

**RESTORATION PLAN**

**FOR THE**

**GOODRICH OIL BARGE GROUNDING**

**DELTA NATIONAL WILDLIFE REFUGE**

**Plaquemines Parish, Louisiana**

Prepared by:

U. S. Fish and Wildlife Service  
U.S. Department of the Interior

January 2014

## **Acronyms and Abbreviations**

|       |  |
|-------|--|
| CFR   | Code of Federal Regulations                        |
| DM    | Departmental Manual                                |
| DOI   | United States Department of the Interior           |
| FWS   | United States Fish and Wildlife Service            |
| MBTA  | Migratory Bird Treaty Act                          |
| NEPA  | National Environmental Policy Act                  |
| NRDAR | Natural Resource Damage Assessment and Restoration |
| OPA   | Oil Pollution Act                                  |
| USC   | United States Code                                 |

## **1.0 INTRODUCTION**

This Restoration Plan presents proposed actions to address injured natural resources and lost services that resulted from a grounding of the Goodrich Oil Barge on the Delta National Wildlife Refuge (Refuge) in Plaquemines Parish, Louisiana. In 2009, the United States and Goodrich Petroleum Company, LLC reached a settlement agreement to resolve claims under the Oil Pollution Act of 1990, 33 USC 2701 *et seq.* (OPA). The primary provision of the settlement agreement required Goodrich, as the responsible party, to pay natural resource damages to the U. S. Department of Interior (DOI) to compensate the public for the injured and lost resources.

### **1.1 Purpose and Need**

The purpose of this Restoration Plan is to evaluate and select restoration actions that will restore, rehabilitate, replace, or acquire natural resources and services roughly equivalent to those injured.

### **1.2 Authorities and Trustee Responsibilities**

OPA, the National Oil and Hazardous Substances Contingency Plan (40 CFR Part 300, Subpart G, Sections 300.600-300.615), and the regulations implementing the natural resource damage provisions of OPA (15 CFR Part 990) establish a liability regime for oil spills into navigable waters or adjacent shorelines that injure or are likely to injure natural resources or the services that those resources provide to the ecosystem or humans. Pursuant to OPA, federal agencies who administer natural resources, states, and federally-recognized Native American tribes may be designated as trustees for natural resources under their statutory authorities and responsibilities. In this case, the DOI is the sole natural resource trustee.

The Region 4 Regional Director of the U.S. Fish and Wildlife Service (FWS) is designated to act on behalf of the Secretary as DOI's Authorized Official in the Goodrich Oil Barge case. As such, FWS is authorized to assess and recover damages, develop a restoration plan, and implement and oversee activities that will restore the natural resources injured by the grounding of the barge.

### **1.3 Summary of the Settlement**

Goodrich's W-6 Facility Oil Storage Barge with a cargo of 2,500 barrels of crude oil went aground in the Delta National Wildlife Refuge on August 29, 2005. The grounding of the barge presented a substantial threat of discharging crude oil into the Refuge. In November 2005, the Refuge issued Special Use Permit, SLR-06-013, allowing Goodrich to remove the barge with the condition that vegetated areas destroyed by removal of the barge would be refilled to pre-removal elevations, and marsh vegetation would be restored.

As a result of the grounding, natural resources and services were injured or potentially injured. DOI/FWS has determined that restoration of resources is appropriate as a result of the incident. The settlement and release agreement required Goodrich to pay \$225,000 in damages to DOI/FWS in order to compensate the public for natural resource injuries pursuant to OPA. Under the Natural

Resource Damage Assessment provisions of OPA, these funds will be used to restore, rehabilitate, replace, or acquire the equivalent natural resources.

#### **1.4 Summary of the Incident and Injury**

The Goodrich barge ran aground carrying a cargo of 2,500 barrels of crude oil, causing physical disturbance and posing a substantial threat of discharging crude oil on the Refuge. When the barge went aground and was subsequently removed, it displaced a hole at least three times the length of the barge and twice its depth, and one and one half times its width. The Refuge estimated at least an acre of wetland was below its original elevations and was denuded of vegetation. As a result of this incident, natural resources and services provided by those resources were injured.

#### **1.5 Restoration Goals**

The purpose of the proposed action is to restore, rehabilitate, replace, or acquire the equivalent of natural resources that were injured or destroyed by the barge grounding incident, pursuant to the requirements of the settlement and release agreement, and applicable federal and state laws and regulations.

The \$225,000 in restoration funds will be used to protect or restore wetland, riparian, terrestrial and other habitats within or adjacent to Delta National Wildlife Refuge with similar attributes as those that were injured or potentially injured.

#### **1.6 Compliance with Other Authorities**

The following environmental regulations, laws, and executive orders were considered in the restoration planning process because they may impose limits or standards for completing restoration activities.

##### **1.6.1 Clean Water Act**

The Clean Water Act 33 USC 1251, *et seq.*, is the principle law governing pollution control and water quality of the nation's waterways. Section 404 of the law authorizes the permit program allowing for the disposal of dredged or fill material into navigable waters. Restoration projects that move material into or out of waters or wetlands require individual Section 404 permits or may be addressed under nationwide permits.

##### **1.6.2 Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act, 16 USC 661, *et seq.*, states that wildlife conservation shall receive equal consideration with other features of water resource development. The Act requires federal permitting and licensing agencies to consult with the FWS and state wildlife agencies prior to permitting any activity that in any way modifies any body of water to minimize adverse impacts of such actions on fish and wildlife resources and habitat.

### **1.6.3 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA), 16 USC 715, *et seq*, provides for the protection of migratory birds. The MBTA may be invoked to consider time of year restrictions for construction activities on sites where migratory birds may be nesting or where commercial activities that produce smoke and noise may unduly disturb overwintering migratory birds.

### **1.6.4 National Environmental Policy Act**

The National Environmental Policy Act (NEPA) established a national policy for protecting the environment. NEPA applies to all federal agency actions that affect the human and natural environment. Federal agencies are obligated to comply with NEPA regulations issued by the Council on Environmental Quality. Under NEPA, if the actions within a federal proposal are categorically excluded, an environmental analysis is not necessary. In the case of the grounding of the Goodrich Oil Barge, the proposed restoration actions, further described in Section 2.0 of this report, are clearly included within the U.S. Department of Interior categorical exclusions (U.S. Department of Interior 2008). The NEPA Compliance Checklist is provided in Appendix 1. According to the Code of Federal Regulations 46.210, Listing of Departmental categorical exclusions, such exclusions are classes of actions which do not individually or cumulatively have a significant effect on the human environment. In the Departmental Manual, Appendix 1 of 516 DM 2, the following FWS actions (U.S. Fish and Wildlife Service 2004) are designated categorical exclusions unless the action is an exception to the categorical exclusion:

#### **A. General.**

(11) Natural resource damage assessment restoration plans, prepared under Sections 107, 111, and 122(j) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA); section 3111 (f)(4) of the Clean Water Act; and the Oil Pollution Act; when only minor or negligible change in the use of the affected areas is planned (U.S. Fish and Wildlife Service 2004).

## **1.7 Coordination and Scoping**

### **1.7.1 Public Notification**

Copies of the draft Restoration Plan were made available on the Delta National Wildlife Refuge website:

<http://www.fws.gov/delta/>

The public comment period was for 30 days beginning August 6, 2013. Parties to whom comments could be sent, and the due date for receipt of comments were posted on the website and in a New Orleans area newspaper. No comments were received.

### **1.7.2 Responsible Party Involvement**

The party responsible for the barge grounding at the Refuge will not be participating in restoration planning and implementation.

### **1.7.3 Administrative Record**

The administrative record contains the official documents pertaining to the Goodrich Oil Barge case settlement, restoration planning, restoration implementation, and post-implementation activities. The administrative record for this case is housed at the FWS Delta National Wildlife Refuge.

### **1.7.4 Climate Change**

Consistent with the goals and objectives outlined in FWS's *Strategic Plan for Responding to Accelerated Climate Change* (FWS 2010), the restoration alternative proposed in this Restoration Plan aligns with landscape level conservation efforts commonly undertaken by the FWS Delta National Wildlife Refuge.

## **2.0 RESTORATION PLAN**

Refuge personnel evaluated injury to marsh habitat, birds and wildlife as part of the resource damage assessment. They concluded that no human intervention to speed recovery to baseline was necessary in impacted areas and that no intervention was necessary in these areas to accomplish primary restoration following completion of response actions for marsh, vegetation, and habitats. No bird or wildlife mortality was noted. The possibility that actions to enhance recovery might result in additional injury was a factor considered in making this decision.

Refuge personnel have concluded that compensation for interim lost ecological services is required for injuries to marsh, vegetation, and habitats. After evaluating a number of potential restoration actions for achieving such compensation, a sediment diversion project was selected to satisfy both the short term and long term compensatory restoration requirements for impacts to refuge resources. The creation of marsh resulting from the sediment diversion will replace the ecological services lost as a result of the grounding and retrieval actions.

The sediment diversion restoration action has the benefits of being very cost effective, possesses a high likelihood of success, and due to the scale of the proposed action and the interconnections between services among the resources impacted, will result in compensation across all impacted resource categories.

### **2.1 Restoration Objectives**

As was noted above, marsh vegetation within the Refuge was injured as a result of the barge grounding and the retrieval actions. The objectives of restoration for injured marsh are:

1. Determine what actions, if any, are necessary or appropriate to enable or facilitate recovery of the injured marsh vegetation at the site of injury (Primary Restoration); and
2. Determine what actions, if any, are necessary or appropriate to replace or acquire equivalent ecological services lost and to restore these services or compensate the ecosystem for this loss (Compensatory Restoration).

## **2.2 Primary Restoration**

**Natural Recovery:** Direct intervention is not required to restore the impacted marsh. Completed retrieval activities and natural processes are considered adequate to provide for the natural recovery of this resource. No additional actions are proposed.

## **2.3 Compensatory Restoration**

Observations during and after retrieval operations indicate that ecological services provided by the injured marsh have been lost due to direct removal of marsh from the excavation necessary to reach and remove the grounded barge. Restoration actions to compensate for this interim loss of ecological services can be provided through creation of the same or ecologically equivalent habitat at a site near the injured marsh communities.

**Small-scale Sediment Diversion:** Creation of marsh through the construction of a sediment diversion would aid in making the public whole through the creation of the same or similar type marsh that was impacted by the grounding. It has a high likelihood of success, as evidenced by the remarkable performance of similar projects in the Mississippi River Delta. It would not negatively affect the impacted marsh and would cause less overall environmental impact than other restoration actions considered. While a small amount of habitat would be destroyed during its construction, the impacts would be dwarfed by the beneficial creation of emergent marsh habitats. The diversion would help recreate the processes that created the delta originally, by allowing sediment rich water to flow out into shallow subtidal ponds, gradually filling them and creating mudflats and finally emergent marsh. The flats would continue to spread as more marsh forms. It has the added benefit of also creating large expanses of shallow subtidal and intertidal flats that serve as rich foraging areas for fish, crabs, wading birds, shorebirds, and other wildlife. Refuge personnel have selected 2 potential sites for small scale sediment diversions.

## **2.4 Compensatory Restoration Project Description**

### **Site Selection:**

Refuge personnel have used small scale sediment diversions as a cost effective method of restoration for several decades. Although many potential sites for a diversion project are available, one of the key criteria for site selection is that the created marsh should provide full ecological services for the life of the marsh within the vicinity of the injury. The proposed location(s) are located within the same receiving pond as that within which the injury occurred (Figure 1). Over the life of the project it is expected to restore in excess of 50 acres of emergent marsh.

### **Project Design:**

**Sediment Diversion:** The sediment diversion(s) will be constructed using dimensions and techniques which have proven themselves effective over the course of several decades. The project is deemed suitable for creating the type and quantity of marsh required to satisfy compensatory restoration requirements. The proposed project involves the excavation of a

maximum 100' wide x 2,300' long x 5' deep crevasse off Octave Pass and/or Main Pass in the Refuge. This will allow sediment laden water to flow out into a shallow open water area, causing the sediments to drop out, creating flats and emergent areas where marsh will naturally develop. Similar projects in the vicinity have created hundreds of acres of marsh along with extensive mud flats.

## 2.5 Monitoring and Project Fulfillment

Past sediment diversion projects within the Refuge have had considerable success. Formation of emergent vegetated marsh is highly dependent on rate of flow, sediment load, depth of pond, and several other factors. Considering these factors, it is possible to project a high likelihood of success for the project, but the time frame cannot be determined. Environmental monitoring will be periodically conducted by Refuge personnel for the purpose of checking the integrity of constructed diversions, and documenting the progress of emergent vegetation establishment and use of the newly-formed marsh habitat by birds and wildlife.



**Figure 1:** Location map showing site of Goodrich Barge grounding and proposed location of sediment diversion(s) within Delta National Wildlife Refuge.

## **2.6 Relevant Circumstances Supporting Application of Categorical Exclusion**

Sediment diversions are a commonly used restoration practice that is often implemented along the southeastern coast of the United States. This wetland restoration practice is clearly identified in a number of accepted wildlife management planning reports, patently supporting the use of a categorical exclusion for this project. The North American Waterfowl Management Plan, Gulf Coast Joint Venture: Mississippi River Coastal Wetlands Initiative (2002: page 13) specifically mentions the implementation of crevasses to capture sediment from sediment-laden water to restore mudflats, and ultimately emergent vegetation, on degraded areas. The U.S. Shorebird Conservation Plan, Lower Mississippi/Western Gulf Coast Shorebird Planning Region (2000: page 17) also mentions the long-term use of sediment diversion crevasses to facilitate sediment accretion and marsh restoration in the deltaic plain. Lastly, sediment diversion structures, crevasses, as a means to restore form and function to wetland habitat are a common coastal shoreline restoration practice and have been implemented for the past several decades on the Delta National Wildlife Refuge (Delta and Breton National Wildlife Refuges Comprehensive Conservation Plan 2008: pages 32 and 45). The strong support for this restoration activity clearly lends itself to the application of a categorical exclusion.

## **2.7 Supporting Documents**

Delta and Breton National Wildlife Refuges Comprehensive Conservation Plan. 2008.

Mississippi River Coastal Wetlands Initiative Area Implementation Plan 2003.

United States Shorebird Conservation Plan (Brown et al. 2001)

North American Waterfowl Management Plan. Online at:

<http://www.fws.gov/birdhabitat/NAWMP/index.shtm>

## **3.0 LITERATURE CITED**

U. S. Department of the Interior, Settlement and Release Agreement Between DOI/FWS and Goodrich Petroleum Company, LLC. June 12, 2009.

U. S. Department of Interior, Departmental Manual Part 521 DM 6, Appendix 1.

National Environmental Policy Act. 2008.

Online at: <http://elips.doi.gov/elips/DocView.aspx?id=2944&searchid=09429153-d276-49d3-bbf9-dde75daebe51&dbid=0>

U. S. Fish and Wildlife Service, Rising to the Urgent Challenge, Strategic Plan for Responding to Accelerating Climate Change, September, 2010. Online at:

<http://www.fws.gov/home/climatechange/strategy.html>

U. S. Fish and Wildlife Service, National Environmental Policy Act. 2004. Departmental Manual Part 516 DM 8.5: Online at:

<http://elips.doi.gov/ELIPS/DocView.aspx?id=1739> Appendix 1. National Environmental Policy Act Checklist for the Goodrich Oil Barge grounding, Delta National Wildlife Refuge, Louisiana.

**Appendix G.**

**NEPA COMPLIANCE CHECKLIST**

State: Louisiana Federal Financial Assistance Grant/Agreement/Amendment Number: N/A  
 Grant/Project Name: Restoration Plan and National Environmental Policy Act Analysis for the Goodrich Oil Barge  
 grounding, Delta National Wildlife Refuge

This proposal  is  is not completely covered by categorical exclusion B(11) in 516 DM 2, Appendix 1; and/or 516 DM 6, Appendix 1.

(check (✓) one) (Review proposed activities. An appropriate categorical exclusion must be identified before completing the remainder of the Checklist. If a categorical exclusion cannot be identified, or the proposal cannot meet the qualifying criteria in the categorical exclusion, or an extraordinary circumstance applies (see below), an EA must be prepared.)

**Extraordinary Circumstances:**

Will This Proposal (check (✓) yes or no for each item below):

- | Yes                      | No                                  |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Have significant adverse effects on public health or safety.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Have significant adverse effects on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands, wetlands (Executive Order 11990), floodplains (Executive Order 11988), national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas under Federal ownership or jurisdiction. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Have a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Have significant adverse effects on properties listed or eligible for listing on the National Register of Historic Places as determined by either the bureau or office, the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, or a consulting party under 36 CFR 800.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Have significant adverse effects on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant adverse effects on designated Critical Habitat for these species.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. Have the possibility of violating a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. Have the possibility for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 11. Have the possibility to limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 12. Have the possibility to significantly contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).   |

(If any of the above extraordinary circumstances receive a "Yes" check (✓), an EA must be prepared.)

Yes  No This grant/project includes additional information supporting the Checklist.

**Concurrences/Approvals:**

Project Leader: \_\_\_\_\_ Date: \_\_\_\_\_

State Authority Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_

(with financial assistance signature authority, if applicable)

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the grant/agreement/amendment:

- is a categorical exclusion as provided by 516 DM 2, Appendix 1 and/or 516 DM 2, Appendix 1. No further NEPA documentation will therefore be made.
- is not completely covered by the categorical exclusion as provided by 516 DM 2, Appendix 1 and/or 516 DM 2, Appendix 1. An EA must be prepared.

**Service signature approval:**

RO or WO Environmental Coordinator: \_\_\_\_\_ Date: \_\_\_\_\_

Staff Specialist, Division of Federal Assistance: \_\_\_\_\_ Date: \_\_\_\_\_

(or authorized Service representative with financial assistance signature authority)

FWS Form 3-2185  
 Revised 02/2004



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