424,746.00
	Expended	\$ 191,120,172.86
	Funds Received Balance Remaining	\$ 20,304,573.14
Birds	Authorized Budget	\$ 0.00
	Funds Received	\$0.00
	Expended	\$ 0.00
	Funds Received Balance Remaining	\$ 0.00
Project Totals	Authorized Budget	\$ 211,424,746.00
	Funds Received	\$ 211,424,746.00
	Expended	\$ 191,120,172.86
	Funds Received Balance Remaining	\$ 20,304,573.14

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### BUDGET SUMMARY

		Louisiana TIG
		NOAA
Wetlands, Coastal and Nearshore Habitats	Authorized Budget	\$ 35,041,254.00
	Funds Received	\$ 35,041,254.00
	Expended	\$ 31,043,122.47
	Funds Received Balance Remaining	\$ 3,998,131.53
Birds	Authorized Budget	\$ 0.00
	Funds Received	\$0.00
	Expended	\$ 0.00
	Funds Received Balance Remaining	\$ 0.00
Project Totals	Authorized Budget	\$ 35,041,254.00
	Funds Received	\$ 35,041,254.00
	Expended	\$ 31,043,122.47
	Funds Received Balance Remaining	\$ 3,998,131.53

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## COMPONENT LIST

### North Breton Island Restoration

North Breton Island, located near the southern end of the Chandeleur Island chain in Louisiana, is part of the Breton National Wildlife Refuge established in 1904 by Theodore Roosevelt. Restoration focuses on enhancing habitat for nesting brown pelicans, terns, skimmers and gulls. The work is anticipated to include dredging approximately 8.2 million cubic yards of sand, silt, and clay sized material from a nearby borrow site and placing it on the existing island platform to create the desired island configuration. Initial designs for the island suggest that this will facilitate development of more than 200 acres of constructed barrier island habitat, including beaches, dunes, and back-barrier marsh. Sand fencing and native plants may be installed to facilitate development of nesting habitat. DOI is the lead Trustee for the design and construction of this component, working cooperatively with Louisiana and NOAA.

<b>Trustee Implementation Group(s)</b>	Louisiana
<b>Restoration Type(s)</b>	Birds

### Caillou Lake Headlands Barrier Island Restoration

Restoration of beach, dune, and back-barrier marsh habitats at the Caillou Lake Headlands location occurred on Whiskey Island, a barrier island in the Isle Dernieres reach of the Terrebonne Basin barrier system. The project was federally authorized under the Water Resources Development Act of 2007 and selected as a preferred alternative in the Terrebonne Basin Barrier Shoreline Restoration (TBBSR) Integrated Feasibility Study and Final Environmental Impact Statement (USACE 2010), and included in the state's master plan [Coastal Protection and Restoration Authority (CPRA 2012)]. Louisiana is the lead Trustee for the design and construction of this project, working cooperatively with NOAA and DOI.

<b>Trustee Implementation Group(s)</b>	Louisiana
<b>Restoration Type(s)</b>	Birds, Wetlands, Coastal and Nearshore Habitats

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### Chenier Ronquille Barrier Island Restoration

Chenier Ronquille is located along the Plaquemines/Barataria Bay barrier shoreline, eight miles east of Grand Isle. Chenier Ronquille serves as the western anchor of the Plaquemines/Barataria shoreline and forms the eastern boundary of Quatre Bayou Pass. The Chenier Ronquille barrier island restoration was authorized in 2010 as a candidate project under the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). This project component aims to increase island longevity by restoring beach, dune, and back-barrier marsh habitats. Restoration work repaired the breaches in the shoreline and will prevent the creation of new breaches over the project component life, while reestablishing dune and marsh platforms. The National Oceanic and Atmospheric Administration (NOAA) is the lead Trustee for the design and construction of this project component, working cooperatively with Louisiana and the Department of Interior (DOI).

**Trustee Implementation Group(s)** Louisiana

**Restoration Type(s)** Birds, Wetlands, Coastal and Nearshore Habitats

### Shell Island (East and West Lobes) Barrier Island Restoration

Shell Island is located approximately 49 miles south-southeast of New Orleans, along the southern margin of the Barataria Basin in Plaquemines Parish. This project aims to increase island longevity by restoring beach, dune, and back-barrier marsh habitats on Shell Island West and the western portion of Shell Island East. Restoration work repaired breaches in the shoreline, reestablished a primary dune along the length of the shoreline, and constructed a back-barrier marsh platform. Plans and proposals to restore Shell Island have been developed in multiple documents, including Coast 2050: Toward a Sustainable Coastal Louisiana, the Barataria Basin Barrier Shoreline Restoration Project [United States Army Corps of Engineers (USACE 2012)], and the state's master plan [Coastal Protection and Restoration Authority (CPRA 2012)]. CPRA is the lead Trustee for the design and construction of this project, working cooperatively with NOAA and DOI.

**Trustee Implementation Group(s)** Louisiana

**Restoration Type(s)** Birds, Wetlands, Coastal and Nearshore Habitats



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Caillou Lake Headlands Barrier Island Restoration

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## COMPONENT DETAILS

### General Activity Description

Great Lakes Dredge and Dock company was the low bidder at \$103,176,805. The construction contract has been executed. A notice to proceed was sent on December 1, 2015. Following extensive surveying, engineering, and design efforts, construction began in October 2016 and was completed in April 2018. After construction, portions of the island were planted with sea oats, Gulf bluestem, seashore dropseed and bitter panicum. Planting operations began April 2, 2018 and was completed on April 11, 2018. A total of 47,280 plants were installed in this planting cycle. The remaining segments of the island will be planted under a separate contract in the next growing season.

### Project Activity Time Frame

<b>Approximate Construction Start</b>	Oct-2016
<b>Approximate Construction Duration</b>	12 - 18 months

# Louisiana Outer Coast Restoration

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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Public Submittal of Bid Packages and Contract Award	Public bids were open on 9/2/2015. Great Lakes Dredge and Dock was the low bidder.	Complete	Aug-2015	Sep-2015
Public Submittal of Bid Packages and Contract Award	A complete bid package was submitted for advertisement.	Complete	Jun-2015	Jun-2015
Permitting and Consultations	Received final sand lease from Bureau of Ocean Energy Management.	Complete	Sep-2014	May-2015
Engineering and Design	The 95% final construction plans and specifications were completed.	Complete	Oct-2013	Mar-2015
Permitting and Consultations	Section 404 permit modification was received from U.S. Army Corps of Engineers and a Coastal Use Permit was received from LA Department of Natural Resources.	Complete	Jan-2013	Mar-2015

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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Construction	A separate vegetative planting contract will be issued for a Fall 2018 planting event.	Complete	Jun-2018	Nov-2018
Construction	Mobilization began on October 3, 2016: pipelines laid, quarters barges staged and dredge in place. Beach and dune fill began on April 7, 2017 and sand fencing installation began on July 10, 2017. Construction was completed on April 25, 2018.	Complete	Oct-2016	Apr-2018
Public Submittal of Bid Packages and Contract Award	Great Lakes Dredge and Dock company was the low bidder at \$103,176,805. The construction contract has been executed, and a notice to proceed was sent on December 1, 2015.	Complete	Sep-2015	Dec-2015

### Post-Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Operations and Maintenance	The operations and maintenance plan for the Outer Coast is being drafted.	In Progress	Sep-2018	
Monitoring	LiDAR, bathymetric, and topographic surveys for monitoring were collected in July 2018.	Complete	Jun-2018	Jul-2018
Monitoring	The monitoring plan for the Outer Coast Project is complete.	Complete	Feb-2015	Feb-2017

## As-Builts Overview

### Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### As-Built Overview

#### Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
04-01-2018	Barrier Island	954 Acres	Restored	

#### As-Built

As-Built	Parameters	Date Completed	Comments
Vegetation Planting	Plant Type	sea oats, Gulf bluestem, seashore dropseed, and bitter panicum. 04-01-2018	

### Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	Restore beach, dune, and back barrier marsh habitats.
Comments	No comments available for this section

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## COMPONENT DETAILS

### Aerial Photography Or Satellite Imagery Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		05/01/2018	12/31/2026	2018, 2021, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Island breaches should not be present (only applicable if criterion for habitat acreage is not met).	12/31/2026		

### Bathymetric Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		06/01/2018	12/31/2026	2018, 2019, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

# Louisiana Outer Coast Restoration

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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### LiDAR Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		06/01/2018	12/31/2026	2018, 2019, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

### Topographic Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		06/01/2018	12/31/2026	2018, 2020, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### Vegetation Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Percent cover		09/01/2019	12/31/2026	2019, 2022, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Percent of vegetation cover is similar to that of other restored barrier islands in the same regions or basins within coastal Louisiana for the same time period after project construction.	12/31/2026		

### Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
Deepwater Horizon Natural Resource Damage Assessment (NRDA) Monitoring Plan Phase II Early Restoration Louisiana	03-16-2017	Monitoring and Adaptive Management Plan	Monitoring plan describing project-wide strategy
Calliou Lake Headlands_As Built.pdf	04-01-2019	Interim Monitoring and Adaptive Management Progress Report	Drawings and surveys after construction

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Caillou Lake Headlands Barrier Island Restoration

## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from FWS to DOI Re: Whiskey Island [CBRA Response] (July 1, 2014)</a>
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from LA DNR to DOI Re: Direct Federal Action Draft Phase III Early Restoration Actions for the Deepwater Horizon Oil Spill [CZMA Response] (February 18, 2014)</a>
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from NOAA NMFS to USACE New Orleans District Re: Louisiana Coastal Area beach and marsh restoration projects [ESA Section 7 Consultation Response] (March 22, 2012)</a>
Endangered Species Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from DOI to USA COE Re: Biological assessment CPRA [ESA Section 7 Consultation Response] (August 12, 2013)</a>
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">NOAA RC Agency Memorandum Re: DWH Early Restoration projects, Phase III, no further EFH consultation needed from NMFS [EFH Consultation Correspondence](October 17, 2014)</a> <a href="#">NOAA RC Agency Memorandum Re: DWH Early Restoration projects, Phase III, no further EFH consultation needed from NMFS [EFH Consultation Correspondence] (October 17, 2014)</a>
Marine Mammal Protection Act (NMFS)		N/A	
Marine Mammal Protection Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Memorandum from DOI to North Florida Ecological Field Office Re: Compliance with Marine Mammal Protection Act [MMPA Determination] (June 4, 2014)</a>



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## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Migratory Bird Treaty Act (USFWS)	Department of the Interior (DOI)	Complete	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	<a href="#">Programmatic and Phase III Early Restoration Plan and Restoration Programmatic Environmental Impact Statement. (June 30, 2014)</a>
National Historic Preservation Act	Department of the Interior (DOI)	Complete	<a href="#">Procedure for requesting information regarding compliance with Section 106 of the National Historic Preservation Act</a>
Rivers and Harbors Act/Clean Water Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from USACE New Orleans District Re: Coastal Protection and Restoration Authority [CWA/RHA Permit Response] (June 8, 2014)</a>

Chenier Ronquille Barrier Island Restoration

## COMPONENT DETAILS

### General Activity Description

Following extensive surveying, engineering, and design efforts, construction began in May 2016 and was completed in March 2017. Portions of the island were planted in March 2018 to establish new vegetation, and will be monitored to track progress.

### Project Activity Time Frame

Approximate Construction Start	Jan-2016
Approximate Construction Duration	12 - 18 months

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Chenier Ronquille Barrier Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Permitting and Consultations	The Department of the Army Section 10/404 Permit (issued through the USACE) was extended to cover operations and maintenance events such as vegetative planting and gapping of containment dikes (if necessary).	Complete	Jul-2017	Sep-2017
Permitting and Consultations	A fill material license to dredge material from state-owned water bottoms for 2017 was received from LDWF in January 2017.	Complete	Dec-2016	Jan-2017
Permitting and Consultations	A fill material license to dredge material from state owned water bottoms for 2016 was received from LDWF in December 2015.	Complete	Jun-2015	Jan-2016
Engineering and Design	The Intergovernmental Agreement between NOAA and the State of Louisiana to perform land rights and oyster lease work was executed on December 10, 2015. The Temporary Servitude Agreement with Louisiana Land and Exploration [LL&E] and the Grant of Particular Use with the State (recorded on November 30, 2015), and an Assignment of Land Rights Agreement between NOAA and the State (signed on December 6, 2015) were signed and fully executed.	Complete	Jun-2015	Dec-2015
Engineering and Design	Notices of Acquisition for oyster leases that would be affected by the project were issued on December 14, 2015 and the affected leases or portions of leases were acquired on December 28, 2015.	Complete	Dec-2014	Dec-2015
Engineering and Design	Task order to the architect-engineer firm CB&I to convert survey data, complete final design, and provide bid process engineering support. Design work was completed in April 2015.	Complete	Nov-2014	Apr-2015

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Chenier Ronquille Barrier Island Restoration

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## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Engineering and Design	NOAA issued a Task Order to the architect-engineer firm CB&I to update borrow area plans, update existing design surveys, including hazards and magnetometer surveys, and verify project viability and constructability. All work has been completed on this task order.	Complete	Apr-2014	Aug-2014

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## COMPONENT DETAILS

### Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Construction	Native vegetation was cultivated in a nursery. A total of 7,465 containers of seashore paspalum, 3,050 containers of sea oats, and 47,200 containers of bitter panicum were planted on the dune and dune backslope. A total of 7,500 plugs of smooth cordgrass were planted on and adjacent to the marsh containment dike in March 2018.	Complete	Oct-2017	Mar-2018
As Built/Construction Monitoring	Construction oversight and monitoring began on February 26, 2016 and was complete on July 5, 2017.	Complete	Feb-2016	Jul-2017
As Built/Construction Monitoring	As-built surveys began on November 7, 2016 and were complete on March 4, 2017.	Complete	Nov-2016	Mar-2017
Construction	Construction began on May 12, 2016 and was complete on March 16, 2017.	Complete	May-2016	Mar-2017
Construction	The Notice to Proceed for construction was issued to Great Lakes Dredge and Dock Co., LLC on January 4, 2016.	Complete	Jan-2016	Jan-2016
As Built/Construction Monitoring	The NTP for Task order #3 to the architect-engineer firm CB&I for construction period oversight and monitoring services was issued on January 5, 2016.	Complete	Nov-2015	Nov-2015
Public Submittal of Bid Packages and Contract Award	The bid opening for construction was held on October 13, 2015.	Complete	Jul-2015	Oct-2015

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Chenier Ronquille Barrier Island Restoration

## COMPONENT DETAILS

### Post-Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Operations and Maintenance	The operations and maintenance plan for the Outer Coast Project is being drafted.	In Progress	Sep-2018	
Monitoring	Performance monitoring is being conducted	In Progress	Apr-2017	
Monitoring	Aerial imagery was collected in 2018.	Complete	Sep-2018	Oct-2018
Monitoring	LiDAR, bathymetric, and topographic surveys for monitoring were collected from April 17 to August 1, 2017.	Complete	Apr-2017	Aug-2017
Monitoring	The monitoring plan for the Outer Coast Project is complete.	Complete	Feb-2015	Feb-2017

### As-Built Overview

#### Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
03-01-2017	Barrier Island	518 Acres	Restored	Project created and restored complete barrier island

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Chenier Ronquille Barrier Island Restoration

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## COMPONENT DETAILS

### As-Built

As-Built	Parameters		Date Completed	Comments
Beach Re-nourishment	Sand/Sediment Volume (cubic yards)	1862798	03-01-2017	Project placed sediment to create beach and
Sand Fencing	Length (linear feet)	8622	03-01-2017	Sand fencing was installed along the crest of the dune
	New/Existing	New		
Sediment Placement (non-beach)	Sand/Sediment Volume (cubic yards)	1103812	03-01-2017	Project restored back-barrier saline marsh

## Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	Restore barrier island habitats that will contribute to making the environment and the public whole for Deepwater Horizon oil spill-related injuries to these habitats;.
Comments	No comments available for this section

Chenier Ronquille Barrier Island Restoration

# COMPONENT DETAILS

## Aerial Photography Or Satellite Imagery Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		05/04/2017	12/31/2026	2017 (post-construction), 2018, 2021, 2024	

### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Island breaches should not be present (only applicable if criterion for habitat acreage is not met).	12/31/2026		



Chenier Ronquille Barrier Island Restoration

# COMPONENT DETAILS

## Bathymetric Survey Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/20/2017	12/31/2026	2017, 2019, 2024	

### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Gulf-side shoreline change rate should not exceed either the short-term historical shoreline change rate (referenced in scientific literature) or the regional contemporary change rate (from data from adjacent barrier shorelines during a similar time frame). Sediment volume performance criteria may be established from either existing reliable littoral transport estimates or an operational sediment budget to evaluate observed versus expected sediment transport rates (only to be analyzed if criterion for habitat acreage, presence of island breaches, and shoreline position criterion are not met).	12/31/2026		

Chenier Ronquille Barrier Island Restoration

# COMPONENT DETAILS

## LiDAR Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/20/2017	12/31/2026	2017, 2019, 2024	

### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Sediment volume performance criteria may be established from either existing reliable littoral transport estimates or an operational sediment budget to evaluate observed versus expected sediment transport rates (only to be analyzed if criterion for habitat acreage, presence of island breaches, and shoreline position criterion are not met).	12/31/2026		

Chenier Ronquille Barrier Island Restoration

## COMPONENT DETAILS

### Vegetation Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Percent cover		08/01/2019	12/31/2026	2019, 2022, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Percent of vegetation cover is similar to that of other restored barrier islands in the same regions or basins within coastal Louisiana for the same time period after project construction.	12/31/2026		

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## COMPONENT DETAILS

### Topographic Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/17/2017	12/31/2026	2017, 2020, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Sediment volume performance criteria may be established from either existing reliable littoral transport estimates or an operational sediment budget to evaluate observed versus expected sediment transport rates (only to be analyzed if criterion for habitat acreage, presence of island breaches, and shoreline position criterion are not met).	12/31/2026		

Chenier Ronquille Barrier Island Restoration

# COMPONENT DETAILS

## Aerial Photography Or Satellite Imagery Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Shoreline position		05/04/2017	12/31/2026	2017 (post-construction), 2018, 2021, 2024	

### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Gulf-side shoreline change rate should not exceed either the short-term historical shoreline change rate (referenced in scientific literature) or the regional contemporary change rate (from data from adjacent barrier shorelines during a similar time frame).	12/31/2026		

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## COMPONENT DETAILS

### LiDAR Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Shoreline position		04/20/2017	12/31/2026	2017, 2019, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Gulf-side shoreline change rate should not exceed either the short-term historical shoreline change rate (referenced in scientific literature) or the regional contemporary change rate (from data from adjacent barrier shorelines during a similar time frame).	12/31/2026		

### Topographic Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Shoreline position		04/17/2017	12/31/2026	2017, 2020, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Gulf-side shoreline change rate should not exceed either the short-term historical shoreline change rate (referenced in scientific literature) or the regional contemporary change rate (from data from adjacent barrier shorelines during a similar time frame).	12/31/2026		

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## COMPONENT DETAILS

### Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
Deepwater Horizon Natural Resource Damage Assessment (NRDA) Monitoring Plan Phase II I Early Restoration Louisiana	03-16-2017	Monitoring and Adaptive Management Plan	Monitoring plan describing project-wide strategy
Chenier_Ronquille_As-Built_Final	02-15-2018	Interim Monitoring and Adaptive Management Progress Report	Drawings and surveys after construction

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## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from FWS to DOI Re: Chenier Ronquille Barrier Island [CBRA Response] (July 1, 2014)</a>
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from LA DNR to NMFS HCD Re: Chenier Ronquille Barrier Island Restoration CWPPRA Project BA-76: Barrier island restoration via dedicated dredging, Plaquemines Parish, Louisiana. (December 15, 2011)</a> <a href="#">Letter from LA DNR to DOI Re: Direct Federal Action Draft Phase III Early Restoration Actions for the Deepwater Horizon Oil Spill [CZMA Response] (February 18, 2014)</a>
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Memorandum from NOAA NMFS to NOAA RC Re: Deepwater Horizon-Early Restoration Plan Phase III, Endangered Species Act Section 7 Consultations for Chenier Ronquille Barrier Island Restoration Project, Louisiana (SER-2012-132) [ESA Section 7 Consultation Response] (October 23, 2014)</a>
Endangered Species Act (USFWS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from FWS to NOAA NMFS Re: Chenier Ronquille Barrier Island Restoration Project [ESA Section 7 Consultation Response] (June 7, 2012)</a>
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">NOAA RC Agency Memorandum Re: DWH Early Restoration projects, Phase III, no further EFH consultation needed from NMFS [EFH Consultation Correspondence] (October 17, 2014)</a>
Marine Mammal Protection Act (NMFS)		N/A	



# Louisiana Outer Coast Restoration

## 2018 Annual Report

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Chenier Ronquille Barrier Island Restoration

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## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Marine Mammal Protection Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Memorandum from DOI to North Florida Ecological Field Office Re: Compliance with Marine Mammal Protection Act [MMPA Determination] (June 4, 2014)</a>
Migratory Bird Treaty Act (USFWS)		N/A	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	<a href="#">Finding of No Significant Impact for the Chenier Ronquille Barrier Island Restoration Project (BA-76) in Plaquemines Parish, Louisiana [NEPA] (November 15, 2013) Programmatic and Phase III Early Restoration Plan and Restoration Programmatic Environmental Impact Statement. (June 30, 2014)</a>
National Historic Preservation Act	Department of the Interior (DOI)	Complete	<a href="#">Procedure for requesting information regarding compliance with Section 106 of the National Historic Preservation Act</a>
Rivers and Harbors Act/Clean Water Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from USACE New Orleans District to NMFS Re: Permit No. MVN-2011-03148-ETT [CWA/RHA Permit Response] (November 7, 2012)</a>

North Breton Island Restoration

COMPONENT DETAILS

General Activity Description

Work to date over the life of the project supports engineering and design, monitoring plan development, and preparation of a bid package for the construction contract. Activities supporting this work include collection and analyses of samples collected from the island, island platform and target borrow area (LiDAR, bathymetry, topography, sidescan sonar, chirp subbottom seismic and magnetometer surveys, vibracore sampling); database and data management input; design development; consultations with appropriate entities to address environmental compliance requirements; and permit acquisition. Data related to the project are available at: [gom.usgs.gov/doi/Breton](http://gom.usgs.gov/doi/Breton).

Project Activity Time Frame

Approximate Construction Start	Aug-2019
Approximate Construction Duration	12 - 18 months

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Permitting and Consultations	In accordance with the Biological Opinion issued by the U.S. Fish and Wildlife Service (USFWS), pre-construction winter piping plover and red knot surveys began in July 2018. Pre-construction benthic invertebrate monitoring was conducted in April 2018, data analysis is still underway.	In Progress	Apr-2018	
Public Submittal of Bid Packages and Contract Award	Construction bid package preparation is undergoing internal USFWS and DOI legal review.	In Progress	Feb-2018	
Engineering and Design	Final project design report and drawings are expected 2019. Drawings are being updated to reflect the site survey conducted in December 2018.	In Progress	Jul-2017	
Engineering and Design	Data pertinent to the engineering and design of the project continues to be entered into the project database and web mapping applications as it becomes available. Publicly available data are accessible at <a href="https://gom.usgs.gov/doi/breton/">https://gom.usgs.gov/doi/breton/</a> .	In Progress	Mar-2014	
Engineering and Design	A verification survey was conducted in late 2018 to assess changes to the island since the last survey conducted in 2015. Survey results indicate a negligible change in the fill volume required to complete the project as designed.	Complete	Oct-2018	Dec-2018
Permitting and Consultations	Coastal Permits from USACE and Louisiana have been approved	Complete	Aug-2015	Mar-2018
Engineering and Design	The trustees developed a vibracore sampling plan to refine sand resources in the target area. Vibracore sampling was conducted in January 2017. A report detailing the results of the survey was submitted to DOI in October 2017 and was approved in January 2018.	Complete	Jan-2017	Jan-2018

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Permitting and Consultations	A geotechnical survey was conducted on North Breton to better understand the soil bearing capacity of the site and to estimate subsidence during construction. Following a review period, the final report was approved.	Complete	Aug-2016	Jan-2018
Permitting and Consultations	DOI developed a migratory bird abatement plan for use during construction (and submitted as part of the Joint Coastal Permit application). DOI also developed a piping plover and red knot monitoring plan and benthic invertebrate sampling survey as part of the project's Endangered Species Act consultation with USFWS. Pre-construction bird surveys are expected to begin early 2018; the pre-construction benthic invertebrate survey is planned for March 2018.	Complete	Apr-2017	Nov-2017
Engineering and Design	The trustees selected an offshore shoal area approximately 3 miles east of North Breton Island as the target borrow area based on preliminary vibracore, cultural resource, geotechnical and geophysical data, as well as potential effects of proposed sediment borrow pits in this area on nearshore wave climate and longshore sediment transport along Breton Island (via wave modeling analyses).	Complete	Jan-2017	Oct-2017
Permitting and Consultations	A submerged cultural resources survey of the borrow area and pipeline corridor was conducted in May of 2016. Results were transmitted to Louisiana SHPO and the applicable tribal organizations for review and comment under NHPA Sec 106. All responding entities concurred with the DOI finding of no adverse effect.	Complete	Mar-2016	Oct-2017
Engineering and Design	Preliminary dune, beach and marsh fill designs were developed based on project design alternatives analyses. Preliminary design of the borrow site excavation will follow borrow area vibracore sampling and analyses.	Complete	Jan-2017	Jul-2017

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Engineering and Design	Preliminary restoration designs were developed for use in modeling and evaluation. A Design Alternatives Analysis Report was developed to compile the results of modeling and make recommendations on the design elements to develop further.	Complete	Oct-2015	Mar-2017
Engineering and Design	The United States Geological Survey (USGS) worked collaboratively with DOI's contractor to develop models used to aid in evaluating preliminary restoration designs. Existing topographic and bathymetric data were used to create model grids used to simulate evolution of the island given different design alternatives affected by storm events, subsidence and relative sea level rise. Sensitivity tests were performed to assess model domain size and resolution.	Complete	Dec-2015	Nov-2016
Engineering and Design	USGS completed a shoreline change analysis based on historic topographic and bathymetric surveys. These analyses are being used to help inform sediment budget estimates and restoration design. Associated final reports are available at <a href="http://coastal.er.usgs.gov/data-release/doi-F7XS5SGM/">http://coastal.er.usgs.gov/data-release/doi-F7XS5SGM/</a> and <a href="https://pubs.er.usgs.gov/publication/ofr20161039">https://pubs.er.usgs.gov/publication/ofr20161039</a> . An associated seafloor change report is available at <a href="https://pubs.er.usgs.gov/publication/ofr20161069">https://pubs.er.usgs.gov/publication/ofr20161069</a>	Complete	Jan-2015	Apr-2016
Permitting and Consultations	A contractor field team completed a submerged cultural resource survey in the target borrow area. Results will be compiled in a final report.	Complete	Aug-2014	Apr-2016
Engineering and Design	A contractor field team collected geotechnical data (via geotechnical cores) of the beach, dune and back-barrier marsh platform.	Complete	May-2015	Mar-2016
Engineering and Design	The trustees requested and received proposals from the project contractor for a submerged cultural resource survey, vibracore sampling and analysis plan and a surface contaminant sampling and analysis plan at the target borrow area.	Complete	Oct-2015	Dec-2015

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Permitting and Consultations	The trustees submitted a joint permit application for work in the Louisiana coastal zone to USACE and the State of Louisiana on September 17, 2015 for approval to collect vibracore samples in the target borrow area approximately 3 miles east of North Breton Island. The State of LA provided a negative effects concurrence on September 22, 2015 (Consistency Number: C20150177). USACE approved the application December 9 under USACE file number MVN 2014-2016 EPP.	Complete	Sep-2015	Dec-2015
Engineering and Design	Design-level topographical surveys were completed on the island.	Complete	May-2015	Oct-2015
Engineering and Design	A USGS report analyzing potential changes to waves affecting the North Breton Island system following development of potential borrow pits in the target borrow area was completed. The report is available at <a href="http://pubs.er.usgs.gov/publication/ofr20151055">http://pubs.er.usgs.gov/publication/ofr20151055</a> .	Complete	Jun-2014	May-2015
Public Submittal of Bid Packages and Contract Award	DOI contracted with Lindbergh and Associates for architect-engineer design service support for borrow site(s) survey, analysis and design and restoration alternative development.	Complete	Jan-2014	Mar-2015
Permitting and Consultations	DOI consulted with potentially affected tribes and the Louisiana State Historic Preservation Office as part of the cultural resource review process for work on North Breton Island. This process was completed in February 2015, with a no adverse effects determination.	Complete	Aug-2014	Feb-2015
Engineering and Design	The USGS collected sediment samples around the island and offshore area in July 2014 and January 2015 to help guide more extensive sampling to inform project engineering and design. Information on the effort is available at: <a href="https://coastal.er.usgs.gov/development/gittens/ip-081095/ds/index.html">https://coastal.er.usgs.gov/development/gittens/ip-081095/ds/index.html</a> .	Complete	Jul-2014	Jan-2015

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Permitting and Consultations	A joint coastal geotechnical permit No. MVN-2014-2016-ETT was provided by USACE in September 2014 to permit the collection of geotechnical data on the island.	Complete	Apr-2014	Sep-2014
Engineering and Design	The USGS completed initial acoustic geophysical surveys to help evaluate the presence of appropriate sand sources in the target borrow area. The final digital chirp subbottom profile data report is available at <a href="https://pubs.er.usgs.gov/publication/ds972">https://pubs.er.usgs.gov/publication/ds972</a> . The archive of bathymetry and backscatter data is available at <a href="https://pubs.er.usgs.gov/publication/ds1005">https://pubs.er.usgs.gov/publication/ds1005</a> .	Complete	Jul-2014	Aug-2014
Permitting and Consultations	State of Louisiana coastal zone consistency determination regarding geotechnical sample collection on the island was provided to the trustees in August 2014.	Complete	Jun-2014	Aug-2014
Engineering and Design	The USGS completed a topobathy LiDAR survey in January, 2014. The final data release report is available at <a href="http://coastal.er.usgs.gov/data-release/doi-F70G3H6G/">http://coastal.er.usgs.gov/data-release/doi-F70G3H6G/</a> .	Complete	Jan-2014	Jan-2014

## As-Built Overview

### Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
No records are available				

# Louisiana Outer Coast Restoration

## 2018 Annual Report

North Breton Island Restoration

## COMPONENT DETAILS

### As-Built

As-Built	Parameters	Date Completed	Comments
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No records are available

## Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	Provide nesting habitat which facilitates additional production of brown pelicans, terns, skimmers and gulls (helping to restore injuries to these species).
Comments	Louisiana, NOAA and DOI collaborated to develop a project monitoring plan to help inform project success. The plan (titled Deepwater Horizon Natural Resource Damage Assessment (NRDA) Monitoring Plan, Phase III Early Restoration, Louisiana Outer Coast Restoration Project) outlines a proposed strategy to collect data which will help inform the success of the constructed design within the context of the analyzed dynamics of the Breton Island system. This plan will be implemented at Breton following construction of the selected restoration design.

## Vegetation Survey Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Percent cover		04/22/2022	07/15/2028	Spring/Summer of 2022, 2025, 2029, and 2033	

### Performance Criteria

No performance criteria currently available for this parameter



North Breton Island Restoration

COMPONENT DETAILS

Aerial Photography Or Satellite Imagery Monitoring Activity

Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area	Acres of Habitat	03/22/2021	03/18/2028	Shortly after completion, and at least 2 additional events (2024 and 2028).	

Performance Criteria

No performance criteria currently available for this parameter

Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Shoreline position		03/22/2022	03/18/2028	3 times post-construction	

Performance Criteria

No performance criteria currently available for this parameter

# Louisiana Outer Coast Restoration

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### North Breton Island Restoration

## COMPONENT DETAILS

### Avian Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Presence or absence	Map colony boundaries	06/22/2021	06/19/2028	annual surveys conducted for 10 years post-construction	

#### Performance Criteria

*No performance criteria currently available for this parameter*

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Reproductive output		07/22/2021	07/18/2028	annual surveys conducted for 10 years post-construction	

#### Performance Criteria

*No performance criteria currently available for this parameter*

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### LiDAR Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		03/22/2021	03/19/2028	post-construction baseline, and 3 additional surveys	

#### Performance Criteria

*No performance criteria currently available for this parameter*

### Bathymetric Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/22/2021	04/19/2028	post-construction, and two additional surveys	

#### Performance Criteria

*No performance criteria currently available for this parameter*

## Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
Deepwater Horizon Natural Resource Damage Assessment (NRDA) Monitoring Plan Phase II Early Restoration Louisian	03-16-2017	Monitoring and Adaptive Management Plan	Monitoring plan describing project-wide strategy

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from FWS to DOI Re: North Breton Island [CBRA Response] (July 1, 2014)</a>
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from LA DNR to DOI Re: Direct Federal Action Draft Phase III Early Restoration Actions for the Deepwater Horizon Oil Spill [CZMA Response] (February 18, 2014)</a>
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from NOAA NMFS to NOAA RC Re: SER-2014013018 DWH-ERP, North Breton Island Restoration, North Breton Island, Plaquemines Parish, Louisiana [ESA Section 7 Consultation Response] (April 2, 2014)</a>
Endangered Species Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Deepwater Horizon Early Restoration North Breton Island Restoration Project Plaquemines Parish, Louisiana 04EL1000-2014-F-0200 Biological Opinion Conference Opinion [ESA Section 7 Consultation Response] (May 9, 2014)</a>
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Memorandum from NOAA NMFS to NOAA RC Re: Essential Fish Habitat (EFH) Review of the restoration of North Island in the Chandeleur Island barrier system, Louisiana [EFH Consultation Response] (March 17, 2014)</a> <a href="#">NOAA RC Agency Memorandum Re: DWH Early Restoration projects, Phase III, no further EFH consultation needed from NMFS [EFH Consultation Correspondence] (October 17, 2014)</a>
Marine Mammal Protection Act (NMFS)		N/A	

# Louisiana Outer Coast Restoration

## 2018 Annual Report

### North Breton Island Restoration

## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Marine Mammal Protection Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Memorandum from DOI to North Florida Ecological Field Office Re: Compliance with Marine Mammal Protection Act [MMPA Determination] (June 4, 2014)</a>
Migratory Bird Treaty Act (USFWS)	Department of the Interior (DOI)	Complete	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	<a href="#">Programmatic and Phase III Early Restoration Plan and Restoration Programmatic Environmental Impact Statement. (June 30, 2014)</a>
National Historic Preservation Act	Department of the Interior (DOI)	Complete	<a href="#">Procedure for requesting information regarding compliance with Section 106 of the National Historic Preservation Act</a>
Rivers and Harbors Act/Clean Water Act	National Oceanic and Atmospheric Administration (NOAA)	In Progress	

# Louisiana Outer Coast Restoration

## 2018 Annual Report

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Shell Island (East and West Lobes) Barrier Island Restoration

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## COMPONENT DETAILS

### General Activity Description

Following extensive surveying, engineering, and design efforts, construction began in September 2015 with the issuance of a notice to proceed and ended in September 2017 with the final acceptance. During the spring and summer of 2017, monitoring conducted a topographic and bathymetric survey of the project and beyond. Portions of the island were planted in the Spring of 2018. The first vegetative sampling effort occurred in October 2018.

### Project Activity Time Frame

**Approximate Construction Start** Sep-2015

**Approximate Construction Duration** 12 - 18 months

### Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Public Submittal of Bid Packages and Contract Award	Construction contract awarded to Great Lakes Dock & Dredge Company, LLC.	Complete	Mar-2015	Jun-2015
Engineering and Design	Engineering and Design process, including plans and specifications for dredging contract, was completed.	Complete	Apr-2013	Mar-2015

# Shell Island (East and West Lobes) Barrier Island Restoration

## Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Construction	Final inspection and final acceptance of the vegetative plantings	Complete	May-2018	May-2018
Construction	Installation of vegetative plantings	Complete	Apr-2018	May-2018
Construction	Issuance of notice to proceed for vegetative plantings	Complete	Sep-2017	Sep-2017
Construction	Final walk-through and final acceptance of the sediment placement and sand fencing aspects of the project	Complete	Mar-2017	Sep-2017
Construction	Sand fence installation	Complete	May-2016	Dec-2016
Construction	Sediment placement for marsh platform	Complete	May-2016	Oct-2016
Construction	Sediment placement for beach and dune component	Complete	Mar-2016	Sep-2016
Construction	Notice to proceed with construction awarded to Great Lakes Dock & Dredge Company.	Complete	Sep-2015	Sep-2015

# Louisiana Outer Coast Restoration

## 2018 Annual Report

Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Post-Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Monitoring	Vegetation - Fall 2018	Complete	Oct-2018	Oct-2018
Monitoring	Real Time Kinematic (RTK) (tie in Bathymetry and LiDAR)	Complete	Apr-2017	Aug-2017
Monitoring	Bathymetry	Complete	Apr-2017	Jun-2017
Monitoring	LiDAR	Complete	Apr-2017	Apr-2017

### As-Built Overview

#### Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
12-01-2016	Beach	320 Acres	Created	Sand/Sediment Volume (cubic yards): 4,874,081
12-01-2016	Tidal Wetland	299 Acres	Created	Sand/Sediment Volume (cubic yards): 1,122,891

### As-Built

As-Built	Parameters	Date Completed	Comments
Sand Fencing	Length (linear feet)	14400	12-01-2016
	New/Existing	New	



Shell Island (East and West Lobes) Barrier Island Restoration

# COMPONENT DETAILS

## Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	Restore beach, dune, and back barrier marsh habitats
Comments	No comments available for this section

## Aerial Photography Or Satellite Imagery Monitoring Activity

### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area	acres	03/14/2017	12/31/2026	2017, 2018, 2021, 2024	

### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes. Island breaches should not be present (only applicable if criterion for habitat acreage is not met).	12/31/2026		

# Louisiana Outer Coast Restoration

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Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Vegetation Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Aboveground biomass	% cover	03/31/2018	03/31/2026	2018, 2021, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Percent of vegetation cover is similar to that of other restored barrier islands in the same regions or basins within coastal Louisiana for the same time period after project construction.	12/31/2026		

### Avian Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Biomass	Colony Mapping	03/31/2018	03/31/2021	2018, 2019, 2020, 2021	

#### Performance Criteria

*No performance criteria currently available for this parameter*

# Louisiana Outer Coast Restoration

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Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Bathymetric Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/20/2017	12/31/2026	2017, 2019, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

### LiDAR Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/20/2017	12/31/2026	2017, 2019, 2024	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

# Louisiana Outer Coast Restoration

## 2018 Annual Report

Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Topographic Survey Monitoring Activity

#### Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/20/2017	12/31/2026	2017, 2020, 2025	

#### Performance Criteria

Target	Target Date	Target Achieved?	Comments
Habitat acreage across the project will be at least 60% of the constructed habitat acreage or commensurate with regional contemporary changes.	12/31/2026		

### Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
Deepwater Horizon Natural Resource Damage Assessment (NRDA) Monitoring Plan Phase II I Early Restoration Louisiana	03-16-2017	Monitoring and Adaptive Management Plan	Monitoring plan describing project-wide strategy

# Louisiana Outer Coast Restoration

## 2018 Annual Report

Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from FWS to DOI Re: Shell Island [CBRA Response] (July 1, 2014)</a>
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from LA DNR to USACE New Orleans District Re: LCA - Barataria Basin Barrier Shoreline Restoration Project [CZMA Consistency Determination] (September 13, 2011)</a> <a href="#">Letter from LA DNR to DOI Re: Direct Federal Action Draft Phase III Early Restoration Actions for the Deepwater Horizon Oil Spill [CZMA Response] (February 18, 2014)</a>
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">Letter from NOAA NMFS to USACE New Orleans District Re: Louisiana Coastal Area beach and marsh restoration projects [ESA Section 7 Consultation Response] (March 22, 2012)</a>
Endangered Species Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Letter from FWS to USACE New Orleans District Re: Public Notice MVN-2011-2935-EFF [ESA Section 7 Consultation Response] (May 22, 2012)</a> <a href="#">Letter from FWS to USACE New Orleans District Re: Permit Application MVN-2011-2935-EFF [ESA Section 7 Response] (September 26, 2012)</a>
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	<a href="#">NOAA RC Agency Memorandum Re: DWH Early Restoration projects, Phase III, no further EFH consultation needed from NMFS [EFH Consultation Correspondence] (October 17, 2014)</a>
Marine Mammal Protection Act (NMFS)		N/A	

# Louisiana Outer Coast Restoration

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Shell Island (East and West Lobes) Barrier Island Restoration

## COMPONENT DETAILS

### Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Marine Mammal Protection Act (USFWS)	Department of the Interior (DOI)	Complete	<a href="#">Memorandum from DOI to North Florida Ecological Field Office Re: Compliance with Marine Mammal Protection Act [MMPA Determination] (June 4, 2014)</a>
Migratory Bird Treaty Act (USFWS)	Department of the Interior (DOI)	Complete	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	<a href="#">Programmatic and Phase III Early Restoration Plan and Restoration Programmatic Environmental Impact Statement. (June 30, 2014)</a>
National Historic Preservation Act	Louisiana Coastal Protection and Restoration Authority (CPRA)	Complete	<a href="#">Procedure for requesting information regarding compliance with Section 106 of the National Historic Preservation Act</a>
Rivers and Harbors Act/Clean Water Act	Louisiana Coastal Protection and Restoration Authority (CPRA)	Complete	

# Louisiana Outer Coast Restoration

## 2018 Annual Report

## PROJECT CONTACTS

Name	Title	Organization	Phone	Email	Location	Project Role(s)
Robin Donohue	Fish and Wildlife Biologist	United States Fish and Wildlife Service (USFWS)	(251) 517-8008	robin_donohue@fws.gov	Fairhope, AL	Project Manager
Stephen Heverly	Strategic Communications Specialist	National Oceanic and Atmospheric Administration (NOAA) (ERT)	(301) 427-8626	stephen.heverly@noaa.gov	Silver Spring, MD	Public Affairs Representative
Shirley Long	Restoration Specialist	Louisiana Coastal Protection and Restoration Authority (CPRA)	(225) 342-4708	shirley.long@la.gov	Baton Rouge, LA	Public Affairs Representative