Presentation
to the

Upper Mississippi River Basin Environmental Management Program Workshop

by

Mark Pratt

Civil Engineer

US Army Corps of Engineers, Rock Island District

August 17, 2007

US Army Corps of Engineers®

EMP Database Purpose Statement

- The purpose of the EMP database is to collect, sort, and deliver information pertinent to users involved with various aspects of EMP. This database provides information essential to the planning, designing, and evaluation of EMP projects and the entire program.

US Army Corps of Engineers®

EMP Database
Agenda

- Functions
- Data Input
- Output Forms
- Web Demonstration
- Where we go from here
- Questions/Comments

US Army Corps of Engineers®

EMP Database
Functions

- Present data at microscopic and macroscopic levels
- Utilize collected project data as a developmental tool along with design handbook
- Use historical data to project trends into future, for example, funding needs

US Army Corps of Engineers®

EMP Database
Data Input

- Project Costs
- Project Features
- Project Location
- Project Dates
- Sponsor Information

US Army Corps of Engineers®

EMP Database
Output Forms

- Program
- Project
- Query Unit
- Forecasting

US Army Corps of Engineers®

Website Opening Page

Basic Data Entry | Project Data Entry | Web Reports

The purpose of the EMP database is to collect, sort, and deliver information pertinent to users involved with various aspects of EMP.
This database provides information essential to the planning, designing, and evaluation of EMP projects and the entire program.
The links above allow the user to either view project information in PDF format or manage the information on a project by project basis.

US Army Corps of Engineers®

Select a Project

Basic Data Entry | Project Data Entry | Web Reports

WARNING: Projects should only be updated by the appropriate project engineer or project manager.

Project: Please Select A Project... Update

Content

Roger Perk, CEMVR Project Management

(309) 794-5475

Rock Island, IL

Roger A. Perk

US Army Corps of Engineers®

Selected Project

Basic Data Entry | Project Data Entry | Web Reports

WARNING: Projects should only be updated by the appropriate project engineer or project manager.

Project: LONG ISLAND (GARDNER) DIVISION Update

Project Point of Contact

Kara Mitvalsky
CEMVR-ED-DN
(309) 794-5623
Kara.N.Mitvalsky@mvr02.usace.army.mil

Content

Roger Perk, CEMVR Project Management
(309) 794-5475
Rock Island, IL
Roger A. Perk

US Army Corps of Engineers®

Fact Sheet Entry

Basic Data Entry | Project Data Entry | Web Reports

Update Fact Sheet Information

LONG ISLAND (GARDNER) DIVISION

Habitat Rehabilitation and Enhancement Project

Pool 21

Upper Mississippi River Miles

340.2 - 332.5

Adams County, Illinois

Rock Island District

Resource Problem:

Gardner Division is subject to yearly Mississippi River floods and is rapidly losing its valuable backwater areas and side chutes to siltation and vegetation encroachment. The project area also has one of the last high quality stands of bottomland forest in the middle reaches of the

Project Features:

?* Dredge 5,000 feet of O'Dell Chute and construct an
emergent closure structure at the upstream end of
the chute;

Project Output:

The mast tree plantings will improve the existing timber stand and increase its diversity by including both hard and soft mast tree species in the plantings. Island protection will stabilize island bank line, reduce tree fall from bank erosion, and provide additional aquatic habitat.

Financial Data:

General design costs were $724,000 and construction costs are estimated at $3,933,000. Annual costs for operation, maintenance, and repair are estimated at $5,000 and will be the responsibility of the U.S. Fish and Wildlife Service. The Illinois Department of Natural

Status:

The Final Definite Project Report was completed in September 2000. MVD Approval was granted in November 2000. The Contract was awarded in March 2001. The dredged channel closure structure, shoreline protection features, and the mast trees are complete. A modification to the

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Funding Authority

Basic Data Entry | Project Data Entry | Web Reports

Update Funding Authority

Project LONG ISLAND (GARDNER) DIVISION

Project Authority EMP.HREP

Project Funding Source CG

Corps Cost/Share Rate (%) 100

Non-Corps Cost/Share Rate (%) 0

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Sponsor

Basic Data Entry | Project Data Entry | Web Reports

Update Project Sponsor

Project LONG ISLAND (GARDNER) DIVISION

Project Sponsor and Management

Site Name Great River

Non-Corps Sponsor USFWS

Point of Contact

Land Management

Land Owner(s)

Agency ILDNR

Authority

Annual Operation and Maintenance Cost

	Year	Estimated Cost
Stage I	2000	18300
Stage II	2008	4600
Stage III		0
Stage IV		0
Stage V		0

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Status

Basic Data Entry | Project Data Entry | Web Reports

Update Project Status

Project LONG ISLAND (GARDNER) DIVISION

Status Initiated

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

FY Project Funding

Basic Data Entry | Project Data Entry | Web Reports

Update Fiscal Year Project Funding

Project LONG ISLAND (GARDNER) DIVISION

Year 2005

Annual District Priority 7

Fiscal Year Project Phase O&M

Fiscal Year Project Funding Needs

Planning and Design 0

Construction 25000

Total 25000

Next | Last

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Location

Basic Data Entry | Project Data Entry | Web Reports

Update Project Location

Project LONG ISLAND (GARDNER) DIVISION

Pool 21 | Upper Mississippi

District Rock Island District

River Mile (Upper) 340.2

River Mile (Lower) 332.5

County Adams | IL | 17

County

County

County

County

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Land Use

Basic Data Entry | Project Data Entry | Web Reports

Update Project Land Use

Project LONG ISLAND (GARDNER) DIVISION

Acres Affected 6000

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Management

Basic Data Entry | Project Data Entry | Web Reports

Update Project Management

Project LONG ISLAND (GARDNER) DIVISION

Program Priority

Project Point of Contact Mitvalsky, Kara

Fact Sheet Date

Definate Project Report

Draft Initiated	☑
Draft Initiated Date	
Draft Completion Date	09/01/2000
Public Review Draft	
Final Report	

Operation And Maintenance

Draft Initiated	☑
Draft Initiated Date	
Draft Completion Date	
Final Report	09/01/2003

Performance Evaluation Report

Project Evaluation Report Performed ☑

Report Years 2003

Stage	I				

Plans And Specifications

Initiated	☐	☐	☐	☐	☐
Initiated Date					
Completion Date	12/01/2000				

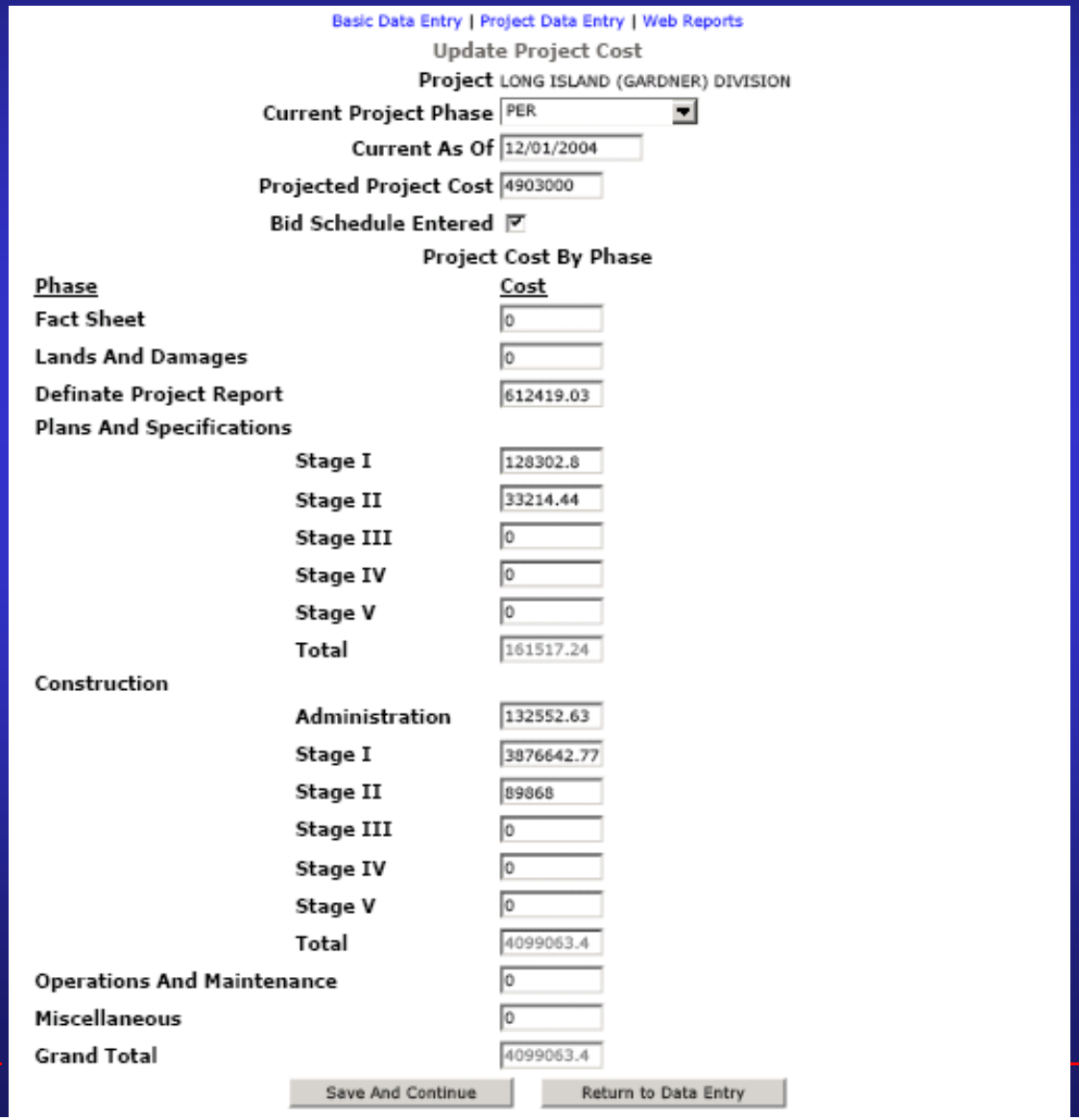
Construction

Contract Advertised					
Contract Awarded	03/07/2001				
Completion Date	09/30/2004				

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Costs by Phase



Basic Data Entry | Project Data Entry | Web Reports

Update Project Cost

Project LONG ISLAND (GARDNER) DIVISION

Current Project Phase PER

Current As Of 12/01/2004

Projected Project Cost 4903000

Bid Schedule Entered ☑

Project Cost By Phase

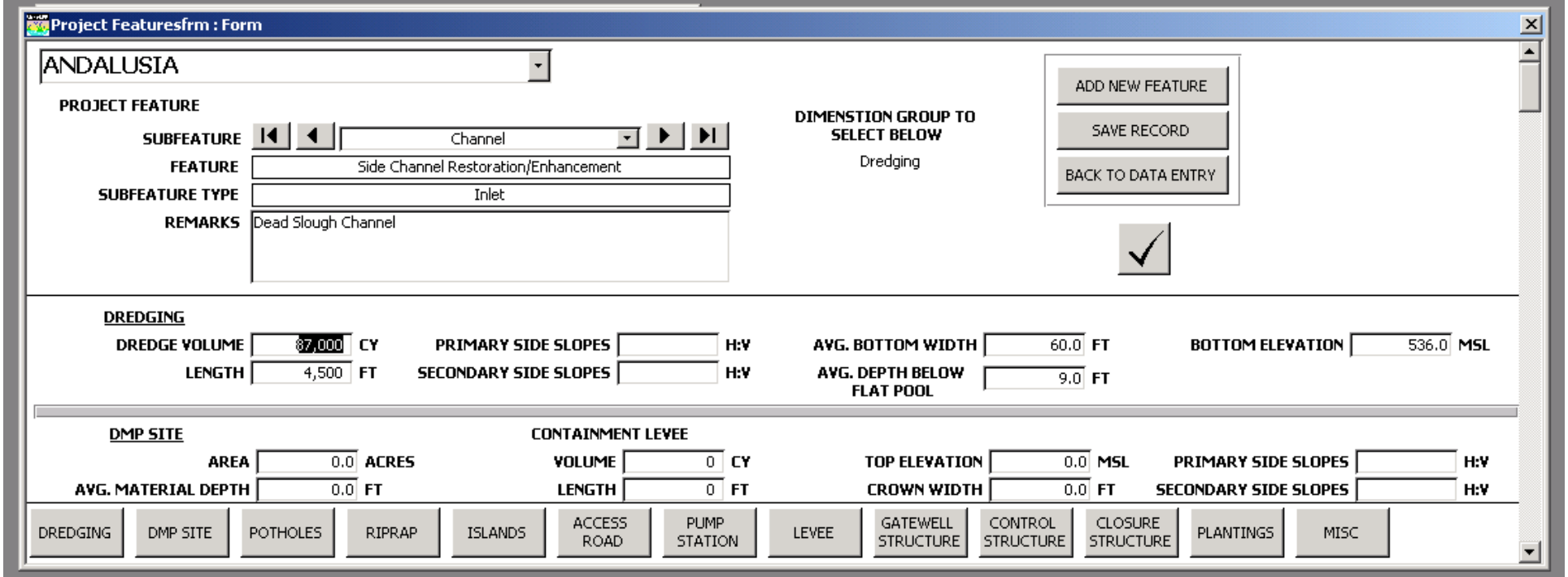
Phase		Cost
Fact Sheet		0
Lands And Damages		0
Definate Project Report		612419.03
Plans And Specifications		
	Stage I	128302.8
	Stage II	33214.44
	Stage III	0
	Stage IV	0
	Stage V	0
	Total	161517.24
Construction		
	Administration	132552.63
	Stage I	3876642.77
	Stage II	89868
	Stage III	0
	Stage IV	0
	Stage V	0
	Total	4099063.4
Operations And Maintenance		0
Miscellaneous		0
Grand Total		4099063.4

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Features

Not yet uploaded to web site



Project Contract Numbers

Basic Data Entry | Project Data Entry | Web Reports

Update Project Contract Numbers

Project LONG ISLAND (GARDNER) DIVISION

Stage I

Solicitation DACW25-01-B-0002

Contract DACW25-01-C-0008

Bid Schedule Obtained ☑

Remarks

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Contract Items

Basic Data Entry | Project Data Entry | Web Reports

Update Project Contract Items

Project LONG ISLAND (GARDNER) DIVISION

Subfeature	Closure Structure
Feature	Water Level Management
Subfeature Type	Full
Feature Remarks	
Construction Stage	I
Contract Item Number	0002AA
Description	Closure Structure Rock Nock
Quantity	300
Unit of Measure	CY
Unit Price	45.00
Total Amount	13500.00
Remarks	First 300 Cubic Yards

Next | Last

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Misc. Contract Items

Basic Data Entry | Project Data Entry | Web Reports

Update Miscellaneous Items

Project LONG ISLAND (GARDNER) DIVISION

Stage I

Contract Item Number 0013

Description Contractor Furnished Boat for Government Use

Quantity 1

Unit of Measure LS

Unit Price 7500.00

Total Amount 7500.00

Remarks

Next | Last

Save And Continue | Return to Data Entry

US Army Corps of Engineers®

Project Query

Basic Data Entry | Project Data Entry | Web Reports

UMRS-EMP

EMP Program Reports

To View All Projects, Select "All" After Choosing A Query Unit

Select A Report To View: Feature Sheet

Select A Query Unit Below:

- ○ Pool
- ○ County
- ◉ Legislative District
- ○ Water System
- ○ State
- ○ Corps District

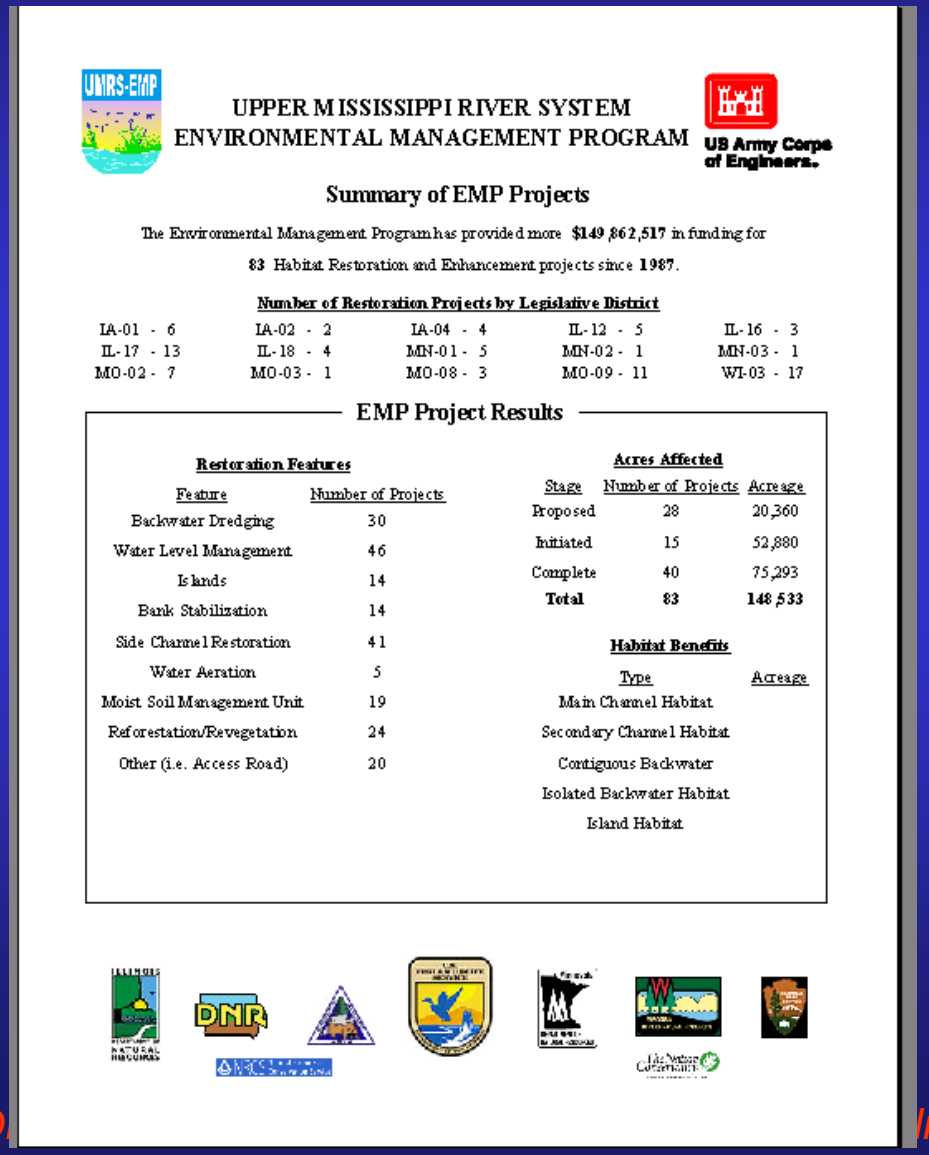
All Legislative Districts
IA-01
IA-02
IA-03
IA-04
IA-05
IL-11
IL-12
IL-14
IL-15

View Report

US Army Corps of Engineers®

Report Samples

One Page Summary



UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT PROGRAM

US Army Corps of Engineers

Summary of EMP Projects

The Environmental Management Program has provided more **$149,862,517** in funding for **83** Habitat Restoration and Enhancement projects since **1987**.

Number of Restoration Projects by Legislative District

IA-01 - 6	IA-02 - 2	IA-04 - 4	IL-12 - 5	IL-16 - 3
IL-17 - 13	IL-18 - 4	MN-01 - 5	MN-02 - 1	MN-03 - 1
MO-02 - 7	MO-03 - 1	MO-08 - 3	MO-09 - 11	WI-03 - 17

EMP Project Results

Restoration Features

Feature	Number of Projects
Backwater Dredging	30
Water Level Management	46
Islands	14
Bank Stabilization	14
Side Channel Restoration	41
Water Aeration	5
Moist Soil Management Unit	19
Reforestation/Revegetation	24
Other (i.e. Access Road)	20

Acres Affected

Stage	Number of Projects	Acreage
Proposed	28	20,360
Initiated	15	52,880
Complete	40	75,293
Total	**83**	**148,533**

Habitat Benefits

Type	Acreage
Main Channel Habitat	
Secondary Channel Habitat	
Contiguous Backwater	
Isolated Backwater Habitat	
Island Habitat	

US Army Corps of Engineers®

Report Samples

Report to Congress Table

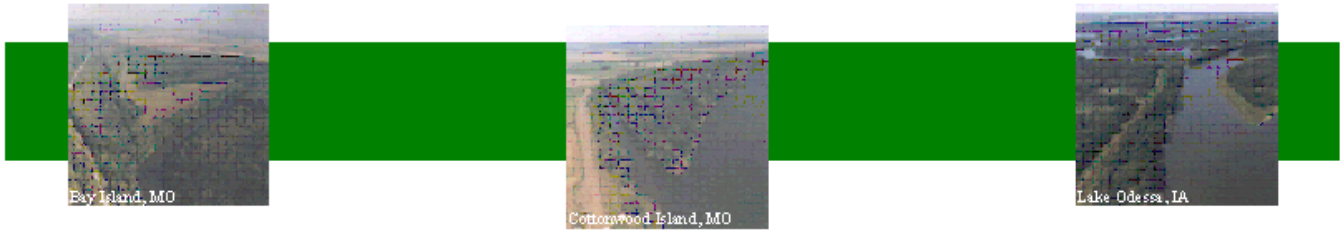


Table 2-1. Upper Mississippi River System Environmental Management Program Habitat Rehabilitation and Enhancement Project features and their status as of 8/15/2005

Project	Status	Acres	Backwater Dredging	Water Level Management	Island	Bank Stabilization	Side Channel Restoration	Aeration	MSMU	Reforestation Revegetation	Other
ALTON POOL SIDE CHANNELS	Proposed	0					X				
AMEROUGH SLOUGH	Complete	2,500	X					X			
ANDALUSIA	Complete	393		X	X		X				X
ANGLE BLACKBURN ISLANDS	Proposed	500	X				X		X		
BALDWIN BACKWATER PROTEC	Proposed	0	X	X			X				
BANK STABILIZATION	Complete	1,500				X	X				
BANNER MARSH	Complete	5,524		X						X	X
BATCHTOWN	Initiated	3,300		X							
BAY ISLAND	Complete	650		X					X	X	X
BERTROM MCCARTNEY LAKES	Complete	2,000	X	X							X
BIG TIMBER	Complete	1,039	X	X						X	
BLACKHAWK PARK	Complete	282					X				X
BROWNS LAKE	Complete	453	X	X			X			X	
BUSSEY LAKE	Complete	213	X	X							
CALHOUN POINT	Initiated	2,300	X						X		
CAPOLI SLOUGH	Proposed	600	X	X		X					
CLARENCE CANNON	Proposed	3,750	X	X		X				X	
CLARKSVILLE REFUGE	Complete	325		X							
COLD SPRINGS	Complete	35					X				
CONWAY LAKE	Initiated	560	X	X	X			X			
COTTONWOOD ISLAND	Complete	463	X				X			X	X
CUIVRE ISLAND	Complete	290		X			X				X
DRESSER ISLAND	Complete	940		X							

US Army Corps of Engineers®

Report Samples

Fact Sheet

COTTONWOOD ISLAND

Habitat Rehabilitation and Enhancement Project

Pool 21
Upper Mississippi River Miles 331.0 - 328.5

Lewis County, Missouri

Rock Island District

Resource Problem:
Historically, Cottonwood Chute provided deep water habitat, and numerous low swales on the island provided important wetland habitat. Siltation has greatly reduced the quantity and quality of these habitat areas. Sedimentation has been acute in the upper end of the chute and in timbered portions of the island fronting the main channel. Dissolved oxygen values have fallen to critical levels and fish species diversity has decreased in the shallowing portion of the chute.

Project Features:
* Mechanically excavate lower 4,900 feet of Cottonwood Chute to a 9-foot depth with 4 deep holes 15 feet deep;

* Plant mast producing trees on dredged material, three Forest Management Areas, and an agricultural field;

* Excavate 4 acres of potholes (5); and,

* Notch 6 wing dams 100 feet to the original river bottom at staggered locations.

Project Output:
Mechanically dredging Cottonwood Chute would provide overwintering habitat for fish in the dredged deep holes. Planting mast-producing trees such as pin oak, bur oak, swamp white oak, pecan, and sycamore would enhance habitat value by introducting a mast-producing component into a forest dominated by silver maple and cottonwood. Excavating potholes would restore sloughs and depressions impacted by sedimentation and provide secluded habitat for migratory bird nesting and feeding. It is anticipated that flow will increase in the vicinity of the notched wing dams, deepening the pool behind the wing dams. The change in flow at one wing dam may also stimulate an in-stream meander to the next wind dam. A meander would create deeper areas, which would attract a diverse benthic community and fishery.

Financial Data:
General planning and design costs are estimated at $628,000 while construction costs are estimated at $804,000. Annual costs for operation, maintenance, and repair are estimated at $6,000 and will be the responsibility fo the non-Federal sponsor, the Missouri Department of Conservation (MDOC).

Status:
Project construction was completed in FY 00. The dedication cermony was held in July 2000. The project has been turned over to the MDOC for operation and maintenance. Performance monitoring is continuing. An initial performance evaluation report (PER) was completed in June 2001.

US Army Corps of Engineers®

Report Samples

Feature Fact Sheet

COTTONWOOD ISLAND

Habitat Rehabilitation and Enhancement Project

Pool 21
Upper Mississippi River Miles 331.0 - 328.5

Lewis County, Missouri

Rock Island District

Acres Affected	Real Estate	PED, S+A, And EDC
463	$3,955	$716,857

Backwater Dredging

Subfeature	Cost
Deep Holes	$169,614
Potholes	$146,135
Total Feature Cost	**$315,749**

Other

Subfeature	Cost
Access Road	$50,424
Wing Dam Notching	$91,462
Total Feature Cost	**$141,886**

Reforestation/Revegetation

Subfeature	Cost
Trees	$109,873
Total Feature Cost	**$109,873**

Side Channel Restoration/Enhancement

Subfeature	Cost
Dredging	$192,437
Total Feature Cost	**$192,437**

Total Project Cost	**$1,480,757**
Cost Per Acre	**$3,198**

US Army Corps of Engineers®

Report Samples

Sponsor O&M Cost Projections

USFWS O and M COSTS BY REFUGE

Current as of 8/15/2005

REFUGE Minnesota Valley	ACRES AFFECTED	PROJECT COSTS		PROJECTED ANNUAL O and M (adjusted for inflation)**	
		TO DATE	PROJECTED	2006	2011
LONG MEADOW LAKE	1,000	$381,000	$1,250,000	$0	$3,180
RICE LAKE - MINNESOTA	210	$679,000	$679,000	$3,920	$4,270
TOTAL	1,210	$1,060,000	$1,929,000	$3,920	$7,450

REFUGE Upper Mississippi River	ACRES AFFECTED	PROJECT COSTS		PROJECTED ANNUAL O and M (adjusted for inflation)**	
		TO DATE	PROJECTED	2006	2011
AMBROUGH SLOUGH	2,500	$2,629,000	$2,667,000	$0	$2,650
BANK STABILIZATION	1,500	$1,696,000	$1,696,000	$6,832	$7,442
BERTROM MCCARTNEY LAKES	2,000	$2,344,000	$2,344,000	$4,256	$4,636
BROWNS LAKE	453	$2,093,000	$2,093,000	$16,352	$17,812
BUSSEY LAKE	213	$3,432,000	$3,432,000	$1,680	$1,830
CAPOLI SLOUGH	600	$328,000	$2,100,000	$0	$4,240
COLD SPRINGS	35	$463,000	$463,000	$2,128	$2,318
CONWAY LAKE	560	$79,000	$2,460,000	$0	$0
EAST CHANNEL	19	$558,000	$558,000	$6,944	$7,564
FINGER LAKES	113	$1,445,000	$1,445,000	$17,808	$19,398
GUTTENBERG WATERFOWL PONDS	35	$327,000	$327,000	$2,688	$2,928
HARPERS SLOUGH	2,200	$592,000	$9,000,000	$0	$4,770
INDIAN SLOUGH	631	$988,000	$988,000	$2,016	$2,196
ISLAND 42	95	$262,000	$262,000	$2,688	$2,928
LAKE ONALASKA	7,000	$2,064,000	$2,064,000	$4,144	$4,514
LAKE WINNESHIEK	6,000	$0	$4,560,000	$0	$0
LANSING BIG LAKE	9,755	$2,089,000	$2,089,000	$2,688	$2,928
LONG LAKE	15	$1,565,000	$1,118,000	$5,600	$6,100
PETERSON LAKE	500	$1,179,000	$1,179,000	$4,256	$4,636
PLEASANT CREEK	2,350	$1,365,000	$1,370,000	$10,640	$11,590
POLANDER LAKE	1,000	$3,131,000	$3,136,000	$5,376	$5,856
POOL 11 ISLANDS	10,342	$6,674,000	$9,802,000	$0	$11,660
POOL 12 OVERWINTERING	6,900	$708,000	$14,004,000	$0	$5,830
POOL 8 ISLANDS	4,026	$6,668,000	$20,916,000	$8,400	$32,894
POOL 9 ISLANDS	320	$1,266,000	$1,266,000	$4,144	$4,514
POTTERS MARSH	2,305	$3,007,000	$3,007,000	$8,400	$9,150
SPRING LAKE	3,300	$6,493,000	$6,493,000	$36,288	$39,528
SPRING LAKE ISLANDS	300	$691,000	$3,538,000	$0	$9,964
SPRING LAKE PENINSULA	300	$448,000	$448,000	$1,456	$1,586

Page 1 of 2

US Army Corps of Engineers®

Report Samples

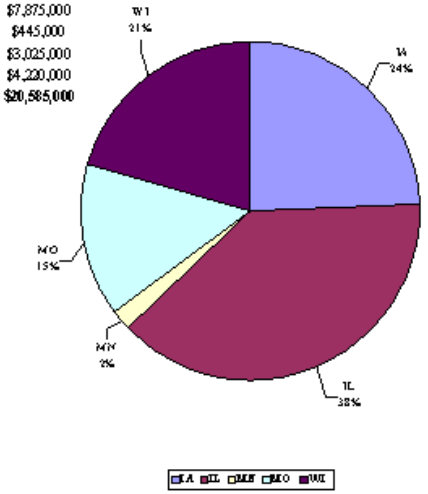
Pie Charts

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT PROGRAM

US Army Corps of Engineers.

Funding Breakdown for Fiscal Year 2006

State	Funding
IA	$5,020,000
IL	$7,875,000
MN	$445,000
MO	$3,025,000
WI	$4,220,000
Total	$20,585,000



US Army Corps of Engineers®

EMP Database
Where do we go from here?

- Data
  - Answer the acres affected question
  - Incorporate GIS information to enhance feature data
  - Input biological goals and objectives
- Output
  - Utilize historical data to make projections
- Further enhance website