

DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS 180 FIFTH STREET EAST, SUITE 700 ST. PAUL MN 55101-1638

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, the St. Paul District, Corps of Engineers, has assessed the environmental impacts of the following proposed project:

Chippewa River Diversion Approach Channel Bank Stabilization Project, Lac qui Parle Flood Control and Water Conservation Project Chippewa County, Minnesota

The primary purpose of the project is to stabilize the banks of the Chippewa River Diversion Approach Channel. This area has experienced extensive bank erosion from fluctuating water levels, ice formation, and high near-bank velocities. The proposed project would involve riprap supplementation and installation of about 900 linear feet to the east and west banks of the channel. This work would involve the operation of heavy equipment including backhoes, trucks, and dozers. The work is anticipated to require about 10 working days and would occur during the fall or winter months of 2012, depending on hydrological conditions and available funds and resources.

This Finding of No Significant Impact is based on the following factors: the proposed project would have only minor and short-term adverse impacts on air and water quality, noise levels, aesthetic values, and aquatic and terrestrial habitat. The associated level of controversy is expected to be nominal. The project would have permanent non-significant impacts to surface water quality and aquatic habitat, biological productivity, infrastructure, public health and safety, community growth and development, and aesthetic value. The project would have no impact on cultural resources or federally-listed threatened or endangered species. A complete explanation of these determinations is presented in the "Environmental Effects" section of the environmental assessment.

Based on information presented in the Environmental Assessment, Chippewa Diversion Channel Bank Stabilization Project, I have determined that the proposed action would not be a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement will not be prepared.

26 July 2012

Michael J. Price O Colonel, Corps of Engineers

Va Bergmann

District Engineer

CEMVP-PD-E 25 July 2012

MEMORANDUM FOR: District Commander

SUBJECT: FONSI for Environmental Assessment of the Chippewa Diversion Approach Channel Bank Stabilization Project, Lac qui Parle Project, Chippewa County, Minnesota.

- Attached for your signature is the Finding of No Significant Impact (FONSI) for the Chippewa Diversion Approach Channel Bank Stabilization Project. The required 30-day public review period expired on 13 July 2012. No comments were received from the public.
- 2. The project will stabilize about 900 feet of shoreline for the Chippewa River Diversion approach channel by installing new riprap on the east bank and supplementing existing riprap on the west bank. This work would involve the operation of heavy equipment including backhoes, trucks, and dozers. The work is anticipated to require about 10 working days and would occur during the fall or winter months of 2012, depending on hydrological conditions and available funds and resources.
- 3. The coordination letters and the responses received from the various agencies are included in Attachment F of the environmental assessment. The U.S. Fish and Wildlife Service indicated they have no concerns with the proposed project. The Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Natural Resources had minor comments, which have been addressed. The Minnesota State Historic Preservation Office also concurred that the proposed bank stabilization work is in accordance with applicable regulations (Attachment H).
- 4. The Minnesota Pollution Control Agency (MPCA) has tentatively granted a waiver for Section 401 Water Quality Certification (Attachment G). A formal waiver from MPCA is anticipated within 10 to 30 days of the FONSI. The contractor will be responsible for obtaining an NPDES permit.
- The proposed project would have no effect on any federally-listed threatened or endangered species.
- 6. The FONSI and the 404(b)(1) evaluation are enclosed for your signature. There are no unresolved substantive issues on this project and I recommend they be signed at this time.

TERRY J. BIRKENSTOCK

Deputy Chief, Regional Planning and Environment Division North

Encl

Potter PD-E Birkenstock PD-E DE Person OC PPrice DE PRICE DE PRICE

ENVIRONMENTAL ASSESSMENT

Chippewa River Diversion Approach Channel Bank Stabilization La qui Parle Flood Control and Water Conservation Project Chippewa County, Minnesota



U.S. ARMY CORPS OF ENGINEERS ST. PAUL DISTRICT

July 2012

ENVIRONMENTAL ASSESSMENT

Chippewa River Diversion Approach Channel Bank Stabilization La qui Parle Flood Control and Water Conservation Project Chippewa County, Minnesota

TABLE OF CONTENTS

| <u>Section</u> | <u>Page</u> |
|--------------------------------------------|------------------------------------------------------------|
| 1.0 | PURPOSE, NEED, AND AUTHORITY FOR THE PROPOSED PROJECT EA-1 |
| 2.0 | PROPOSED AND ALTERNATIVE ACTIONS EA-4 |
| 3.0 | AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES EA-10 |
| 4.0 | COORDINATION EA-15 |
| 5.0 | MAJOR FINDINGS AND CONCLUSIONS EA-15 |
| | FIGURES |
| Figure 2 – Figure 8. M channel Figures 9 A | erial image and location of the proposed project |
| | TABLES |
| | ummary of Proposed Project Features |

LIST OF ATTACHMENTS

- Attachment A. Mussel Data for the Chippewa River near the Diversion Structure.
- Attachment B. Results of Mussel Survey (Pollywog) in the Project Area Conducted on April 4, 2012.
- Attachment C. Results of Sediment Analysis for a 2003 Sample in the Chippewa River in Comparison to MPCA Sediment Quality Targets (SQTs) (Crane and Hennes 2007).
- Attachment D. Clean Water Act, Section 404(b)(1) Evaluation.
- Attachment E. Results of Web Search for Federal and State-listed Species in Chippewa County, Minnesota.
- Attachment F. Coordination with the Public and Agencies Regarding the Proposed Project.
- Attachment G. Coordination of the Proposed Project Relative to Section 401 Water Quality Certification.
- Attachment H. Response Letter from Minnesota State Historical Preservation Office on the Proposed Project.

ENVIRONMENTAL ASSESSMENT

Chippewa River Diversion Channel Bank Stabilization La qui Parle Flood Control and Water Conservation Project Chippewa County, Minnesota

1.0 PURPOSE, NEED, AND AUTHORITY FOR THE PROPOSED PROJECT

The St. Paul District, Corps of Engineers (Corps), has prepared this Environmental Assessment (EA) in accordance with requirements of the National Environmental Policy Act (NEPA) of 1969, Council on Environmental Quality regulations (40 CFR 1500-1508) and Corps of Engineers regulations (ER-200-2-2). This EA describes the activities and environmental effects for a proposal to stabilize the banks of the Chippewa River Diversion approach channel, which is part of the Lac qui Parle Flood Control and Water Conservation Project.

1.1 Location of Project and Problems Being Addressed

The proposed project is located along the banks of the approach channel for the Corps' Chippewa River Diversion, located in west-central Minnesota near the city of Watson (Figure 1). The proposed project would address problems with bank erosion resulting from a combination of high flows, ice, and high near-bank velocities (Figures 2 through 7). More specifically, during high flow in the early spring, the west bank (which has riprap) has been observed covered with ice, thus constricting the channel and creating scour conditions along the east bank. As a result, the east bank (which has no riprap) has sustained considerable erosion damage (R. Melby, pers. comm., 2012). Much of the bank is exposed and too steep for vegetation to re-establish. Portions of the bank have slumped and exposed a portion of the pipeline that is a part of the upstream U.S. Geological Survey (USGS) gage station. In addition, a small portion of the existing riprap on the west bank had settled or been lost to the channel. Without stabilization measures, high flows will continue to eat away at the banks, eventually threatening the Chippewa River Diversion structure that serves to protect against downstream flooding to the city of Montevideo, Minnesota. In addition, there will be further degradation of aquatic and shoreline habitat as well as water quality. The purpose of the proposed project is to protect and stabilize these banks against future erosion from high flows.

1.2 Authority

The Laq qui Parle Flood Control and Water Conservation Project, of which this diversion channel is a part, is authorized by the Flood Control Act of 22 June 1936 (Public Law 74-738) which directs the Secretary of the Army to construct and maintain civil engineering projects. The Corps retains complete ownership of the project and is 100 percent responsible for the project's operation and maintenance. Other project purposes specifically assigned by Congress include recreation, fish and wildlife protection and propagation, water supply and water quality.

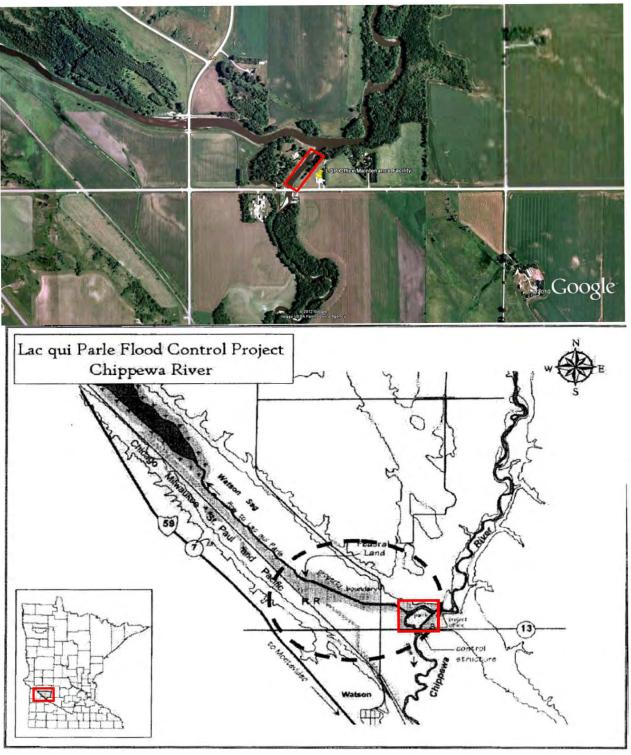


Figure 1. Aerial image and location of the proposed project (red box).



Figure 2. Chippewa River Diversion approach channel and control structure before erosion problems.



Figure 4. Chippewa River Diversion approach channel east bank – middle reach with pipeline connecting to the USGS gage station (4 April 2012).



Figure 6. Chippewa River Diversion approach channel bank – upstream end (4 April 2012).



Figure 3. Chippewa River Diversion approach channel east bank - downstream reach (4 April 2012).



Figure 5. Chippewa River Diversion approach channel bank – upstream reach (4 April 2012).



Figure 7. Chippewa River Diversion approach channel – west bank.

2.0 PROPOSED AND ALTERNATIVE ACTIONS

2.1 Proposed Action

Summary - In general, the proposed action work would consist of supplementing existing riprap along a portion of the west bank and installing new riprap along the entire east bank (Figure 8 and Table 1). For the west bank work, angular rock and bedding material would be added along portions of the bank near the confluence with the Chippewa River. An estimated 16 to 24 cubic yards (two to three truckloads) would be required. For the east bank, the work would consist of reshaping the entire bank of the Chippewa River diversion channel (about 900 feet). Once reshaped, a 1.5-foot layer of bedding material and riprap would be installed from the toe of the bank to 5 feet above the water surface (riprap portion). An estimated 1,333 cubic yards of material over an area of about 0.6 acre (Figure 8) would be required. Excess material would be placed in a nearby designated spoil area. Most of the work would be done by a Corps-approved contractor using heavy machinery. Additional details on this work are provided below.

Table 1. Summary of Proposed Project Features.

| Location | Project Feature | Elevation | Area | Description/Purpose |
|-------------------------------|-------------------------------|------------------|----------------------|----------------------------------------------------------------------------------------------|
| | | Range (feet msl) | (acres) ¹ | |
| Approach Channel West Bank | Riprap supplementation | 939 to 945 | 0.04 | Add riprap to problem areas. |
| Approach Channel East Bank | Bank shaping | 937 to 949 | 1.0 | Re-shape 900 linear feet of the bank for riprap placement. |
| | Bedding installation | 937 to 945 | 0.6 | Add 6 inches or 12 inches of bedding material for riprap support. |
| | Riprap installation | 937 to 945 | 0.6 | Bank protection from scour and erosion. |
| | Stream gage repair | 938 + | - | Restore functionality of stream gage. |
| | Staging | 948+ | 0.2 | Temporary stockpiling of materials. |
| | Vegetation removal/replanting | 945 to 949 | 0.4 | Clear area of trees and shrubs, add topsoil and grass seeding for additional bank stability. |
| Spoil Area | Spoil area | 945+ | 1.4 | Temporarily store excess material. |
| | Access road | 950+ | 0.3 | Allow vehicle access to spoil area. |

¹ Feature areas may overlap.

Project Features:

Bank Shaping – The entire east bank (about 1 acre) would be re-shaped to have a slope of 1V:3H along the riprap strata (elevation range: 937 feet to 945 feet above mean sea level or msl) and a 1V:5H slope for the transition strata above 945 feet msl to meet the existing ground elevation (Figures 9A to 9C). Along 400 linear feet or so of the bank, the lowest elevation strata would directly key into the bed of the channel at the minimum elevation 937 feet msl (Figure 9A). Other portions of the bank would slope down to the minimum elevation but would slope back up to the normal water elevation of 940 feet msl (Figure 9-B). This would maintain a wedge between the water and the riprap/bedding layer that would help avoid scour undermining this layer. Some of this wedge would be filled with random material after riprap installation.

This approach is to allow hydraulic processes to form the natural angle of repose with respect to the channel. Most fill would be compacted before bedding material is placed. Any excess material from bank shaping would be exported to a nearby designated spoil area (see section on "Spoil" below).

Bedding – For affected areas of both banks, a layer of bedding material would be installed as the base layer to support riprap, allow water infiltration, and prevent soil from being washed through the larger rock. Most of the bedding would be 6 inches thick above the normal water surface elevation (940 feet msl) and 12 inches thick below this elevation (i.e., from 937 to 940 feet msl). Bedding material would be composed of clean, small rock, ranging from 1- to 4-inches in diameter, although larger material would be used for in-water placement. Approximately 500 cubic yards of material would be needed, covering an area of approximately 0.6 acre.

<u>Riprap Supplementation/Installation</u> — For the west bank, about 24 cubic yards of larger rock would be added along a 0.04-acre area of the existing riprapped area from an elevation of 939 to 945 feet msl (Figure 9-C). For the east bank, this same type of rock would overlay the bedding material that would extend on the bank from 938 to 945 feet msl elevation. Stone would be sized to withstand the current velocities of the diversion channel; that stone placed in the water would be 1.5 times larger than on-land. In total, approximately 833 cubic yards of rock would be needed. This rock would consist of clean, angular stone, averaging about 12 inches in diameter. Stone would be acquired from an approved quarry close to the site where it would be transported and offloaded onsite.

<u>Stream Gage Repair</u> — The exposed pipeline associated with the upstream USGS stream gage would be removed during bank shaping and riprap installation. A new pipeline would be installed after the project was constructed. The gage would not be functioning during the construction period.

<u>Staging</u> — Materials would be temporarily stockpiled next to the lower portion of the approach channel on the east bank (north of County Road 13) or adjacent to the project footprint on top of the bank. Dump trucks would access the site via the access road connected to County Road 13. Material would be offloaded by the supplier at the staging area. The area of disturbance is anticipated to be limited to less than 0.2 acre.

Spoil – Excess material removed during bank shaping would be piled in a designated spoil area covering about 1.4 acres, just to the west of the project site (Figure 10). It is estimated that this would involve about 2,333 cubic yards and would largely be composed of a mixture of clay, silt, sand, and gravel material, interspersed with larger rock. An existing 400-foot-long road would enable vehicle access. This material would be made available to the public and county and State entities for their use. Removal of this material would be commensurate with demand.

<u>Vegetation Removal/Seeding</u> – For the east bank work, a 0.4-acre area would be cleared and grubbed along the upstream portion of the east bank to allow vehicles to turn around. This area,

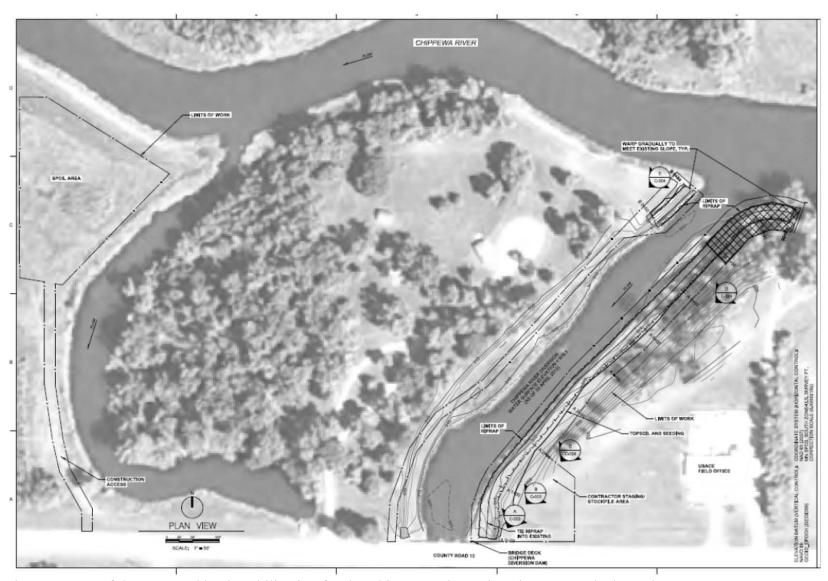
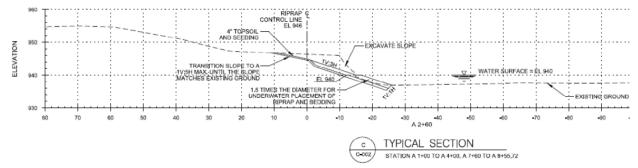
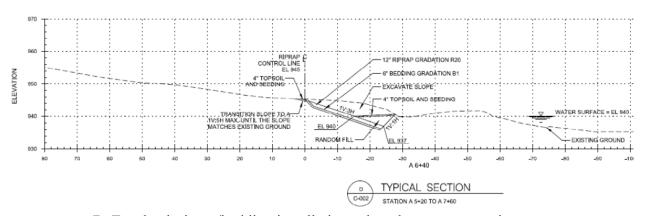


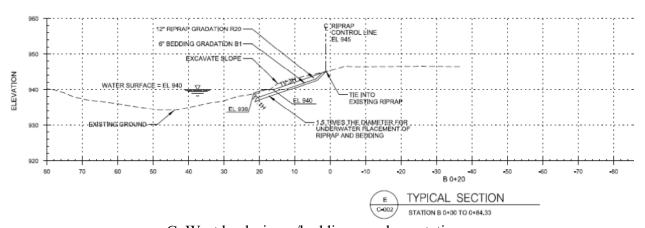
Figure 8. Map of the proposed bank stabilization for the Chippewa River Diversion approach channel.



A. East bank riprap/bedding installation—sloped to key directly into the channel bed.



B. East bank riprap/bedding installation—sloped to create a wedge.



C. West bank riprap/bedding supplementation.

Figures 9 A-C. Typical cross sections of proposed bank stabilization work. Note: Facing downstream.

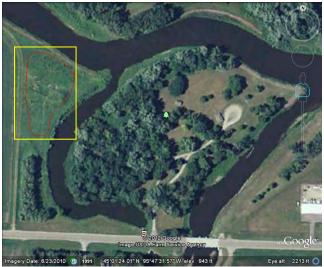






Figure 11. Ground view of approved spoil area for excess material.

along with the non-riprapped bank (i.e., above 945 feet elevation msl), would be topped with 4 inches of topsoil and seeded to promote vegetation cover. In addition, some topsoil and seed would be added to a portion of the reshaped bank on top of fill material for the wedge.

Avoidance/Minimization Measures - To minimize environmental impacts, the Corps would minimize flow through the project site (approach channel) during construction by completely closing the Chippewa Diversion gate and diverting maximum flows through the natural channel/low-flow control (maximum flow is approximately 100 cubic feet per second (cfs)). Flows in excess of this would be diverted into Lac qui Parle Reservoir through the Watson Sag Weir. These measures would essentially create a stagnant pool with near zero velocities in the approach channel, effectively isolating much of the sedimentation effects from the Chippewa River. Upon project completion, the Corps would incrementally ramp up flows through the project site over a 24-hour period to minimize the magnitude of the sediment plume. If flows on the Chippewa River upstream of the dam approach 4,000 cfs, the pool would exceed the fixed crest weir elevation at the diversion and flow through the approach channel would occur. Forecasted flows at the Chippewa River at Milan¹, upstream of the diversion, would be monitored during the construction phase so that measures could be taken before flows down the channel occurred (e.g., removing equipment from the channel or banks).

The selected contractor would develop and implement a Corps-approved Environmental Protection Plan (EPP) that prevents or controls pollution or habitat disruption during construction. Among other things, the EPP would contain an erosion and sediment control plan in compliance with Federal, State, and local laws and regulations. The control measures selected and maintained by the contractor would be such that water quality standards would not be violated as a result of the construction. This plan would identify best management practices

¹ USGS Gage 05304500; http://waterdata.usgs.gov/mn/nwis/nwisman/?site_no=05304500.

(BMPs) that may include, among other things, silt fences, and surface stabilization measures²:

- Identify measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.
- Include measures for marking the limits of use areas including methods for protection of features to be preserved authorized work areas.
- Contain a spill control plan.

In addition, the contractor would be required to clean all previously-used construction equipment prior to bringing it onto the project site. Equipment shall be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds.

The Corps would conduct periodic inspections during the construction season to ensure compliance with the EPP.

2.2 Alternatives Considered

The **No Action** alternative was considered but rejected because it would not correct the problems caused by the deteriorated condition of the bank. Erosive forces would continue to degrade this area, resulting in further bank losses and degraded conditions for vegetation. The contribution of materials to the river, primarily sand and silt, would continue, further reducing depth diversity in localized areas and resulting in further degradation of aquatic and shoreline habitat. Shoreline erosion would also contribute to continued degradation of water quality associated with increased turbidity. The pipeline connecting to the existing gage station could be damaged from the slumping bank. Continued erosion of the east bank could eventually lead to structural failure of the Chippewa Diversion dam. In extreme cases, this could lead to flooding downstream areas including the city of Montevideo, Minnesota. The combination of these factors is an unacceptable condition.

A **Toe Wood-Sod Mat** alternative³ would create an upper and lower bank with the latter consisting of a bankfull bench with a bottom layer of logs, branches, brush, roots and soil as fill. The fill would be covered with a layer of live cuttings, then with a top layer of sod mats and transplants set at bank-full stage. Over time, this approach would allow for movement of the streambed to its proper dimensions. This alternative was rejected because the approach channel is a man-made channel designed as a fixed configuration; thus it is unnecessary to utilize an approach aimed at allowing a streambed to move to its proper dimensions. Moreover, the channel requires a fixed configuration with highly resilient material (i.e., rock) for long-term operations of the diversion.

² Because disturbance associated with the project footprint will exceed 1 acre, the Corps anticipates that a Construction Stormwater permit from the Minnesota Pollution Control Agency (MPCA) may be needed. As part of this permit, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented to minimize impacts.

³ (http://files.dnr.state.mn.us/publications/waters/toe woodsod mat dec2010.pdf).

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The following is a brief discussion of the affected environment and environmental consequences, which is also summarized in Table 2. Additional details of the project area and associated resources can be found in other EAs issued for the Lac qui Parle Project, the Watson Sag levee repair, and Chippewa River dredging (e.g., Anderson et al. 1975, Corps 2004, 2005). A general discussion of effects related to riprap is provided in Fischenich 2003.

3.1 Climate

The climate of the region is typical of western Minnesota – warm summers (average maximum in July of 83°F) with moderate rainfall (24 inches, total annual precipitation) and cold winters (average temperature is 14°F).

3.2 Geology and Soils

Soils in Chippewa County include prime farmland types such as silt and sandy loam.

3.3 Vegetation

Vegetation in the proposed bank stabilization area and immediate surroundings is composed of marginal riparian vegetation. Most of this vegetation is composed of turf, but some larger trees and shrubs are present. Lion's Park is a landscaped area just west of the project site. Agriculture fields also surround the area. The project would likely result in temporary disturbance to vegetative cover within the project site. However, shrubs and grass would quickly become reestablished except for the riprapped portions of the bank (about 0.6 acre). An area of trees and shrubs, about 0.4 acre in size, would also be permanently removed.

3.4 Aquatic Areas

The Chippewa River is a low-gradient stream with sand/silt bottom with some gravel and rock riffle sections that meanders through a landscape heavily dominated by agriculture. Sections of the river have been altered through channelization and bank stabilization, including the approach channel itself. Excessive sedimentation from upland area erosion has substantially degraded aquatic habitat. Benthic habitat degradation from siltation, excessive water turbidity, and variable and frequent low flows are significant problems limiting overall aquatic habitat quality. Within the project area, the quality of aquatic habitat is poor with bank erosion being a contributing factor. Construction of the proposed project would have localized temporary effects as a result of increased turbidity and erosion. Portions of the stream adjacent to the bank would also be permanently altered because riprap would differ from the parent material of the channel boundary. The addition of rock would improve microhabitat diversity, creating interstitial spaces as cover, diverse hydraulic conditions at the boundary layer, and a more stable streambed.

Table 2. Environmental Assessment Matrix for the proposed project*.

| Table 2. Elivironmental | No Action Alternative Preferred Alternative | | | | | | | ve. | | | | | | |
|------------------------------------------------------------|---------------------------------------------|-------------|-------|-----------|-------|-------------|-------------|-------------|-------------|-------|-----------|-------|-------------|-------------|
| | RFI | NEFIC | | | | DVERS | SE. | REI | NEFIC | | ADVERSE | | | |
| | DE | NEFIC | IAL | | А | DVER | or. | DE | VEFIC | AL | | AD | VERSE | , |
| PARAMETER | SIGNIFICANT | SUBSTANTIAL | MINOR | NO EFFECT | MINOR | SUBSTANTIAL | SIGNIFICANT | SIGNIFICANT | SUBSTANTIAL | MINOR | NO EFFECT | MINOR | SUBSTANTIAL | SIGNIFICANT |
| A. SOCIAL EFFECTS | | | | | | | | | | | | | | |
| 1. Noise Levels | | | | X | | | | | | | | ST | | |
| 2. Aesthetic Values | | | | | LT | | | | | LT | | ST | | |
| 3. Recreational Opportunities | | | | X | | | | | | | | ST | | |
| 4. Transportation | | | | X | | | | | | | X | | | |
| 5. Public Health and Safety | | | | | | LT | | | LT | | | | | |
| 6. Community Cohesion (Sense of Unity) | | | | X | | | | | | | X | | | |
| 7. Community Growth and Development | | | | | LT | | | | | LT | | | | |
| 8. Business and Home Relocations | | | | | LT | | | | | | X | | | |
| 9. Existing/Potential Land Use | | | | X | | | | | | | X | | | |
| 10. Controversy | | | | X | | | | | | | X | | | |
| B. ECONOMIC EFFECTS | | | | | | | | | | | | | | |
| 1. Property Values | | | | X | | | | | | | X | | | |
| 2. Tax Revenue | | | | X | | | | | | | X | | | |
| 3. Public Facilities and Services | | | | | LT | | | | | LT | | | | |
| 4. Regional Growth | | | | X | | | | | | | X | | | |
| 5. Employment | | | | X | | | | | | ST | | | | |
| 6. Business Activity | | | | X | | | | | | | X | | | |
| 7. Farmland/Food Supply | | | | X | | | | | | | X | | | |
| 8. Commercial Navigation | | | | X | | | | | | | X | | | |
| 9. Flooding Effects | | | | | LT | | | | | LT | | | | |
| 10. Energy Needs and Resources | | | | X | | | | | | | X | | | |
| C. NATURAL RESOURCE EFFECTS | | | | | | | | | | | | | | |
| 1. Air Quality | | | | X | | | | | | | | ST | | |
| 2. Terrestrial Habitat | | | | X | | | | | | | | ST | | |
| 3. Wetlands | | | | X | | | | | | | X | | | |
| 4. Aquatic Habitat | | | | | LT | | | | | LT | | ST | | |
| 5. Habitat Diversity and Interspersion | | | | | LT | | | | | LT | | ST | | |
| 6. Biological Productivity | | | | | LT | | | | | LT | | ST | | |
| 7. Surface Water Quality | | | | | LT | | | | | LT | | LT/ST | | |
| 8. Water Supply | | | | X | | | | | | | X | | | |
| 9. Groundwater | | | | X | | | | | | | X | | | |
| 10. Soils | | | | X | | | | | | | X | | | |
| 11. Threatened or Endangered Species D. CULTURAL RESOURCE | | | | X | | | | | | | X | | | |
| EFFECTS | | | | | | | | | | | | | | |
| Historic Architectural Values | | | | X | | | | | | | X | | | |
| 2. Prehistoric & Historic Archeological | | | | | | | | | | | | | | |
| Values CT 1 4 4 CT 1 | IT | 1 | | X | | | | | | | X | | | |

^{*} ST = short-term effects; LT = long-term effects

3.5 Wildlife

Wildlife species typical of this region include such common avian species as robin, blue jay, and chickadee. Common mammalian species include raccoon, rabbit, and white-tailed deer. The bald eagle, a State-listed species of special concern, is a permanent inhabitant of the region. However, no eagle nests are known within a several-mile radius of the project site. No impacts to wildlife are expected from the proposed project.

3.6 Fish and Mussels

Fish in the Chippewa River are indicative of limited quality habitat and include suckers, redhorse, carp, and a variety of minnow species. Mussels species in proximity to the proposed project include deertoe, plain pocketbook, threeridge, black sandshell (State species of special concern), fat mucket, fragile papershell, spike (State species of special concern), strange floater, pink heelsplitter, giant floater, Wabash pigtoe, white heelsplitter, and mucket (Attachment A). Within the project area, live black sandshell (State-listed species of special concern), fragile papershell, plain pocketbook, deertoe, and fat mucket were found (Attachment B).

The proposed project would have temporary adverse impacts to fish and mussels as a result of increased turbidity during construction. Also, mussels and other benthic organisms that are largely sedentary would be covered by dirt fill and rock or crushed by earth-moving equipment during bank shaping and riprap installation. However, some species in these taxa may also realize some long-term benefits as a result of increased complexity to the shoreline microhabitat. For example, biomass and density of macroinvertebrates would increase as a result of the added interstitial spaces (Dardeau et al 1995 *IN* Fischenich 2003).

3.7 Water Quality

The Chippewa River has several reaches that are listed as impaired for at least one parameter. The reach in the project area is 303(d) impaired for turbidity and has additional Minnesota Pollution Control Agency (MPCA) requirements and BMPs for projects within 1 mile of the river. Construction of the proposed project would have localized and temporary impacts to water quality, primarily in the form of increased turbidity, nutrients, chemical oxygen demand (COD) and occasional other pollutants such oil or grease. Some of the increases in turbidity may occur as a result of erosion of the mudflat in the lower portion of the bank (Figure 5). However, these impacts would be minimized with the implementation of avoidance measures and construction BMPs. Because upland disturbance would be greater than 1 acre, the Corps anticipates the contractor would be responsible for obtaining and complying with a National Pollutant Discharge Elimination System (NPDES) permit, obtained and complied with by the contractor.

The risk of sediment contaminants being mobilized from work in the channel is minimal; samples analyzed in 2003 as a part of dredging activities show concentrations of metals are relatively low and organochlorine pesticides were undetectable with the exception of alpha-BHC (Table 3 *IN* Corps 2004). This conclusion is supported when comparing these results to MPCA's sediment guidelines (Attachment C). A 404(b)(1) analysis has been finalized for the project

(Attachment D).

Long-term effects of the proposed project to water quality would be mixed. The project would result in a stabilized bank that reduces turbidity, particularly during high flows. However, the additional rock would increase the surface area for conveying solar radiation, resulting in slightly higher water temperatures. However, this effect would be discountable because the stream is not supportive of a cold-water fishery (i.e., trout).

3.8 Threatened and Endangered Species

No federally-protected species are found in Chippewa County, Minnesota (Attachment E). Therefore, the proposed project would have no effect on this resource. Among State-listed mussel species in the project vicinity, only the black sandshell (species of special concern) was observed within the project footprint (Attachments A and B).

3.9 Employment

The actions proposed for the bank stabilization work are located within a non-urban setting. The actions should have no impact on the employment conditions.

3.10 Cultural Resources

The proposed project would take place along the east and west banks of the diversion channel. An assessment of the project area occurred in late May 2012; no cultural resources were encountered (B. Perkl, pers. comm. 2012). The Chippewa Diversion works is eligible for inclusion in the National Register of Historic Places as contributing elements of the historically significant Lac qui Parle flood control project. However, the proposed project would not directly affect this structure; therefore, no impacts are expected.

3.11 Floodplain

The proposed project area is located within the floodplain. By stabilizing the banks, flows over the long term would continue to be conveyed by the diversion as designed. During periods of flood, water in the Chippewa River would be contained within the channel, and excess flows would continue to be diverted to the Watson Sag. Even during temporary diversion through the natural channel as a part of construction, flows would be conveyed in accordance with the diversion's operational plan. The project would have no impact on this resource.

3.12 Farmland

The proposed project would take place in a rural setting that is interspersed with farmland. However, the project footprint is not located on farmland. By stabilizing the bank, the Chippewa River diversion would continue to function as designed, thus preventing the flooding of these areas.

3.13 Recreation Resources

The Chippewa River has limited fishing activities. The proposed project would have limited short-term adverse effects on the recreational resources of the area as a result of disturbance during construction. Over the long-term, recreational opportunities may be slightly enhanced as a result of improved aquatic habitat and water quality.

3.14 Watercourses

The proposed project would not affect any Section 10 navigable waters and would not alter or modify any navigable watercourse.

3.15 Stormwater

The proposed project would have minimal impacts on storm water runoff because it is within an area that is already heavily disturbed and has little value in terms of stormwater retention. However, the size of the upland disturbance zone would be larger than 1 acre. For this reason, a NPDES permit for this project is anticipated.

3.16 Air

Construction air quality effects would be short term and minor, consisting primarily of vehicle emissions.

3.17 Hazardous Waste

No hazardous waste is anticipated to be generated at the site. The risk of spill of pollutants such as oil or grease would be minimized with avoidance measures in place.

3.18 Drinking Water

The effects of the project would be localized and would not affect any nearby municipal sources of drinking water.

3.19 Noise

The proposed project would be done in areas of low population density, and/or noisy equipment would be limited. No significant changes from the ambient noise level would be expected.

4.0 COORDINATION

- 4.1 In accordance with the Fish and Wildlife Coordination Act, the Corps of Engineers coordinated the proposed project with the representatives from State and Federal agencies (Attachment F). Changes were made to the final EA/Finding of No Significant Impact (FONSI) based on comments received during this coordination phase.
- 4.2 The Corps contacted the MPCA to determine the need for 401 water quality certification or waiver in accordance with State water quality protection regulations. The MPCA has initially determined that a waiver would be granted (Attachment G). A formal response from MPCA is anticipated within 30 days.
- 4.3 This project was coordinated with the Minnesota State Historic Preservation Office (SHPO) in accordance with 36 CFR Part 800, Protection of Historic and Cultural Properties, the implementing regulations for Section 106 of the National Historic Preservation Act of 1966, as amended. The Minnesota SHPO concurred with the Corps' no effect determination (Attachment H).

5.0 MAJOR FINDINGS AND CONCLUSIONS

- 5.1 The impact of the proposed action upon the affected environment would be minimal and short-lived compared to the benefits gained. Minor, temporary increases in water turbidity, noise, and air emissions as well as habitat degradation associated with the construction would occur. With the completion of the construction, these increases would disappear.
- 5.2 This EA has been prepared in accordance with NEPA; the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508); and the Corps of Engineers Policy and Procedure for Implementing NEPA (33 CFR Part 230). The proposed action would comply with Federal environmental laws, executive orders and policies, and State and local laws and policies, including the Clean Air Act, as amended; the Clean Water Act, as amended; the Endangered Species Act of 1973, as amended; the Fish and Wildlife Coordination Act of 1958, as amended; the Land and Water Conservation Act of 1965, as amended; the National Historic Preservation Act of 1966, as amended; NEPA; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; and Executive Order 12898, Federal Action to Address Environmental Justice in Minority Population and Low-Income Populations. The proposed action would not result in the conversion of farmland to nonagricultural purposes. Therefore, the provisions of the Farmland Protection Policy Act of 1981 would not apply to this project. The proposed action would not conflict with any State of Minnesota air quality implementation plans.
- 5.3 This EA concludes that (1) no significant cumulative or long-term adverse environmental impacts would be associated with stabilizing the banks of the Chippewa River approach channel; (2) the benefits outweigh the minor, temporary impacts that may result; and (3) the project does not constitute a major Federal action significantly affecting the quality of the human environment.

BIBLIOGRAPHY

Anderson, D. O., L. Falk, D. Mathiason and G. Van Amburg. 1975. Environmental Assessment of Lake Lac qui Parle. Center for Environmental Studies, Tri-College University, 218 Stevens Hall, North Dakota State University. Fargo, North Dakota.

Crane, J. L. and S. Hennes. 2007. Guidance for the Use and Application of Sediment Quality Targets for the Protection of Sediment-Dwelling Organisms in Minnesota.

Fischenich, J. C. 2003. Effects of riprap on riverine and riparian ecosystems. ERDC/EL TR-03-4. U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.

U.S. Army Corps of Engineers - St. Paul District (Corps). 2004. Environmental Assessment, Long-Term Maintenance Dredging Plan of the Chippewa River and Chippewa River Diversion Channel, Lac qui Parle Project. Chippewa County, Minnesota. 13 pp. + attachments.

U.S. Army Corps of Engineers - St. Paul District (Corps). 2005. Environmental Assessment, Watson Sag Levee Repair. Chippewa River Diversion Channel, Lac qui Parle Project. Chippewa County, Minnesota. 16 pp. + attachments.

Attachment A. Mussel Data for the Chippewa River near the Diversion Structure.

From: Davis, Mike J (DNR) [Mike.Davis@state.mn.us] Sent: Monday, March 12, 2012 10:26 AM Potter, David F MVP Subject: RE: LQP - Souris Supplemental Funds (UNCLASSIFIED) Dave, Looks like we have done any surveys in this part of the river. The closest site we have done on the Chippewa is about 5 miles downstream as the crow flies the meanders on the river, or 5 miles upstream. We found a lot of mussels at the upstream site including one that is about to listed at Threatened in MN, 12 live species there. At the site downstream we found fewer mussels but still 10 species. Hope this is of some help to you Mike Davis MN DNR Ecological and Water Resources 1801 South Oak St. Lake City, MN 55041 (651) 345-3331 x227 (507) 696-5072 Cell ----Original Message----From: Potter, David F MVP [mailto:David.F.Potter@usace.army.mil] Sent: Monday, March 12, 2012 9:54 AM To: Davis, Mike J (DNR) Subject: FW: LQP - Souris Supplemental Funds (UNCLASSIFIED) Mike-Do you have any mussel data for this project you could share with me? is a shoreline protection project for the Chippewa Dam of the Lac Qui Parle Project. Thanks David Potter, Fishery Biologist Environmental & GIS Branch PD-E 180 East 5th Street, Suite 700 St. Paul District, Corps of Engineers St. Paul, MN 55101 651.290.5713 (tel) 651.290.5805 (fax)

ChippewaRiverUpstreamSite

| ite_id | year species | total_live | |
|--------|-------------------------|----------------|--|
| 3211 | 2008 Truncil | la truncata 64 | |
| 3211 | 2008 Lampsi | lis cardium 47 | |
| 3211 | 2008 Amblen | na plicata 27 | |
| 3211 | 2008 Ligumia | a recta 15 | |
| 3211 | 2008 Lampsi siliquoi | | |
| 3211 | 2008 Leptode | ea fragilis 8 | |
| 3211 | 2008 Elliptio | dilatata 8 | |
| 3211 | 2008 Strophi undulat | | |
| 3211 | 2008 Potamil | lus alatus 5 | |
| 3211 | 2008 Pygano | don grandis 4 | |
| 3211 | 2008 Fuscona | aia flava 3 | |
| 3211 | 2008 Lasmig complar | | |
| 3211 | 2008 Actinon ligamer | | |

Chippe wa River Downstream Site

| site_id | year | species | total_live | |
|---------|------|-------------------------------|------------|--|
| | 3210 | 2008 Amblema plicata | 13 | |
| | 3210 | 2008 Leptodea fragilis | 9 | |
| | 3210 | 2008 Lampsilis cardium | 9 | |
| | 3210 | 2008 Lampsilis siliquoidea | 7 | |
| | 3210 | 2008 Fusconaia flava | 4 | |
| | 3210 | 2008 Truncilla truncata | 2 | |
| | 3210 | 2008 Potamilus alatus | 2 | |
| | 3210 | 2008 Pyganodon grandis | 1 | |
| | 3210 | 2008 Lasmigona complanata | 1 | |
| | 3210 | 2008 Ligumia recta | 1 | |

Attachment B. Results of Mussel Survey (Pollywog) in the Project Area Conducted on 4 April 2012.

| | | | | Lat | ٠ 4 | bject | - Of | Kize- | We | stee | NH | 97FE | T - (| Chip | seusa | Aug. | roer | J | |
|-----------------------------------------|---------------|----------|------------|-------------|----------|-----------|------|----------------|------------|--------------------------|----------|----------------------------|--------------------------------------|-----------------------------------------------|-------------------------|-------------|-----------------------------|------------------|-----|
| Coordinate System UTM NAD 83 Zope 15 | River_ st. cr | oixP | ool | River Mile | | | | of | Project IC | | Foot Nav | | | | | Date_4- | | -45" | C |
| Northing | | | | | | | | | Collector | | | | | Crew Le | ader | Kelner | 185 | TEN | |
| Easting | | State 1_ | | State 2 | | Habitat_f | NUS | | Sample D | uration | 30 minu | 2_Collec | tion Typ | Pollywo | Dive / S | led / Snort | kel / Bank | Srch | 50 |
| Comments | | | | | | | | | | | | | | | Qual | | | | |
| Water Temperature0 | : | Weather | , includin | g Air Terns | | | | _ | Length_ | | | | | | | | | | _ |
| SPECIES | Sample ID | New WP | WP | ID Mark | Prev ID | No. Live | Age | Length (mm) | Rep. | No. live 1-5 years | No.live | Zebes Attached (Y/N) | Zebe / Unio 1-10/11- 50/>50 | shell covered 1-10/11- 50/50- 100 | Depth (Min-Max) m | | Substrate /GR/CB/B eg | % SD/BR/Det/\ | v |
| Lirecta | upper por | 79- | | | | 1 | 8 | | F | | | _ | - 11 | | | SUT. | + GARO | rel (si | 3-5 |
| Lifragins | Station | site | , , | _ | | 6 | 1-~ | | - | 5 | | | | | | | + | - | - 1 |
| T. truncata | (1+50 | 4 | 10/4 | +50 | <u> </u> | 2 | | | FG(i | 10 | | | | | - | | | - | 1 |
| L. Silianuta | (1750 | , | (| | | ax | 2 | | | 2 | | | | | | | | | 1 |
| P. grandis | | | | | | X | * | | | 7 | | | | | | | | | 1 |
| P. grandis | | | | | | D | | | | | | | | | | | 4, 1 1 | | 1 |
| S. vigilatis | | _ | | _ | _ | ۵ | | | | | | | | | | | | | + |
| | from 4 | +50 | | | | | | | | | | - | | _ | | | | | 1 |
| L. Cardius | | 00 | | | | | | | | | | | | | | 5:1 | 47 | 0 | 1 |
| 6. compl. | | | | | | E.D | | | | , | | | | | | - | rou | 98 | 1 |
| | 2 1 | 1, | | | | | | | | | | | | | | | | | - |
| Locardium | D.S. of | 01/ | 85515 | dam | | .4 | | | | 3 | | | | | | , | | | 1 |
| 1 siliquoidia | | | | | | -4 | | | | 0 | | | | | | | | | 1 |
| A. mara | Dead | | | | | <u> </u> | | | | | | | | | | | | |] |
| thuncson | 1 | | | | | | | | | | 1. | | | | | | | | 4 |
| p-alatus | | | | | - | | | | _ | | _ | | | | | | | | - |
| p. alatis L. Gogilie F Hava | W- | | | | | | | | 164 | _ | | | | | | | | | 1 |
| L. Frota | | | | | | | | | | | | | | | | | | | 1 |
| 1,000 | | | | | | | | | | | | | | | | | | | 1 |
| | * | | 0.5 | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | - | | | | | | | | | + |
| | | | | _ | _ | | | | | | | | | | | | | | 1 |
| | 1. | | | | | | | | | | | | | | | | | | 1 |

COMMENTS:

Attachment C. Results of Sediment Analysis for a 2003 Sample in the Chippewa River in Comparison to MPCA Sediment Quality Targets (SQTs) (Crane and Hennes 2007).

| Constituent | Result | Unit of Measurement | Effective Quantification Limit | SQT I ^a | SQT II ^b |
|------------------------------|--------------|---------------------|--------------------------------------|--------------------|---------------------|
| Inorganics | | | | | |
| Arsenic | 5.0 | mg/Kg | 0.29 | 9.8 | 33 |
| Cadmium | 0.31 | mg/Kg | 0.29 | 0.99 | 5.0 |
| Chromium | 16 | mg/Kg | 7.1 | 43 | 110 |
| Copper | 8.6 | mg/Kg | 2.9 | 32 | 150 |
| Lead | 7.1 | mg/Kg | 7.1 | 36 | 130 |
| Manganese | 720 | mg/Kg | 14 | - | - |
| Mercury | 0.027 | mg/Kg | 0.015 | 0.18 | 1.1 |
| Nickel | 12 | mg/Kg | 7.1 | 23 | 49 |
| Zinc | 37 | mg/Kg | 1.4 | 120 | 460 |
| Cyanide, Total | 0.22 | mg/Kg | 0.22 | - | - |
| Ammonium Nitrogen | 270 | mg/Kg | 22 | - | - |
| Percent Solids | 67.3 | % | - | - | - |
| Total Organic Carbon | 29000 | mg/Kg | 12000 | - | - |
| Total Volatile Solids | 4.6 | % | - | - | - |
| Organochlorine Pesticide | | /V.C | 2.0 | 4.9 | 28 |
| 4,4'-DDE | <3.0 <3.0 | ug/KG | 3.0 | | 28 |
| | | ug/KG | 3.0 | 3.2 | 31 |
| 4,4,'-DDT alpha-BHC | <3.0 1.8 | ug/KG ug/KG | 3.0 | 4.2 | 63 |
| | <30 | | | - 2.2 | 10 |
| Alpha-Chlordane ^c | | ug/KG | 30 | 3.2 | 18 |
| Arochlor 1016 | <30 | ug/KG | 30 | - | - |
| Arochlor 1221 | <30 | ug/KG | 30 | - | - |
| Arochlor 1232 | <30 | ug/KG | 30 | - | - |
| Arochlor 1242 | <30 | ug/KG | 30 | - | - |
| Arochlor 1248 | <30 | ug/KG | 30 | - | - |
| Arochlor 1254 | <30 | ug/KG | 30 | - | - |
| Arochlor 1260 | <30 | ug/KG | 30 | - | - |
| Beta-BHC | <1.5 | ug/KG | 1.5 | - | - |
| Chlordane, Technical | <30 | ug/KG | 30 | - | |
| Delta-BHC | <1.5 | ug/KG | 1.5 | - | |
| Dieldrin ^c | <3.0 | ug/KG | 3.0 | 1.9 | 62 |
| Endrin ^c | <3.0 | ug/KG | 3.0 | 2.2 | 210 |
| gamma-BHC | <1.5 | ug/KG | 1.5 | - | - |
| gamma-Chlordane | <1.5 | ug/KG | 1.5 | - | - |
| Heptachlor | <1.5 | ug/KG | 1.5 | - | - |
| Heptachlor epoxide | <1.5 | ug/KG | 1.5 | 2.5 | 16 |
| Oxychlordane | < 3.0 | ug/KG | 3.0 | - | - |

Note: Results reproduced from Table 3 *IN* Corps 2004.

^a Contaminant concentrations below which harmful effects on sediment-dwelling organisms are unlikely to be observed.

b Contaminant concentrations above which harmful effects on sediment-dwelling organisms are likely to be observed.

^c Effective quantification limits are above SQT Level I or SQT Level II; therefore, non-detect for those parameters is not meaningful..

Attachment D. Clean Water Act, Section 404(b)(1) Evaluation.

SECTION 404(b)(1) EVALUATION Chippewa River Diversion Channel Bank Stabilization Lac qui Parle Flood Control and Water Conservation Project Chippewa County, Minnesota

I. PROJECT DESCRIPTION

A. Location

The proposed project is located along the approach channel of the Chippewa River Diversion, located in west-central Minnesota near the city of Watson.

B. General Description

In general, the proposed work would consist of supplementing existing riprap along a portion of the west bank and installing new riprap along the entire east bank. For the west bank work, angular rock and bedding material would be added along portions of the bank near the confluence with the Chippewa River. An estimated 16 to 24 cubic yards (two to three truckloads) would be required. For the east bank, the work would consist of reshaping much of the bank (about 900 feet). Once reshaped, a 1.5-foot layer of bedding material and riprap would be installed from the toe of the bank to 5 feet above the water surface (riprap portion). An estimated 1,333 cubic yards of material over an area of about 0.6 acre would be needed. Excess material would be placed in a nearby designated spoil area. Most of the work would be done by a Corps-approved contractor using heavy machinery. Additional details are provided in section 2.1 of the Environmental Assessment (EA).

C. Authority and Purpose

The Laq qui Parle Flood Control and Water Conservation Project, of which this diversion channel is a part, is authorized by the Flood Control Act of 22 June 1936 (Public Law 74-738) which directs the Secretary of the Army to construct and maintain civil engineering projects. The Corps retains complete ownership of the project and is 100 percent responsible for the project's operation and maintenance. Other project purposes specifically assigned by Congress include recreation, fish and wildlife protection and propagation, water supply and water quality.

D. General Description of Dredged or Fill Material

1. General Characteristics of Material

Fill materials associated with the installation of riprap would be composed of clean quarry-run angular rock and gravel, ranging from 1 to 12 inches in diameter. The bedding material would consist of clean, small rock, ranging from 1- to 4- inches in diameter, although larger material

would be used for in-water placement (i.e., 1.5 to 6- inches in diameter). Some of the random material used for fill would be recycled as part of bank shaping and would be composed of rock, gravel, sand, and fines.

2. Quantity of Material

Estimated quantities of material needed for the proposed project are shown in Table 1. Materials needed within the Ordinary High Water Mark (OHWM; 940 feet above mean sea level (msl) elevation) include about 400 cubic yards of riprap and 267 cubic yards of bedding material.

Table 1. Estimated Quantities for Chippewa River Bank Erosion Repair.

| | Volu | Volume | | | | | |
|------------|----------------------|-----------------|--------------|--|--|--|--|
| | ft^3 | yd ³ | Weight (ton) | | | | |
| Entire | e Section (Water and | Dry Placem | ent) | | | | |
| Riprap | 22500 | 833 | 1167 | | | | |
| Bedding | 13500 | 500 | 750 | | | | |
| Excavation | 63000 | 2333 | re. | | | | |
| | Underwater Plac | ement | | | | | |
| | Volt | ume | WE DAY A SY | | | | |
| | ft^3 | yd ³ | Weight (ton) | | | | |
| Riprap | 10800 | 400 | 560 | | | | |
| Bedding | 7200 | 267 | 400 | | | | |

Notes:

- (1) Assumes a repair reach of 900 ft.
- (2) Based on the typical cross-section developed

3. Source of Material

Some of these materials would be obtained onsite from re-shaping the east bank. Rock for riprap and bedding material would be obtained from nearby outside sources such as local quarries. All material brought onsite would be clean and free of contaminants, fines, or other undesirable material.

E. Description of the Proposed Placement

1. Location

Fill material placed below the OHWM would be located along the entire periphery (900 feet) of

the east bank of the Chippewa River Diversion approach channel. A small portion (0.04 acre) of the west bank would have fill material placed as a part of riprap supplementation.

2. Size

The extent of the project site involving bank stabilization within the OHWM is estimated to be along the margins of 900 linear feet of the banks (about 4,500 square feet).

3. Type of Site

The project site is an artificially-created channel constructed as part of the Chippewa River Diversion. This site is heavily disturbed from existing features associated with the Chippewa Diversion. Additional details of the site are provided in Section 3 of the EA.

4. Type of Habitat

In general, the Chippewa River is a low-gradient stream with sand/silt bottom with some gravel and rock riffle sections that meanders through a landscape heavily dominated by agriculture. The approach channel itself was excavated as part of construction of the Chippewa River Diversion. Additional details are provided in Section 3 of the EA.

F. Description of the Placement Methods

The methods of placing material would involve heavy machinery such as excavators and dump trucks. First, the banks would be reshaped to the appropriate slopes and packed. Then bedding material would be added, followed by riprap. Placement methods would likely include pushing the material from the top of the bank where it is offloaded. A number of avoidance measures, including Best Management Practices (BMPs), would be implemented to minimize turbidity levels.

II. FACTUAL DETERMINATIONS

Note: Additional discussion of project effects on a number of the components listed below are provided in Section 3 of the EA.

A. PHYSICAL SUBSTRATE DETERMINATIONS

1. Substrate Elevation and Slope

In general, the newly constructed riprapped bank would be sloped 1 foot vertical to every 3 feet horizontal (1:3) from the toe (elevation 937 feet msl) to an elevation of 945 feet msl (5 feet above the OHWM). Above this elevation, the slope would be more gradual, 1:5, to tie into the existing elevation. In some areas, a wedge would be formed at the base of the riprap as protection against scour at the toe. Excavation may involve steeper slopes, although this slope would be filled to flatten it.

2. Substrate Type

Substrate in the footprint of the proposed bank work is composed of silt, sand, gravel, and larger rock.

3. Dredged/Fill Material Movement

Secondary movement of most of the fill material used to construct the project would be negligible because the constructed features are designed to be stable. The riprap would be anchored with bedding material and would be locked in place by the shape of the angular rock used and the relatively flat slopes. Localized movement of smaller material (i.e., gravel and sand) is anticipated during the normal flow range. There may also be some erosion of mudflat areas during high flows. During moderately infrequent flood events, some of the riprap may become displaced, and some of the smaller materials would likely mobilize and leech into the approach channel.

4. Physical Effects on Benthos

Any organisms in the filled and excavated areas would be destroyed or displaced during construction. However, the overall long-term project effects to benthos would be positive by the increase in interstitial spaces and improved water quality. This may be offset somewhat by thermal loading caused by the increased surface area of rock at the water interface.

5. Actions Taken to Minimize Impacts

A number of procedures would be used to minimize impacts where needed and are described in detail in the EA. In general, the disturbance area would be isolated from flows, thus minimizing turbidity levels. The project may have Minnesota water quality limitations and monitoring requirements to be followed during construction. As part of project's Environmental Protection Plan, a number of BMPs would be in place to minimize surface erosion.

B. WATER CIRCULATION, FLUCTUATION, AND SALINITY DETERMINATIONS

1. Water

The riprap and bedding rock used for construction would be basically inert material that would have little to no effect on water chemistry and nutrient levels. Also, these materials would be clean of fines. However, short-term effects may have some increase in turbidity as fines are mobilized. However, these levels will be minimized through implementation of BMPs/avoidance measures. Long-term water clarity, odor, taste, and pH would not significantly change as a result of the new riprap. Temperature may increase slightly due to the increased surface area of rock that transfers solar radiation.

2. Current Patterns and Circulation

a. Current Velocity and Patterns

The newly armored banks of the Chippewa River Diversion approach channel would have localized and small-scale effects on the current patterns and circulation associated with flow patterns along the land/water interface. Turbulence would increase, which would damper the effects of scour, especially at high flows.

b. Stratification

The newly armored banks would have no effect on stratification within the approach channel.

c. Hydrologic Regime

The proposed project would not significantly alter the existing hydrologic regime associated with the Chippewa River Diversion; it would still operate under its current operational guidelines.

3. Normal Water Level Fluctuation

Construction of project features is not expected to alter normal water level fluctuations in the area or cause prolonged periods of inundation or exaggerated extremes of high and low water.

4. Salinity Gradient

Not applicable.

5. Actions Taken to Minimize Impacts

No special actions would be taken to minimize the effects of the proposed project on current patterns or flow. As a part of the construction sequence, the approach channel would have no flows until the project has been completed. Water would instead be diverted around the project site and through the natural channel.

C. SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

1. Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site

Under the normal range of flows, the proposed bank stabilization should lessen the kinds and concentrations of suspended particulate/turbidity in the project vicinity. The bank erosion that has occurred in the past would be largely eliminated. However, some material might leech into the approach channel, through the diversion, and eventually into the Chippewa River. Also, during construction, temporary turbidity would increase due to excavation, placement of construction material, and movement of equipment. Also, suspended sediments would increase when flows through the approach channel are re-established. In these cases, increases in

suspended particulates would be largely localized and limited to physical changes to the water column.

2. Effects on Chemical and Physical Properties of the Water Column

The temporary increase in localized turbidity during construction would result in decreased light penetration and reduced aesthetic qualities near the construction site. Suspended particles are not expected to cause a change in dissolved oxygen, toxic metals, organisms, or pathogens in the water column after project completion. No significant chemical impacts are anticipated. The assimilation of any and all construction materials to the river should not cause any violation of applicable water quality standards, or lead to loss of environmental values over the long term.

3. Effects on Biota

Over the long-term, the project would increase levels of light penetration that could increase photosynthesis and plant growth. Sight-dependant species might have some slight benefit associated with increased feeding ability, growth rates, or resistance to disease. However, the temporary increase in turbidities during construction would likely impair feeding activity of sight-feeding fish and may cause them to leave the area. Also, mussels and other benthic taxa in the immediate vicinity of these activities might be negatively affected due to the limited mobility of these taxa.

4. Actions Taken to Minimize Impacts

Constructing project features primarily from land and diverting flows around the project site should minimize impacts to the water column due to suspended sediment, thereby minimizing turbidity. The Corps would also gradually re-introduce flows through the project site over a 24-hour period to minimize the plume to downstream areas.

D. CONTAMINANT DETERMINATIONS

The risk of sediment contaminants being mobilized from work in the channel is minimal and is described in further detail in Section 3 of the EA.

E. AQUATIC ECOSYSTEM AND ORGANISM DETERMINATIONS

1. Effects on Plankton and Nekton

No significant impacts are anticipated. At a local level, planktonic organisms might be impacted as a result of small-scale current pattern and water velocity changes. The overall planktonic community structure would remain the same because downstream drift would be minimally affected. Nectonic or free-swimming organisms would avoid the area during construction activities.

2. Effects on Benthos

Currently the project area within the OHWM is composed mostly of riprap, gravel, sands, clays, and other natural materials. Bank work would disturb the benthic community within a very small footprint (estimated at less than 4,500 square feet), but benthos would reestablish in this area post-construction. The riprap would provide interstitial spaces that would be colonized by benthos. Thus, long-term benefits to benthos would be realized from this additional habitat.

3. Effects on Aquatic Food Web

No significant long-term negative impacts are anticipated to any life stage or aquatic or terrestrial organism. The productivity of benthic macroinvertebrates, an important food source to fish, would likely increase due to the interstitial spaces provided by the riprap.

4. Effects on Special Aquatic Sites

No effects to special aquatic sites are anticipated as no special aquatic sites exist in the project area.

5. Threatened and Endangered Species

No federally-protected species are found in the project site (see Section 3 and Attachment E of the EA). Therefore, the proposed project would have no effect on this resource.

6. Other Wildlife

No impacts from the proposed project are expected to wildlife.

7. Actions Taken to Minimize Impacts

No special actions are proposed to minimize impacts to the aquatic ecosystem.

F. PROPOSED PLACEMENT SITE DETERMINATIONS

1. Mixing Zone Determinations

A mixing zone is a limited volume of water serving as a zone of initial dilution in the immediate vicinity of a discharge point, where receiving water quality may not meet water quality standards or other requirements otherwise applicable to the receiving water. A mixing zone would allow for a zone of dilution before compliance with relevant water quality standards is met. The mixing zone should be considered as a place where wastes and water mix and not as a place where effluents are treated.

A portion of the Chippewa River immediately downstream of the diversion would serve as the mixing zone where assimilation of sediments would occur. As flows would be gradually

reintroduced through the area of disturbance, the extent of the plume resulting from suspended sediments should be minimized. The mixing zone should be adequate for assimilation of any sediment related contaminants that may be present. No violation of any water quality standard resulting from fill material connected with this project is anticipated.

2. Determination of Compliance with Applicable Water Quality Standards

No violations to the State of Minnesota water quality standard should occur. Rock riprap and bedding material would be obtained from approved local quarries and would be clean of fines. State certification under Section 401 of the Clean Water Act has been initially waived before any construction activities begin.

3. Potential Effects on Human-Use Characteristics

Implementation of this project would have no significant effect either directly, indirectly, or cumulatively on municipal or private water supplies, national or historic monuments, wilderness areas, or other similar preserves. The project would have temporary negative effects to the recreational fishery during construction and long-term positive effects when operational. Use of a small municipal park would be affected temporarily by riprap supplementation of the west bank.

a. Municipal and Private Water Supply

No municipal or private wells would be affected by the proposed project.

b. Recreational and Commercial Fisheries

No commercial fishing is in the vicinity of the project area. In addition, recreational fishing opportunities are limited. No substantial effects to recreational fishing are anticipated.

c. Water-Related Recreation and Aesthetics

Water-related recreation in the project vicinity is limited to wildlife viewing and canoeing. However, there are limitations to these opportunities in the project footprint. Over the long-term, recreational opportunities may be slightly enhanced as a result of improved aquatic habitat and water quality.

d. Cultural Resources

An assessment of cultural resources within the project area occurred in late May 2012; no cultural resources were encountered (B. Perkl, pers. comm. 2012). The Chippewa Diversion Works is eligible be included on the National Register of Historic Places as contributing elements of the historically significant Lac qui Parle flood control project. However, the proposed project would not directly affect this structure. Therefore, no impacts are expected. The Minnesota State Historic Preservation Office concurred with this determination (Attachment

H).

If finds of human remains, funerary objects, sacred objects, or objects of cultural patrimony are encountered or collected from Federal lands or federally-recognized tribal lands, the Corps would coordinate with the appropriate federally-recognized Native American Tribes, pursuant to the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. § 3001 *et seq.*) and its implementing regulations (43 CFR Part 10).

G. DETERMINATION OF CUMULATIVE EFFECTS ON THE AQUATIC ECOSYSTEM

Implementation of the proposed action would cause no significant cumulative impact on aquatic habitat.

H. DETERMINATION OF SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

No significant secondary adverse effects on the aquatic ecosystem are expected from the proposed action.

SECTION 3: FINDINGS OF COMPLIANCE OR NONCOMPLIANCE WITH THE RESTRICTIONS ON PLACEMENT

- 1. No significant adaptations of the guidelines were made relative to this evaluation.
- 2. The proposed fill activities would comply with Section 404(b)(1) guidelines of the Clean Water Act of 1972, as amended. As discussed in the EA, the placement of fill for the proposed project is required to achieve the project purpose, which is to stabilize the banks of the Chippewa River Diversion approach channel. Without stabilization measures, high flows would continue to eat away at the banks, eventually threatening the diversion that serves to protect against downstream flooding to the city of Montevideo, Minnesota. The proposed alternative would not be environmentally damaging to the aquatic ecosystem.
- 3. There are no practical and feasible alternatives to the placement of fill in the proposed site that would meet the objectives and goals for this project.
- 4. The proposed fill activities would comply with all State water quality standards and Section 307 of the Clean Water Act of 1972, as amended. The MPCA has initially issued a waiver of 401 Water Quality certification for the project, which is anticipated to be finalized within 30 days after the signing of the FONSI (Attachment G).
- 5. The proposed project would comply with the Endangered Species Act of 1973, as amended, because no federally-listed species are found in the project site.
- 6. The proposed fill activity would not have significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. Aquatic life and other wildlife would not be adversely affected. Significant adverse effects on aquatic ecosystem diversity, productivity, and stability and on recreational, aesthetic, and economic values would not occur.
- 7. On the basis of this evaluation, I conclude that the proposed discharges would comply with the Section 404(b)(1) Guidelines for the discharge of dredged or fill material.

Date

Michael J. Price

Colonel, Corps of Engineers

District Engineer

Attachment E. Results of Web Search for Federal and State-listed Species in Chippewa County, Minnesota.

Filter Search: Minnesota DNR Page 1 of 1

| The species will | de: Filtered Search | | | |
|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 8 result(s) for L Outcrop; River Sh | ocations:Chippewa; Habital ore; | ts:Small Rivers | and Stream | ns, Rock |
| Common name | Scientific name | Group | Federal status | State status |
| A Species of Lichen | Buellia nigra | lichen | none | endangered |
| Bald Eagle | Haliaeetus leucocephalus | bird | none | special concern |
| Creek Heelsplitter | Lasmigona compressa | mussel | none | special concern |
| Elktoe | Alasmidonta marginata | mussel | none | threatened |
| Ellipse | Venustaconcha | mussel | none | threatened |
| Plains Prickly Pear | ellipsiformis Opuntia macrorhiza | vascular plant | none | special concern |
| Round Pigtoe | Pleurobema coccineum | mussel | none | threatened |
| Spike | Elliptio dilatata | mussel | none | special concern |
| ₹all []a | mphibian bird fish | | insect | |
| ₹all []a | | | insect spider | |
| all a | mphibian bird fish | | | |
| all a mammal n | mphibian bird fish noss mussel rep ct one or more) | tile 🗍 snail | spider | vascular plant |
| all a nammal na nammal status (sele | mphibian bird fish noss mussel rep ct one or more) ered federal threat | tile snail | spider | vascular plant |
| all a mammal n n Filter by status (sele federal endange state endanger | mphibian bird fish noss mussel rep ct one or more) ered federal threated | tile snail | spider | vascular plant |
| all a nammal na nammal status (sele | mphibian bird fish noss mussel rep ct one or more) ered federal threat | tile snail | spider | vascular plant |
| mammal n Filter by status (sele federal endange state endangen | mphibian bird fish noss mussel rep ct one or more) ered federal threat ed state threaten USFS Sensitiv | tile snail | federal constant | vascular plant |
| all a mammal n mammal n filter by status (sele federal endanger state endanger CITES Filter by location (op | mphibian bird fish noss mussel rep ct one or more) ered federal threat ed state threaten USFS Sensitiv ctional) F Selected Areas: Sections Chippewa (12) | ened | federal constant specific state specific specifi | vascular plant |

Attachment F. Coordination with the Public and Agencies Regarding the Proposed Project.

LETTER CORRESPONDENCE:



DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS 180 FIFTH STREET EAST, SUITE 700 ST. PAUL MN 55101-1078

June 11, 2012

REPLY TO ATTENTION OF

Regional Planning and Environment Division North

SUBJECT: Environmental Assessment/Section 404(b)(1) Evaluation - Chippewa River

Diversion Approach Channel Bank Stabilization Project, Chippewa County,

Minnesota

Dear Interested Party:

The Draft Environmental Assessment and Finding of No Significant Impact (FONSI) for a proposed bank stabilization project for the Chippewa River Diversion near Watson, Minnesota, is available for your review and can be accessed via the St. Paul District website at www.mvp.usace.army.mil/environment/. The Section 404(b)(1) evaluation is being distributed as part of this report in lieu of a separate Section 404 public notice.

The objective of the proposed project is to implement bank stabilization and protection along the approach channel for the Chippewa River Diversion. The east bank, in particular, has experienced substantial erosion from high flows and ice formation. Without stabilization measures, high flows would continue to eat away at the banks, eventually threatening the Chippewa River Diversion structure that serves to protect against downstream flooding to the city of Montevideo, Minnesota. The proposed work would consist of supplementing existing riprap along a portion of the west bank and installing new riprap along the entire east bank. Before installing new riprap, the bank would be reshaped to meet design specifications for slope. Riprap would consist of a layer of bedding material and angular rock. In all, about 1,300 cubic yards of material would be placed. The work is expected to last about 10 days and would occur in fall or winter 2012, depending on hydrological conditions, available resources, and funding.

Anyone who has an interest that may be affected by the proposed action may request a public hearing on this project. Anyone interested in a public hearing must submit a written request to the District Engineer at the address given above. This written request must clearly set forth the interest that may be affected and how it may be affected by this activity. The District Engineer has the authority to modify the plan if comments and statements are received pursuant to this public notice that, in his judgment, reveal the necessity of modifying the proposed action following appropriate consultation.

Comments on the proposed action should be provided by July 13, 2012. If you have any questions about the project or would like a hard copy sent, please call Mr. David Potter at (651) 290-5713. Please address all correspondence on this project to the Deputy Chief, Regional Planning and Environment Division North, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, St. Paul, Minnesota, 55101-1678.

Sincerely,

Terry J. Birkenstock

Deputy Chief, Regional Planning and Environment Division North

Just Bitentonto

NOTE: No public comments received.

June 15, 2012

Regional Planning and Environmental Division North Environmental and GIS Branch

Tony Sullins US Fish and Wildlife Service Twin Cities Ecological Services 4101 American Boulevard East Bloomington, MN 55425-1665

SUBJECT: Environmental Assessment / Section 404(b)(1) Evaluation – Chippewa River

Approach Channel Bank Stabilization Project, Chippewa County, Minnesota

Dear Mr. Sullins:

The Draft Environmental Assessment and Finding of No Significant Impact (FONSI) for a proposed bank stabilization project for the Chippewa River Diversion near Watson, Minnesota is enclosed for your review. It is also available on the St. Paul District Website at:

www.mvp.usace.army.mil. The Section 404(b)(1) evaluation is being distributed as part of this report in lieu of a separate Section 404 public notice.

The objective of the proposed project is to implement bank stabilization and protection along the approach channel for the Chippewa River Diversion. The east bank, in particular, has experienced substantial erosion from high flows and ice formation. Without stabilization measures, high flows would continue to eat away at the banks, eventually threatening the Chippewa River diversion structure that serves to protect against downstream flooding to the city of Montevideo, Minnesota. The proposed work would consist of supplementing existing riprap along a portion of the west bank and installing new riprap along the entire east bank. Before installing new riprap, the bank would be reshaped to meet design specifications for slope. Riprap would consist of a layer of bedding material and angular rock. In all, about 1,300 cubic yards of material would be placed. The work is expected to last about 10 days and would occur in the fall or winter of 2012, depending on hydrological conditions, available resources, and funding.

Anyone who has an interest that may be affected by the proposed action may request a public hearing on this project. Anyone interested in a public hearing must submit a written request to the District Engineer at the address given above. This written request must clearly set forth the interest that may be affected and how it may be affected by this activity. The District Engineer has the authority to modify the plan if comments and statements are received pursuant to this public notice that, in his judgment, reveal the necessity of modifying the proposed action, following appropriate consultation.

Comments on the proposed action should be provided by July 15, 2012. If you have any

questions about the project, please call Mr. David Potter at 651-290-5713. Please address all correspondence on this project to the Deputy Chief, Regional Planning and Environmental Division North, St. Paul District, Corps of Engineers, 190 Fifth Street East, Suite 401, St. Paul, Minnesota, 55101-1638.

Sincerely,

Enclosure Terry J. Birkenstock

Deputy Chief, Regional Planning and

Environment Division North

Identical List:

Mr. Kenneth Westlake U.S. Environmental Protection Agency Region 5 Mailcode: E-19J 77 W. Jackson Boulevard Chicago, IL 60604

Mr. Craig Affeldt Environmental Review Unit Minnesota PCA 520 Lafayette Road North St. Paul, Minnesota 55155-4194 Mr. Tony Sullins U.S. Fish and Wildlife Service Twin Cities Field Office 4101 East 80th Street Bloomington, Minnesota 55425

Ms. Melissa Doperalski Environmental Review Section Minnesota DNR 500 Lafayette Road – Box 10 St. Paul, Minnesota 55155-4010

E-MAIL CORRESPONDENCE:

Potter, David F MVP

From: Potter, David F MVP

Sent: Wednesday, May 30, 2012 3:46 PM

To: david.trauba@state.mn.us; Ethan.jenzen@state.mn.us; 'richard_davis@fws.gov';

'jim.brist@state.mn.us'

Cc: Kosterman, Kristin A MVP

Subject: Chippewa Diversion riprap project

Attachments: LQP Chippewa Diversion Shoreline Reclamation Project Description.pdf

All:

I have spoken to most of you regarding said project. Attached is a description of the proposed riprap work on the Chippewa Diversion. In the spirit of coordination as per the fish and Wildlife Coordination Act, I invite you to send me your comments/concerns with regards to said project. Also, we are interested in the need for permits (e.g., Protected Waters or 401 kater Quality certification). A draft EA and 404(b)(1) analysis will be forthcoming, also for you to review.

If possible, please provide these to me by June 13th.

Thank you,

David Potter, Fishery Biologist Environmental & GIS Branch PD-E 180 East 5th Street, Suite 700 St. Paul District, Corps of Engineers St. Paul, MW 55101 651.290.5713 (tel) 651.290.5805 (fax)

Potter, David F MVP

From: Potter, David F MVP

Sent: Wednesday, June 06, 2012 3:31 PM

To: david.trauba@state.mn.us, 'richard_davis@fws.gov', Ethan.jenzen@state.mn.us
Subject: updated project description for Chippewa River Diversion approach channel bank

stabilization

Attachments: Chippewa Diversion riprap project; LQP Chippewa Diversion Shoreline Reclamation Project

Description.pdf

A11:

Attached is a more detailed project description for your review. I ask if you could still honor the June 13th deadline for submitting comments (by noon, if possible).

Thank you,

David Potter, Fishery Biologist Environmental & GIS Branch PD-E 180 East 5th Street, Suite 700 St. Paul District, Corps of Engineers St. Paul, MN 55101 651.290.5713 (tel) 651.290.5805 (fax) From: Jenzen, Ethan (DNR) [Ethan.Jenzen@state.mn.us]

Sent: Tuesday, June 12, 2012 6:02 PM

To: Potter, David F MVP; Trauba, David R (DNR); richard_davis@fws.gov

Cc: Bratsch, Stacy (DNR)

Subject: RE: updated project description for Chippewa River Diversion approach channel bank

stabilization

David,

Thank you for supplying a detailed description of this project. This appears to be necessary to protect the banks of the river channel in the area of the diversion. Just two quick comments:

I agree that this project should be completed under low flow conditions. It appears that as part of this project, flows will be adjusted to maintain flows, however, the replacement of the dam on the Chippewa in Montevideo will be proceeding this summer/fall, and a tentative agreement has been reached to maintain low flows as much as possible in the natural channel to limit impacts on the exposed banks. Hopefully, the timing of these two projects can be offset to accommodate construction on both.

My only other comment is in regards to sediment control and containment on-site, and it appears that this has been addressed to a certain degree in the plan.

Thanks for the opportunity to comment on this project. As for a DNR permit, the Corps does not specifically need the permit to proceed, as USACE jurisdiction supersedes DNR jurisdiction. However, if you would like to obtain a permit to go through the review process with the local agencies, we can certainly make that happen. Please let me know how you would like to proceed. Thanks!

Ethan

Ethan Jenzen Area Hydrologist DNR Ecological and Water Resources 320-796-2161 x 232 ethan.jenzen@state.mn.us From: Richard_Davis@fws.gov

Sent: Wednesday, June 13, 2012 1:16 PM

To: Potter, David F MVP

Subject: Re: updated project description for Chippewa River Diversion approach channel bank

stabilization

Hello David,

The Service does not have any concerns with the proposed project at this time. Our office will provide you with a letter indicating our involvement and review pursuant to the Fish and Wildlife Coordination Act.

Thanks, Rich

Richard Davis
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Twin Cities Field Office
4101 American Blvd. E.
Bloomington, MN 55425
(612)725-3548 ext. 2214

LETTER CORRESPONDENCE:



Minnesota Pollution Control Agency

520 Lafayerre Road North | 5t. Paul Minnesota 55155-4194 | 651-296-6300

800-657-3664 | 401-282-5312 TTY | www.pca.atteliumn.id | Equal Opportunity Employee

July 13, 2012

Mr. Terry J. Birkenstock
Deputy Chief, Regional Planning and Environment Division North
St. Paul District, Corps of Engineers
180 Fifth Street East, Suite 700
St. Paul, MN 55101-1678

Re: Chippewa River Diversion Approach Channel Bank Stabilization Project

Draft Environmental Assessment

Dear Mr. Birkenstock:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) for the Chippewa River Diversion Approach Channel Bank Stabilization project (Project) located near the city of Watson in Chippewa County, Minnesota. The Project consists of implementation of bank stabilization and protection along the approach channel for the Chippewa River Diversion. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, MPCA staff has the following comments for your consideration.

Section 2.1 Proposed Action

- The section on bank shaping in Section 2.1 of the Draft EA mentioned a sacrificial boundary or berm that would partially erode under high scour. This mention of a sacrificial berm is repeated in Section II of the Clean Water Act (CWA) Section 404(b)(1) Evaluation. However, given the listing of this portion of the Chippewa River as impaired for turbidity, a permit cannot be issued for a project such as this that will cause or contribute to the impairment. Enacted in the early 1980s, 40 C.F.R. § 122.4(i) and 40 C.F.R. § 122.44(d) fulfill the Clean Water Act objective to restore and maintain the chemical, physical, and biological integrity of the nation's waters. 40 C.F.R. § 122.4(i) prohibits the net increase of any pollutant that will cause or contribute to a numeric or narrative water quality standard violation. 40 C.F.R. § 122.44(d) requires effluent limits in permits to ensure discharges do not cause, have a reasonable potential to cause, or contribute to the violation of a numeric or narrative water quality standard. Therefore, the MPCA suggests that the St. Paul District of the U.S. Army Corps of Engineers eliminate the sacrificial boundary/berm from their design. More information can be found at http://www.pca.state.mn.us/udgxb24. For questions regarding this matter, please contact Judy Mader at 651-757-2544.
- With respect to the dredging activities, MPCA staff recommends you follow the guidance provided at http://www.pca.state.mn.us/publications/wq-gen2-01.pdf. For further information regarding dredged materials, please contact Emily Schnick at 651-757-2699.

Section 3.8 Threatened and Endangered Species

Section 3.8 contradicts the statement in Section 3.6 regarding the presence of state-listed mussel species in the Project area. Please clarify which section is correct. Mr. Terry J. Birkenstock Page 2 July 13, 2012

Attachment C

The effective quantification limits for dieldrin and endrin were above the Sediment Quality Target level / for those parameters and the effective quantification limit for alpha chlordane was above the Sediment Quality Target level I and II. Therefore, a result of non-detect for those parameters is not meaningful.

Miscellaneous Comments

- Please note that Sections A, B, and C of Appendix A of the National Pollutant Discharge Elimination System/State Disposal System General Permit for Construction Activity apply to this project and must be compiled with.
- It would have been helpful to have dates on the photographs in Figures 2 through 7.

We appreciate the opportunity to review this Project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this Draft EA, please contact me at 651-757-2508.

Sincerely,

Waren Kroner

Karen Kromar Planner Principal Environmental Review Unit Resource Management and Assistance Division

KK:mbo

cc: Craig Affeldt, MPCA, St. Paul Randy Hukriede, MPCA, Willmar Judy Mader, MPCA, St. Paul

CORPS RESPONSE TO MPCA COMMENTS DATED 13 JULY 2012:

Sacrificial Berm

It was not our intent that use of the term "sacrificial berm" should imply that we are proposing to construct features intended to partially erode under high scour conditions, which is a concern for this reach of the Chippewa River as it is impaired for turbidity. We do not propose constructed features with the intent of eroding nor do we anticipate the project will cause or contribute to the impairment.

Under existing condition, some portions of the east bank have mudflats that extend as much as 30 feet from the ordinary high water mark to the water surface (see Figure 5 in the EA). Due to the topography of these areas, construction activities for bank shaping would involve creating a "wedge" along which the toe of the riprap/bedding layer would be buried to help avoid the potential for undermining scour (see Figure 9B in the EA). The wedge would then be backfilled and seeded for additional protection. The remaining portion of these mudflat areas would be left intact, allowing for hydraulic processes to form the natural angle of repose with respect to the channel. The final EA has been revised to clarify this point.

Dredging

The Corps does not propose active dredging activities associated with this project, only excavation and shaping activities associated with the east bank. Some of these activities will have limited disturbance to the bed of the approach channel. The draft EA references the 2004 EA for the long-term maintenance dredging plan only to provide a basic understanding of contaminant issues associated with sediments in the Chippewa River.

Threatened and Endangered Species

The final EA was corrected for the contradiction for the state-listed mussels between Sections 3.6 and 3.8.

Attachments

Concur that non-detection results for dieldrin, endrin, and alpha chlordane are not meaningful. This point has been footnoted in the corresponding attachment.

NPDES/SDS General Permit

Comment noted that the selected contractor has the responsibility of obtaining and complying with permit conditions.

Photographs

The final EA was revised to include dates of when the photographs were taken.

Attachment G. Coordination of the Proposed Project Relative to Section 401 Water Quality Certification.

LETTER CORRESPONDENCE:



DEPARTMENT OF THE ARMY

5T. PAUL DISTRICT, CORPS OF ENGINEERS 100 FIFTH STREET EAST, SUITE 700 5T. PAUL MN 85101-1670

JUNE 11, 2012

REPLY TO ATTENTION OF

Regional Planning and Environment Division North

SUBJECT: Chippewa River Diversion Approach Channel Bank Stabilization

Mr. Jim Brist Municipal Division Minnesota Pollution Control Agency 520 Lafayette Road St. Paul, Minnesota 55155

Dear Mr. Brist:

The St. Paul District, Corps of Engineers, is planning to implement bank stabilization measures along the approach channel for the Chippewa River Diversion near Watson, Minnesota. Details of the proposed project are provided in the draft Environmental Assessment (EA) and Section 404(b)(1) Evaluation (Enclosure). The draft EA has also been sent to your agency's Environmental Review Unit for review.

The objective of the proposed project is to stabilize the banks of the approach channel to address erosion problems resulting from high flow events. Without stabilization measures, bank erosion will continue, eventually threatening the Chippewa River Diversion structure that serves to protect against downstream flooding to the city of Montevideo, Minnesota. The proposed action would consist of supplementing existing riprap along a portion of the west bank and installing new riprap along the entire east bank. This work is estimated to require 1,333 cubic yards of material over an area of about 0.6 acre. Excess material would be placed in a nearby designated spoil area. Most of the work would be done by a Corps-approved contractor using heavy machinery. The work is anticipated to require about 10 working days and would occur during fall or winter 2012, depending on hydrological conditions and available funds and resources. The selected contractor would be required to develop and implement an Environmental Protection Plan that minimizes environmental impacts through Best Management Practices or other means. Moreover, the Corps would divert flows around the construction area to minimize downstream turbidity.

We request water quality certification or waiver under Section 401 of the Clean Water Act for this project. If you have any questions, please contact David Potter at (651) 290-5713.

Sincerely,

Terry J. Birkenstock

Deputy Chief, Regional Planning and Environment Division North

Enclosure

E-MAIL CORRESPONDENCE:

Potter, David F MVP

From: Potter, David F MVP

Sent: Thursday, June 07, 2012 8:36 AM

To: 'David.Richfield@state.mn.us'; 'jim.brist@state.mn.us'

Subject: Chippewa River Diversion approach channel bank stabilization

Attachments: LQP Chippewa Diversion Shoreline Reclamation Project Description.pdf

Hi David and Jim:

Attached is an updated project description for said project. I hope the information is adequate for you to determine the need for 401 water quality certification or waiver. I anticipate that a draft EA/404 analysis will be available for review next week.

David Potter, Fishery Biologist Environmental & GIS Branch PD-E 180 East 5th Street, Suite 700 St. Paul District, Corps of Engineers St. Paul, MN 55101 651.290.5713 (tel) 651.290.5805 (fax)

6N7W

From: Brist, Jim (MPCA) [jim.brist@state.mn.us]

Sent: Monday, June 18, 2012 3:03 PM

To: Potter, David F MVP

Subject: RE: Chippewa River Diversion approach channel bank stabilization

David, Dave Richfield and I have reviewed the attached description for the Chippewa River Diversion approach channel bank stabilization project.

We have a couple of comments.

- For the in-water BMPS, it would be useful to provide more details to describe the BMPS that will be used to reduce sediment and explain some of the rationale behind the BMP selection.
- 2) It appears that the work described is covered under General Permit RGP-003.

If you have further questions, please contact me. Thx Jim

Jim Brist 401 Certification Coordinator MPCA 651 757-2245

Potter, David F MVP

Brist, Jim (MPCA) [jim.brist@state.mn.us] Tuesday, July 24, 2012 2:12 PM From:

Sent:

Potter, David F MVP To:

Subject: Chippewa River Diversion Approach Channel Bank Stabilization Project

This email is provided to inform you of MPCA's preliminary intent to waive the 401 Water Quality Certification for the Chippewa River Diversion Approach Channel Bank Stabilization Project. Based on the draft Environmental Assessment information, a 401 is required. However, if there are no changes to the current proposal MPCA intends to issues a waiver.

Jim Brist 401 Certification Coordinator MPCA (651) 757-2245



800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

August 17, 2012

Mr. Terry J. Birkenstock, Deputy Chief US Army Corps of Engineers, St. Paul District Regional Planning and Environmental Division North 180 Fifth St E Ste 700 St. Paul, MN 55101-1678

RE: Waiver of 401 Certification for Chippewa River Diversion Channel Bank Stabilization.

Dear Mr. Potter:

This letter is submitted by the Minnesota Pollution Control Agency (MPCA) under authority of Section 401 of the Clean Water Act (CWA) (33 USC 1251 et seq.), Minn. Stat. chs. 115 and 116 and Minn. R. 7001.1400-7001.1470.

MPCA is waving the 401 Certification.

The MPCA waives its Section 401 authority to certify the referenced project application. However, this action does not eliminate, waive or vary the applicant's responsibility of complying with all water quality standards and requirements contained in Minn. R. 7050 and all other applicable MPCA statutes and rules regarding water quality in the construction, installation and operation of the project. In addition, this action does not waive the MPCA's authority to take necessary actions, including enforcement actions, to ensure that the applicant and the project's construction, installation, and operation comply with water quality standards and all other applicable MPCA statutes, rules and permits governing water quality.

This action does not release the applicant from any liability, penalty or duty imposed by Minnesota or federal statutes, regulations, rules or local ordinances and it does not convey a property right or an exclusive privilege. For further information, please contact Jim Brist at 651-757-2245.

Sincerely.

David Richfield

Supervisor, Agency Rules Unit

SSTS, Land Treatment, and Rules Section

Municipal Division

DR/JB:ah

cc: Peter Swenson, USEPA
Janice Cheng, USEPA

David Potter, USACE
Kent Lokkesmoe, DNR

Attachment H. Response Letter from Minnesota State Historical Preservation Office on the Proposed Project.



July 24, 2012

Terry Birkenstock, Deputy Chief Regional Planning and Environment Division St. Paul District, US Army Corps of Engineers 180 Fifth Streel East, Suite 700 St. Paul, MN 55101-1678

RE Chippewa River Diversion Channel Bank Stabilization Project T118 R41 S15 SW Tunsberg Twp, Chippewa County SHPO Number: 2012-2273

Dear Mr. Birkenstock:

Thank you for initiating consultation on the above project. It is being reviewed according to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

Based on the survey information provided, we agree that the project will not affect any archaeological resources. In terms of above ground historic resources, both the Lac Qui Parle Flood Control Project Historic District and the Watson State Scenic Wayside Park Picnic Shelter are within the Area of Potential Effect, and both have been determined eligible for listing in the National Register of Historic Places.

The placement of additional riprap and the temporary deposit of sediments at the locations proposed will not substantially after the visual environment of either Register-eligible site. Therefore, we agree with your determination that the project as proposed will have no adverse effect on the Lac Qui Parle Flood Control Project Historic District and the Watson State Scenic Wayside Park Picnic Shelter

If you have any questions on our review, please contact me at (651) 259-3456.

Sincerely,

Mary Ann Heidemann, Manager

Government Programs and Compliance

cc: Brad Johnson, USACE