

8/4/86

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT PROGRAM
GENERAL PLAN APPENDIX
FOR IMPLEMENTATION

ISLAND 42 BACKWATER RESTORATION AND
WATERFOWL NESTING ENHANCEMENT
POOL 5, UPPER MISSISSIPPI RIVER
WABASHA COUNTY, MINNESOTA

INTRODUCTION

Project Authority

The 1985 Supplemental Appropriations Act (Public Law 99-88) provides authorization and appropriations for an environmental management program for the Upper Mississippi River system that includes fish and wildlife habitat rehabilitation and enhancement. The proposed project would be funded and constructed under this authorization.

Project Purpose

The project purpose is to improve the fisheries habitat of about 95 acres of backwaters by increasing fresh (oxygenated) water flow to the interior areas of the island and by increasing the average depth in one of the interior backwaters by dredging. Waterfowl nesting habitat would be increased through establishment of nesting cover on an existing dredged material disposal area at the south end of the island.

Project Location and Background

Island 42 lies on the Minnesota side of the main channel of the Mississippi River between river miles (RM) 747.7 and 749.6 (attachments 1 and 2). The site lies within the Upper Mississippi Wildlife and Fish Refuge. The backwaters provide habitat for a wide variety of fish including crappies, bluegill, largemouth bass, sauger, northern pike, freshwater drum, shortnose gar, and carp. Island 42 provides substantial spawning habitat in the spring during periods of high flow. However, as the water elevation recedes, water flow through the island interior decreases and dense beds of submergent and emergent vegetation develop. Survey data by the Minnesota Department of Natural Resources (DNR) indicate that the lack of water flow, the extensive growth of submergent vegetation, and the reduced depth in the pool areas caused by sedimentation result in periods of low dissolved oxygen during the late summer and winter. Dissolved oxygen levels during these periods usually average less than 3 parts per million (ppm) which is generally inadequate for most fish. As water levels recede, fish that do not emigrate from dead end and isolated sloughs are trapped and perish. Therefore, while much of the backwater area provides good spawning habitat in the spring, year-round fish habitat is limited.

A major limiting factor for ground-nesting waterfowl in the Mississippi River corridor is the lack of adequate nesting cover. Flooding of islands during the nesting season precludes successful completion of nesting. Some dredged

material disposal sites can provide habitat above floodwater stages, although vegetation on these areas is frequently too sparse to provide adequate nesting cover. A disposal area on the southeast end of Island 42 could be developed as waterfowl nesting habitat with the establishment of vegetation on the site.

Several attempts to increase fresh water flow to the island's interior have been made. In 1974, a 55-foot-wide, 6-foot-deep, 300-foot-long inlet was dredged into the interior of the island on the east side of the island at about RM 748.4. Although some sedimentation has occurred in the opening since construction, the inlet still provides a small portion of the island's interior with fresh water.

Another opening, 6 feet wide, 5 feet deep, and 450 feet long, was constructed on the northwest side of the island in 1978. Permanent flow through the channel could not be maintained because of beaver activity and sedimentation during periods of high water. The channel was closed in 1985.

PLAN FORMULATION

Existing Conditions

Island 42 consists primarily of bottomland forest and backwater sloughs and lakes. Low dissolved oxygen levels exist in the backwater sloughs and lakes during both summer and winter. Grassy areas of the island are used for nesting by waterfowl, primarily mallards and blue-winged teal. However, flooding of the island during nesting season often precludes successful completion of nesting. The accompanying environmental assessment (attachment 3) contains additional information on the environmental setting of the project area.

Future Without-Project Conditions

If no action is taken, the low dissolved oxygen problems and sedimentation will continue. Areas affected by sedimentation and low dissolved oxygen levels may continue to degrade as fishery habitat. Waterfowl nesting habitat located above floodwater stages would continue to be limited in the area.

Alternatives Considered

Other than the proposed action described below, no practicable alternatives were identified that would provide the desired objectives. Pumped flows or use of mechanical aerators would be impractical in this instance because of the size and location of the area to be benefited. The dike around the disposal area offers the best opportunities for providing nesting habitat that would be above floodwater stages. As final project designs are developed, minor alterations to channel routes, pipe location, and areas to be dredged would be analyzed.

Proposed Project

The proposed action consists of two features to improve year-round aquatic habitat quality and one feature to improve waterfowl nesting habitat (attachment 2). Delivery of fresh water from the main channel to the interior

of the island would be accomplished with the installation of about 100 feet of 4-foot diameter culvert to provide an inlet for the water, which would then empty into a 900-foot-long, 50-foot-wide channel. The system would provide a flow of about 15 to 25 cfs of fresh water to the interior slough system. The culvert inlet would be anchored in rock riprap or concrete to prevent high water erosion. The area 50 feet upstream and 50 feet downstream around the entrance of the inlet would be riprapped with about 75 cubic yards of stone or concrete. The increased water flow to the interior water system would improve aquatic habitat quality.

The location of the inlet and channel was identified by the Minnesota DNR and is based on experience gained from previous efforts to improve water flow to the island. Using a gated culvert as an inlet, as opposed to an open channel cut, would decrease sediment flow into the channel as the culvert would be set above the river bed (where most sediment transport occurs) and allow the inlet to be closed during periods of high flow. A 50-foot-wide channel was designed to decrease the possibility of the channel being closed by beaver activity.

In addition to the above feature, a 5-acre area of interior backwater on the island would be dredged to increase the average depth from 2 feet to 5 feet to provide more year-round fish habitat. The dredged material would be placed along the containment dike of an existing disposal area and incorporated into the existing sand, and the dike area would be seeded to provide waterfowl nesting cover.

Project Impacts

Construction of the project would result in some short-term disturbance impacts resulting from vegetation clearing and earth moving. Increasing fresh water flow to the island's interior and deepening a backwater area by dredging would improve year-round fish habitat by helping to maintain dissolved oxygen levels above 5 ppm during the late summer and winter. This would subject fish to less crowding and make available more desirable overwintering habitat which would result in higher survival and condition of resident fish. In addition, there would be an improvement in the habitat diversity of the area. Increased flows would diminish submerged aquatic vegetation abundance, increasing the amount of open areas. The combination of increased flow, diminished aquatic vegetation, and increased habitat interspersions would improve fish production in the area. The creation of the dredged area would dramatically improve year-round fish use of the site. The current average depth is about 2 feet and, during the summer, the site develops dense amounts of aquatic vegetation. Fish use during the summer and winter becomes quite limited. Dredging to a depth of 5 feet would prohibit the growth of most submerged aquatic vegetation. A greater stored oxygen volume would allow the site to support fish through the winter.

The proposed activities would improve about 95 acres of fish habitat. Based on Minnesota DNR surveys conducted in similar habitat areas, production of sport fish in the improved areas should increase by an estimated 50 to 75 pounds per acre.

Project implementation would also benefit water oriented migratory birds such as the great blue heron, cormorant, merganser, and American bald eagle. All

these species are fish eaters and would benefit from an increase in the fish resource base.

Establishment of vegetation along the containment dike would provide approximately 2 acres of waterfowl nesting habitat, much of it located above normal floodwater levels. The addition of this nesting habitat would improve nesting success in the immediate area. The species most likely to use the improved nesting habitat would be mallards and blue-winged teal.

The existing disposal area is identified as an emergency disposal area. Therefore, placement of dredged material from the proposed operations would involve restrictions to ensure that the site's usability is not affected.

The accompanying environmental assessment (attachment 3) and Section 404(b)(1) evaluation (attachment 4) contain additional information on project impacts.

As noted previously, earlier attempts to improve water flow to the island interior failed because of channel closure due to sedimentation or beaver activity. The proposed design for this project would greatly decrease previous problems. The proposed action is the first of several backwater improvement projects on the Mississippi River Wildlife and Fish Refuge that will be recommended under the environmental management program. Monitoring of this project under the Long-Term Resource Monitoring Program would provide valuable information concerning the effectiveness of the design and location of the inlet culvert and channel and would aid in optimizing the design of features for similar projects in the future.

PROJECT REQUIREMENTS

Land Acquisition

No land acquisition would be required because Island 42 is part of the Upper Mississippi National Wildlife and Fish Refuge.

Operation and Maintenance

Operation and maintenance associated with the project would include the operation of a closure structure on the pipe inlet during high water, if necessary, and possible periodic dredging of the 900-foot delivery channel. The U.S. Fish and Wildlife Service would be responsible for operation and maintenance. The average annual cost of operation and maintenance is estimated to be \$400.

Engineering and Construction Costs

Estimated engineering and construction costs are outlined below.

<u>Item</u>	<u>Units</u>	<u>Unit price</u>	<u>Quantity</u>	<u>Estimated cost</u>
Cleaning and grubbing	LS	\$	LS	\$ 2,500
48 inch O CMP culvert	LF	60	100	6,000
Channel excavation	LF	60	900	54,000
Dredging	CY	5	25,000	120,000
Revegetation	LS		LS	5,000
Contingencies				46,900
Subtotal				234,400
E&D				23,000
S&I				18,600
Total estimated cost				\$276,000

Local Cooperation/Cost Sharing Agreement

Section 224(e) of S. 1567 provides for 100 percent Federal funding of enhancement projects when benefits are determined to be national, including benefits to species that are subject to treaties to which the United States is a party. No aquatic species that would benefit from the project have been identified that are subject to any treaty. Waterfowl that would benefit from the project are expected to be mostly mallards and blue-winged teal; these species are migrating waterfowl subject to the Migratory Treaty Act of 1918 (16 U.S.C. 703) between the United States and Canada. Project costs allocated to waterfowl nesting (revegetation) are \$5,000.

Additionally, Section 224(e) of S. 1567 provides for 100-percent Federal funding of enhancement projects that are within the boundaries of the National Wildlife Refuge System. As a result, the Island 42, Minnesota, project is recommended at 100 percent Federal funding. Therefore, no local cooperation/cost-sharing agreement is required for this project. However, the U.S. Fish and Wildlife Service will operate and maintain the project after construction as part of the Upper Mississippi River Wildlife and Fish Refuge.

Coordination

The proposed project has been coordinated with the Minnesota DNR and the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service has indicated support for the project (attachment 5). The environmental assessment and FONSI will be circulated for public review.

Permit Requirements

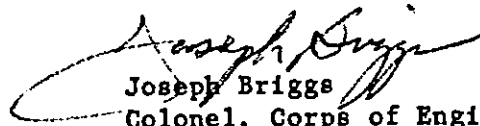
Permits for construction would be required from the Minnesota DNR. As part of the process to ensure project compliance with all Federal statutes, the St. Paul District has prepared a Section 404(b)(1) evaluation (attachment 4) and will obtain Section 401 water quality certification.

Monitoring

The project will be monitored to determine its effectiveness in improving year-round fish habitat. Postconstruction monitoring of dissolved oxygen, fish populations, and sediment will be accomplished under the long-term resource monitoring program.

RECOMMENDATION

I recommend that the Secretary of the Army, under the Upper Mississippi River System Environmental Management Program, construct the Island 42 backwater restoration and waterfowl nesting enhancement project on a 100-percent Federal cost basis. The total cost of the project would be \$276,000. I recommend that the funds be allocated in FY 1986 for project construction.

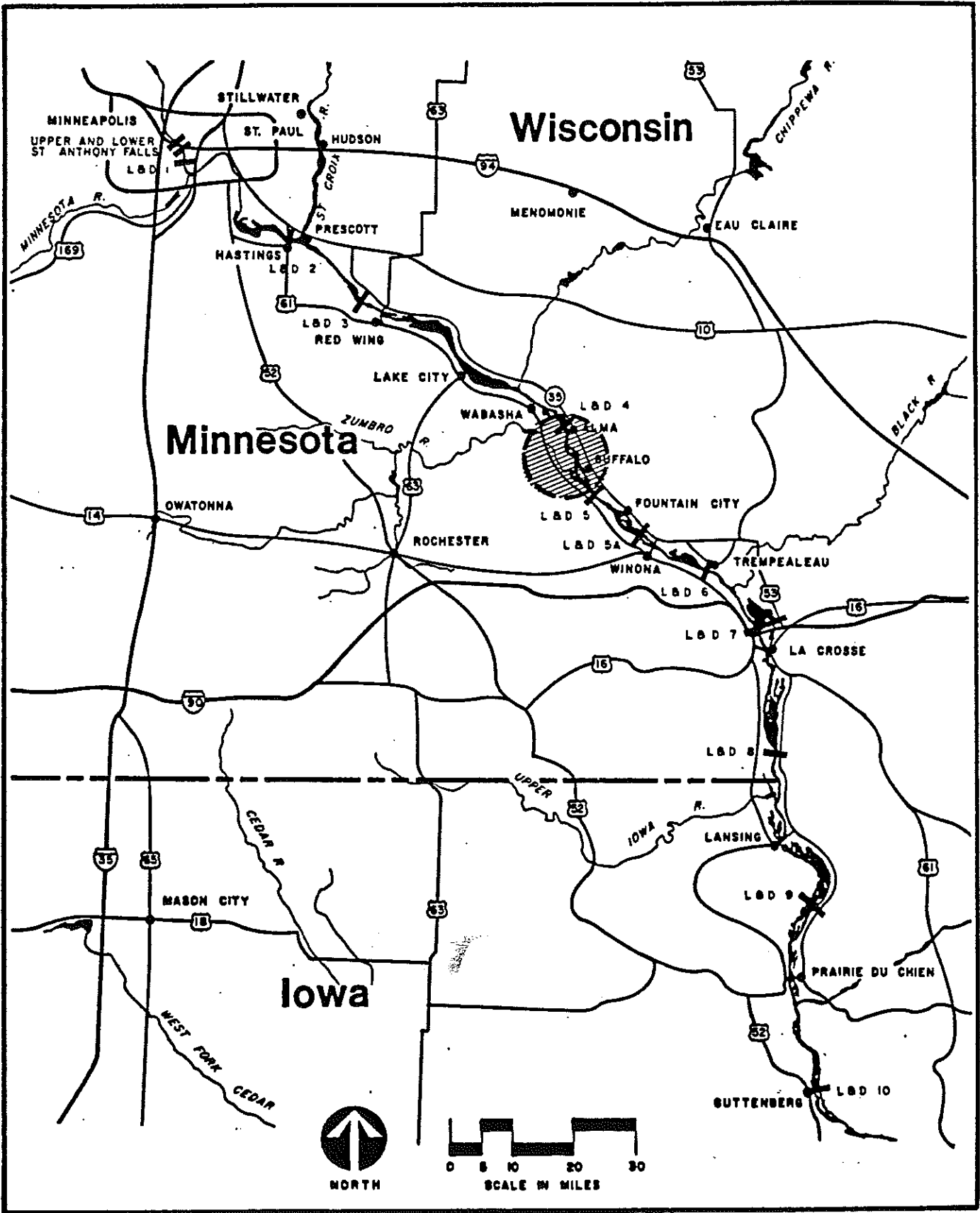


Joseph Briggs
Colonel, Corps of Engineers
District Engineer

ATTACHMENTS

1. General area map
2. Project area map
3. Draft FONSI/environmental assessment
4. Draft Section 404(b)(1) evaluation
5. U.S. Fish and Wildlife Service correspondence

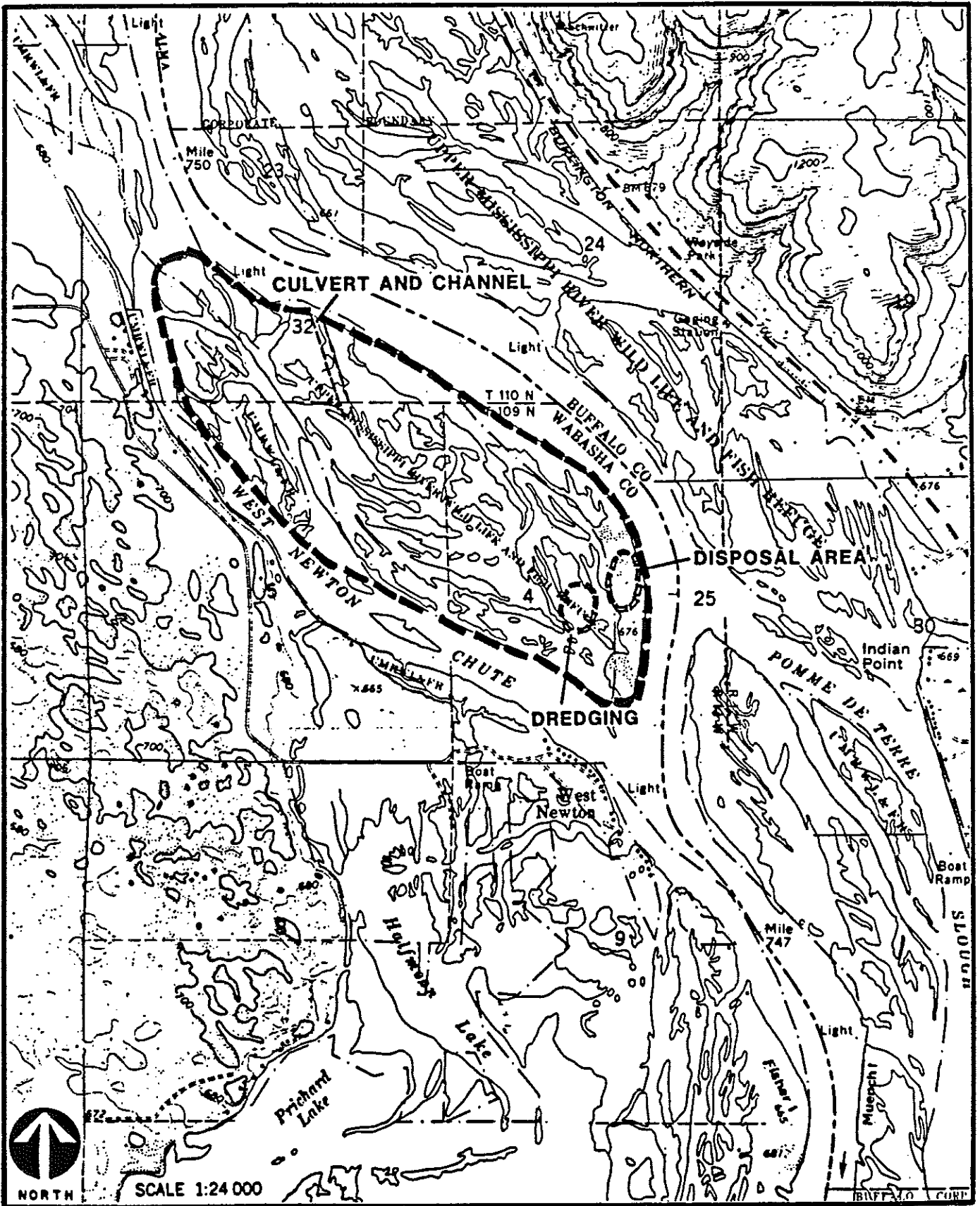
ATTACHMENT 1
GENERAL AREA MAP



**Upper Mississippi River System
Environmental Management Program**

**Project Area Map
Island 42
Pool 5 Mile 749 Plate**

**ATTACHMENT 2
PROJECT AREA MAP**



Upper Mississippi River System
 Environmental Management Program

Project Area Map
 Island 42
 Pool 5 Mile 749 Plate

ATTACHMENT 3
FONSI/ENVIRONMENTAL ASSESSMENT



DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS
1135 U.S. POST OFFICE & CUSTOM HOUSE
ST. PAUL, MINNESOTA 55101-1479

REPLY TO
ATTENTION OF

Environmental Resources
Planning Division

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act, the St. Paul District, Corps of Engineers, has assessed the environmental impacts of the following project:

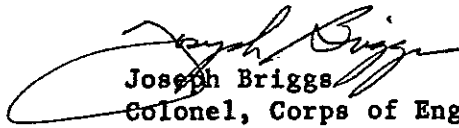
Island 42 Backwater Restoration and
Waterfowl Nesting Enhancement,
Pool 5, Upper Mississippi River,
Wabasha County, Minnesota

The intent of the project is to improve aquatic habitat and waterfowl nesting habitat on Island 42. The project is described in section 3.00 of the environmental assessment. This finding of no significant impact is based on the following factors: the project would have beneficial impacts on fish and wildlife resources; the project would have no impacts on the cultural environment; and continued coordination will be maintained with appropriate State and Federal agencies. See sections 1.00 and 5.00 of the assessment for a discussion of the impacts.

The environmental review process indicates that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement will not be prepared.

Date

4 Aug 1986


Joseph Briggs
Colonel, Corps of Engineers
District Engineer

ENVIRONMENTAL ASSESSMENT
ISLAND 42 BACKWATER RESTORATION AND
WATERFOWL NESTING ENHANCEMENT
POOL 5, UPPER MISSISSIPPI RIVER,
WABASHA COUNTY, MINNESOTA

1.00 SUMMARY

Description of Project

1.01 Island 42 lies on the Minnesota side of the main channel of the Mississippi River between river miles 747.7 and 749.2. Public Law (P.L.) 99-88 authorizes implementation of this project as part of the Upper Mississippi River System Environmental Management Program. The project would improve fisheries habitat by increasing fresh water flow to the interior backwater areas of the island and by increasing the average depth in one of the interior backwaters by dredging. Waterfowl nesting habitat would be improved by establishing nesting cover on an existing dredged material disposal area. The alternative to this proposal is no action.

Major Conclusions

1.02 An environmental review of the proposed action indicates that the project would improve aquatic and waterfowl habitat and would not have significant adverse effects on the environment. Therefore, an environmental impact statement will not be prepared.

Relationship to Environmental Requirements

1.03 The proposed action would comply with Federal environmental laws, executive orders, and policies, and with State and local laws and policies; including the Clean Air Act, as amended; the Clean Water Act of 1977; the Endangered Species Act of 1973, as amended; the Land and Water Conservation Fund Act of 1965, as amended; the National Historic Preservation Act of 1966, as amended; the Fish and Wildlife Coordination Act of 1958, as amended; the Farmland Protection Policy Act; Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands.

1.04 In accordance with Corps of Engineers regulations (33 CFR 323.4(a)(2)), a Section 404(b)(1) evaluation has been prepared for this project.

2.00 NEED FOR AND OBJECTIVES OF ACTION

2.01 Authority for this project as part of the Upper Mississippi River System Environmental Management Program is provided by P.L. 99-88. Fisheries investigations on Island 42 have indicated the area does not support year-round fish use because of reduced depth in the pools caused by sedimentation, excessive growth of submerged aquatic vegetation, and depressed dissolved oxygen levels resulting from a lack of fresh (oxygenated) water flow. The project is typical of many backwater areas where fish habitat values diminish as sedimentation occurs.

2.02 The proposed activities would deepen the selected backwater area, increasing the value of year-round fish habitat. The project would demonstrate the possibilities of maintaining a depth of 5 feet in backwater areas by dredging. Establishment of vegetation on the dredged material disposal area on the riverward side of the island would increase waterfowl nesting habitat. Introduction of fresh water to the interior of the island would improve year-round fish habitat.

3.00 ALTERNATIVES

Without-Project Condition (No Action)

3.01 If no action is taken, low dissolved oxygen level problems and sedimentation would continue to occur. Aquatic habitat quality in affected backwater areas would slowly degrade. Waterfowl nesting habitat located above floodwater stages would continue to be limited in the area.

Selected Plan

3.02 The proposed action consists of two features to improve year-round aquatic habitat quality, fresh water flow enhancement and dredging, and one feature to improve waterfowl nesting habitat. Delivery of fresh water from the main channel to the interior of the island would be accomplished with the installation of 100 feet of buried pipe to provide an inlet for the water, which would then empty into a 900-foot-long, 50-foot-wide, 3-foot-deep channel. The system would provide a flow of about 15 to 25 cfs of fresh water to the interior slough system. The pipe inlet would be anchored in rock riprap to prevent high-water erosion. This feature would increase water flow in the interior water system, improving aquatic habitat quality. In addition, a 5-acre area of an interior backwater would be dredged to increase the average depth from 2 feet to 5 feet and thereby increase year-round fish habitat. The dredged material would be placed along the containment dike of an existing disposal area and be incorporated into the existing sand, and the dike area would be seeded to provide waterfowl nesting cover.

4.00 AFFECTED ENVIRONMENT

4.01 Island 42 is on the Minnesota side of the main channel of the Mississippi River between river miles 747.7 and 749.6. The plant community of Island 42 is typical of Upper Mississippi River habitats, consisting of floodplain forest and backwater sloughs and lakes. The most common tree species present include silver maple, river birch, and American elm, with the understory generally dominated by poison ivy. The backwater areas have little flow, and submergent vegetation is extensive, with the most common species present being coontail, waterweed, river pondweed, curly-leaf pondweed, and water stargrass. Emergent vegetation is not as abundant in the backwater areas, with white water lily, burreed, and cattail the common species present.

4.02 Island 42 has a diverse wildlife community. Wildlife most commonly found in the area includes muskrat, beaver, wading birds, waterfowl, and a wide variety of songbirds.

4.03 The area also provides habitat for a wide variety of fish, including crappies, bluegill, largemouth bass, sauger, northern pike, freshwater drum, shortnose gar, and carp. Substantial fish spawning habitat is provided during periods of high water. As the water elevation recedes, dense beds of submergent vegetation develop. Coupled with shallow areas with low water flow, the dissolved oxygen levels in the backwater areas become very low, reducing year-round aquatic habitat value of these areas.

4.04 No State-listed threatened or endangered species are present in the project area. Federally-listed threatened or endangered species may occur in the area. The Arctic peregrine falcon (Falco peregrinus) and the bald eagle (Haliaeetus leucocephalus) may be sighted in the area during migration. In addition, bald eagles may occasionally use the area for roosting. A mussel survey conducted on the west side of the island in 1977 did not indicate the presence of the Higgins' eye pearly mussel (Lampsilis higginsii) in the area. Backwater habitats with fine substrates, such as those in the project area, are not preferred habitats for the Higgins' eye pearly mussel.

4.05 In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, the National Register has been consulted. No sites listed on or eligible for the National Register are located in the proposed project area.

5.00 ENVIRONMENTAL EFFECTS

5.01 An environmental analysis has been conducted for the proposed action, and a discussion of the impacts follows. As specified by Section 122 of the 1970 Rivers and Harbors Act, the categories of impacts listed in table EA-1 were reviewed and considered in arriving at the final determination. In accordance with Corps of Engineers regulations (33 CFR 323.4(a)(2)), a Section 404(b)(1) evaluation was prepared.

Natural Resources

5.02 Construction of the project would result in some short-term disturbance impacts resulting from vegetation clearing, earth moving, and dredging activities. About 1 acre of woods would be lost with the construction of the 900-foot delivery channel from the pipe outlet to the island's interior backwaters.

5.03 The introduction of fresh water to the interior backwaters of the island would increase year-round fish habitat by increasing the water flow and decreasing periods of low dissolved oxygen. The proposed action would help to maintain average dissolved oxygen levels above 5 ppm during the late summer and winter. Similarly, dredging activities would increase fish habitat by increasing the depth of the selected backwaters area from 2 feet to an average depth of 5 feet. Both actions would diminish submerged aquatic vegetation abundance. The combination of increased water depth in selected areas, increased flows, and diminished aquatic vegetation would improve fish habitat and production on about 95 acres. The increase in desirable late summer and overwinter habitat would subject fish to less crowding and result in higher survival and improved condition of resident fish. Based on Minnesota DNR

surveys conducted in similar habitat areas, sport fish production in the improved areas is expected to increase by an estimated 50 to 75 pounds per acre.

5.04 Establishment of vegetation along the containment dike of the existing disposal area would provide new waterfowl nesting habitat. The site is identified as an emergency dredged material disposal area. Placement of the dredged material from this project would follow restrictions to ensure that the use of the site as an emergency disposal site is not affected.

5.05 The proposed action would result in short-term decreases in water quality because of temporary localized increases in turbidity.

5.06 No State-listed or federally-listed threatened or endangered species would be adversely affected by the project. The suitability of the area as a roosting site for bald eagles would be temporarily affected because of disturbance during construction.

Cultural Resources

5.07 The proposed project area has a low potential for cultural resources sites. Coordination with the Minnesota State Historic Preservation Officer has been initiated. A meeting with the Environmental Review Officer was held on November 26, 1985, to review the project and to examine the U.S. Geological Survey quad maps and the 1895 Mississippi River Commission maps. A review response is expected from the State Historic Preservation Officer shortly. Project information and maps have also been reviewed by Mr. Robert Larson, a geomorphologist with the Corps of Engineers Waterways Experiment Station (WES), for an analysis of the geomorphic setting in relation to the archeological potential of the project area. The review indicates that, geomorphically, the island has been extensively reworked by the river, and it has a low potential for cultural resource sites. The proposed project areas do not need to be surveyed.

6.00 COORDINATION

6.01 The proposed project has been coordinated with the Minnesota DNR and the U.S. Fish and Wildlife Service. This environmental assessment and general plan report will be sent to the following agencies.

Federal

Department of Transportation
Environmental Protection Agency
U.S. Coast Guard
U.S. Fish and Wildlife Service
U.S. Geological Survey
National Park Service
Soil Conservation Service
Advisory Council on Historic Preservation

State of Minnesota

Department of Energy, Planning, and Development
Department of Agriculture
Department of Health
Department of Natural Resources
Department of Transportation
Pollution Control Agency
State Archeologist
State Historic Preservation Officer
Water Resources Board

County

Wabasha County Board of Commissioners

Table EA-1.

Environmental Impact Assessment Matrix

Magnitude of Probable Impact

Name of Parameter	Increasing Beneficial Impact			No Appreciable Effect		Increasing Adverse Impact	
	Increasing Significant	Substantial	Minor	Minor	Substantial	Minor	Significant
A. Social Effects							
1. Historical/Archeological Values				X			
2. Noise Levels				X			
3. Aesthetic Values				X			
4. Recreational Opportunities			X				
5. Transportation				X			
6. Public Health and Safety				X			
7. Community Cohesion (Sense of Unity)				X			
8. Community Growth and Development				X			
9. Business and Home Relocations				X			
10. Existing/Potential Land Use				X			
11. Controversy				X			
B. Economic Effects							
1. Property Values				X			
2. Tax Revenues				X			
3. Public Facilities and Services				X			
4. Regional Growth				X			
5. Employment				X			
6. Business Activity				X			
7. Farmland/Food Supply				X			
8. Commercial Navigation				X			
9. Flooding Effects				X			
10. Energy Needs and Resources				X			
C. Natural Resource Effects							
1. Air Quality				X			
2. Terrestrial Habitat			X				
3. Wetlands				X			
4. Aquatic Habitat		X					
5. Habitat Diversity and Interspersion		X					
6. Biological Productivity				X			
7. Surface Water Quality				X			
8. Water Supply				X			
9. Groundwater				X			
10. Soils				X			
11. Threatened and Endangered Species				X			

ATTACHMENT 4
404(b)(1) EVALUATION

SECTION 404(b)(1) EVALUATION
DREDGED MATERIAL PLACEMENT
ISLAND 42, WABASHA COUNTY, MINNESOTA
POOL 5, UPPER MISSISSIPPI RIVER

I. PROJECT DESCRIPTION

A. Background - Island 42 lies on the Minnesota side of the Mississippi River between river miles 747.7 and 749.6. The purpose of the proposed activities is to improve the fisheries habitat of the backwater area of the island's interior by increasing fresh (oxygenated) water flow to the interior areas of the island and by increasing the average depth in one of the interior backwaters by dredging. Waterfowl nesting habitat would be increased on the island by the establishment of nesting cover on an existing dredged material disposal area at the south end of the island. Public Law 99-88 provides authorization and appropriations for a 10-year environmental program on the Upper Mississippi River that includes fish and wildlife rehabilitation and enhancement. The proposed activities would be implemented under this authority.

B. Proposed Action - Delivery of fresh water from the main channel to the interior of the island would be accomplished with the installation of about 100 feet of 2- to 4-foot diameter culvert to provide an inlet for the water, which would then empty into a 900-foot long, 50-foot wide channel. Approximately 5,000 cubic yards of material would be excavated for channel construction. This material would be sidecast and revegetated for waterfowl nesting cover. The area 50 feet upstream and 50 feet downstream around the entrance of the pipe inlet would be riprapped with about 75 cubic yards of stone or concrete. In addition, about 25,000 cubic yards of material would be dredged from an interior backwater on the island to increase water depth and improve fish habitat. The area would be dredged using an 8-inch hydraulic dredge. The dredged material would be temporarily stored in an existing disposal area at the south end of Island 42. The dewatered dredged material would then be worked into the sand of the existing containment dike and the dike area seeded to establish vegetation. It is anticipated that the activities would begin in July 1986 and be completed by September 1986.

C. Quality and Source of Material - Riprap around the pipe would be either rock obtained from approved quarries in the vicinity of the project or concrete. The dredged material would consist primarily of organic silt. Because of the nature of the dredged materials, it is likely they may contain trace amounts of heavy metals or pesticides.

II. FACTUAL DETERMINATIONS

A. Proposed Disposal Site Determinations (40 CFR 230.11(f)) - The proposed riprap would be of sufficient size so that little material would be suspended in the water column. The disposal site for the dredged material is an existing disposal site on the south end of Island 42.

B. Physical Substrate Determination (40 CFR 230.11(a)) - The soil of the disposal site and containment dike consists of sand. Soils in the area where the culvert, riprap, and sidecast material would be placed are alluvial silt and sands. The culvert would be placed by cutting a trench and then backfilling over the culvert. Riprap around the inlet area would be placed to conform to the existing slope of the bank area. The riprap would be sufficiently large to preclude movement of the fill material. The material excavated for channel construction would be sidecast on an area that is currently bottomland hardwoods. Because placement of the riprap and sidecast materials would have minimal effects, no special actions to minimize adverse impacts would be taken.

C. Water Circulation, Fluctuations, and Salinity Determinations (40 CFR 230.11(b)) - Placement of the culvert would direct water flow to the interior of the island, as discussed in part I.A. This activity should improve the water quality of the interior sloughs. The other fill activities would have no effect on water circulation, fluctuation, or salinity.

D. Suspended Particulate/Turbidity Determinations (40 CFR 230.11(c)) - Placement of the culvert and riprap may result in some minor temporary increases in turbidity during project construction. Because of the small amount of dredged material that would be placed in the existing containment area, it is unlikely that any effluent would be discharged from the disposal site. Water would most probably leave the site through soil percolation.

E. Containment Determinations (40 CFR 230.11(d)) - No introduction, relocation, or increase in contaminants would result from the placement of the culvert or riprap material or the sidecasting of material for channel construction. Any trace contaminants in the effluent from the dredged material would be filtered through soil percolation.

F. Aquatic Ecosystem and Organism Determinations (40 CFR 230.11(e)) - Some temporary disturbances of wildlife would result from equipment operations during construction. Since vegetation impacts would be restricted to the culvert placement, riprap, and channel construction area, actual displacement of wildlife would be minor. The berm created by the sidecasting of excavated material for channel construction would be revegetated to provide waterfowl nesting cover. Diversion of water flow to the interior sloughs of the island would increase year-round fish habitat by increasing water flow and decreasing periods of low dissolved oxygen. Incorporation of the organic silt dredged material into the sand of the containment dike would increase the possibility of successfully establishing vegetation along the dike. No federally-listed or State-listed threatened or endangered species would be affected by the proposed action.

G. Determination of Cumulative Effects on the Aquatic Ecosystem (40 CFR 230.11(g)) - No cumulative effects would result.

H. Determination of Secondary Effects on the Aquatic Ecosystem (40 CFR 230.11(h)) - No secondary effects would result.

I. Determination of Potential Effects on Human Use Characteristics (40 CFR 230.50-54) - The proposed action would result in no adverse effects on municipal or private water supplies, recreational or commercial fisheries, water-related recreation, aesthetics, parks, national historic monuments, or similar preserves.

III. FINDINGS OF COMPLIANCE

A. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge that Would Have Less Impact upon the Aquatic Ecosystem (40 CFR 230.10(a)) - The proposed action is designed to improve the aquatic and terrestrial habitat of the area. Therefore, other alternatives were not desired.

B. Compliance with Applicable State Water Quality Standards (40 CFR 230.10(b)(1)) - The proposed actions would not violate any State water quality standards.

C. Compliance with Section 307 of the Clean Water Act (40 CFR 230.10(b)(2)) - The proposed action would not violate any applicable effluent standard or prohibition under Section 307 of the Clean Water Act.

D. Compliance with the Endangered Species Act (40 CFR 230.10(b)(3)) - The proposed action would comply with the Endangered Species Act of 1973, as amended.

E. Evaluation of Extent of Degradation of Waters of the United States (40 CFR 230.10(c)) - The proposed project would not have any significant adverse effect on the following: human health and welfare; life stages of aquatic life or other wildlife dependent on aquatic systems; aquatic ecosystem diversity, productivity, or stability; or recreational, aesthetic, cultural, or economic values.

F. Appropriate and Practicable Steps Taken to Minimize Adverse Impacts of the Discharge on the Aquatic Ecosystem (40 CFR 230.10(d)) - The proposed activities would be done in such a manner as to minimize to the extent possible erosion from the project sites during construction.

G. Conclusions - Based on this evaluation, the proposed site for the discharge of dredged and fill material has been determined to be in compliance with the requirements of the guidelines, with the inclusion of appropriate and practicable conditions to minimize pollution or adverse effects to the aquatic ecosystem.

4 Aug 1986
Date


Joseph Briggs
Colonel, Corps of Engineers
District Engineer

ATTACHMENT 5

U.S. FISH AND WILDLIFE SERVICE CORRESPONDENCE

- 1. Fish and Wildlife Coordination Act Report**
- 2. Endangered Species Coordination**
- 3. FWS letter of Intent**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

SPFO

St. Paul Field Office, Habitat Resources
50 Park Square Court
400 Sibley Street
St. Paul, Minnesota 55101

December 2, 1985

Mr. Louis Kowalski
Chief, Planning Division
U.S. Army Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101-1479

Dear Mr. Kowalski:

This replies to your November 26, 1985 letter requesting our comments on seven habitat enhancement and recreation projects proposed on the Upper Mississippi River. These projects are part of the Upper Mississippi River System Environmental Management Program (EMP) as authorized by Public Law 99-88.

We have reviewed the draft planning documents prepared by the District for these projects and offer the following preliminary comments. There are presently four habitat enhancement projects under consideration as candidates for construction in FY 86-87.

- Blackhawk Park Backwater Rehabilitation - Proposed by the Wisconsin Department of Natural Resources: channel construction and culvert installation.
- Wilcox Wildlife and Recreation Project - Proposed by the Minnesota Department of Natural Resources: land purchase, boat access, and bank fishing.
- Island 42 Backwater Enhancement - Proposed by the Minnesota Department of Natural Resources: culvert/channel installation and backwater dredging.
- Guttenberg Fish Ponds - Proposed by the U.S. Fish and Wildlife Service and Iowa Conservation Commission: culvert and water control structure installation.

In general, these habitat enhancement projects were either specific GREAT-I recommendations or were proposed in the past by resource agencies. Each has its own unique merits in terms of enhancing fish and

wildlife resources. The Service concurs with the conceptual design of these projects and their possible implementation in FY 86-87 as part of the EMP. We understand that projects selected for implementation will be subject to routine agency coordination, NEPA documentation, federal/state/local permits, etc. We therefore request that close coordination be maintained with the Service during the advanced planning stages for any of these projects selected for construction in FY 86-87 under the EMP.

In addition to the above habitat enhancement projects, three recreation projects are also proposed at this time as candidates to the EMP.

- Guttenberg Boat Access - Proposed by the Iowa Conservation Commission: boat launch and parking facility construction.
- Du Charme Creek Recreational Area - Proposed by the Wisconsin Department of Natural Resources: boat access and beach facilities.
- Dakota City Public Access - Proposed by the Minnesota Department of Natural Resources: boat launch and parking facilities.

We note that specific project plans are not yet available for the Dakota City project. However, we understand the project will involve use of Site 7.05 which is designated as a long-term dredged material disposal site for Pool 7. The St. Paul District's plan for disposal at Site 7.05 included the potential for future construction of a boat access. While construction of the proposed project in FY 86-87 would speed up the eventual construction of a boat access, we are somewhat concerned with the potential loss of disposal capacity in Pool 7 if Corps' dredged material is not beneficially used for construction. This could result in a need to develop additional long-term dredged material disposal sites in Pool 7. At this time, the Service would concur with including this project as a candidate for the EMP provided it is designed and constructed to utilize Corps' dredged material to the maximum extent possible for beneficial use. Should this project be selected for construction in FY 86-87, we also request early coordination be maintained with this office to facilitate Section 10/404 permit processing.

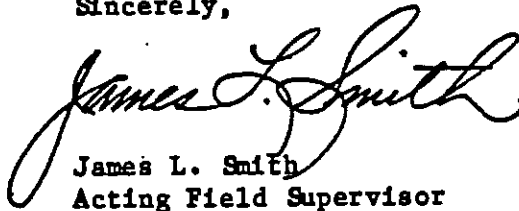
At this time, the Service tentatively concurs with the inclusion of the Du Charme Creek and Guttenberg boat access projects as candidates for the EMP. Our support is tentative at this time because all or portions of each project are presently in the public notice review process for required Department of the Army permits. With respect to the Du Charme Creek project, the Wisconsin Department of Transportation has applied for a permit from the St. Paul District to construct the parking lot

referenced in your draft report. In addition, the Iowa Conservation Commission has applied for a Corps' permit from your Rock Island District to construct the proposed boat access. We understand that final action has not been taken on these permit requests, pending negotiations between the Districts, Service and applicants. The Service is willing to provide additional comments to the Corps on these projects once the permitting process is concluded.

We appreciate the opportunity to offer our preliminary comments on these projects. Please keep us informed as to the status of projects proposed under the EMP.

These comments have been prepared under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Service's Mitigation Policy and are consistent with the intent of the National Environmental Policy Act of 1969.

Sincerely,



James L. Smith
Acting Field Supervisor

cc: Iowa Conservation Comm., Des Moines, IA
MN DNR, St. Paul/Lake City
WI DNR, Madison/Eau Claire
Iowa Conservation Commission, Des Moines



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

IN REPLY REFER TO:

AF/SE

3-86-F-MN-3-SPFO

JAN 30 1986

Colonel Joseph Briggs
District Engineer, St. Paul District
U.S. Army Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101-1479

Dear Colonel Briggs:

This replies to a December 11, 1985 letter from Mr. Wayne Knott of your Environmental Resources Branch concerning potential impacts on federally endangered or threatened species from the possible construction of three habitat enhancement and recreation projects proposed on the Upper Mississippi River (UMR). These projects are part of the Upper Mississippi River System Environmental Management Program (EMP) as authorized by Public Law 99-88.

The three proposed projects are described below:

- a. Island 42 Backwater Enhancement (Pool 5, RM 748) - The proposed project calls for the installation of 100 feet of buried pipe between the main channel and the island's interior to provide an inlet for oxygenated water. In addition, a five-acre area of an interior lake would be dredged to a depth of five feet. The dredged material would be dewatered within a confined disposal area and subsequently spread over sandy areas on the island. These areas would then be seeded to provide waterfowl nesting cover.
- b. Island 40, Wiggle Waggle Slough (Pool 5) - The proposed project would involve dredging approximately 45,000 cubic yards of material from the slough to restore water depths and circulation patterns through the slough and into the Finger Lakes and Ing's Lake. Dredged material would be placed at the head of Island 40 to restore the eroded portion of the island. This area would then be riprapped to prevent further erosion.
- c. Du Charme Creek (Pool 10, RM 844) - This proposal calls for the purchase of islands located off of Du Charme Creek and the subsequent recreational enhancement of the islands. This enhancement would entail the placement of approximately 6,000 cubic yards of dredged material on the islands. This disposal would be done in a manner to minimize the potential for erosion and downstream sedimentation.

With respect to the federally threatened bald eagle (Haliaeetus leucocephalus), the Fish and Wildlife Service concurs with your "may affect" determination for projects a and b identified above. Since eagles may use trees adjacent to both project locations for roosting, we concur with your assessment that construction of projects a and b could cause a short-term disturbance to eagles using these areas. However, due to the nature of the proposed work it is my biological opinion that implementation of these projects will not jeopardize the continued existence of this species.

While the Service also concurs with your determination that construction of project c, identified above, may affect the federally endangered Higgins' eye pearly mussel (Lampsilis higginsii), we feel that the information contained in your biological assessment is inadequate to conclude that project impacts would be relatively minor and short-term in nature. As stated in your biological assessment, mussel beds containing Lampsilis higginsii have been found adjacent to and downstream of Du Charme Creek. Depending on the number of individuals present, the construction methods used in the placement of fill material and the effectiveness of erosion control measures implemented, adverse impacts to mussels in general and L. higginsii in particular could be significant at this location. However, it is my biological opinion that implementation of the Du Charme Creek project will not jeopardize the continued existence of L. higginsii if measures previously agreed upon by the St. Paul District are taken as follows:

1. Mussel Survey and Relocation

The proposed project is preceded by a survey of the river bottom at the project site and does not exceed an incidental take of three L. higginsii in an identifiable mussel bed or a total of six L. higginsii for the entire project for relocation to suitable habitat in Pool 10.

A "mussel bed" in this biological opinion is defined as an area where the density of mussels of any species exceeds 10 per square meter of river bottom.

In consideration of the limited movement of mussels along river bottoms, the survey must be conducted in the spring or fall within nine months prior to the start of project construction.

The mussel survey must be comprehensive and conducted with scuba diving by a biologist familiar with the identification of L. higginsii, including juvenile specimens.

Live specimens of L. higginsii are to be relocated in suitable habitat within Pool 10 by the biologist conducting the survey.

Suitable habitat for relocation of mussels is to be determined by the biologist conducting the survey.

Live specimens are to be placed on the river bottom by hand.

A fish and wildlife biologist of the St. Paul Field Office (telephone 612/725-7131) will be present during the survey and relocation of mussel specimens.

The survey relocation of specimens will cease and this office will be contacted immediately if more than three L. higginsi in an identifiable mussel bed or more than six L. higginsi in the entire project are observed.

The presence of more than three L. higginsi in an identifiable mussel bed or more than six L. higginsi for the project would exceed the expected density of L. higginsi in this area, and therefore would constitute new information regarding reinitiation of consultation with this office. Consultation with this office must also be reinitiated should the proposed project be modified.

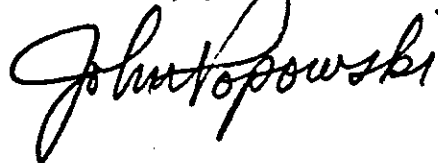
2. Project Design and Construction

Dredge or fill material placed at this site must be accomplished in a manner which minimizes adverse impacts to mussels. At this time, the Service recommends mechanical versus hydraulic placement of dredged or fill material.

Fill material discharged at this site must be adequately stabilized to prevent erosion and secondary downstream sedimentation of material.

These comments have been prepared under the authority of and in accordance with provisions of the Endangered Species Act of 1973, as amended. Fish and Wildlife Service comments on these projects with respect to the Fish and Wildlife Coordination Act have or will be provided at the appropriate stage of project development.

Sincerely yours,



John Popowski
Acting Regional Director



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

IN REPLY REFER TO:

AW/PSW

MAR 11 1986

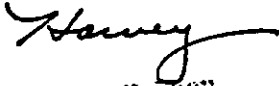
Colonel Joseph Briggs
District Engineer, St. Paul District
U. S. Army Corps of Engineers
1135 U. S. Post Office and Custom House
St. Paul, Minnesota 55101-1479

Dear Colonel ^{Joe} Briggs:

The Island 42 Backwater Restoration and Waterfowl Nesting Enhancement project (Pool 5) has been proposed for construction in Fiscal Year 1986 under the Upper Mississippi River System Environmental Management Program. When complete, routine operation and maintenance associated with the project will be the responsibility of the Fish and Wildlife Service. When final approval for this project is received, details of maintenance responsibilities for other than routine maintenance can be further addressed through a cooperative agreement or other suitable document between our agencies.

If you have questions or need additional information, please contact Charles Gibbons at FTS 725-4689.

Sincerely yours,


Harvey K. Hansen
Regional Director

cc: Upper Mississippi NW&FR