PO-33 - Goose Point/Point Platte Marsh Creation

CWPPRA
Goose Point/Point Platte Marsh Creation (PO-33)
Phase II Request

Technical Committee Meeting

December 6, 2006

Baton Rouge, LA

Project Overview

Project Location: Region 1, Pontchartrain Basin, St. Tammany Parish, north shore of Lake Pontchartrain

Problem: High loss rate (-3.1%/yr) from 1956-1978; historically intermediate and low-salinity brackish marsh; loss believed to be caused by ponding and saltwater intrusion; lake shoreline very narrow in some places and breached in several locations

Goals:

1) Re-create 566 acres of marsh in open water to restore the lake-rim function

2) Maintain 436 net acres of marsh at the end of the project life

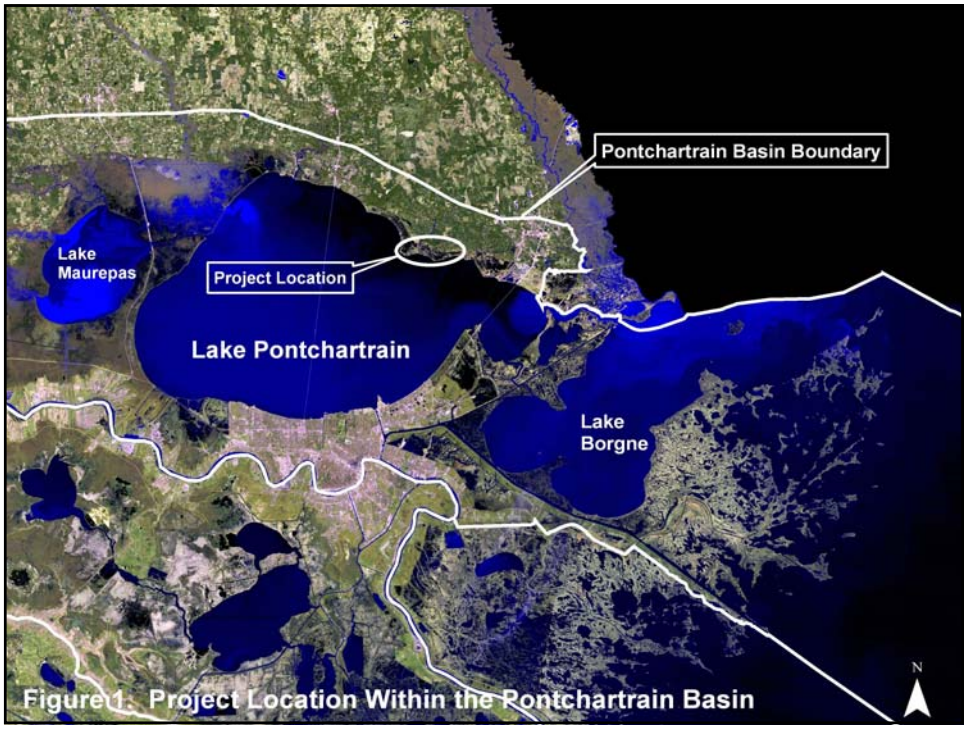
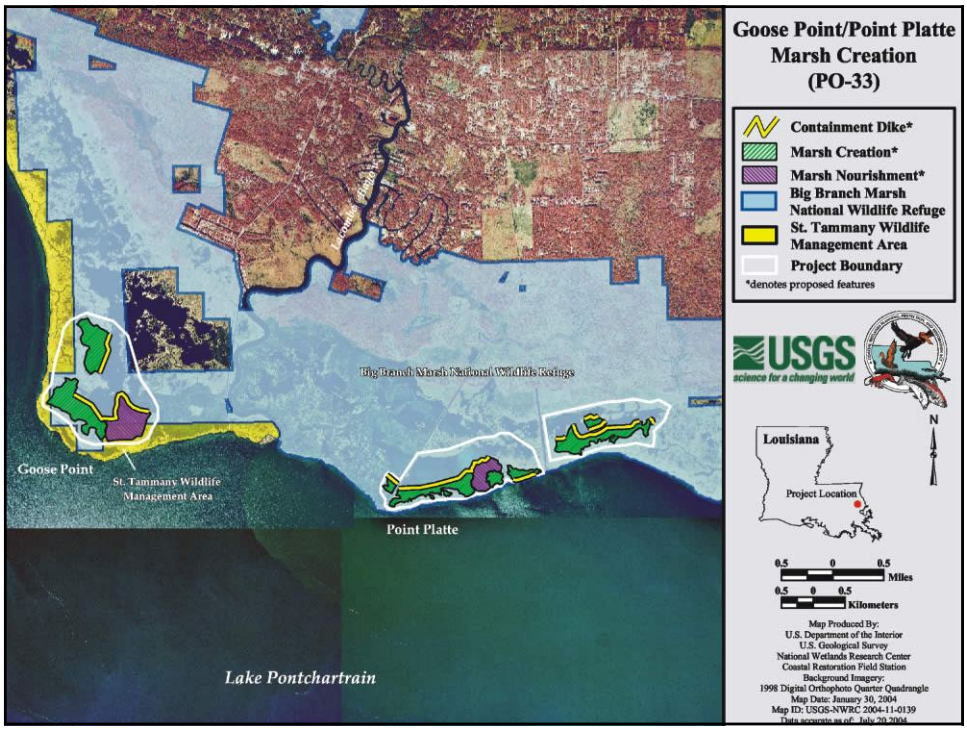


Figure 1. Project Location Within the Pontchartrain Basin



Project Features Overview

- 566 acres of marsh creation/nourishment; 417 acres of open water and 149 acres of degraded marsh will be filled with dredged material

- Target height of +2.0-ft NAVD88 with a maximum fill height of +2.5-ft in marsh creation areas; fill height of +1.5-ft in marsh nourishment areas; average marsh elevation is +1.0-ft

- Containment dikes constructed to +3.5-ft with a 5-ft crown width and 1(V):3(H) side slopes

- Two borrow sites totaling 298 acres in Lake Pontchartrain; approximately 10-ft of dredging at each site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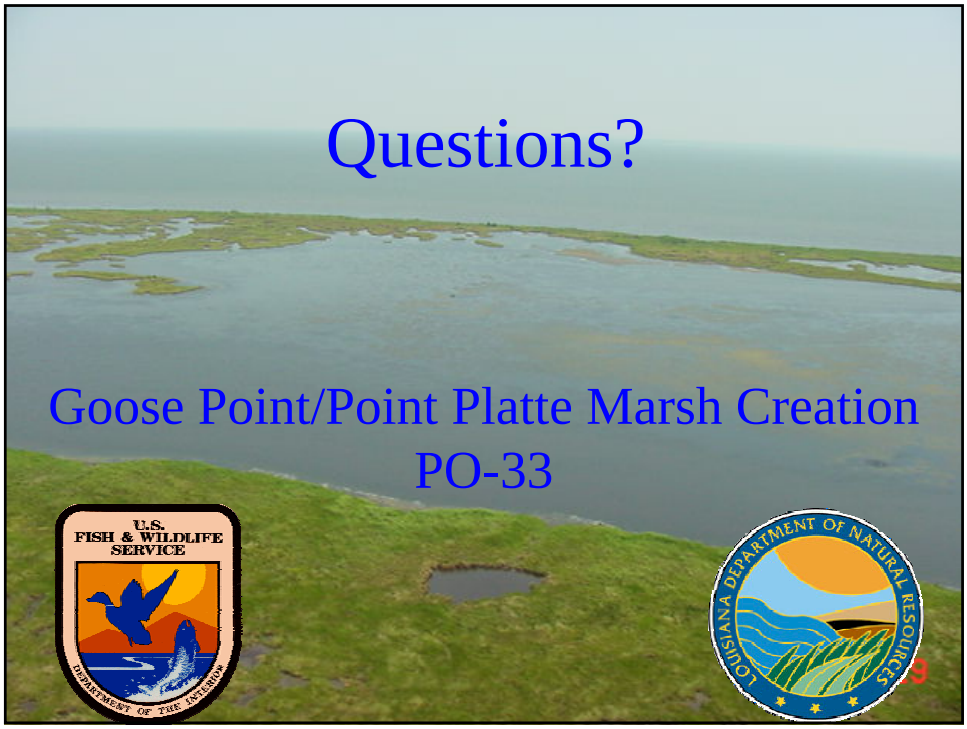
Project Benefits & Costs

- In total, the project will benefit 1,384 acres of marsh and open water habitat; 436 net acres of marsh at the end of the 20-year project life
- Wetland Value Assessment: 297 Net AAHUs
- The Fully Funded Cost is: $20,867,777
  Phase 2 Request is: $18,989,923
- The Prioritization Score is: 53

Why Should We Fund This Project Now?

- Numerous shoreline breaches currently exist; narrow shoreline rim in some locations
- This is the only project being considered for funding on the north shore of Lake Pontchartrain; this area experienced extensive loss from Hurricane Katrina
- Marshes along the north shore of Lake Pontchartrain are extremely important in reducing storm damage to towns of Lacombe and Slidell, infrastructure, etc.


Questions?
Goose Point/Point Platte Marsh Creation
PO-33
U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

November 29, 2006

Mr. Troy Constance, Acting Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers, New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Constance:

The U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources would like to submit the Goose Point/Point Platte Marsh Creation Project (PO-33) for Phase 2 approval. That project was approved for Phase 1 funding by the CWPPRA Task Force as part of the 13th Priority Project List. The enclosed packet includes all information required for a Phase 2 authorization request, per Section 6.j. of the CWPPRA Standard Operating Procedures manual. This Phase 2 authorization request is also being sent to all CWPPRA Technical Committee and Planning and Evaluation Subcommittee members.

If you have any questions regarding this submittal, please contact Mr. Kevin Roy of this office at (337) 291-3120.

Sincerely,

/s/Russell C. Watson
Supervisor
Louisiana Field Office

Enclosures

Phase II Authorization Request
Goose Point/Point Platte Marsh Creation
PO-33

Description of Phase I Project

The PO-33 Project was approved for Phase I funding on the 13th Priority Project List. At the time of Phase I authorization, project features included:

1) Hydraulic dredging in Lake Pontchartrain to create 437 acres of marsh and nourish 114 acres of existing marsh (Figure 1). The target elevation for the fill material was 1.0 foot above average marsh elevation;

2) Earthen containment would be used where necessary around the project perimeter to contain dredged material. Depending on soil stability, containment dikes would be breached upon demobilization;

3) The marsh platform would be planted with appropriate vegetation.

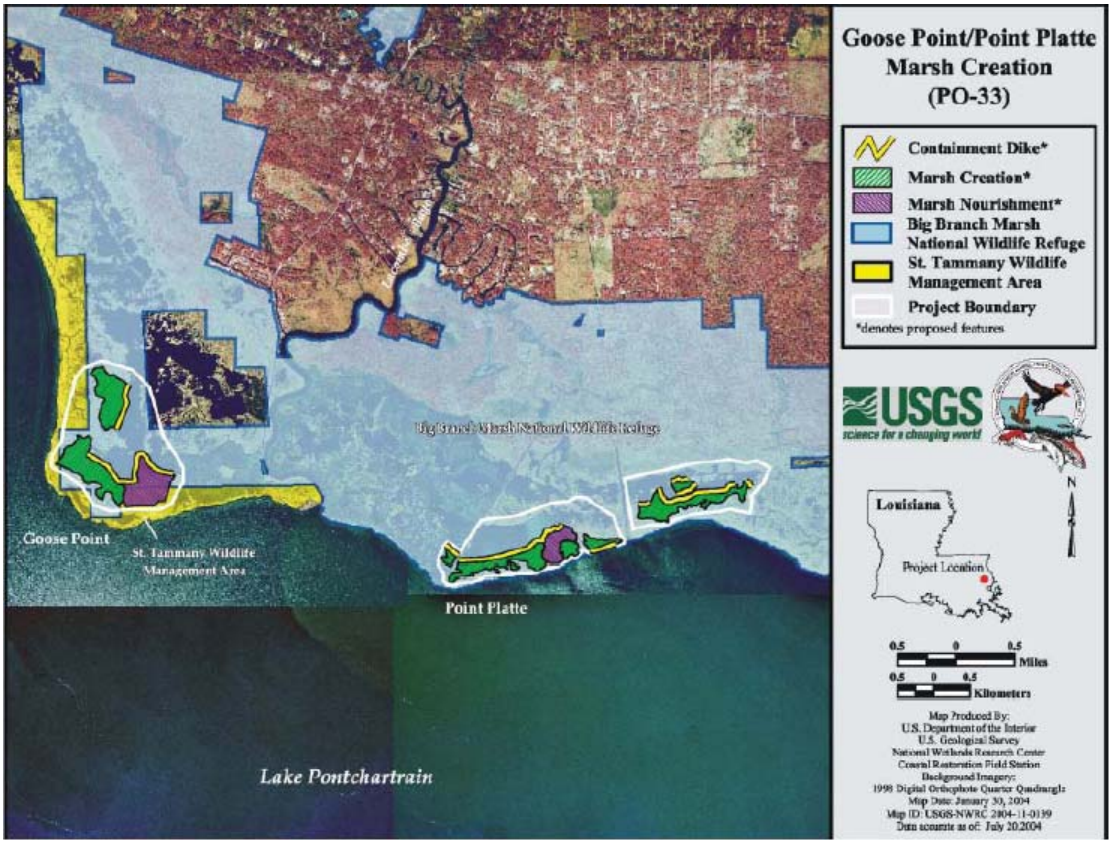


Figure 1. Project features at the time of Phase 1 approval.

Specific goals of the project were to: 1) create 437 acres of emergent marsh through the deposition of dredged material into open water areas and 2) nourish/enhance 114 acres of emergent marsh by adding a layer of sediment to the marsh surface.

The Wetland Value Assessment conducted for the Phase I project estimated a benefited area of 1,384 acres and the net creation/restoration of 436 acres of marsh at the end of the project life.

At the time of Phase I approval, the fully-funded project cost was $21,747,421. That figure included $1,930,596 for Phase I and $19,816,825 for Phase II. The cost breakdown for Phases I and II is presented in the following table.

Task Name	Phase I Costs	Phase II Costs
Engineering and Design	$1,241,993	
Land Rights	$10,428	
DNR Administration	$329,530	$328,271
FWS Administration	$347,528	$364,382
Monitoring	$0	$0
Corps Project Management	$1,387	$19,612
Construction		$14,576,359
Contingency		$3,644,090
Supervision and Inspection		$416,905
Operations and Maintenance		$467,206
Total	**$1,930,596**	**$19,816,825**

Overview of Phase I Tasks, Process and Issues

The following tasks were completed during Phase I:

1) Interagency kickoff meeting and field trip
2) Final Cost Share Agreement executed between FWS and DNR
3) Preliminary landrights
4) Elevation surveys for the borrow areas, fill sites, and containment sites
5) Magnetometer survey
6) Geotechnical investigation of the borrow and fill sites
7) 30% design review
8) 95% design review

9) Draft Ecological Review
10) Draft Environmental Assessment
11) Construction cost estimate
12) Application for Corps Section 404 permit
13) Overgrazing determination
14) Cultural resources clearance
15) HTRW assessment
16) Section 303e approval

Engineering and Design Tasks

Bathymetric surveys were performed in Lake Pontchartrain to produce cross-sectional data of the borrow areas. A magnetometer survey was performed in the borrow areas to verify existing pipelines and detect any unknown and/or abandoned pipelines. In order to detect certain lake-bottom features such as oyster beds, sand pockets, Pleistocene channels, and geologic faults, sub-bottom profile and side-scan sonar surveys were performed in the borrow areas.

In order to determine the suitability of the soils in the PO-33 project area for the various proposed marsh creation/nourishment features, a geotechnical investigation was performed which included collection of soil borings, laboratory tests to determine soil characteristics, and stability analyses on the borrow areas. A total of eleven (11) subsurface borings were drilled in the project area and tested in the laboratory for classification, strength, and compressibility.

Design meetings were held at the 30% (July 20, 2006) and 95% (November 8, 2006) levels.

Landrights, Cultural Resources, Environmental Compliance and Other Tasks

Preliminary landrights work has proceeded smoothly and no problems are anticipated in acquiring final landrights.

The Louisiana Department of Culture, Recreation and Tourism and the Chitimacha Tribe of Louisiana have indicated no objections to project implementation.

The Fish and Wildlife Service has applied for a Corps of Engineers Section 404 permit and requested that the Louisiana Department of Natural Resources-Coastal Management Division determine if the project is consistent with the Louisiana Coastal Resources Program. Water quality certification has also been requested from the Louisiana Department of Environmental Quality.

An overgrazing determination provided by the Natural Resources Conservation Service indicated that overgrazing is not a problem in the project area. An HTRW assessment conducted by the Lafayette Field Office of the U.S. Fish and Wildlife Service indicated that no HTRW materials should be encountered during project implementation.

A draft Ecological Review is available and a draft Environmental Assessment was issued for public comment on November 6, 2006.

Description of the Phase II Candidate Project

Project Features

Sediment will be hydraulically dredged in Lake Pontchartrain and pumped into open-water and fragmented marsh areas to create approximately 566 acres of marsh. Approximately 298 acres of water bottom in Lake Pontchartrain would be dredged to a maximum depth of -23 feet North American Vertical Datum of 1988 (NAVD 88; all following elevations are reported in NAVD 88). A magnetometer survey was conducted in the borrow area to identify pipelines and other hazards, and the proposed borrow areas have been configured to avoid those hazards.

To determine target elevations for the fill sites, consolidation settlement calculations and self-weight consolidation tests were run for borings taken within the fill sites and borrow areas. The purpose of those analyses was to determine a fill elevation that would be as close as possible to the existing marsh elevation after 20 years, and that would fall within the inter-tidal zone for the longest period of time. It was concluded that a target fill elevation of +2.0 feet would ultimately settle to an elevation of +0.80 feet and that a target fill elevation of +2.5 feet would ultimately settle to an elevation of +1.1 feet. Those values are extremely close to the existing marsh elevation (+1.0 feet) and fall within the inter-tidal zone (MHW=1.08 feet, MLW=0.48 feet), therefore a target fill elevation of +2.0 feet was selected with a maximum fill elevation of +2.5 feet. Subsequently, a target fill elevation of +1.5 feet was selected for the marsh nourishment sites, which include fragmented marsh, are relatively well contained by surrounding marsh, and are mainly intended as outfall for the marsh creation sites.

Containment dikes will be built to +3.5 feet with a 5-foot crown width and 1(V):3(H) side slopes. Containment dikes will be constructed with a bucket dredge using *in situ* material from within each fill site and the borrow area will be filled with hydraulically dredged material. It is anticipated that the containment dikes will subside and breach naturally to allow tidal connectivity and prevent ponding. Project features are shown in Figure 2.

Updated Assessment of Benefits

An updated assessment of benefits was not prepared for this project because the project scope has not significantly changed from the Phase 1 project.

Modifications to the Phase 1 Project

Final design features are essentially unchanged from the original Phase 1 project.

Current Cost Estimate

The revised fully-funded cost prepared by the CWPPRA Economics Work Group is $20,867,777.

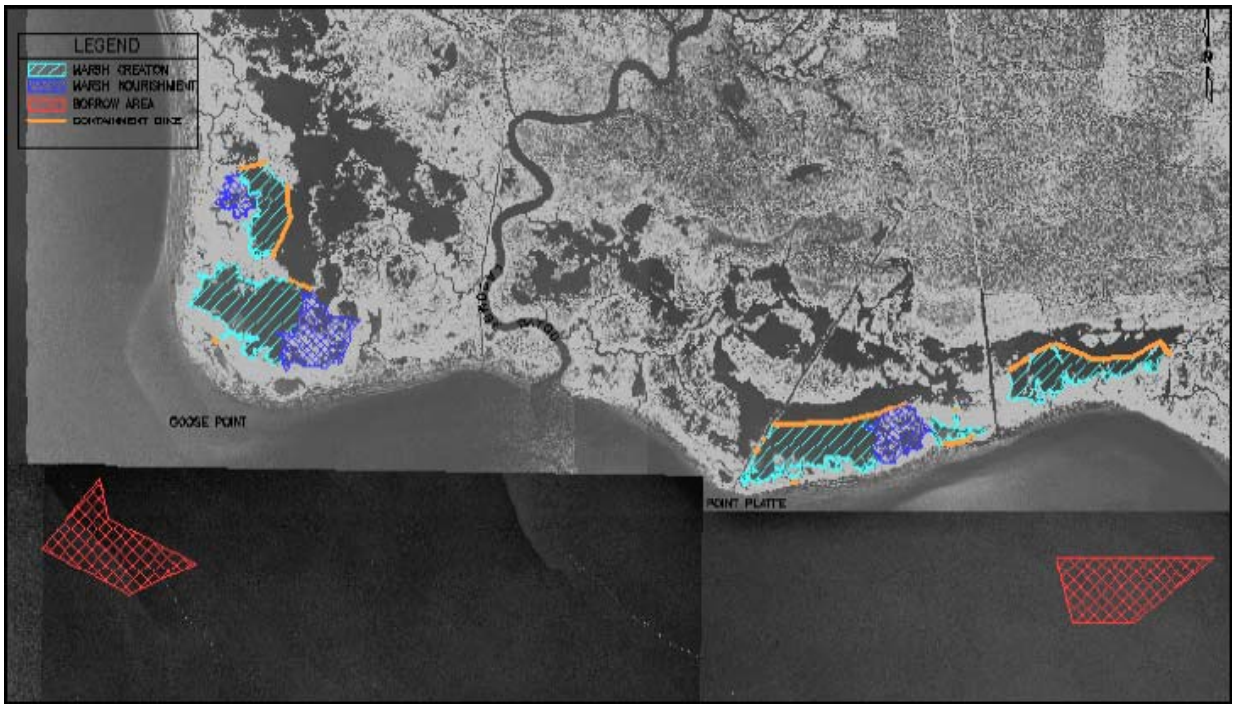


Figure 2. Project features.

Checklist of Phase Two Requirements

A. List of Project Goals and Strategies.

The goals of the project are to: 1) create 566 acres of emergent marsh through the deposition of dredged material into open water and fragmented marsh and 2) provide a net benefit of 436 acres of marsh at the end of the 20-year project life.

B. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A Cost Share Agreement between the U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources was executed on May 14, 2004. A draft amendment, authorizing construction, operation, maintenance, and monitoring, to the Cost Share Agreement has been prepared.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

FWS has received verbal notification from DNR that landrights will be finalized in a relatively short time after Phase 2 approval.

D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.

A 30% design meeting was held on July 20, 2006, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.

A 95% design meeting was held on November 8, 2006, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

F. A draft of the Environmental Assessment, as required under the National Environmental Policy Act must be submitted thirty days before the request for Phase 2 approval.

A draft EA was issued for public comment on November 6, 2006.

G. A written summary of the findings of the Ecological Review.

The following paragraph is from the Recommendations section of the October 23, 2006 draft 95% Ecological Review:

Based on the evaluation of similar projects, a review of engineering principles, and an evaluation of the revised design report including comments received at the 30% Design Review meeting (held July 20, 2006), the LDNR project team feels that the conceptual design for the Goose Point/Point Platte Marsh Creation project would likely achieve the desired ecological goals for the majority of the 20-year project life and concurs that the current level of design warrants continued progress toward the Phase II funding request.

H. Application for and/or issuance of the public notices for permits. If a permit has not been received by the agency, a notice from the Corps of when the permit may be issued.

The FWS has applied for a Section 404 permit from the Corps of Engineers.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

An HTRW assessment/contaminants screening was conducted by the FWS Lafayette Field Office's Environmental Contaminants Specialist. It was concluded that project implementation would not encounter any of the known wells, pits or associated facilities. No resuspension of contaminants from sediment disturbance is expected.

J. Section 303(e) approval from the Corps.

Section 303(e) approval was received from the Corps via email on November 27, 2006.

K. Overgrazing determination from the NRCS (if necessary).

An overgrazing determination was issued on January 24, 2005 by the NRCS and indicated that overgrazing would not be a problem in the project area.

L. Revised cost estimate of Phase 2 activities, based on the revised Project design.

Funding/Budget information:

1.) - Specific Phase Two funding request (updated construction cost estimate, three years of monitoring and O&M, etc.)

2.) - Fully funded, 20-year cost projection with anticipated schedule of expenditures

The specific Phase 2 funding request (updated construction estimate and three years of monitoring and O&M) is $18,989,923. The revised fully-funded cost of the project is $20,867,777. The revised budget sheets, with the anticipated schedule of expenditures, are provided in Attachment 1.

M. A Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

This project has not undergone a significant change in scope. Therefore, a revised Wetland Value Assessment was not prepared. Benefits for this project are the same as those at the time of Phase 1 approval.

N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

The following Prioritization Criteria scores were reviewed and agreed upon by all the Environmental and Engineering Workgroups.

Criteria	Score	Weight	Final Score
Cost Effectiveness	5	2	10
Area of Need	4	1.5	6
Implementability	10	1.5	15
Certainty of Benefits	7	1	7
Sustainability of Benefits	10	1	10
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	5	1	5
Total Score			**53**

Attachment 1