



## United States Department of the Interior

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February 11, 2003

Colonel Donald R. Curtis  
U.S. Army Corps of Engineers  
Kansas City District  
700 Federal Building  
Kansas City, Missouri 64106-2896

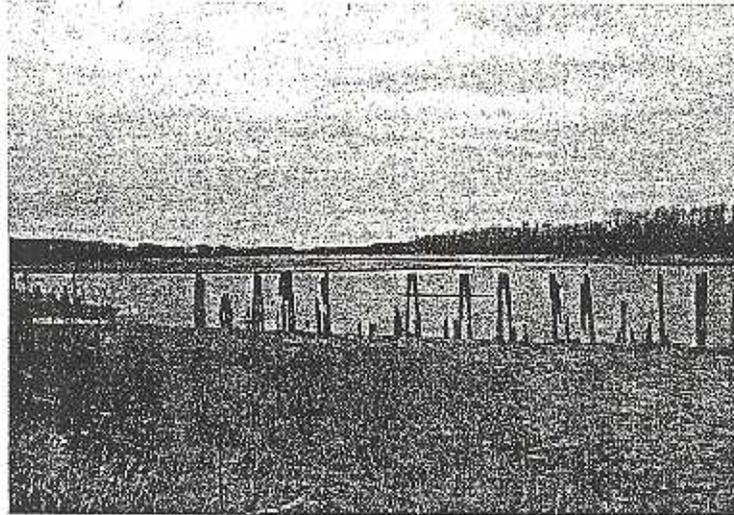
Dear Colonel Curtis:

This is the supplemental Fish and Wildlife Coordination Act Report for the Missouri River Bank Stabilization and Navigation, Fish and Wildlife Mitigation Project Expansion authorized in Section 334 of the Water Resources Development Act (WRDA) of 1999. This report contains the Fish and Wildlife Service's (Service) findings and recommendations regarding the proposed project expansion and should accompany the U.S. Army Corps of Engineers' (Corps) environmental impact statement (EIS) for the project. The Service submits this report pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et al), and it constitutes the report of the Secretary of the Interior as required by Section 2(b) of that Act. The Service has coordinated our recommendations with the respective states and comments from the fish and wildlife agencies of Nebraska, Iowa, Kansas and Missouri have been incorporated into our report, and we have enclosed copies of their written comments. We will forward a copy of Kansas' written comments as soon as we receive them.

### **Background**

The Missouri River Bank Stabilization and Navigation Project (BSNP), was authorized under several acts of Congress between 1912 and 1945. Collectively, those authorizations provided for a 9-foot deep by 300-foot-wide navigation channel and bank stabilization along the Missouri River between Sioux City, Iowa and the mouth, north of St. Louis, Missouri, a distance of approximately 735 miles. As a consequence of the construction, operation, and maintenance of the BSNP, roughly 500,000 acres of riverine and riparian habitat have been lost from the lower 730 miles of the river (U.S. Army Corps of Engineers 1981). The project greatly reduced shallow water habitat and virtually eliminated sandbars and islands. Much of the adjacent floodplain was converted to agricultural land. Many of the remaining wetlands and forested tracts are highly degraded and fragmented, greatly limiting their resource value. Project-related hydrologic changes and diminished terrestrial and aquatic habitats have resulted in significant declines in populations of fish and wildlife associated with the Missouri River ecosystem (NRC

2002). Empirical data from certain river reaches documents long-term declines in benthic invertebrate production and commercial fisheries.



**Figure 1. Middle Decatur Bend, Nebraska. Old river channel cut off as part of the BSNP.**

In response to those habitat losses and the Corps' responsibilities under the Fish and Wildlife Coordination Act, the Corps issued the 1981 "Missouri River Bank Stabilization and Navigation Project Final Feasibility Report and Final EIS." That report and EIS led to authorization of the original Missouri River Fish and Wildlife Mitigation Project as part of the WRDA of 1986. As part of that effort, the Service prepared a Coordination Act Report (CAR) that documented project-related fish and wildlife habitat losses, and included specific recommendations for numerous restoration projects along the channelized river to compensate for those habitat losses (U.S. Fish and Wildlife Service 1980). In the EIS, the Corps evaluated several project alternatives with differing levels of habitat restoration. Based on those analyses, the Corps recommend a mitigation project that would:

1. ) Restore 2,500 acres of aquatic habitat on public and non-public lands;
2. ) preserve 700 acres of aquatic habitat on public and non-public lands subject to the effects of degradation of the Missouri River channel;
3. ) acquire the necessary interest in 9,900 acres needed to restore or preserve aquatic habitat;
- 4.) acquire the necessary interest in 20,000 acres of existing terrestrial habitat to permit development for fish and wildlife, and public use; and
- 5.) develop terrestrial habitat on 16,900 acres of undeveloped public lands.

Subsequent to that report, the Kansas City District developed a "Real Estate Design Memorandum No. 1" for land acquisition activities for the Missouri River Bank Stabilization and Navigation Fish and Wildlife Mitigation Project which was approved May 1991. That report

established the real estate requirements for acquisition in fee or easement of 29,900 acres of undeveloped lands. It was also recommended an additional 18,200 acres of habitat development on existing public lands within the four affected States (i.e., Nebraska, Iowa, Kansas and Missouri). Project funding began in Fiscal Year 1992.

To date, approximately 24,915 acres of the 29,900 acres authorized for land acquisition have been acquired. On existing public lands, the Corps has developed 5,778 acres of fish and wildlife habitat, 32 percent of that authorized. The original Feasibility Report and FIS noted that the Corps' recommended plan would restore only three percent of the aquatic and seven percent of the terrestrial habitat losses (in acres) that occurred because of BSNP construction, operation, and maintenance. Since the original project authorization, negative effects of the navigation project have continued.

There is still a great need for fish and wildlife habitat restoration to compensate for a larger portion of historic and on-going fish and wildlife resource losses. Under the original authorization, mitigation projects were distributed among the four affected states based on the proportion of project-related losses that occurred in each state. Currently, land acquisition is essentially complete in Kansas and Nebraska, and is likely to be completed in Missouri this year. However, landowners in all four states express continued interest in the mitigation project. The last decade of high water along the river was particularly challenging for farmers in low-lying areas. In the rural areas selling lands for the mitigation program appears to be a viable alternative for landowners who are farming extremely marginal croplands.

### **Project Description**

In recognition of the substantial unmet fish and wildlife resource needs of the lower river, Congress passed Section 334 of the WRDA of 1999 which reauthorizes the Missouri River Bank Stabilization and Navigation Fish and Wildlife Mitigation Project and increases the amount of lands, and interests in land, to be acquired for the project by 118,650 acres. To determine the cost of this project modification, Section 334 (b)(1) also directs the U.S. Army Corps of Engineers to conduct an economic study in conjunction with the States of Missouri, Kansas, Iowa, and Nebraska. The states developed a preliminary list of projects as a framework for the cost estimate of expanded project. That study was completed and transmitted to Congress in 2002.

The basic approach of the expanded project will be similar to the original project. Land acquisition and habitat creation and restoration (discussed in more detail below) will offset project-related fish and wildlife habitat losses. The expanded program, however, will likely have a greater focus on aquatic habitat restoration to better provide for riverine habitat and species most affected by the BSNP.

### **Fish and Wildlife Resource Problems and Opportunities**

Historically, the Missouri River was a diverse 2,300 mile-long riverine/floodplain ecosystem of braided channels, riparian lands, chutes, sloughs, islands, sandbars, backwater areas, and natural

floodplain communities. These riverine and floodplain habitats were maintained by a dynamic equilibrium of continuous bank erosion and deposition, which constantly reshaped the channel and floodplain.

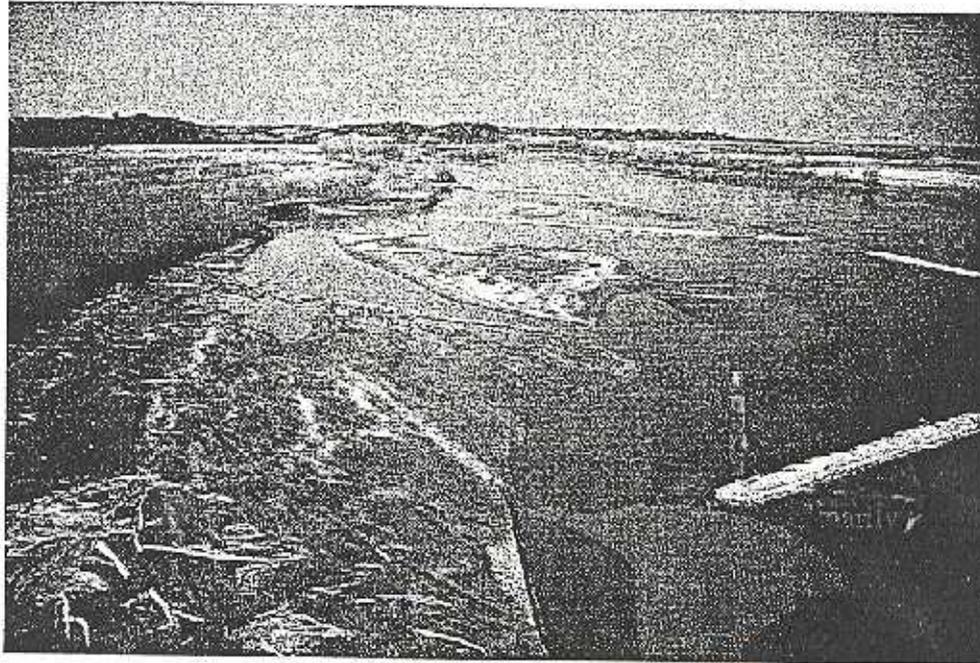
Fish and wildlife values associated with the historic Missouri River ecosystem were significantly altered in the lower river by construction and operation of the Missouri River Bank Stabilization and Navigation Project. That project, coupled with the construction and operation of seven main stem reservoirs transformed the free-flowing river into a highly engineered waterway dominated by regulated flows, self-channelization, and bank stabilization. As previously noted, those modifications resulted in dramatic losses of important fish and wildlife habitats. Roughly 168,000 acres of natural channel, and 354,000 acres of meander belt habitat have been lost from the lower 730 miles of the river (U.S. Army Corps of Engineers 1981). The BSNP reduced shallow water habitat (0-5 foot depths) by up to 90 percent in some river reaches, eliminated 50 percent of the river's surface area, virtually eliminated sandbars and islands, and converted nearly 67,000 acres of riverine habitat into, primarily, privately owned and leveed agricultural land. Floodplain forest was reduced from 76 percent of floodplain vegetation in the 19th century to 13 percent by 1972 (Bragg and Tatschl 1997).

Flows have been modified primarily to meet flood control, navigation, and hydropower objectives. As a result of the habitat losses and flow regime changes, four species that depend on the river are federally-listed as endangered or threatened. Many fish species native to the river have had serious population declines; six are of special concern. Data from certain river reaches verifies long-term declines in benthic invertebrate production, commercial fisheries, and certain tailwater sport fisheries. Detailed descriptions of fish and wildlife resources and problems along the river can be found in the Service's 1980 CAR (U.S. Fish and Wildlife Service 1980) which is hereby incorporated by reference. River resource professionals have estimated that a reasonable target for restoration of the lower Missouri River ecosystem would be to acquire and restore approximately 168,000 acres of floodplain lands between Sioux City and St. Louis, which is roughly equivalent to the amount of natural channel converted to land by the Bank Stabilization and Navigation Project, or about 10% of the river's existing floodplain.

Over the years, the states and the Service have recommended a number of measures to increase and improve shallow water, wetland, and floodplain habitats in the lower river (U.S. Fish and Wildlife Service 1980, U.S. Fish and Wildlife Service 2000, numerous reports and correspondence). Those recommendations have included notching dikes and revetments, river widening, reopening chutes and side channels, recharging wetlands and oxbows, and widening the channel to enhance habitat diversity for fish and wildlife and resupply turbidity and sediment to the system. Reconnecting historic off-channel areas with the river would make those habitats accessible to river fish and wildlife, especially where flows are available to provide seasonal or year-round access.

Widening the channel can increase shallow water habitat in dike fields and behind point bars. It is feasible to significantly widen the channel without impacting navigation. For example, lowering and notching of dikes at Missouri River Mitigation Project sites in Nebraska has added

up to 100 feet of top width to the river with no effects on navigation. Shallow water/sandbar habitat is needed throughout the channelized river; however, the greatest need is between Sioux City and Kansas City. Widening the channel will require a significant public land base or acquisition of sloughing easements from affected private landowners.



**Figure 2. Structure modifications and resulting shallow water habitat at Plowboy Bend Conservation Area, RM 171, Missouri.**

Removing, breaching and lowering levees to increase river/floodplain connectivity can be done on public lands where flood protection for private lands will not be compromised. Acquisition of entire river bends or areas riverward of large levees from willing sellers would allow low-level agricultural levees to be removed or breached so that out of bank flows can recharge wetlands and provide dependable backwater habitat for fish spawning and nurseries during the more frequent, lower stage flood events (i.e., 1, 2, and 5-year floods).

Aquatic habitats can also be restored by removing or lowering navigation closing structures to open side channels, chutes, and backwaters and removing drainage structures (e.g., culvert) on public lands (both existing and acquired). This would make these habitats accessible to river fish and wildlife, especially when flows are available to provide seasonal or year-round access. Expansion of these habitats is important to increase off-channel spawning and nursery areas for certain river fish, as well as provide habitats (with suitable depths, velocities, and substrates) that can not be found in the main channel because of the navigation constraints.

Suitable public lands are needed as many of the restoration activities are not feasible on private land. Land acquisition should be limited to willing sellers only and focus on lands with the greatest potential restoration benefits. These areas include: 1) land with river channel frontage; 2) floodplain and wetland habitats; 3) lands at major tributary confluences; and, 4) lands with restorable side channels, chutes, and backwaters. Acquisition and management of public lands should be done so as not to affect adjacent private lands or the integrity of existing levee districts.

Since our 1980 report, a number of events have occurred that have and will likely continue to shape the direction of restoration efforts. In 1993, the Great Flood literally changed the landscape along the lower river. The Flood inundated tens of thousands of acres of floodplain, and caused millions of dollars in damages to both public and private property. Many agricultural areas were so damaged that landowners chose to sell their land. Again in 1995, high water along the lower river undermined landowners attempts to recover from the previous flood. Those flood events stimulated considerable interest by landowners in selling flood prone and damaged lands for conservation purposes, and led to the acquisition of many of the current mitigation sites. In addition, the states and the Service established a number of conservation areas and refuges along the lower river that complement the mitigation project. Of particular note is the Big Muddy National Fish and Wildlife Refuge, which is authorized to acquire up to 60,000 acres along the river between Kansas City and St. Louis.

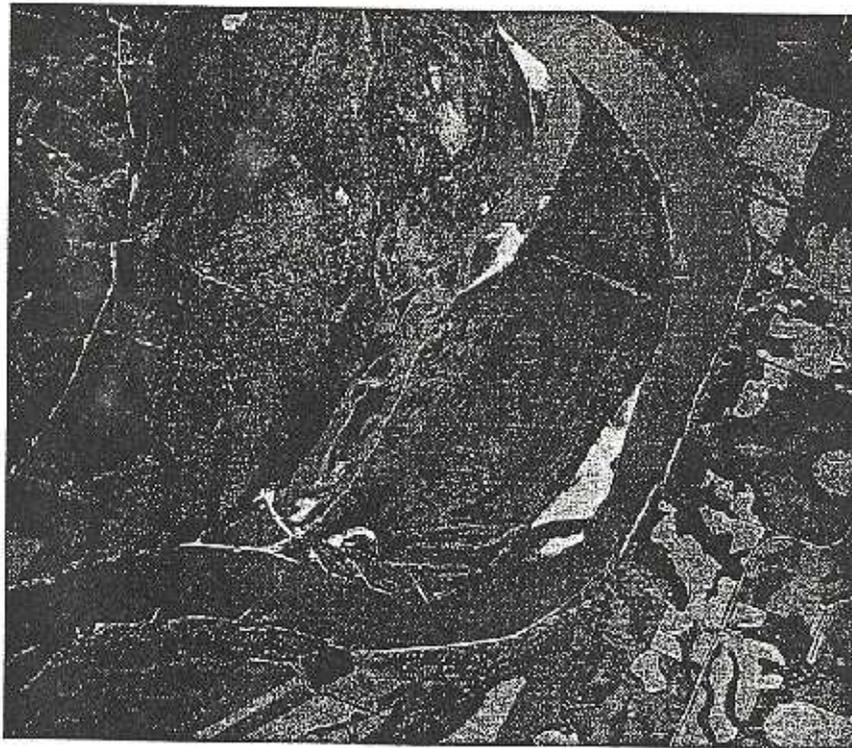


Figure 3. Lisbon Bottoms Unit of Big Muddy National Fish and Wildlife Refuge, RM 214, Missouri. Chute was formed during 1993 and 1995 Floods along the lower river.

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In addition to land acquisition and habitat restoration efforts, several species that occur in the Missouri River have been afforded protection under the Endangered Species Act. The least tern was listed as endangered in 1985 and the piping plover was listed as threatened in 1986. Both species historically migrated through the project area, and there are numerous nesting records for the least tern in the upper reaches of the project area. Construction and operation of the BSNP, however, eliminated much of the birds' migration habitats and essentially all the suitable nesting habitat on the lower river. Because of flow modifications, the remaining few sand shoals are exposed only at very low river stages, generally during the non-nesting season. Most recently, the pallid sturgeon was federally listed as endangered in 1990 and continues to occur at very low numbers in the lower river.

In accordance with the Endangered Species Act, the Corps and the Service consulted on the effects of Missouri River and Kansas River operations on federally listed species. In 2000, the Service provided the Corps with a Biological Opinion that determined that project operations were likely to jeopardize the continued existence of the piping plover, least tern, and pallid sturgeon (U.S. Fish and Wildlife Service 2000). The Service's Biological Opinion provided a Reasonable and Prudent Alternative (RPA) to remove jeopardy. That RPA included hydrologic modifications, habitat restoration, and adaptive management of the Corps projects. As result of that consultation, the Corps has indicated that it will use its authorities under the mitigation project to implement the RPA habitat restoration measures for the channelized river.

### **Existing Mitigation Project**

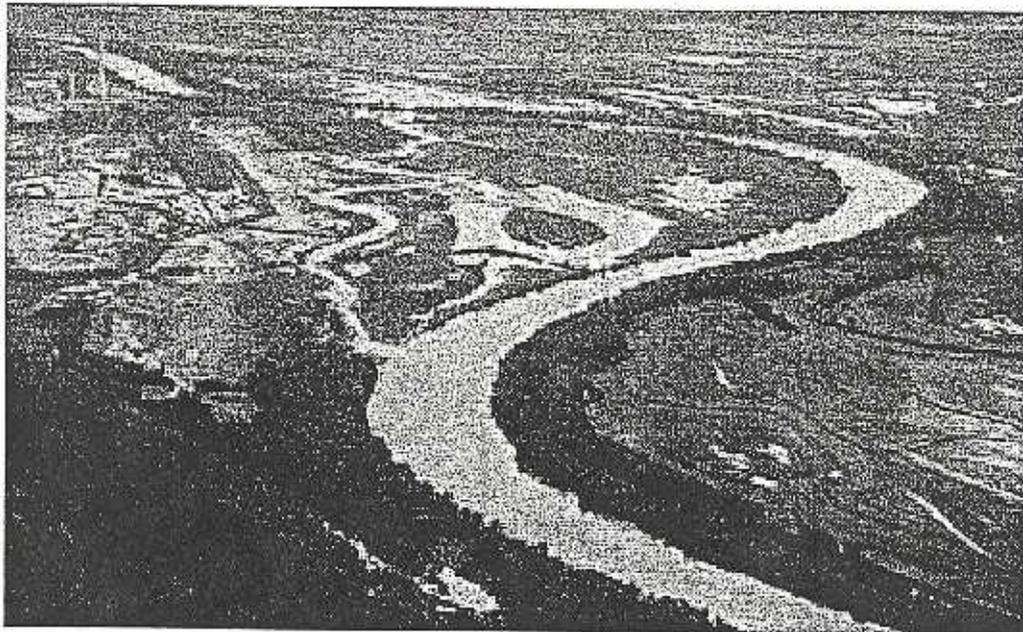
#### Fish and Wildlife Benefits

Although there has been no systematic monitoring of the various mitigation sites, numerous research projects and informal surveys have been conducted by academia and agency personnel. Thousands of acres of floodplain have been either reforested or allowed to naturally succeed to forest providing nesting, brooding, migration, and wintering habitat for a variety of game mammals, reptiles, amphibians, neotropical songbirds, raptors, wading birds, waterfowl and other game. Creation and restoration of seasonally flooded areas provides important migration habitat for waterfowl, wading birds, and shorebirds, as well as riverine fishes. These wildlife benefits are generally accompanied with increased public use and appreciation for recreation, hunting, fishing, boating, birding, and hiking.

The project has also produced aquatic habitat benefits. Monitoring studies of recently completed restoration projects in the lower river suggest that off-channel habitat is used by a number of species of special concern, as well as juvenile fish of both sport and commercial interest. Boyer Chute is located on the Boyer Chute National Wildlife Refuge near Blair, Nebraska. This historic chute was reconnected with the river by modifying Corps channel structures. Fish sampling at the chute has documented a greater catch-per-unit effort (CPUE) and species richness than some of the sites in the adjacent main channel (River Corporation 1998). Species found using the chute include paddlefish, sauger, catfish, and *Hybognathus* sp. (cyprinid species

of special concern). Young-of-the-year of many species of fish, including blue sucker, big and smallmouth buffalo, and longnose gar have also been found in the chute.

Another chute restoration project at Hamburg Bend, just north of the Iowa/Missouri border, is also providing valuable off-channel fisheries habitat. At least 27 species of fish have been collected in the chute, including five species of special concern: sturgeon chub, speckled chub, silver chub, flathead chub, and plains minnow (Nebraska Game and Parks 2001). In addition, juvenile channel catfish, largemouth bass, white crappie, sauger, and walleye were important sport fishes found to use the chute.

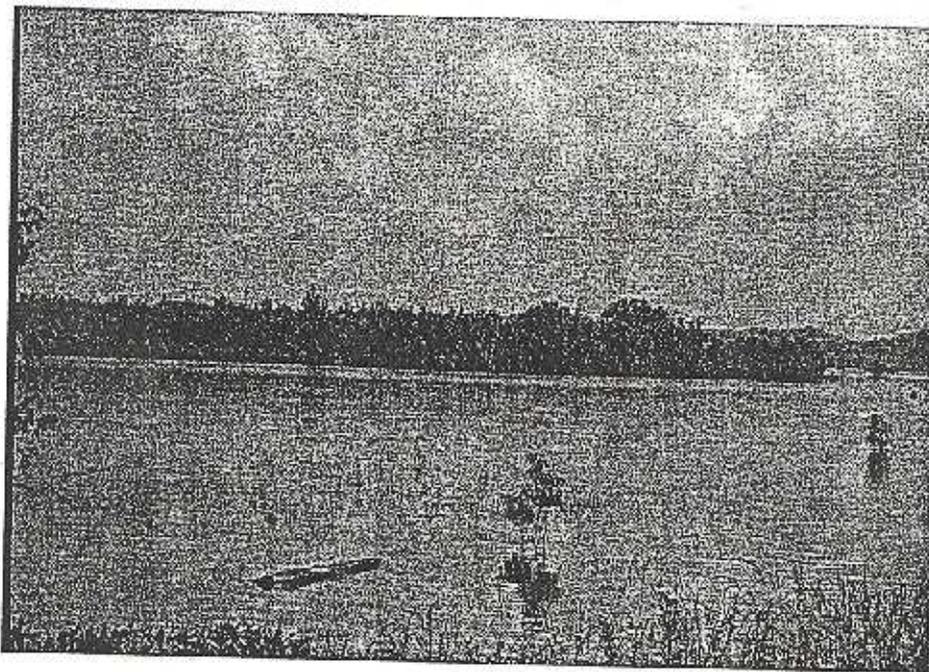


**Figure 4. Hamburg Bend Mitigation Site, RM 556, Nebraska. An example of chute restoration along the lower river.**

Further down river, a naturally formed chute at Lisbon Bottoms, Missouri, (not part of the Mitigation project) is also providing important and very scarce off-channel habitat for numerous fish species. Of the 91 species known from the lower Missouri River, 64 have been collected in the Lisbon Chute, twice the number of species collected in the adjacent main channel of the Missouri River (Jim Milligan, FWS, pers. comm.). Other species collected in the chute at Lisbon Bottoms include a relatively rare American eel, and four species of special concern: sicklefin and sturgeon chubs, plains minnow, and blue sucker (Jim Milligan, FWS, pers. comm.) Especially significant was the recent collection of larval pallid sturgeon at the lower end of the chute which is the first documentation of successful wild reproduction for that species along the lower river in 50 years (Jim Milligan, FWS, per. comm). Such restoration projects demonstrate the benefits of restoring some of the historic diversity of river habitats for native fish and wildlife species affected by the BSNP.

### Additional public benefits

Benefits of habitat restoration can extend beyond fish and wildlife resources. In October, 1998, high water on the lower river coupled with intense rains produced river levels that were predicted to exceed flood stage by 12 feet or more. Surprisingly, the river crested 5 feet below the predicted level, aided in a large part to numerous upstream restoration areas that allowed the floodwater to spread out on the floodplain, attenuating peak river stages. In addition to benefits of natural flood attenuation, increased flood water storage on the floodplain provides habitat conditions favorable to fish, wildlife, and recreation along the river. Acquisition and habitat restoration of frequently flooded floodplain tracts greatly reduces flood "damages" to those properties, facilitates restoration projects in adjacent tracts or along the river, and provides the Corps with more flexibility in river operations, allowing higher river flows to be accommodated without seriously contributing to flooding and drainage problems on agricultural lands.



**Figure 5. Overton Bottoms North Mitigation Site, RM 185, June 2002, river flooded site providing fish and wildlife habitat and flood water storage.**

Such river flows provide important biological cues to many fish species, triggering critical reproductive behaviors, and increasing fisheries access to restored channel and flood plain habitats. Many fisheries biologists believe sampling results of the above-mentioned restoration projects, as well as the recent appearance of rare fish species in the main channel, reflect the synergistic effects of habitat restoration and several years with high river flows since the 1993 Flood (River Corporation 1998, Nebraska Game and Parks 2001). Long-term fish sampling in the river adjacent to the Hamburg Bend Mitigation Site documented that the catch per unit effort (CPUE) of several species of concern increased from 0.58 during 1986 -1993, to 3.17 between

1996-2000. That increase, however, may be transient. Recent sampling for those species in the restored chute at this mitigation site shows a decreasing CPUE from a high of 28.16 in 1997 (some of the highest post-regulation flows) and 2000 (Nebraska Game and Parks 2001). Those findings underscore the importance of coupling habitat restoration and hydrologic modification in Missouri River ecosystem restoration projects, as was echoed by the National Academy of Sciences (NRC 2002).

The Service believes the Mitigation Project provides an excellent opportunity to further improve recreational benefits, help diversify the economy, and enhance the "quality of life" of communities along the lower river. In a 1992 study, the Missouri Department of Conservation estimated that fish and wildlife associated activities along the Missouri River accounted for annual expenditures of \$5.4 million, generating an additional \$12 million in business activity, and supporting over 200 jobs (Brown 1992). In Nebraska, a 1993 study estimated fish and wildlife recreation use (national economic development value) of \$49.7 million along the Nebraska reach of the river, while the total estimated recreation-related expenditures were \$364.5 million (Nebraska Game and Parks 1993).

Economic opportunities extend beyond traditional fish and wildlife recreation. For example, the Missouri Tourism Board and the Missouri Department of Economic Development (MDED) have documented economic benefit of natural resources to the state of Missouri. In 1999, tourism provided \$12 billion in economic benefits to the state (MDED 2000). Wildlife watching provided Missouri \$16.7 million in state sales tax revenue and \$8.0 million in state income tax revenue (USFWS 1996). The MDED (2001) reported on the positive impact of natural amenities on population and employment in Missouri. The study found that above average natural amenities and a diversified economy are the major determinants of population growth and moderate determinants of employment growth. The study concludes: "In Missouri, it is increasingly important to include natural amenities as a factor in any economic development strategy."

### Potential Resource Challenges

To date the mitigation project has been successful in restoring a variety of fish and wildlife habitats along the lower river. There are, however, a few issues that will likely continue to challenge restoration in the channelized reach. One particularly vexing problem in the upper project area is significant channel degradation. Construction of the main stem dams greatly reduced the sediment load in the river and is largely responsible for up to eight feet of bed degradation in the upper reach of the project area. This has led to a decoupling of the river and floodplain at all but the highest river stages. Floodplain wetlands have been dewatered and there is little opportunity for riverine fish access to the adjacent floodplain. Not only does this seriously limit potential to restore historic floodplain processes at mitigation sites along this reach, but reduced sediment loads and controlled flows also constrain opportunities for channel widening and shallow water habitat development. If sufficient lands can be acquired and levees set back or modified at strategic locations in this reach, higher flows may be accommodated that

could help widen the channel and restore some riverine connectivity to the floodplain without seriously contributing to flooding problems on adjacent lands.

Long-term performance and maintenance of mitigation projects may well be another future challenge. At this point, many of the individual mitigation sites are new and have yet to fully mature. However, given the dynamic nature of the river, it is likely that some of the areas may need to be modified in the future, perhaps periodically, to fully realize their intended habitat benefits. The ability to adjust and refine (i.e., adaptively manage) a project's design based on changing river/floodplain conditions is critical to the ultimate success of the project. An important part of this approach is a well-focused monitoring and evaluation program. As the project progresses, a more formalized approach to a comprehensive monitoring and evaluation program would provide the most useful data to assess progress, and guide future project planning, construction, and operation. Ideally, there should be mechanisms to allow timely adjustments to individual projects as necessary elements of that project's operation and maintenance. A commitment to adaptive management presents not only a planning and engineering challenge, but a fiscal challenge as well.

The institutional commitment for this project, both in terms of financial and programmatic support has been unpredictable. In the past, the mitigation project has been limited by year-to-year funding constraints and uncertainties that increase the difficulty of conducting a comprehensive, long-term restoration project. In addition, the mitigation project is only one of many Corps projects that must essentially compete for funding. In times of shrinking budgets, more traditional projects often have better success in securing appropriations. Such challenges underscore the importance of articulating the benefits of the Mitigation Project and its accomplishments. Over the last few years, progress on the mitigation project has been extremely encouraging. Many of the project's accomplishments to date are, in a large part, testimony to the states' relentless efforts to develop and sustain the momentum necessary to achieve meaningful, ecosystem-level fish and wildlife restoration.

Progress on the mitigation project has also reflected some financial aspects of federal land acquisition which influence landowners who are considering selling their property as part of the project. Various floodplain landowners have expressed concerns about the tax implications of the federal government purchasing land along the river. These concerns generally fall into two areas: capital gains tax for those who sell land to the government and potential losses in the local tax base because of the federal government's payment in lieu of taxes, which generally goes to the affected state. These issues are beyond the scope of the mitigation project. In the future and with enough support, there will likely be solutions that would address these issues to better benefit landowners, local taxing entities, and conservation efforts.

### **Recommendations for Expanded Project**

In light of the mitigation project's progress to date and foreseeable challenges, the Service offers the Corps the following recommendations for the mitigation project to most effectively restore and conserve fish and wildlife resources along the lower Missouri River.

- 1.) Build upon the existing momentum to increase restoration achievements through the expanded mitigation project. This should include a sustained commitment to project support and implementation in cooperation with the Service, the States, and the Tribes. Such a partnership will be necessary to fully realize the potential resource benefits of the ecosystem-level conservation efforts. A significant, long-term commitment to river restoration will most effectively ensure timely realty acquisition, planning, and implementation of this ambitious and important mitigation project.
- 2.) Incorporate adaptive management throughout project implementation. This may require innovative fiscal and planning mechanisms to address variable, and perhaps unpredictable, responses of individuals projects, but will ultimately contribute to the program's success and emerging science of river restoration. An important aspect of adaptive management is a well-defined monitoring program to specifically target those resource questions of greatest interest and priority to the restoration efforts. Information gained through targeting monitoring not only can document physical and biological responses to restoration efforts, but can also be used to better design and operate specific mitigation measures in the future.
- 3.) Investigate ways to assist the states in studies to better assess the economic impact of fish and wildlife restoration as a result of the mitigation project. This could be included as a component of a monitoring plan, or build on state efforts to characterize the importance of fish and wildlife-related activities along the river. Such a characterization would be an important evaluation of some of the public benefits derived from the mitigation project. It may also lead to a greater understanding and appreciation of the true value of fish and wildlife resources to the communities along the river.
- 4.) Consider developing or providing for a database/bibliography of ongoing research and monitoring programs of mitigation sites to document resource response to restoration efforts. It is likely other federal agencies, the states and academia could provide much of this information to the Corps. Depending on the interest expressed, summaries of this information could be posted on a website for the general public who have a substantial investment in the project.
- 5.) Develop and expand outreach/education efforts associated with the project. This could include providing outreach materials at rest areas, etc., near mitigation sites and better signage and interpretive aids at each site to inform the public of the objectives and accomplishments of the project. In addition, the Kansas City District has recently established a website that provides a variety of useful information and photos of mitigation areas. The Corps should continue to expand this site and perhaps link with a similar site on the Omaha District's web page. Such sites may also be a means to stimulate landowner interest in the mitigation program, or lead to partnerships with other conservation efforts.

### Service Position

The Service believes the authorized project expansion is the most effective way to restore a meaningful habitat base, and that it would significantly benefit fish and wildlife resources along the channelized river. Successful restoration on the increased acreage, coupled with that originally authorized would potentially mitigate approximately 88 percent of the habitat within the natural channel lost as a result of the BSNP, or 28 percent of total floodplain habitat losses. Based on the project opportunities recommended by the states, the Corps estimates that the expanded project will provide approximately 7,000 acres of shallow water and sandbar habitats; those most effected by implementation of the BSNP, and now very rare in the lower river. Those habitats are extremely important to larval and juvenile fish, and are also believed to be important to several federally listed species and species of concern. The expanded project is also anticipated to restore approximately 20,000 acres of additional wetlands for the Missouri River that can provide nesting, rearing and foraging habitat for numerous migratory birds (e.g., waterfowl, shorebirds, water birds, songbirds, etc. ), as well as various reptiles and amphibians.

In summary, the Service strongly supports expansion of the Missouri River Fish and Wildlife Mitigation Project. This project will provide significant habitats for numerous species of fish and wildlife affected by the BSNP and greater opportunities and flexibility to manage the river with fewer flood-related impacts to land and property along the adjacent flood plain. The mitigation project also offers an excellent opportunity to substantially enhance local and regional economies through increased recreation and tourism.

We look forward to working with the Corps and the states as we continue our efforts to improve the Missouri River for fish and wildlife.

Sincerely,



Charles M. Scott  
Field Supervisor

### Enclosures

cc: USFWS, AES, Ft. Snelling, MN (Lewis)  
USFWS, ES, Rock Island, IL (Nelson)  
USFWS, Big Muddy NFWR, Columbia, MO (Bell)  
USFWS, Desoto NWR, Missouri Valley, IA (Klimeck)  
USFWS, ES, Manhattan KS, (Gill)  
USFWS, ES, Grand Island, NE (Anschutz)  
USFWS, Missouri River Coordinator, Bismarck, ND (Olson)

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# Nebraska Game and Parks Commission

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July 19, 2002

REC'D AUG 05 2002

Jane Ledwin  
US Fish and Wildlife Service  
Columbia Missouri Ecological Services Field Office  
608 East Cherry St., Room 200  
Columbia, MO 65210

Dear Ms. Ledwin:

Nebraska Game and Parks Commission (NGPC) staff members have reviewed the draft supplemental Fish and Wildlife Coordination Act Report for the Missouri River Bank Stabilization and Navigation, Fish and Wildlife Mitigation Project Expansion. The report contains the FWS' preliminary findings and recommendations regarding the proposed project expansion.

NGPC staff fully support the expanded mitigation project (see attached letter; Frank Albrecht to Kelly Ryan(COE), February 21, 2002). We also concur with your five recommendations outlined in the supplemental Coordination Act Report and support the FWS' position described in the report.

Thank you for the opportunity to comment on this report. We look forward to working with you and all of the other partners as we continue to move toward restoring much needed aquatic and terrestrial habitat on this important resource. Feel free to contact me at 402-471-5422 if you have any questions or need any additional information.

Sincerely,

Frank Albrecht  
Assistant Division Administrator  
Realty and Environmental Services Division

cc Kirk Nelson, NGPC  
Mark Brohman, NGPC  
Scott Luedtke, NGPC  
Gene Zuerlein, NGPC  
Steve Anschutz, USFWS



# Nebraska Game and Parks Commission

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February 21, 2002

Kelly Ryan  
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Kansas City, Missouri 64106

Dear Mr. Ryan:

We have received your letter regarding the reauthorization of the existing Missouri River Fish and Wildlife Mitigation Project which is a component of the 1999 Water Resources Development Act (WRDA99). Your letter also invited the Nebraska Game and Parks Commission (NGPC) to serve as a Cooperating Agency for the Supplemental Environmental Impact Statement process.

We fully support this expanded effort, as NGPC staff members have been active participants in the Missouri River Mitigation Project from early planning stages to the present. We commend the effort made by Corps of Engineers (COE). The project as outlined will restore much-needed functions of aquatic and terrestrial habitat, which were largely lost from decades of modifications to the Missouri River.

We will gladly continue our participation on the Coordination Team and will provide information on the review requests of the draft and final SEIS which will be produced in the near future. We have had an excellent working relationship with the COE and look forward to continuing in that role on this expanded Missouri River Mitigation Project.

Thank you for the invitation and feel free to call me at 402-471-5422 if you have any questions or need any additional information.

Sincerely,

Frank Albrecht  
Assistant Division Administrator  
Realty and Environmental Services Division

cc: Scott Luedtke, NGPC  
Mark Brohman, NGPC  
Gene Zuerlien, NGPC  
Gerald Mestl, NGPC



# MISSOURI DEPARTMENT OF CONSERVATION

## Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180  
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JOHN D. HOSKINS, Director

July 30, 2002

REC'D AUG 02 2002

Mr. Charles M. Scott, Field Supervisor  
Missouri Ecological Services Field Office  
U. S. Fish and Wildlife Service  
608 East Cherry Street, Room 200  
Columbia, Missouri 65201

Dear Mr. Scott:

Thank you for providing opportunity for state fish and wildlife agencies from Nebraska, Iowa, Kansas, and Missouri to offer comments on your draft supplemental Fish and Wildlife Coordination Act Report for the Missouri River Bank Stabilization and Navigation, Fish and Wildlife Mitigation Project Expansion.

The Missouri Department of Conservation offers the following comments and suggestions.

1. We strongly agree with your second recommendation for the Expanded Mitigation Project (page 14) to incorporate adaptive management throughout Project implementation. While there will always be exceptions, we believe the Corps has demonstrated their willingness to incorporate adaptive management. Perhaps the action item to bring to the forefront of your second recommendation is the need to hardwire monitoring into Project implementation. Basic monitoring of Project successes or failures is fundamental to obtaining documentable information necessary to ensure political and financial support for the Project into the future. Basic monitoring is also the precursor to adaptive management. One needs to understand what change has occurred before determining what adaptive steps to take next. We would like to see a portion of the Project budget be dedicated to monitoring, rather than having to depend on the general Corps' budget from year to year.
2. We strongly agree with your third recommendation (page 14) to encourage the expanded Mitigation Project to find ways to assist the states in studies to better assess the economic impact of fish and wildlife restoration. We offer an example of a real need for assistance. Department research staff members, Dr. Steve Sheriff and Dr. Rochelle Renken, are developing a proposal to evaluate recreational use of the Missouri River in Missouri and the associated economic benefits of restored fish and wildlife habitat. The information from this study would increase understanding of the tie between fish and wildlife restoration and economic benefits. The estimated cost of this study is \$1.5 million. We will not be able to proceed with this important study unless and until we find external funding. The Corps is a logical funding partner.

COMMISSION

STEPHEN C. BRADFORD  
Cape Girardeau

ANITA B. GORMAN  
Kansas City

CYNTHIA METCALPE  
St. Louis

HOWARD L. WOOD  
Bonne Terre

Mr. Charles M. Scott  
Page Two  
July 30, 2002

3. We agree with your fifth recommendation (page 15) that the Corps should expand their education/outreach efforts associated with the Mitigation Project. The Corps is doing a great job in creating and improving the Mitigation Project website. It is to our benefit to increase the level of understanding and support by the public and congressional delegates for the on-the-ground fish and wildlife restoration results that the Project offers. We suggest that the Lewis and Clark commemoration provides an identifiable and attractive link or theme that could be utilized to expand education/outreach efforts by the Corps, other federal agencies, and the states.
4. We suggest articulation of the need to uncouple the Mitigation Project from the Master Manual issue. Politics make this difficult; however, the point should be made at every possible opportunity. The purpose of the Mitigation Project is to offset a portion of the fish and wildlife habitat losses that have resulted from the Missouri River Bank Stabilization and Navigation Project. The Master Manual issue is focused, unfortunately, on three endangered species rather than ecosystem restoration. While the Mitigation Project will certainly benefit endangered species, it should not be used as the primary mechanism to attempt to resolve Master Manual issues. The threat to overwhelm Project funds to meet species-specific needs is real and should be overtly opposed.
5. While the Corps cannot lobby congress for passage of federal legislation that would eliminate or reduce capital gains taxes that result from selling land to the federal government, it can emphasize that the lack of such legislation represents an impediment to Project implementation. Capital gains tax reduction or elimination for selling land to the federal government would perhaps have the greatest positive impact on Project implementation. Willing sellers, which the Project depends on, would become significantly more numerous.
6. Minor editorial corrections. Page 11, second sentence, note the error in the word "channel." Page 11, fifth sentence, should be "... to 3.10 and (not in) 2000 . . . ." Page 14, (3.) third sentence should be "... lead to (not be) a greater appreciation . . . ."

Thanks again for the opportunity to provide input into the U.S. Fish and Wildlife Service's draft supplemental Fish and Wildlife Coordination Act Report for the Missouri River Mitigation Project Expansion.

Sincerely,

  
JOHN D. HOSKINS  
DIRECTOR

c: Conservation Commissioners  
Norm Stucky  
Ollie Torgerson  
Dave Erickson



# STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR  
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
JEFFREY R. VONK, DIRECTOR

July 22, 2002

Jane M. Ledwin  
Acting Field Supervisor  
Fish and Wildlife Service  
Columbia Missouri Ecological Services Field Office  
608 East Cherry Street, Room 200  
Columbia, MO 65201

REC'D JUL 26 2002

Dear Ms. Ledwin:

The Iowa Department of Natural Resources (DNR) has reviewed the U.S. Fish and Wildlife Service's draft supplemental Fish and Wildlife Coordination Act Report for the Missouri River Bank Stabilization and Navigation on the Fish and Wildlife Mitigation Project Expansion authorized by the Water Resources Development Act of 1999.

The State of Iowa has a history of aggressively protecting and managing sovereign lands for public use along the Missouri River. The Iowa DNR managed 21 wildlife areas totaling 9,759 acres immediately adjacent to the river at the time the original mitigation project was authorized in 1986. The majority of these properties are located north of Council Bluffs where the more serious impacts of river channelization and bed degradation are clearly evident. A complicating issue in some instances is the fact that the Iowa-Nebraska state boundary wanders from the main channel at numerous locations north of Council Bluffs per the 1943 Compact.

The Iowa DNR, Service, U.S. Army Corps of Engineers, and willing sellers (landowners) have made significant progress in identifying and implementing mitigation projects in Iowa to restore diverse fish and wildlife habitat adjacent to the Missouri River channel and within the floodplain. The authorization of the original Missouri River Fish and Wildlife Mitigation Project has resulted in the following accomplishments in Iowa (summary):

- ◆ Identified 8 primary mitigation project sites (one site is currently inactive).
- ◆ Development has occurred on 4 sites – one large bend complex is a joint effort with Nebraska.
- ◆ Land acquisition of 1,788 acres on 5 sites.
- ◆ The Iowa DNR has a license on all Corps properties and is the active land manager.

Jane M. Ledwin  
July 16, 2002  
Page 2

The expansion mitigation project is authorized for an additional 118,650 acres in the four states and it has the potential to restore significant reaches of the river. To accomplish this goal, the states of Iowa and Nebraska must work cooperatively to acquire and restore sizable, multifaceted segments of the river. To this end, the Iowa DNR has identified 7 potential project sites that will directly impact 42 river miles.

The Iowa DNR concurs in principle with the Service's findings relative to river history, fish and wildlife habitat losses, resource problems and opportunities, existing mitigation project, review of public benefits, and resource challenges as presented in the document. Land acquisition from willing sellers will be an ongoing challenge in Iowa. Effective habitat restoration will require addressing river degradation and associated dewatering of adjacent wetland habitats primarily found north of Council Bluffs. Just the opposite, silt deposition, is occurring along Iowa's two lower counties south of the Platte River. It is crucial to involve Levee Districts in relocating levees to enhance specific mitigation sites. Addressing these challenges during project planning and engineering and the ability to make adjustments as river dynamics fluctuate will be essential for the expansion mitigation to succeed.

The Iowa DNR endorses the Service's five specific "Recommendations for Expanded Project." We fully intend to be a strong, active partner to provide diverse terrestrial and aquatic habitat on the Missouri River.

We appreciate the opportunity to review and comment on the Service's findings and recommendations addressing the Fish and Wildlife Mitigation Project Expansion. We look forward to working with the Service, Corps and other states in addressing a common goal of improving fish and wildlife habitat on the Missouri River.

Sincerely,



Liz Christiansen  
Deputy Director