



US Army Corps
of Engineers

Missouri River Bank Stabilization and Navigation Project, Fish and Wildlife Mitigation Project



View of the new levee and control structure, seasonal wetland and shallow backwater nursery, Eagle Bluffs Conservation Area Mitigation Site

**Annual Implementation Report
January 2002**

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INTRODUCTION

AUTHORITY

This report presents the current status and future plans for implementation of the Missouri River Fish and Wildlife Mitigation Project, Iowa, Nebraska, Kansas, and Missouri, hereinafter referred to as the “Project”. Congress first authorized construction of the Project in Section 601(a) of the Water Resources Development Act of 1986 (Public Law 99-662). The authorization included acquisition and development of 29,000 acres of land, and habitat development on an additional 18,200 acres of existing public land in the States of Iowa, Nebraska, Kansas and Missouri. The total amount of land authorized for mitigation was 48,100 acres.

In 1999, Congress passed another WRDA bill. Section 334(a) of the Water Resources Development Act of 1999 included modifying the Project by increasing the amount of acreage to be acquired and/or restored by 118,650 acres. Thus the new total amount of land authorized for mitigation is currently 166,750 acres.

BACKGROUND

The original authorization for the Project was based upon a report of the US Army Corps of Engineers, Chief of Engineers, dated April 24, 1984, entitled Missouri River Bank Stabilization and Navigation Project Final Feasibility Report and Final EIS for the Fish and Wildlife Mitigation Plan (Ref 1). The authority to prepare the Feasibility Report was the 1958 Fish and Wildlife Coordination Act (P.L. 85-624). The Final Feasibility Report described the fish and wildlife and habitat losses that have, and will, occur due to the Missouri River Bank Stabilization and Navigation Project. Also described in the Report are various measures to mitigate for these losses, and recommended a plan to restore, preserve, or develop 48,100 acres of habitat.

Preconstruction Engineering and Design (PED) for the Project was initiated in December 1989. As a part of PED work, a "Reaffirmation Report" for implementation of the Project was approved by the Corps of Engineers' Missouri River Division in August 1990 (Ref 2). The purpose of the Reaffirmation Report was to confirm that the plan recommended in the 1984 Feasibility Report and Final EIS was still viable. PED was completed in September 1991 and this Project has been in a “Construction” status since that time. The Reaffirmation Report explains the various aspects of the Project such as the approval process, funding levels, costs, schedules, documentation and involvement of other State and Federal agencies. In accordance with the Reaffirmation Report, Annual Implementation Plans are required to be created.

A "Real Estate Design Memorandum No. 1" for land acquisition activities for the Project was completed by the Kansas City District in March 1990 (Ref 3). This report was endorsed by the Corps of Engineers' Missouri River Division in July 1990, and approved by Corps of Engineers' Headquarters in May 1991. This report established the real estate requirements for the acquisition in fee or easement of 29,900 acres of privately owned lands and for any real estate requirements for development of 18,200 acres of existing public lands within the four affected States.

This project is 100 percent Federally funded for real estate, design, construction, and operation and maintenance. However, even though there is not a cost share sponsor, the U.S. Fish and Wildlife Service and the four affected States (Iowa, Nebraska, Kansas, and Missouri) participate in the Project. The agency participation is through a Coordination Team that was developed to formulate and decide upon the various acquisition and development sites.

Approximately 60 percent of the original project is within the Kansas City District (CENWK) and 40 percent within the Omaha District (CENWO). For ease of dealing with the affected states, CENWK is working on sites in Missouri and Kansas, while CENWO is responsible for all Nebraska and Iowa sites.

In November 2000, the US Fish and Wildlife Service issued a Biological Opinion (Bi-Op) against the Corps of Engineers (Ref 4). The Bi-Op stated that the Corps had severely altered, and continue to alter, the natural hydrology and shallow water habitat on the Missouri River within the Project area. The Bi-Op stated that the Corps has to perform "Reasonable and Prudent Alternative" actions to restore, enhance and conserve shallow water habitat in the amount of 20-30 acres per mile for the 735 mile Project area.

REPORT PURPOSE AND FORMAT

Programmatic updates of the Reaffirmation Report are accomplished through Annual Implementation Reports. This document is the eighth such report. The purpose of the Annual Implementation Reports is to create an administrative record of mitigation efforts that have already occurred, complete a status of the mitigation efforts that are underway, and outline a plan for continued mitigation in the future.

There are four main elements of the Project: Real Estate, Habitat Development, Operation and Maintenance, and Monitoring and Evaluation. Thus, each section of this report is divided into four parts to explain the past activities, current status, and future activities for each element.

**PAST MITIGATION EFFORTS
FOR FY01 AND PRIOR**

REAL ESTATE (FY01 and Prior)

Non-Public Lands.

As stated previously, the original authorized Project allowed for acquisition of 29,900 acres of privately held land. During the Feasibility effort, it was clear that each State had been affected by the Bank Stabilization and Navigation Project (BSNP). Through coordination with the four affected States and the U.S. Fish and Wildlife Service, the 29,900 acres was divided up between the States proportional to the amount of fish and wildlife losses attributed to each State. An additional effort was completed in order to distribute the lands between habitat types. However, now that the project has been underway, shifting of some of the lands between the States to accommodate timing of willing sellers, availability of public lands, etc. was necessary. The current approved plan for the 29,900 acres is indicated in Table 1.

**TABLE 1
ACQUISITION OF NON-PUBLIC LANDS
TOTAL AUTHORIZED BY WRDA86**

State	Preserve Existing Aquatic Habitat (ac)	Acquire & Develop New Aquatic Habitat (ac)	Acquire & Develop New Terrestrial Habitat (ac)	Total (ac)	Percentage
Missouri	--	1,150	12,050	13,200	44
Kansas	--	100	2,250	2,350	8
Iowa	200	200	6,800	7,200	24
Nebraska	--	250	6,900	7,150	24
TOTAL	200	1,700	28,000	29,900	100

During the public involvement process for the EIS and Feasibility Report for the Project, a policy of obtaining lands only from willing sellers was established. The Corps of Engineers maintains their authority for condemnation, however, it has been agreed that this authority will not be used on the Project so as to minimize the impacts of acquisition. Other real estate criteria have been developed to guide the acquisition process to insure the best possible results. These are discussed in detail in the referenced reports.

Each of the four affected States has furnished a list of priority acquisition sites that have potential for wildlife mitigation. With the priority in hand, the Corps of Engineers completed a survey of willing sellers near the priority areas. These planning efforts identified sufficient real estate lands to accomplish the original authorized project. As of 30 Sep 01, 24,915 acres of non-public land has been acquired for the Project. This is 83 percent of the 29,900 acres originally authorized. The status of the acquisition of non-public lands as of September 30, 2001 (FY01 and prior) is displayed in Table 2.

TABLE 2
ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED BY STATE
(AS OF 30 SEP 01)

State	Authorized WRDA 86 (ac)	Total Aquired as of 30 Sep 01 (ac)	Percentage of Authorized Amount	Amount Remaining to be Aquired to meet WRDA 86 (ac)
Missouri	13,200	12,498	95	702
Kansas	2,350	2,111	90	239
Iowa	7,200	3,291	46	3,909
Nebraska	7,150	7,015	98	135
TOTAL	29,900	24,915	83	4,985

To date, a total of nineteen mitigation sites have been established at areas along the river that were formerly non-public lands. These lands were obtained in Fee Title where the ownership is now held by the Corps of Engineers. Eight of the mitigation sites are within the State of Missouri, one is in Kansas, five are in Iowa, and five are in Nebraska. A breakdown by site of the amount of non-public land acquired for mitigation for the States of Missouri, Kansas, Iowa, and Nebraska are given in Tables 3, 4, 5 and 6, respectively. Locations of these sites are given in the Location Maps as a part of Appendix 1.

TABLE 3
ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED WITHIN STATE OF MISSOURI
(AS OF 30 SEP 01)

Missouri Sites	Location	Approx. River Mile	Descending Bank	Total Aquired (ac)
Berger Bend	Franklin County	93 – 90	L	414*
Hemmes Bend/Corning Site	Holt County	514 – 512	L	967*
Lower Hamburg Bend	Atchison County	553 – 550	L	2,265
Nishnabotna	Atchison County	544 – 541	L	1,283
Overton Bottoms	Cooper County	187 – 183	R	4,986
Rush Bottom Bend	Holt County	502 – 499	L	811*
Tate Island	Gallaway County	113 – 110	L	423
Thurnau	Holt County	503 – 502	L	1,349*
TOTAL				12,498

* NOTE: Acquisitions are still underway at this site

TABLE 4

**ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED WITHIN STATE OF KANSAS
(AS OF 30 SEP 01)**

Kansas Sites	Location	Approx. River Mile	Descending Bank	Total Aquired (ac)
Benedictine Bottoms	Atchison County	429 – 424	R	2111
TOTAL				2,111

TABLE 5

**ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED WITHIN STATE OF IOWA
(AS OF 30 SEP 01)**

Iowa Sites	Location	Approx. River Mile	Descending Bank	Total Aquired (ac)
Auldon Bend	Harrison County	580 – 577	L	588
Blackbird-Tieville- Decatur Bends	Monona County	698 – 686	L	315*
Copeland Bend	Fremont County	571 – 565	L	1,069*
Louisville Bend	Monona County	685 – 682	L	84
Noddleman Island	Mills County	587 – 583	L	1,235
TOTAL				3,291

*NOTE: Acquisitions are still underway at this site

TABLE 6
ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED WITHIN STATE OF NEBRASKA
(AS OF 30 SEP 01)

Nebraska Sites	Location	Approx. River Mile	Descending Bank	Total Aquired* (ac)
Blackbird-Tieville-Decatur Bend	Thurston, Burt Counties	698 – 686	L	1,890*
Hamburg Bend	Otoe County	556 – 552	R	1,544*
Kansas Bend	Nemaha County	547 – 544	R	1,056
Langdon Bend	Nemaha County	532 - 528	R	921
Tobacco Bend	Cass County	589 – 586	L	1,604*
TOTAL				7,015

*NOTE: Acquisitions are still underway at this site

Existing Public Lands.

In addition to the acquisition of mitigation sites on non-public lands, the WRDA86 authorization allowed for restoration and development of mitigation sites on 18,200 acres of existing public land. For habitat development on existing public lands, "no cost" easements are being obtained to allow the Corps of Engineers to construct project features on land not owned by the Corps.

Through coordination with the four affected States and the U.S. Fish and Wildlife Service, the amount of public land was distributed by State and between habitat types. However, shifting of some of the Public lands between the States was necessary to accommodate availability of public lands, etc. The current approved plan for the 18,200 acres of existing public land is indicated in Table 7.

TABLE 7
EXISTING PUBLIC LANDS
TOTAL AUTHORIZED TO BE RESTORED/DEVELOPED UNDER WRDA 86

State	Preserve Existing Aquatic Habitat (ac)	Acquire & Develop New Aquatic Habitat (ac)	Acquire & Develop New Terrestrial Habitat (ac)	Total (ac)	Percentage
Missouri	0	550	15,200	15,750	87
Kansas	0	0	0	0	0
Iowa	500	200	1,700	2,400	13
Nebraska	0	50	0	50	0
TOTAL	500	800	16,900	18,200	100

Currently, there is a lack of public land within the Project Area in the States of Kansas and Nebraska. However, through the Project coordination effort with the four affected States and the US Fish and Wildlife Service, existing public lands were studied for potential development. A list of priority for mitigation was completed and included into the decisions of funding and scheduling of development.

As of September 30, 2001, easements and/or licenses have been obtained on 5,779 acres of existing public land for the Project. This is 32 percent of the 18,200 acres originally authorized. The status of obtaining easements and/or licenses on existing public lands as of September 30, 2001 (FY01 and prior) is displayed in Table 8.

TABLE 8
EXISTING PUBLIC LANDS
TOTAL EASEMENTS/LICENSES ACQUIRED BY STATE
(AS 30 SEP 01)

State	Authorized WRDA 86 (ac)	Total Aquired as of 30 Sep 01 (ac)	Percentage of WRDA86	Amount Remaining to be Aquired to meet WRDA 86 (ac)
Missouri	15,750	3,331	21	12,419
Kansas	0	1.4	100	-1.4
Iowa	2,400	2,396	100	4
Nebraska	50	50	100	0
TOTAL	18,200	5,778	32	12,422

To date, a total of fourteen mitigation sites have been established at areas along the river which are located on public lands owned by Federal and State agencies other than the Corps of Engineers. Nine sites are within the State of Missouri, four sites are in Iowa, and one site is in Nebraska. There are no mitigation sites established to date on existing public lands in the State of Kansas (a 1.4 acre easement was taken at the Benedictine Bottoms site). A breakdown by site of the amount of mitigation restored or developed on existing public land in the States of Missouri, Iowa, and Nebraska are given in Tables 9, 10 and 11, respectively.

TABLE 9
EXISTING PUBLIC LANDS
TOTAL EASEMENTS/LICENSES ACQUIRED WITHIN STATE OF MISSOURI
(AS OF 30 SEP 01)

Missouri Sites	Location	Approx. River Mile	Descending Bank	Total Aquired* (ac)
Berger Bend	Franklin County	93 - 90	L	60
Columbia Bottom	St. Louis County	5 - 0	R	0*
Deroin Bend	Holt County	520 – 517	L	1,082
Eagle Bluffs	Boone County	174 – 170	L	571
Grand Pass	Saline County	273 – 266	R	5
Hemmes Bend/Corning Site	Holt County	514 – 512	L	695
Overton Bottoms	Cooper County	187 – 183	R	332
Nishnabotna	Atchison County	544 – 541	L	1.34
Worthwine Island	Andrew County	460 – 456	L	585
TOTAL				3,331

*NOTE: Acquisitions are still underway at this site

TABLE 10
EXISTING PUBLIC LANDS
TOTAL EASEMENTS/LICENSES ACQUIRED WITHIN STATE OF IOWA
(AS OF 30 SEP 01)

Iowa Sites	Location	Approx. River Mile	Descending Bank	Total Aquired (ac)
Blackbird-Tieville-Decatur Bends	Monona County	698 - 686	L	964
California Bend	Harrison County	652 – 649	L	420
Louisville Bend	Monona County	685 – 682	L	1,012
Winnebago Bend	Woodbury County	711 - 708	L	0*
TOTAL				2,396

*NOTE: Winnebago Bend was an existing 1,200 acre Corps owned property. No additional acquisitions were obtained at this site.

TABLE 11
ACQUISITION OF NON-PUBLIC LANDS
TOTAL ACQUIRED WITHIN STATE OF NEBRASKA
(AS OF 30 SEP 01)

Nebraska Sites	Location	Approx. River Mile	Descending Bank	Total Aquired (ac)
Blackbird-Tieville-Decatur Bends	Thurston, Burt Counties	698 - 686	R	50
TOTAL				50

HABITAT DEVELOPMENT (FY01 and Prior)

The intent of this Project is to restore and/or preserve fish and wildlife habitats that were native to the Missouri River floodplain. This, of course, covers an entire array of different habitat types. The Project has completed mitigation of many different habitat types. The variety and implementation of habitats into different areas of the floodplain is part of the development process of the Project. To date, no one species nor one habitat type has been focused upon for restoration. The habitat development has been of an “ecosystem” approach where all habitat types are considered into development decisions.

Restoration of shallow water aquatic habitat has emphasized restoring filled-in chute and completing in-river improvements. This was accomplished primarily by dike notching, river structure modifications, excavation and dredging. Several mitigation sites had levees that were close to the river channel. In some cases, the levee can be moved back landward of the river channel creating additional opportunities for creation of shallow water habitat. Through 30 Sep 01, shallow water habitats have been created, or work has been started, at the Grand Pass, Plowboy Bend, Overton Bottoms, North Hamburg Bend, Langdon Bend, Tobacco Island and California Bend mitigation sites. Levees have been relocated, or work started, at Eagle Bluffs, Columbia Bottom, and Overton Bottom South mitigation sites.

In addition to the shallow water habitat, migratory waterfowl have benefited from the creation of constructed wetlands at several mitigation sites. Restoration of migratory waterfowl habitat has been accomplished by construction of low dikes, berms, wells, pumps, water delivery systems, and construction of drainage control structures. Through 30 Sep 01, migratory waterfowl habitats have been created, or work has been started, at the Eagle Bluffs, Benedictine Bottoms, Louisville Bend and Winnebago Bend mitigation sites.

Development of terrestrial habitat such as Bottomland Hardwood and Prairie Grassland habitats has been a key to the restoration of the River’s ecosystem. Terrestrial habitats support food plot establishment, nesting cover, insect production, and a whole array of necessary biological functions to keep the ecosystem alive and functioning. Development of terrestrial habitat has been dependent upon the type of existing land use and management objectives. The pre-existing land use at many of the new mitigation sites was agricultural production. The terrestrial habitat development to date has included vegetative plantings, timber thinning, and tree plantings. Through 30 Sep 01, terrestrial habitat has been developed at the Benedictine Bottoms, Overton North, Tate Island, Hamburg Bend, Langdon Bend, Tobacco Island and Winnebago Bend mitigation sites.

The following is a summary of the habitat development efforts at specific mitigation sites. Location maps for all of the mitigation sites can be found in Appendix 1.

Columbia Bottom, Missouri

This mitigation site is located on the Columbia Bottom Conservation Area (CBCA). The CBCA is existing public land owned and operated by the Missouri Department of Conservation (MDC).

CBCA is approximately 4,300 acres in size. The site is on the right descending bank of the Missouri River, at the confluence with the Mississippi River. The land at the Columbia Bottom mitigation site was previously farmed. The area is being improved so that wetlands, native grasses, and bottomland hardwood forest habitats can be restored to the area. Due to the size of the site, the mitigation will occur in several phases.



Columbia Bottom, MO

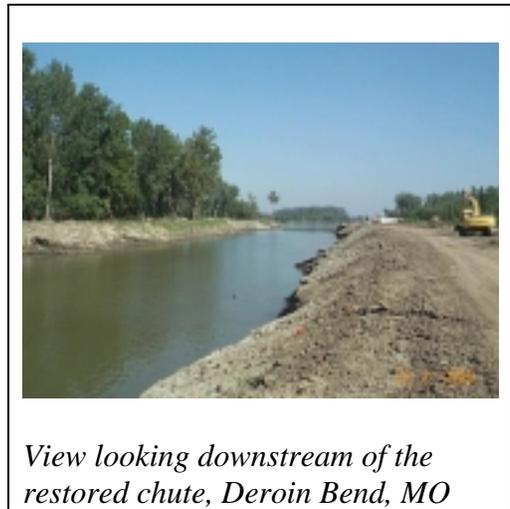
View looking south at the land now on the riverside of newly constructed levee setback.

Phase I is currently under construction. Phase I consists of an 8000 linear foot setback of an existing agricultural levee. The setback will move the existing levee approx. 800 feet from the Mississippi River bank to create an additional 145 acres of land on the riverside of the levee. In the future, this riverward area will be planted with bottomland hardwood trees and shore area may be evaluated for shallow water habitat potential. Construction of Phase I is scheduled to be complete Spring 2002. Phase II of the mitigation is development of approx. 800 acres of constructed wetlands. The work will include construction of 15 low dikes, a pump station, and a water delivery system. Once completed, Phase II will allow development of high quality migratory waterfowl habitat. Phase II is currently under design. Construction of Phase II is scheduled to start Fall 2002.

Deroin Bend, Missouri

This mitigation site is located at river mile 516 to 520, on the left descending bank of the river. The site contains 1,082 acres of state of Missouri land.

The construction is nearly complete and includes restoration of a side channel plus planting of several hundred trees. The three mile channel has a 70 foot bottom width. Upon completion, the Missouri Department of Conservation will manage the site.



View looking downstream of the restored chute, Deroin Bend, MO

Eagle Bluffs, Missouri

This mitigation site is located adjacent to on the Eagle Bluffs Conservation Area (EBCA) near Columbia Missouri. The EBCA is existing public lands owned and operated by the Missouri Department of Conservation (MDC). The area is bounded by the Missouri River to the west and Perche Creek to the East.



Eagle Bluffs, MO

View looking south at the new backwater outlet area and fish friendly structure.

The mitigation at this site is 592 acres in size. The area has been historically used for row crop production. The planned mitigation at this site will include converting the farmed lands to additional seasonally flooded wetlands, and provide a backwater fish nursery. The project scope includes two wetland pools and additional riparian area by constructing new levees and berms and new water control structures.

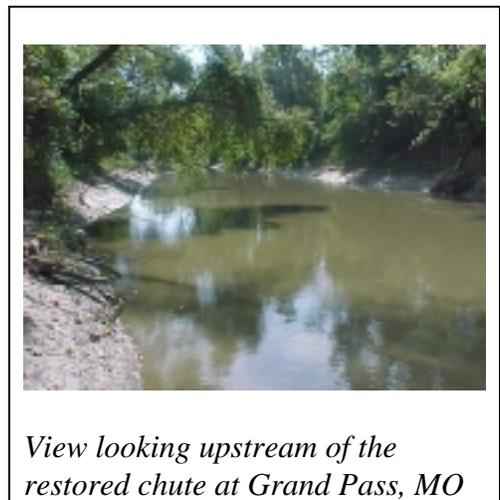
There will be two "fish friendly" structures constructed which were specifically designed to allow fish to spawn within the wetland area and effectively reach Perche creek and the Missouri River. The additional wetlands and backwater nursery area are currently under construction. The project should be completed January 2002.

Grand Pass, Missouri

This mitigation site was located at the Grand Pass Conservation Area (GPCA) on land owned by MDC. The area is adjacent to the right descending bank of the Missouri River, at river miles 263 to 266.

The Grand Pass chute was closed in conjunction with the Missouri River Bank Stabilization and Navigation Project. Work associated with the chute closure began in 1934 and was completed by the early 1960s. The main project element for the mitigation at the GPCA site was restoration of the historic chute.

Restoration of the chute was completed in 1991. The work included modification of existing river structures, excavation and dredging of the chute, installation of submerged brush piles, and construction of rock hard points. The restored chute is now approximately 50 feet wide and has restored 130 acres of high quality shallow water habitat.



View looking upstream of the restored chute at Grand Pass, MO

Overton Bottoms North, Missouri

Overton Bottoms is approximately 5,000 acres of land purchased by the Corps of Engineers. The area is adjacent to the right descending bank of the Missouri River at river miles 181 to 189. Interstate 70 cuts the bottoms into two sites, Overton Bottoms South (OBS), and Overton Bottoms North (OBN).



View looking at the inlet to the constructed river chute at Overton Bottoms North, MO

Until these lands were purchased for the Missouri River Fish and Wildlife Mitigation project, the area was heavily used for agricultural purposes. With implementation of the mitigation at this site, the agricultural lands have been taken out of production and native grasses and trees have been planted.

In 2000, the Corps designed and constructed a river chute at the OBN site. The 3000 foot long chute is currently 40 feet wide. The chute has created opportunities for new aquatic habitat. The chute was constructed at higher elevations so that it is only inundated on a seasonal basis. It is anticipated that the chute will continue to widen during periods of flood flow and will eventually scour itself out to a full 150 foot width.

Since completion of chute construction, the area has been turned over to the US Fish and Wildlife Service to manage as part of their “Big Muddy Wildlife Conservation Area”. The USFWS has implemented low maintenance operation plans for the area and plans to let the land recover to pre-agricultural conditions on its own. The Corps and USFWS will continue monitoring the chute development and make necessary adjustments to assure it’s future development.

Overton Bottoms South, Missouri

The OBS site is located just to the south of I-70 from the OBN site described above. Together these sites make up about 5,000 acres. The main project element for the planned mitigation at the OBS site is setback of an existing levee. The levee setback will create opportunities on the additional land on the river side of the levee in which future shallow water and/or bottomland hardwood forest habitats can be restored. The borrow area for the construction of the new levee is being constructed so as to allow opportunistic wetlands to form.

Upon completion of construction, the Missouri Department of Conservation will assume operation and management of the constructed features. The construction of the levee setback at OBS is currently 35% complete and is scheduled to be completed by April 2002.

The OBS site contains about 500 acres of existing bottomland hardwood trees that will be preserved along the river corridor. Additional opportunities will be created when an existing levee will be relocated back from the river creating opportunities on the additional land on the river side of the levee in which future shallow water and/or bottomland hardwood forest habitats can be restored.



Overton Bottoms South, MO
View looking at the borrow site for the levee setback project



View looking at the diverse and shallow water habitat created within river by structure modification, Plowboy Bend, MO

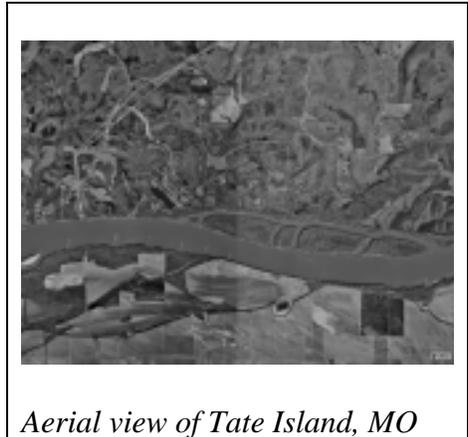
Plowboy Bend, Missouri

The Plowboy Bend mitigation site is one of several efforts to complete within river structural changes for fish habitat improvements. This site is located adjacent to the Plowboy Bend Conservation Area which is owned and operated by the Missouri Department of Conservation. The work at this site included notching an existing dike in several locations and reversing the direction of a second existing dike.

The structural modifications were used to direct the natural force of the river against the adjacent riverbank. The eroded riverbank and area within the dike field created an area of diverse shallow and deep water fish habitat. The diversity created at this site is essential to Pallid Sturgeon recovery.

Tate Island, Missouri

This mitigation site is located at river miles 110 to 113 on the left descending bank of the river near the Morrison Bend. The site contains 422 acres, but is situated in the middle of the river. Access to the site is limited only to boat. The site is located two miles east of Portland, MO. No construction is planned for the site at this time, however opportunities to complete shoreline and/or within river improvements to increase and diversify the shallow water habitat at this site may be undertaken in the future.



Aerial view of Tate Island, MO



View looking across the constructed wetland habitat at Benedictine Bottoms, KS

Benedictine Bottoms, Kansas

This mitigation site is 2,111 acres in size and is located just north of Atchison Kansas. The site is at river miles 425 to 429 on the right descending bank at Rushville Bend of the river.

At this site, the Corps has completed installation of seasonal wetlands, planting of native hardwood trees and prairie grasses. Benedictine Bottoms has been turned over to the Kansas Department of Wildlife and Parks for their management as a wildlife refuge.

Auldon Bar, Iowa

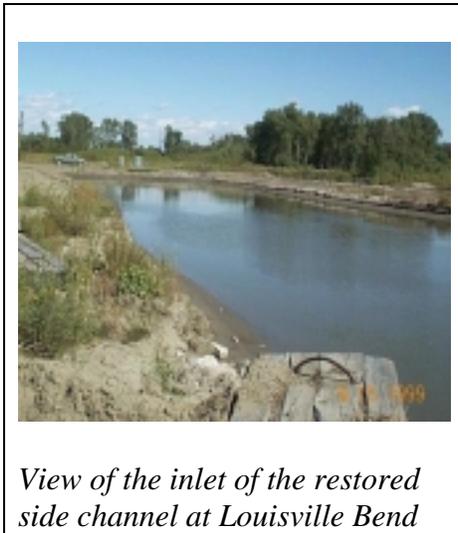
This site is at river miles 577 to 580 on the left descending bank. Currently 588 acres have been purchased at this site. 1,028 acres is desired prior to restoration of habitat at this location. There are apparently no additional willing sellers at this time. No plans to improve this site have been prepared yet. The Iowa Department of natural Resources is managing the 588 acres of land as a wildlife area.

California Bend, Iowa

The California Bend mitigation site is 420 acres in size and is located at river miles 649 to 652 on the left descending bank. This project included opening up a historic side channel which has restored connectivity to the river and created shallow water aquatic habitat. The site is owned and managed by the Iowa Department of Natural Resources.

Copeland Bend, Iowa

The Copeland Bend site is at river miles 565 to 571 on the left descending bank. Land is still being acquired at this site, as it becomes available. Currently, 1,069 acres have been purchased but are scattered throughout the 2,306-acre site. No plans to improve this site have been prepared yet. The Iowa Department of natural Resources is managing the 1,069 acres of land currently purchased as a wildlife area.



Louisville Bend, Iowa

Louisville Bend is at river miles 682 to 685 on the left descending bank. This site was developed primarily as a water fowl area. Of the total area of 1,096 acres, 270 acres are open water.

This site was completed in 1995 and consists of controlled opening at the inlet and outlet, plus a pump at the inlet. Water is pumped into the area as needed and the outflow is regulated to maintain the water surface elevation. The Iowa Department of Natural Resources manages this site.

Noddleman Island, Iowa

The Noddleman Island mitigation site is located at river miles 583 to 587 on the left descending bank. Currently, 1,235 acres of the 2,542 acres desired for this site have been purchased. It appears that there are no additional willing sellers time at this time. No plans to improve this site have been prepared yet. The Iowa Department of Natural Resources is managing the 1,235 acres of land currently purchased as a wildlife area.

Tieville-Decatur Bends, Iowa and Nebraska

This mitigation site consists of 3,148 acres and is located at river miles 686 to 694 on the left descending bank. Although these bends are on the Iowa side of the river, some of the land actually belongs to Nebraska. Construction at this site will begin about March 2002. The mitigation at this site includes opening several side channels and interconnected backwater areas. Also pumps are included to maintain a waterfowl area on part of the site.



View of the restored side channel at Winnebago Bend, IA

Winnebago Bend, Iowa

Construction of the Winnebago Bend site was completed in 2001. The site consists of 1,300 acres on the left descending bank at river miles 708 to 713.

This site features a reopened side channel with control structures at the inlet, outlet and middle of the site. Due to the current configuration of the river, it was necessary to install a pump at the upstream end to maintain water flowing through the site. The Iowa Department of Natural Resources manages this area.

Hamburg Bend, Nebraska

The Hamburg Bend mitigation site is located at river miles 552 to 556 on the right descending bank, just south of Nebraska City, Nebraska. The site consists of 1,544 acres of side channels and backwater areas that mimics the historic meander belt of the floodplain. The increase in numbers and variety of fish at this location shows that excellent habitat has been created at this site.

The mitigation at Hamburg Bend was completed in 1996. The site is managed by the Nebraska Games and Parks.



Aerial view of the meandering floodplain and chutes at Hamburg Bend, NE

Kansas Bend, Nebraska

Kansas Bend consists of 1,056 acres in two separated areas on the right descending bank at river miles 544 to 547. It is located near Peru, Nebraska. The plans and specifications for the construction contract are being prepared. It is anticipated the construction will start at this site in late summer 2002.

Langdon Bend, Nebraska

The Langdon Bend mitigation site is located at river miles 520 to 532 on the right descending bank near the town of Brownsville, Nebraska. The site consists of 921 acres of former agricultural land. At this site, a 10-foot bottom width pilot channel and backwater area was constructed. The channel is connected to the river at the outlet, but stops before meeting the river at the upstream end. Flow into this area will occur by water backing up the channel and will allow overland flow at the times when the Missouri River is at high water.



Tobacco Island, Nebraska

Tobacco Island is located south of Plattsmouth, Nebraska at river miles 586 to 590 on the right descending bank of the river. The site consists of 1,604 acres of former agricultural land.

The mitigation at this site included reopening an old side channel and reconnecting it with the river. The mitigation has created additional shallow water aquatic habitat. The channel is three miles long with a 10-foot bottom width. Construction of the site has just been completed.

OPERATION AND MAINTENANCE (FY01 and Prior)

The Corps of Engineers will fund the operation and maintenance (O&M) of the mitigation features acquired and developed under this Project. The O&M will continue for the life of the project. For the mitigation which has occurred on properties not owned by the Corps of Engineers, O&M will only be conducted on those portions of the property in which mitigation occurred. In most instances, the funds are forwarded to the land owner to fund the effort by their existing crews.

The fish and wildlife agencies of the four affected States have expressed an interest in administering the areas that are acquired and developed. Responsibilities and the degree of operation and maintenance will be documented through an agreement with each State for each site. Funding for operation and maintenance will be requested annually through the normal budget process, as part of the Missouri River Bank Stabilization and Navigation Project. The estimated total cost for operation and maintenance of the original mitigation project (WRDA 86 authorization) was \$625,000, with \$374,000 in CENWK and \$251,000 in CENWO.

An operation and maintenance agreement will be developed during the construction phase for each site. Eventually these operation and maintenance agreements may be consolidated into one operation and maintenance manual for each affected State. The operation and maintenance agreements (manuals) will define the entity that will do the maintenance, the degree of CENWK and CENWO responsibility, operation and maintenance requirements and schedules, procedures for operation and maintenance, funding levels, and any additional requirements. Any funding provided to the States or the USFWS from the Corps will be requested on an annual basis via an Annual Management Plan.

As of September 30, 2001, there were 27 mitigation sites that have been established. 10 of these sites have not had any O&M performed on them to date. There are seven sites which have had habitat developed or preserved and are now considered to be in an O&M phase. In addition, there are 10 sites that have not been placed into an "O&M" status, but there are O&M responsibilities on the property, such as weed control, etc. Typically, these sites are either waiting for funds or additional lands to be purchased prior to habitat development. The status of the O&M of all mitigation sites are described in Table 12, 13, 14, and 15 for the States of Missouri, Kansas, Iowa and Nebraska, respectively.

TABLE 12**OPERATION AND MAINTENANCE FOR
MITIGATION SITES WITHIN THE STATE OF MISSOURI**

Site	Current Funding	Description of O&M	Responsible Party
Berger Bend	CG	Habitat preservation	COE
Columbia Bottom	CG	None (to be started in FY04)	MDC
Deroin Bend	CG	None (to be started in FY03)	MDC
Eagle Bluffs	CG	None (to be started in FY03)	MDC
Grand Pass	O&M	Management and surveillance of the constructed chute (no cost to date due to ag leasing program)	MDC
Hemmes Bend/Corning Site	CG	None (to be started in FY06)	COE
Lower Hamburg	CG	Land management, tree planting, existing habitat preservation	MDC
Nishnabotna	CG	Land management, existing habitat preservation	MDC
Overton Bottoms North	CG	Native grass and tree plantings, weed control, surveillance of constructed chute, signage	USFWS
Overton Bottoms South	CG	Basic land management (no cost to date, ag leasing program)	MDC
Rush Bottom Bend	CG	None (to be started FY06)	MDC
Tate Island	O&M	Habitat preservation, signage	MDC
Thurnau	CG	Land management, weed control	MDC
Worthwine Island	CG	None (to be started FY04)	MDC

TABLE 13

**OPERATION AND MAINTENANCE FOR
MITIGATION SITES WITHIN THE STATE OF KANSAS**

Site	Current Funding	Description of O&M	Responsible Party
Benedictine Bottoms	O&M	Wetland management, infiltration control, tree planting, weed control	KDWP

TABLE 14

**OPERATION AND MAINTENANCE FOR
MITIGATION SITES WITHIN THE STATE OF IOWA**

Site	Current Funding	Description of O&M	Responsible Party
Auldon Bar	CG	Land management and habitat preservation	Iowa DNR
Blackbird-Tieville-Decatur Bend	CG	None (to be started in FY04)	COE
California Bend	O&M	Maintain all structures, fences, signs and roadways. Land management and habitat preservation.	Iowa DNR
Copeland Bend	CG	Land management and habitat preservation.	Iowa DNR
Louisville Bend	O&M	Maintain all structures, fences, signs and roadways. Provide law enforcement. Land management and habitat preservation. Pump maintenance.	Iowa DNR
Noddleman Island	CG	Land management and habitat preservation.	Iowa DNR
Winnebago Bend	O&M	Maintain all structures, fences, signs and roadways. Land management and habitat preservation. Pump maintenance.	Iowa DNR

TABLE 15

**OPERATION AND MAINTENANCE FOR
MITIGATION SITES WITHIN THE STATE OF NEBRASKA**

Site	Current Funding	Description of O&M	Responsible Party
Blackbird-Tieville-Decatur Bends	CG	None (to be started in FY04)	COE
Hamburg Bend	O&M	Maintain all structures, fences, signs and roadways. Land management and habitat preservation.	Ne G&P
Kansas Bend	CG	None (to be started in FY04)	COE
Langdon Bend	CG	Maintain all structures, fences, signs and roadways. Land management and habitat preservation.	COE
Tobacco Island	CG	None (to be started in FY04)	COE

MONITORING AND EVALUATION (FY01 and Prior)

Because many of the mitigation features of this project will be constructed as opposed to created naturally over time, it is important to complete monitoring and evaluation (M&E). During the design phase, specific goals and objectives will be determined for each site and monitoring criteria for meeting these objectives will be established. After construction, M&E will be conducted on the various aspects of each site in order to assess the degree of success of the habitat development. The originally authorized project envisioned monitoring and evaluation to be a low cost effort. \$300,000 was included in the budget for baseline evaluations and monitoring.

Some of the monitoring criteria will utilize habitat-based procedures such as Missouri's Wildlife Habitat Appraisal Guide (WHAG) or Aquatic Habitat Appraisal Guide (AHAG). These procedures can be customized for each state's specific habitat, as needed, and may be complimented by additional monitoring procedures. For example, if one of the objectives of a development site is to increase migratory waterfowl habitat, monitoring may best be done by WHAG and complimented by photographs. Other objectives may be too specific for use of WHAG or AHAG and may require other monitoring procedures. These will be determined on a case-by-case basis.

Monitoring by WHAG will be done by utilizing team with representatives from the Corps, State, and FWS. Other monitoring activities will be coordinated as needed. Monitoring results will be reported annually on some sites and after several years on others, depending on the objectives of the development site. Project performance will be reported in future Annual Implementation Reports.

FUNDING (FY01 and Prior)

As of 30 Sep 01, the only funds budgeted for this project were based upon the WRDA86 authorized 48,100 acres. It is required that the proper NEPA and decision documentation be completed prior to the Corps being able to budget for and request funds on the modified project. Therefore, the funding amounts for FY01 and Prior are based upon the original authorized WRDA86 project only.

The original WRDA86 authorized project divided the funding up into broad categories: Land Acquisition; Planning, Engineering and Design; Habitat Development; Construction Management; and O&M During Construction costs. Construction, General funds began to be provided in Fiscal Year 1992. From FY92 through FY01, the Corps has spent a total amount of \$62,295,000 on the mitigation efforts to date. Table 16 gives a breakdown of costs expended by category.

TABLE 16
BREAKDOWN OF TOTAL COSTS TO DATE
(AS OF 30 SEP 01)

Cost	CENWK	CENWO	TOTAL	% of Total Cost
Land Acquisition	\$18,308	\$11,760	\$30,068	48
Planning, Engineering, and Design	6,554	4,539	11,093	18
Habitat Development	7,061	10,917	17,978	29
Construction Management	974	1,130	2,104	3
O&M During Construction	428	624	1,052	2
TOTAL	\$33,325	\$28,970	\$62,295	100

NOTE: Amounts shown are in 1,000s

CURRENT MITIGATION EFFORTS FY02

REAL ESTATE (FY02)

As of September 30, 2001, there remains a total of 4,985 acres of non-public land authorized for purchase under WRDA86. During FY02, the Corps will undertake several efforts to purchase additional land from non-public owners. This includes 702 acres in Missouri, 239 acres in Kansas, 3,909 acres in Iowa, and 135 acres in Nebraska. In the Kansas City District, efforts to purchase non-public lands will concentrate on Monkey Mountain and Hemmes Bend/Corning Site in Missouri. If acquisitions fail at these two locations, then efforts will be shifted to the Teteseau Lake site adjacent to Grand Pass Conservation Area in Missouri. Additional acquisitions are desired at Berger Bend, Rush Bottom Bend, and Thurnau, but efforts are currently held up pending willing sellers. In the Omaha District, real estate efforts will focus on purchasing additional non-public lands at the Hamburg Bend and Tobacco Island sites in Nebraska and at Copeland Bend in Iowa.

As of September 30, 2001, all easements, etc. on public lands for habitat development have been completed in Kansas, Iowa, and Nebraska. In Missouri, there remains an amount of 12,419 acres of existing public land authorized for habitat development under WRDA86. In FY02, easements will be sought on 4,369 acres of existing public lands owned by Missouri Department of Conservation. These easements will allow habitat development efforts to continue at the Columbia Bottom and Rocheport Cave sites. Additionally, an easement will continue to be pursued with the tribe at Blackbird Bend.

WRDA99 increased the authorized acres to be purchased for this project by 118,650 acres. However, prior to completing any acquisitions under this authorization, a Supplemental Environmental Impact statement must be completed. The Supplemental EIS will be completed in early FY03. In advance of issuing the Record of Decision for the Supplemental EIS, the Corps intends to begin willing seller surveys for the additional land authorized. Two separate efforts will be started in FY02, one in Omaha District and one in Kansas City District. The willing seller effort will be coordinated with the affected States in order to update areas of priority. Surveys will then concentrate on priority areas and those believed to be the best chance of success.

In FY02, the Corps has budgeted \$2,250,000 for real estate activities.

HABITAT DEVELOPMENT (FY02)

In FY02, the Corps of Engineers has \$7,984,000 budgeted for habitat development. This includes \$1,000,000 for engineering and management activities and \$6,984,000 for construction. The following is a summary of habitat development activities to be completed by site.

Columbia Bottom, MO – Phase II design to complete wetland development at the site is underway. The design and plans and specifications will be completed in FY02. A value engineering study will be completed and a construction contract will be awarded in FY02. The construction will extend into FY03. The current working estimate for Phase II of the project is \$6M. Also at this site, the construction contract for Phase I, levee setback project, will be completed in the spring of FY02.

Deroin Bend, MO – A construction contract was awarded in FY01 to complete re-opening the closed side channel at this mitigation site. The contract will finish in FY02. The Corps will be looking to turn this project over to the Missouri Department of Conservation for their O&M starting in FY03.

Eagle Bluffs, MO – A construction contract for this site was awarded in FY01 and will be completed in FY02. The site is will be made operational this year and turned over to MDC for O&M beginning in FY04. The current working estimate for this project is \$2.4M.

Lower Hamburg, MO - Plans and Specifications for construction of a chute are completed. The project is scheduled for FY04 Construction, but may move forward into FY03. The boundary of the mitigation site is currently being surveyed and marked. The boundary survey is scheduled to be completed in FY02. The current working estimate for the project is \$3.5M.

Overton Bottoms North, MO – The Corps will continue to monitor the chute development at this site. Coordination with USFWS and MDC will continue to allow access to the MDC property around Taylor’s landing. Deeping the chute to accommodate shallow water habitat may be completed as funding and weather permit during FY02.

Overton Bottoms South, MO – A construction contract for this site was awarded in FY01 and will be completed in FY02. The site will be made operational this year and turned over to MDC for O&M beginning in FY03. The current working estimate for this project is \$930K. Also at this site, the Corps of Engineers will begin efforts to fund and construct a maintenance building.

Rocheport Cave, MO – The mitigation at this site is scheduled for contracting in Jan 02. Construction is being targeted for summer 02, after nesting season for endangered bats. The design will be completed by Corps of Engineers and MDC personnel. The current working estimate is \$75K.

Worthwine Island, MO – The design to re-open a historic chute is currently underway. The design contract to URS will be completed in FY02. Time and funds permitting, the plans and specifications for this project may be started in FY02. The current working estimate for the project is \$3.5M.

Blackbird-Tieville-Decatur Bends, IA and NE – Plans and specifications are scheduled to be completed on the Tieville-Decatur bends portion of this site. A construction contract will be advertised and awarded in FY02 for the work to start. The contract will extend into FY03.

Louisville Bend, IA – This site is completed, but we have to modify the inlet structure and build the middle dike. Our planned modification of the inlet and middle dike will be awarded in Jan 02.

Langdon Bend, NE – The plans for the improved access road and parking area are complete. This project will be completed as funding and weather permit during FY02.

Kansas Bend, NE – Plans and specifications are scheduled to be completed at the Kansas Bend mitigation site in FY02. A construction contract will be advertised and awarded in FY02 for the work to start. The construction will extend into FY03.

OPERATION AND MAINTENANCE (FY02)

In FY02, the Corps of Engineers has budgeted \$510,000 of Construction, General (CG) funds for O&M activities during construction. These funds will be spent primarily on basic land management, habitat preservation, tree plantings, weed control, and signage at the following mitigation sites: Berger Bend, MO; Lower Hamburg, MO; Nishnabotna, MO; Overton Bottoms North, MO; Overton Bottoms South, MO; Thurnau, MO; Auldon Bar, IA; Copeland Bend, IA; Noddleman Island, IA; and Langdon Bend, NE.

O&M funds for several mitigation sites that are complete and in an “O&M phase are not included in the amount shown above. This includes maintaining constructed structures, pumps, fences, signs and roadways. Also covered are land management activities such as habitat preservation, wetland and infiltration control, habitat preservation, tree planting, and weed control. This effort will continue during FY02 at the Grand Pass, MO; Tate Island, MO; Benedictine Bottoms, KS; California Bend, IA; Louisville Bend, IA; Winnebago Bend, IA; and Hamburg Bend, NE.

MONITORING AND EVALUATION (FY02)

Because many of the mitigation features of this project will be constructed as opposed to created naturally over time, it is important to complete monitoring and evaluation (M&E). During the design phase, specific goals and objectives will be determined for each site and monitoring criteria for meeting these objectives will be established. After construction, M&E will be conducted on the various aspects of each site in order to assess the degree of success of the habitat development.

Specific M&E efforts will be conducted at several mitigation sites during FY02. A three-year fisheries study performed under contract with the State of Nebraska will be completed in FY02. Project reviews will be performed at the Grand Pass, Benedictine Bottoms, and Overton Bottoms mitigation sites. USFWS studies on song birds and turtles will be funded at the Overton North site. Additionally, M&E efforts for shallow water habitat will be organized and proposed to the USFWS during FY02.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (FY02)

An Environmental Impact Statement for the Fish and Wildlife Mitigation project was filed with US EPA on December 23, 1982. This effort was completed for the original 48,100 acres authorized under WRDA86. In the Water Resources Development Act of 1999, the Missouri River Fish and Wildlife Mitigation Project was reauthorized to include an additional 118,650 acres of land to be purchased from willing sellers on which to develop, restore or enhance fish and wildlife mitigation sites. A Draft Supplemental Environmental Impact Statement (DSEIS) will be completed prior to project purchase or habitat development on the additional acres.

A public scoping effort is scheduled to be completed during FY02. The purpose of the public scoping process was to request ideas and comments on how the 188,650 additional acres will be acquired and developed for the project. Comments are being sought from Native American tribes, the general public, organizations, and government agencies. There are nine public scoping meetings planned. They are to be held at different locations along the Missouri River to allow interested parties the maximum chance to attend in person. All meetings are to be held in an open house format to encourage one on one dialogue.

A pre-draft SEIS document will be produced for agency coordination team review prior to issuing the draft document for public comment. The pre-draft should be available in March, 2002. The draft SEIS is scheduled to go to public comment in April, 2002. The final SEIS is scheduled to be out for public comment in September, 2002, and the final Record of Decision is scheduled to be issued in early FY03. The Corps of Engineers is utilizing an AE firm to complete the SEIS effort.

FUNDING (FY02)

The Fish and Wildlife Mitigation project received an amount of \$10,744,000 in FY02. The Corps has funded \$M through FY02 for the project. A breakdown of funding for FY02 activities is presented in Table 17. The total amount of funds provided to through FY02, broken down by task, is given in Table 18.

TABLE 17

BREAKDOWN OF FUNDING FOR FY02 ACTIVITIES

Task	CENWK	CENWO	TOTAL
Land Acquisition	\$1,500	\$750	\$2,250
Planning, Engineering, and Design	1,000	0	1,000
Habitat Development	2,595	3,689	6,284
Construction Management	200	500	700
O&M During Construction	250	260	510
TOTAL	\$5,545	\$5,199	\$10,744

NOTE: Amounts shown are in 1,000s

FUTURE MITIGATION EFFORTS FY03 TO COMPLETION

REAL ESTATE (FY03 to completion)

At the conclusion of FY02, the amount of non-public land purchased in Missouri, Kansas, and Nebraska will be at or very near the amount authorized under WRDA86. There will be a significant portion of land still authorized under WRDA86 for purchase in Iowa. It is hoped that a concerted effort to inform the public of the project and the update of the willing seller surveys may produce additional willing sellers in the State of Iowa. As willing sellers in Iowa come forward, acquisitions of their properties will be of top priority.

At the conclusion of FY02, the amount of habitat developed on existing public lands in Kansas, Iowa, and Nebraska will be at or very near the amount authorized under WRDA86. There will be a significant portion of existing public land authorized under WRDA86 for habitat development in the State of Missouri. During FY03 and beyond, the Corps will continue to work with Missouri Department of Conservation and the USFWS to identify existing public lands in Missouri in which mitigation projects can be implemented.

WRDA99 increased the authorized acres to be purchased for this project by 118,650 acres. During FY03, approval to commence acquisitions under this authorization is expected. The Corps of Engineers will be working with the States on completing any final willing seller survey actions and begin negotiating with new sellers. If funds are provided, it is anticipated that the acquisition effort will last for many years.

HABITAT DEVELOPMENT (FY03 to completion)

If funds are provided in FY03, the habitat development that had been started in FY02 will continue to completion. This will be at the Columbia Bottom, MO; Kansas Bend, NE; and Blackbird-Tieville-Decatur Bends, IA & NE mitigation sites. The Corps should continue to adaptively manage the constructed chute at Overton Bottoms North. Additionally, it is anticipated that funds will be provided to begin habitat development at Lower Hamburg, MO; and Worthwine Island, MO mitigation sites. Finally, due to increased pressure from resource agencies, there should be a significant amount of within river structural modifications to create shallow water habitat as directed by the Biological Opinion.

In FY03, it is anticipated that the Corps of Engineers will complete the SEIS and decision documents necessary to begin acquisition and development of the additional 118,650 acres

authorized under WRDA99. However, until the SEIS has been completed, the method of habitat development may change from that which is currently occurring. For instance, there may be a priority placed upon habitats for endangered species over all other habitats. It is currently too early in the SEIS process to predict where or how habitat development will be achieved in FY03 and beyond. The Corps will comply with the SEIS document and future Annual Implementation Plans will address future plans for habitat development.

OPERATION AND MAINTENANCE (FY03 to completion)

If funds are provided in FY03 to completion of the project, the Corps of Engineers will be establishing many new mitigation sites. As is current practice, the States will be asked to provide annual management plans in order to receive Federal funds for maintenance of constructed features of this project. O&M of the mitigation sites will remain 100% Federal funded.

MONITORING AND EVALUATION (FY03 to completion)

It is anticipated that the SEIS will call for a detailed Monitoring and Evaluation (M&E) effort to be funded by the modified mitigation project. The M&E effort will be used to support adaptive management of established mitigation sites. If funds are provided in FY03, it is anticipated that an M&E plan will be started. Participation of the States and USFWS is considered essential to understanding and agreeing upon adaptive management needed to keep established mitigation sites healthy and productive. Provided future funds are provided to the project, the M&E program will be established and maintained to assure our collective best effort is made to creating the correct habitats in the correct places.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (FY03 to completion)

If funds are provided in FY03, the SEIS process should finish in November, 2002. This should clear the way for additional acquisitions and habitat development for the additional 118,650 acres authorized by WRDA99. As is current practice, each mitigation site will need to have a site specific Environmental Assessment completed prior to habitat development.

FUNDING (FY03 to completion)

In Spring of 2001, the Corps began forwarding a Cost Report to the US Congress. The Cost Report gave a cost estimate of the amount of funds needed to complete mitigation of 118,650 acres. As of this writing, this report has not reached Congress. The report is at the Office of Management and Budget (OMB) for review. Therefore, this report is not public yet. Future Annual Implementation plans will reflect future cost levels approved for the project.

**APPENDIX 1
SITE LOCATION MAPS**

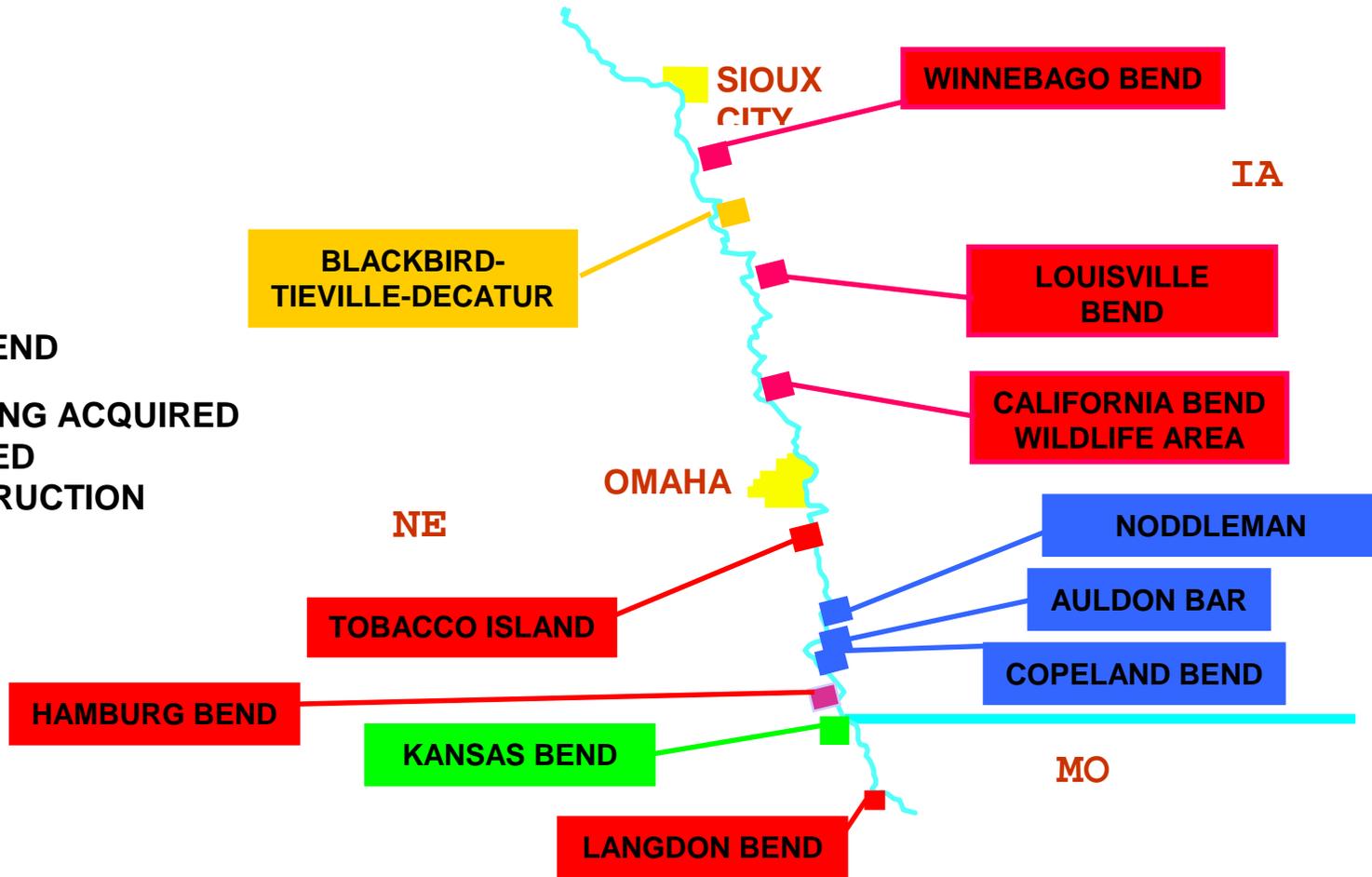
Missouri River Fish & Wildlife Mitigation

IA & NE SITES



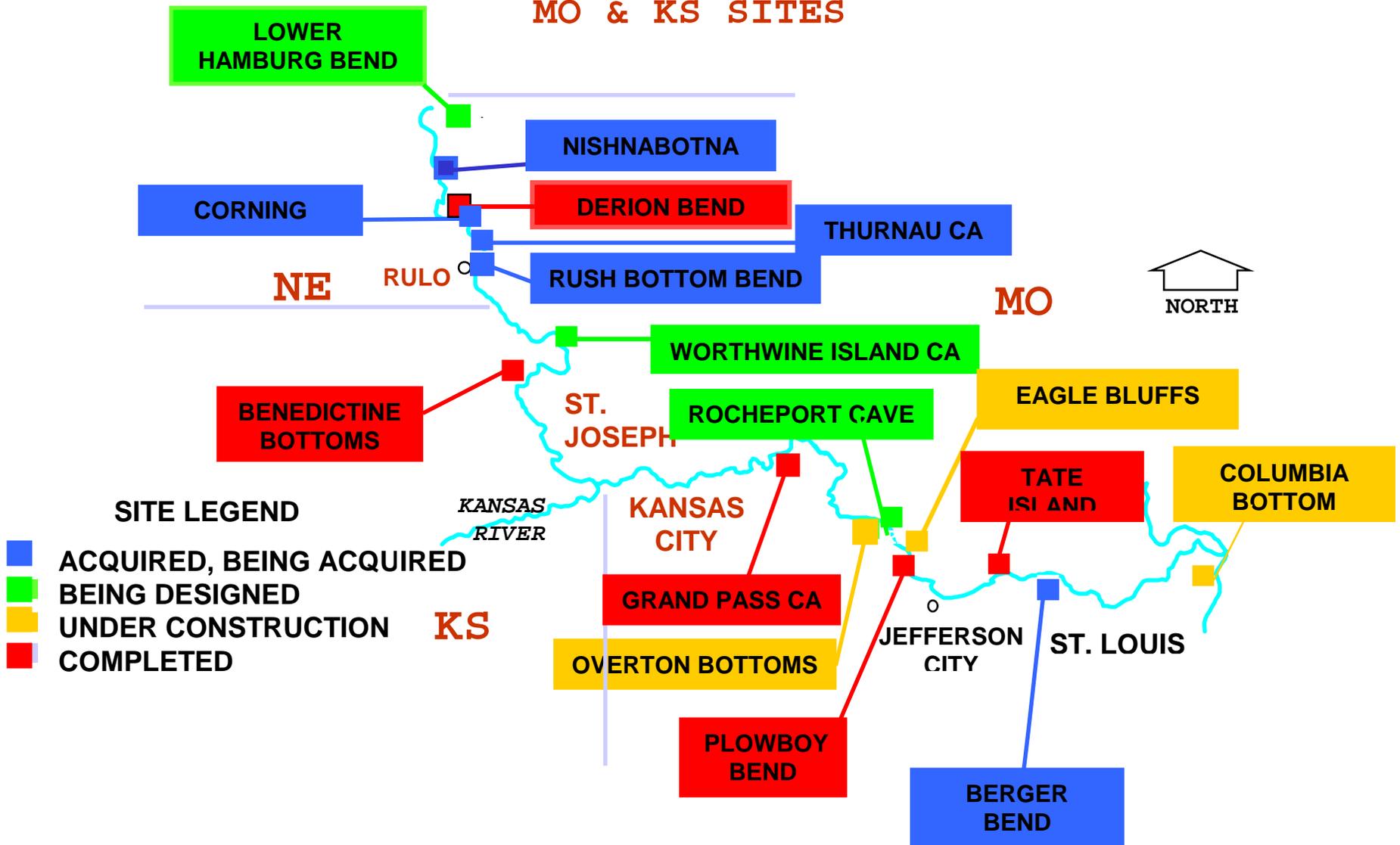
SITE LEGEND

- ACQUIRED, BEING ACQUIRED
- BEING DESIGNED
- UNDER CONSTRUCTION
- COMPLETED



Missouri River Fish & Wildlife Mitigation

MO & KS SITES





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