



September 2, 2010

L-PI-10-084  
10 CFR 54

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Prairie Island Nuclear Generating Plant Units 1 and 2  
Dockets 50-282 and 50-306  
License Nos. DPR-42 and DPR-60

Responses to NRC Requests for Additional Information Dated August 27, 2010  
Regarding Application for Renewed Operating Licenses

- References:
1. Letter from Nuclear Management Company, LLC (NMC) to the U.S. Nuclear Regulatory Commission (NRC), "Prairie Island Nuclear Generating Plant Units 1 and 2 – Application for Renewed Operating Licenses," L-PI-08-024, dated April 11, 2008, ADAMS Accession Number ML081130666.
  2. Letter from the NRC to Northern States Power Company, a Minnesota Corporation, "Request for Additional Information Regarding the Application from Prairie Island Nuclear Generating Plant, Units 1 and 2 (TAC Nos. MD8528 and MD8529)," dated August 27, 2010, ADAMS Accession Number ML102100317.

By letter dated April 11, 2008 (Reference 1), Nuclear Management Company, LLC (NMC)\*, submitted an Application for Renewed Operating Licenses (LRA) for the Prairie Island Nuclear Generating Plant (PINGP) Units 1 and 2. In a letter dated August 27, 2010 (Reference 2), the NRC transmitted Requests for Additional Information (RAIs) regarding that application. This letter provides responses to those RAIs.

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\* On September 22, 2008, NMC transferred its operating authority to Northern States Power Company, a Minnesota Corporation (NSPM), doing business as Xcel Energy. By letter dated September 3, 2008, NSPM assumed responsibility for actions and commitments previously submitted by NMC.

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Enclosure 1 to this letter provides the text of each RAI followed by the NSPM response. Enclosures 2 and 3 contain copies of documents requested in RAI 1 and RAI 2, respectively.

If there are any questions or if additional information is needed, please contact Mr. James Holthaus, Environmental Project Manager, at 612-330-6635.

Summary of Commitments

This letter contains no new commitments or changes to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 2, 2010.



Bradley J. Sawatzke  
Director, Site Operations, Prairie Island Nuclear Generating Plant  
Northern States Power Company - Minnesota

Enclosures (3)

cc: Administrator, Region III, USNRC  
License Renewal Environmental Project Manager, PINGP, USNRC  
Operating Reactor Licensing Project Manager, PINGP, USNRC  
Resident Inspector, PINGP, USNRC  
Prairie Island Indian Community, ATTN: Phil Mahowald  
Minnesota Department of Commerce

**ENCLOSURE 1**

**RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION REGARDING  
PRAIRIE ISLAND LICENSE RENEWAL – ECOLOGY**

This enclosure provides responses from Northern States Power Company, a Minnesota Corporation (NSPM), doing business as Xcel Energy, to Requests for Additional Information (RAIs) provided by the U.S. Nuclear Regulatory Commission (NRC) in a letter dated August 27, 2010 (ADAMS Accession Number ML102100317). These RAI responses are provided in support of the License Renewal Application (LRA) submitted on April 11, 2008 (ADAMS Accession Number ML081130666) by Nuclear Management Company, LLC (NMC). By letter dated September 3, 2008, NSPM assumed responsibility for actions and commitments previously submitted by NMC.

**RAI 1**

Please provide any correspondence with the Minnesota Department of Natural Resources, U.S. Fish and Wildlife Service (FWS), or other State or Federal agency concerning effects of the 2010 maintenance dredging project in the Mississippi River on mussel species or other State or Federally-protected species.

**NSPM Response to RAI 1**

The requested correspondence is provided in Enclosure 2 to this letter.

**RAI 2**

Please provide any biological reports or assessments that were prepared as part of the Work in Public Waters permitting process to determine the effects on the aquatic environment from maintenance dredging since submittal of the Environmental Report.

**NSPM Response to RAI 2**

The requested reports and assessments are provided in Enclosure 3 to this letter.

**RAI 3**

Page 4-14 of the draft Supplemental Environmental Impact Statement (SEIS) states that a draft of Xcel Energy’s Avian Protection Plan (APP) for Minnesota was submitted to FWS in late 2008. Please provide an update on the status of this APP. If the APP has been finalized, please provide a summary statement which includes when and by whom the APP was approved and for how long the APP is valid. The statement should also include any commitments made in the APP, the timeframe for completing the commitments and how the commitments will be tracked.

**NSPM Response to RAI 3**

The APP was approved by the U.S. Fish and Wildlife Service in February 2010. The APP is valid indefinitely and is updated as needed. Guidelines have been developed by Xcel Energy to standardize avian protection in all of the company’s operating divisions, facilitate communication and education, and ultimately make Xcel Energy’s lines safer for birds in both the short and long term.

The APP evaluated threats posed to migratory birds by NSPM’s owned, operated, and maintained electric power transmission and distribution facilities. The facilities that posed an elevated risk to migratory birds for electrocution and collision were identified and prioritized 1 through 3, with 1 being the highest risk and 3 being a lower risk.

The APP does not identify specific NSPM commitments. However, the retrofit and marking tasks identified as Priority 1 and 2 are implemented in accordance with the following schedule:

Year	Electrocution Structure Retrofit Tasks	Collision Line Marking Tasks
2010	Retrofit all Priority 1 Recommendations	Mark 50% of Priority 1 Recommendations
2011	Retrofit 25% of Priority 2 Recommendations	Mark 50% of Priority 1 Recommendations
2012	Retrofit 25% of Priority 2 Recommendations	Mark 25% of Priority 2 Recommendations
2013	Retrofit 25% of Priority 2 Recommendations	Mark 25% of Priority 2 Recommendations
2014	Retrofit 25% of Priority 2 Recommendations	Mark 25% of Priority 2 Recommendations
2015	--	Mark 25% of Priority 2 Recommendations

Priority 3 retrofits are expected to occur when feasible and cost effective, during routine maintenance projects or rebuilds of facilities. No specific completion date is targeted for these retrofits.

Completion of the retrofits and line markings is tracked by distribution and transmission line managers and reported to Xcel Energy's Siting and Permitting Group on an annual basis.

**RAI 4**

In your letter dated January 27, 2010, providing comments on the draft SEIS, Comment 214 states, "It is important to note that the accuracy of the 1984 data for impingement of all fish species is in question due to sampling methodology." In a phone conversation on July 21, 2010, NRC staff asked Northern States Power Company (NSPM) to identify the nature of the problem with the sampling methodology. NSPM said that the comment was questioning NRC's calculations of the number of impinged fish in the draft SEIS based on the referenced data. Since this explanation differs from the comment submitted in writing, please clarify Comment 214.

**NSPM Response to RAI 4**

The original NSPM Comment 214 on the draft SEIS, Draft NUREG-1437, Supplement 39, is replaced with the following, clarifying NSPM's position.

<b>Comment Number</b>	<b>Page Number</b>	<b>Line Number</b>	<b>Comment / Proposed change</b>
214	4-16	29	After the sentence "In 1984, an estimated 43,680 adults were impinged, and in 1987, an estimated 1,176 adults were impinged," insert the following sentence: "The impingement estimates in 1984 were believed to be a gross overestimate due to the sampling equipment design. The equipment was redesigned in 1985 to allow for more accurate impingement estimates. This was reflected in the 1987 data."

**ENCLOSURE 2**

**RESPONSE TO RAI 1 – CORRESPONDENCE WITH STATE AND FEDERAL AGENCIES CONCERNING EFFECTS OF THE 2010 MAINTENANCE DREDGING PROJECT ON MUSSELS OR OTHER PROTECTED SPECIES**

This enclosure provides correspondence with Minnesota Department of Natural Resources, U.S. Fish and Wildlife Service, and other agencies regarding the effects of the 2010 Maintenance Dredging Project on mussel species or other protected species. This information is provided in response to RAI 1 and includes correspondence that is considered material to the request. A tabulation of the correspondence is provided below, in chronologically descending order, followed by actual copies of the correspondence.

Item Number	Document	Date	No. of Pages
1	Letter, U.S. Army Corps of Engineers, to Prairie Island Nuclear Generating Plant (PINGP), containing authorization of and an approved jurisdictional determination for the dredging of the approach canal (approximately 56,000 cubic yards)	March 22, 2010	2
2	E-mail, U.S. Army Corps of Engineers, to PINGP, forwarding the Nationwide Permit for the dredging project.	March 19, 2010	16
3	E-mail, Minnesota Department of Natural Resources, to PINGP, confirming receipt of cosigned Special Permit 16097.	March 15, 2010	1
4	Signed copy of Special Permit 16097 (Taking of mussels, including endangered and/or threatened species)	March 3, 2010	1
5	Letter, Minnesota Department of Natural Resources, to Xcel Energy, regarding Administrative Amendment to Permit 2010-0317, correcting License Condition 12 language	February 2, 2010	1
6	E-mail, Minnesota Department of Natural Resources, to PINGP, waiving the spawning exclusion provision of Permit 2010-0317	February 2, 2010	3
7	E-mail, Minnesota Department of Natural Resources, to PINGP, notifying correction of Permit 2010-0317 Condition 12	January 26, 2010	1
8	Letter, Minnesota Department of Natural Resources, to Xcel Energy, forwarding Permit 2010-0317 authorizing excavation within PINGP's approach canal	January 20, 2010	4
9	E-mail, Goodhue County Wetland Administration, to PINGP, acknowledging that no wetlands will be impacted by the spoil pile location described in Permit 2010-0317 application	December 21, 2009	1

Item Number	Document	Date	No. of Pages
10	Letter, Xcel Energy, to Minnesota Department of Natural Resources, accepting Option 2 for compensatory mitigation for the taking of endangered and threatened mussels associated with the dredging project	December 9, 2009	1
11	Letter, Minnesota Department of Natural Resources, to Xcel Energy, describing two options for calculating compensatory mitigation for the dredging project (June 9-11, 2009 mussel survey)	October 27, 2009	2
12	Letter, Prairie Island Indian Community Legal Department, to City of Red Wing, providing comments regarding PINGP Maintenance Dredging Project Environmental Assessment Worksheet	August 26, 2009	4
13	Letter, Minnesota Department of Natural Resources, to City of Red Wing, providing comments regarding PINGP Maintenance Dredging Project Environmental Assessment Worksheet	August 25, 2009	2
14	Letter, Minnesota Pollution Control Agency, to City of Red Wing, providing comments regarding PINGP Maintenance Dredging Project Environmental Assessment Worksheet.	August 25, 2009	2
15	Letter, Xcel Energy, to Prairie Island Indian Community Tribal Council, informing issuance of the PINGP Maintenance Dredging Project Environmental Assessment Worksheet	July 29, 2009	2
16	Letter, United States Department of the Interior, to Xcel Energy, concurring with the mussel survey approach proposed by the Minnesota Department of Natural Resources *** Included in Enclosure 3 ***	May 26, 2009	--
17	Letter, U.S. Army Corps of Engineers, to PINGP, containing authorization of and an approved jurisdictional determination for the dredging for the maintenance of the existing approach canal, plant canal system, and the intake screenhouse	March 9, 2009	10
18	Letter, Minnesota Department of Natural Resources, to Xcel Energy, forwarding Permit 2009-0323 authorizing dredging of 0.9 acres	February 23, 2009	3
19	Letter, Minnesota Department of Natural Resources, to Xcel Energy, authorizing maintenance dredging of the intake/recirculation canal (Amended Permit 1980-5082)	February 23, 2009	7

**CORRESPONDENCE WITH STATE AND FEDERAL AGENCIES CONCERNING  
EFFECTS OF THE 2010 MAINTENANCE DREDGING PROJECT ON MUSSELS  
OR OTHER PROTECTED SPECIES**

**63 pages follow**



**DEPARTMENT OF THE ARMY**  
**ST. PAUL DISTRICT, CORPS OF ENGINEERS**  
**SIBLEY SQUARE AT MEARS PARK**  
**190 FIFTH STREET EAST, SUITE 401**  
**ST. PAUL MINNESOTA 55101-1638**

**MAR 22 2010**

REPLY TO  
ATTENTION OF

Operations  
Regulatory (2008-05683-EMN)

Mr. Brent Kuhl  
Prairie Island Nuclear Generating Plant  
1717 Wakonade Drive East  
Welch, Minnesota 55089

Dear Mr. Kuhl:

We have reviewed information about your permit application to dredge approximately 56,000 cubic yards of accumulated sediments from the bed of the Mississippi River for maintenance of the existing approach canal at the Prairie Island Nuclear Generating Plant. All dredged material will be placed in a pre-approved upland disposal site. The project site is located in the E ½ of Section 5, T. 113N., R. 15W., Goodhue County, Minnesota.

This work is authorized by the Department of the Army nationwide permit referenced below and described in the enclosures, provided the enclosed conditions are followed.

This determination covers only your project as described above. If the design, location, or purpose of the project is changed, you should contact us to make sure the work would not result in a violation of Federal law.

This nationwide permit expires on March 18, 2012, unless it is modified, reissued, or revoked. The time limit for completing the work described above ends on that date, OR two years from the date of this letter, whichever occurs later. It is your responsibility to remain informed of changes to the nationwide permit program. A public notice announcing any changes will be issued if and when they occur. If these activities are not undertaken within the stated period, or the project specifications have changed, you must immediately notify this office to determine the need for further approval or re-verification.

It is your responsibility to ensure that the work complies with the terms of this letter and the enclosures, AND THAT YOU OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS AND APPROVALS BEFORE YOU PROCEED WITH THE WORK.

This letter contains an approved jurisdictional determination for your proposed project. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the following address:

James B. Wiseman, Jr.  
Administrative Appeals Review Officer  
Mississippi Valley Division  
P.O. Box 80 (1400 Walnut Street)  
Vicksburg, MS 39181-0080  
(601) 634-5820  
(601) 634-5816 (fax)

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter.

It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter.

If you have any questions, contact Eric Norton in our St. Paul District office at (651) 290-5358. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

*Eric Norton*

for Tamara E. Cameron  
Chief, Regulatory Branch

Determination: Nationwide Permit(s) (35)

Copy furnished to:  
Mr. Beau Kennedy, Goodhue County SWCD  
Mr. Bill Buber, MDNR

## Kuhl, Brent A

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**From:** Norton, Eric M MVP [REDACTED]  
**Sent:** Friday, March 19, 2010 3:17 PM  
**To:** Kuhl, Brent A  
**Subject:** PINGP Dredging Permit

**Attachments:** 2008-05683-EMN\_NWP LTR (PINGP Approach Canal).pdf



2008-05683-EMN\_N  
WP LTR (PINGP ...  
Brent,

Attached to this e-mail is a copy of the Nationwide Permit for the PINGP Dredging Project. The original letter is in the mail. The following information demonstrates compliance with Standard Conditions 17 and 18:

Formal consultation between our agency and the U.S. Fish & Wildlife Service (USFWS) was completed on April 15, 2009. In addition, a Unionid Survey consisting of qualitative dive searches (spot dives) and quantitative quadrats (0.25 m<sup>2</sup>) was conducted on June 9-11, 2009. The survey area encompassed 16 acres of the Mississippi River where the existing approach canal is located. No Federally listed mussel species (live or dead) were collected during the survey.

A Phase I Archaeological Survey of the existing holding pond and the construction corridor for the access road between the dredge holding area and C.R. 18 was completed in May 2009 by Merjent, Inc. (Dr. Peggy J. Boden). The Phase I Survey consisted of a pedestrian walk over and shovel-testing in the dredge holding area in the Fall of 2008. In addition, a geomorphology study (including deep coring and micro-artifact analysis of core samples) was conducted for the dredge holding area and the access road, which was completed in February 2009. Based upon the results of the Phase I Archaeological Survey and the Geomorphology Study, we have determined that there will be no historic properties affected by the proposed project.

The State Historic Preservation Office (SHPO) was notified of our determination that no historic properties will be affected by the proposed project. The 30-day review and comment period for the SHPO has expired; therefore, we assume concurrence with our determination. If we receive formal correspondence from the SHPO regarding this project in the future, we will forward the correspondence to you at that time for your records.

Standard Conditions 17 and 18 have been satisfied based upon the information listed above. It is your responsibility to ensure that the permitted work complies with all the other terms and Standard Conditions of this permit. This should satisfy the pressing concerns in regards to the two Standard Conditions. Please let me know if you have any questions. Thanks!

Eric Norton  
U.S. Army Corps of Engineers  
Regulatory Branch  
190 5th Street East  
Saint Paul, Minnesota 55101

[REDACTED]  
Customer Survey  
<http://per2.nwp.usace.army.mil/survey.html>

**GENERAL CONDITIONS APPLICABLE TO ALL  
NATIONWIDE PERMITS IN THE SAINT PAUL DISTRICT**

**March 2007**

**General Conditions**

**Note:** To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

**1. Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.  
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.  
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**2. Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that

normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

**3. Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

**4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

**5. Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

**6. Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

**7. Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

**8. Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

**9. Management of Water Flows.** To the maximum extent practicable, the pre-construction course,

condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**10. Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

**11. Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

**12. Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

**13. Removal of Temporary Fills.** Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

**14. Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

**15. Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

**16. Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

**17. Endangered Species.** (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been

satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

**18. Historic Properties.** (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register

of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**19. Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other

waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

**20. Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-

construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate

compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

**21. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

**22. Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**23. Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

**24. Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

**25. Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a Nationwide Permit verification, the permittee may transfer the Nationwide Permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:  
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

**26. Compliance Certification.** Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

**27. Pre-Construction Notification.**

(a) **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:  
(1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or  
(2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of

the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the

NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction

Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed

immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee

and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer

has approved a specific mitigation plan.

**28. Single and Complete Project.**

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 5, 2009**

**B. ST PAUL, MN DISTRICT OFFICE, FILE NAME, AND NUMBER: 2008-05683-EMN, Dredge canal system at Plant**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: Minnesota County/parish/borough: Goodhue City:  
Center coordinates of site (lat/long in degree decimal format): Lat. 44.62355° N, Long. -92.63157° W  
Universal Transverse Mercator: Zone 15

Name of nearest waterbody: Mississippi River  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Mississippi River  
Name of watershed or Hydrologic Unit Code (HUC):

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date: March 5, 2009
- Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There  *Are* "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. *[Required]*

- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: The Mississippi River is a navigable water of the United States under Section 10 of the Rivers & Harbors Act.

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There  *Are* "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. *[Required]*

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.  
Wetlands: acres.

**c. Limits (boundaries) of jurisdiction based on: Pick List**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain:

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: Mississippi River.

Summarize rationale supporting determination: The Mississippi River is a navigable water under Section 10 of the Rivers & Harbors Act.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

#### B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Pick List  
Drainage area: Pick List  
Average annual rainfall: inches  
Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.  
 Tributary flows through Pick List tributaries before entering TNW.

Project waters are Pick List river miles from TNW.  
Project waters are Pick List river miles from RPW.  
Project waters are Pick List aerial (straight) miles from TNW.  
Project waters are Pick List aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>:

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: Pick List.

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List

Estimate average number of flow events in review area/year: Pick List

Describe flow regime:

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain:

Surface flow is: Pick List

Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain:

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: Pick List

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

TNWs: linear feet width (ft), Or, 1.0 acres.  
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:**

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters: .
- Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: February 12, 2009.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: Goodhue County.
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): FSA 2008 orthophotos.
  - or  Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law:
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** The Mississippi River is a navigable water of the United States under Section 10 of the Rivers & Harbors Act.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: Prairie Island Nuclear Generating Plant | File Number: 2008-05683-EMN | Date: **MAR 22 2010**

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

**SECTION I** - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

**A. INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

**ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approve jurisdictional determinations associated with the permit.

• **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B. PROFFERED PERMIT:** You may accept or appeal the permit.

• **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

• **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C. PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D. APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

• **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

• **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E. PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION**

If you have questions regarding this decision and/or the appeal process you may contact:

Eric Norton  
U.S. Army Corps of Engineers  
Regulatory Branch  
190 5<sup>th</sup> Street East  
St. Paul, Minnesota 55101  
Telephone: 651-290-5358

If you only have questions regarding the appeal process you may also contact:

James B. Wiseman, Jr.  
Administrative Appeals Review Officer  
Mississippi Valley Division  
P.O. Box 80 (1400 Walnut Street)  
Vicksburg, MS 39181-0080  
(601) 634-5820  
(601) 634-5816 (fax)

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
----------------------------------	-------	-------------------



STATE OF MINNESOTA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ECOLOGICAL RESOURCES  
500 LAFAYETTE ROAD, BOX 25  
ST. PAUL, MN 55155

**SPECIAL PERMIT NO. 16097**  
(Taking of mussels, including endangered and/or threatened species)  
March 1, 2010

**TO WHOM IT MAY CONCERN:**

Under the authority of Minn. Statutes, Section 84.0895 and Minn. Rules, Parts 6212.1800-2100, permission is hereby granted to:

**Mark Schimmel, Site Vice President**  
**Prairie Island Nuclear Generating Plant**  
**Xcel Energy**  
**414 Nicollet Mall**  
**Minneapolis, MN 55401-1993**

and his agents, employees, and contractors, to take by destruction in connection with the proposed 2010 Mississippi River dredging at the intake channel for the Prairie Island Nuclear Generating Plant at Red Wing, an unlimited number of endangered, threatened, and non-listed unionid mussels. Dredging will be limited to the area (approx. 16 acres), volume (approx. 56,000 cubic yards), and conditions specified in DNR Public Waters Work Permit No. 2010-0317.

As compensatory mitigation for this taking, the permittee will provide ninety thousand dollars (\$90,000) to the Minnesota Department of Natural Resources, pursuant to Minn. Statutes, 84.085 subd. 1., for the purpose of funding research, propagation, restoration, and/or management activities contributing to the recovery and eventual delisting of endangered and threatened mussel species within the Mississippi River in Minnesota.

This permit is not effective until a signed copy of this permit and the \$90,000 compensatory mitigation payment (payable to the Minnesota Department of Natural Resources) are received by the DNR at the following address: Richard J. Baker, Minnesota Endangered Species Coordinator, Division of Ecological Resources, Box 25, 500 Lafayette Road, St. Paul, MN 55155. Receipt by the DNR will be confirmed by email to Mr. Brent Kuhl, Xcel Energy.

  
\_\_\_\_\_  
Ann Pierce  
CMRR Supervisor, Division of Ecological Resources

3/1/10  
Date

*I hereby certify that I have read, understand, and accept the provision of this permit and understand that this permit is not valid unless it is signed by me.*

  
\_\_\_\_\_  
Mark Schimmel, Permittee

3/3/10  
Date

- cc. Richard J. Baker, Endangered Species Coordinator, Div. Ecological Resources  
Jan Wolff, Acting Regional Manager, Div. Ecological Resources  
Dale Homuth, Regional Hydrologist, Div. Waters  
Bill Huber, Area Hydrologist, Div. Waters  
Melissa Doperalski, Regional EA Ecologist, Div. Ecological Resources  
Dean Olson, District Supervisor, Div. Enforcement  
Mike Davis, Malacologist, Div. Ecological Resources  
Ian Chisholm SHP Supervisor, Div. Ecological Resources  
Lindsey Peterson, Permit Clerk, Div. Fish and Wildlife  
Brent Kuhl, Xcel Energy

# Minnesota Department of Natural Resources

DNR Waters, 1200 Warner Road, St. Paul, MN 55106

Telephone: (651) 259-5766 Fax: (651) 772-7977



February 2, 2010

Xcel Energy  
Northern States Power - Minnesota  
c/o, Brent A. Kuhl  
414 Nicollet Mall  
Minneapolis, MN 55401

RE: Administrative Amendment to Permit #2010-0317, Mississippi River-Pool 3 (25001700),  
Goodhue County, Prairie Island Generating Plant

Dear Mr. Kuhl:

Thank you for the information you submitted regarding an error in Permit Condition 12. Below you will find the correct Permit Condition 12 language:

12. The **permittee** shall comply with all rules, regulations, requirements, or standards of the Minnesota Pollution Control Agency and other applicable federal, state or local agencies.

By this letter we are amending Permit #2010-0317 to reflect this correction.

All other terms and conditions of Permit #2010-0317 remain in full force and effect.

Please feel free to contact Mississippi River Hydrologist Scot Johnson at 651-345-5601 ext. 245 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads 'Dale E. Homuth'.

Dale E. Homuth  
Regional Hydrologist

ec: Scot Johnson, River Hydrologist  
Goodhue County Planning  
Kevin Stauffer, Area Fisheries Supervisor  
Tyler Quandt, Conservation Officer  
DNR Central Office Permits Unit  
Rich Baker, Eco Resources  
Bill Huber, Area Hydrologist  
Goodhue SWCD  
Mike Tenney, Area Wildlife Manager  
COE, Regulatory Branch  
Brian Peterson, City of Red Wing  
Melissa Doperalski, Eco Resources

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**Kumar, Paul A.**

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**From:** Stauffer, Kevin W (DNR) [REDACTED]  
**Sent:** Tuesday, February 02, 2010 1:29 PM  
**To:** Kuhl, Brent A  
**Cc:** Huber, Bill P (DNR); Johnson, Scot B (DNR); Trulson, Roth G.; Flowers, Patrick I  
**Subject:** RE: Permit 2010-0317 Condition 14

Brent,

Thank you for sending the additional justification for a waiver of the spawning exclusion provision that was included in DOW Permit 2010-0317. As we have discussed, this is a standard provision that is usually included in permits for work in the river bed during a period when most fish spawning activity occurs. The provision also gives us the flexibility to waive or modify the exclusion period if there is reasonable justification and we can be assured that no significant or long term impacts will occur.

The habitat in the area proposed for dredging is not considered critical for spawning, but fish movement through this area may be altered by the dredging activity. That said, I understand the need to complete this project in a timely manner and in concert with plant operations. I do not expect any long term impacts from this project and have concluded that the exclusion period can be waived. It would be preferable if the project were completed as early in the spring as possible.

Sincerely,

Kevin Stauffer  
Area Fisheries Supervisor  
Minnesota Department of Natural Resources  
1801 S. Oak Street  
Lake City, MN 55041  
[REDACTED]  
[REDACTED]

---

**From:** Kuhl, Brent A [REDACTED]  
**Sent:** Friday, January 29, 2010 1:14 PM  
**To:** Stauffer, Kevin W (DNR)  
**Cc:** Huber, Bill P (DNR); Johnson, Scot B (DNR); Trulson, Roth G.; Flowers, Patrick I  
**Subject:** Permit 2010-0317 Condition 14

Kevin

Per Permit 2010-0317 and the permit letter dated January 20, 2010, please consider this email submittal for additional rationale and justification for conducting dredging between March 15 and May 15. I have also attached for reference the December 8, 2009 email request for written permission for dredging between March 15 and May 15.

Xcel Energy proposes to dredge as soon as river conditions allow in March. Based on a recent meeting with the dredging contractor (based in St. Paul, MN), once Lock and Dam No. 2 is ice free and operational, they

8/30/2010

will be able to mobilize equipment downstream to the Prairie Island Plant. This is anticipated to occur mid-March but will be dependent on river and ice conditions. Dredging operations are anticipated to be conducted over a period of approximately 6 weeks.

Xcel Energy expects dredging in March and April 2010 to have little impact on river conditions and fish spawning in this area. As explained in the dredging EAW, in April, 2009, during the previously permitted, 0.9 acre dredging operations, water samples were collected and analyzed for total suspended solids ("TSS") to evaluate the impact of comparable dredging activities proposed in this project on water quality. Based upon the 2009 measurements, the TSS concentration (measured in parts per million – ppm) changes caused by the re-suspension of sediments during dredging will be within the range of background concentrations measured for the growing season periods during 2003 to 2009. Any temporary water quality impacts will be immeasurable over background TSS levels in the river.

<u>Location</u>	<u>Measured TSS</u>
<i>April 2009 Dredging Measurements</i>	
100 feet downstream of dredge	43.0 ppm
Downstream of barge unloader	44.0 ppm
River inlet at intake screen house	51.0 ppm
<i>Background Concentration – April 2009</i>	
Main channel	40.0 ppm
Sturgeon Lake (upstream of dredge area)	46.0 ppm
<i>2003 – 2009 River Intake TSS Measurements at Prairie Island</i>	
All samples	
(number of samples = 37)	51.6 ppm (std dev = 21.6)
May – October samples	
(number of samples = 23)	36.6 ppm (std dev = 25.6)

Temporary water quality impacts will be limited to the immediate area during dredging and will have no downstream impacts. It is anticipated that the turbidity of the water within the dredging location may increase slightly as a result of the maintenance dredging, but based upon April 2009 measurements, total suspended solids (TSS) levels in the vicinity of the dredging should not rise above background levels, thus having minimal impact on fish spawning.

If desired, Xcel Energy can also provide recent and historical fisheries survey data for the area within the vicinity and downstream of the planned dredging for your review.

In addition, please find below the plant's rationale for planning the dredging of the approach canal during the Spring time period.

- During March, the plant operates in a "partial closed cycle" to maintain temperatures less than 43F at Lock and Dam No. 3 (per NPDES Permit MN0004006). Operating in a "partial closed cycle" minimizes the amount of river sediment that will be drawn into plant equipment during dredging operations.
- Additionally, the plant is required per their NPDES permit to maintain plant discharge (which is a direct relationship to intake flows) to a lesser amount from April 15 - May 31, and dredging during this closed cycle time minimizes the amount of river sediment that will be drawn into plant equipment.

- In addition, dredging during April will coincide with a scheduled outage for Unit 2. The shutdown of one unit reduces the amount of river water utilized for cooling and drawn into the plant during the shutdown.
- During public hearings for the dredging Environmental Assessment Worksheet (EAW) the Prairie Island Indian Community requested that planned dredging of the intake canal be conducted as early as possible in March and April to minimize potential conflicts with recreational boating traffic and the Treasure Island Marina.

Please contact me with any questions. Thank you for your attention to this request.

Brent Kuhl  
Xcel Energy-Environmental Services

**Kuhl, Brent A**

---

**From:** Johnson, Scot B (DNR) [REDACTED]  
**Sent:** Tuesday, January 26, 2010 9:04 AM  
**To:** Kuhl, Brent A  
**Cc:** Huber, Bill P (DNR); Stauffer, Brenda (DNR)  
**Subject:** Permit 2010-0317 Condition 12 correction

Brent,

Condition 12 of Permit 2010-0317 contains a sentence that does not pertain to the Xcel dredging project. Please strike the second sentence as shown below:

12. The permittee shall comply with all rules, regulations, requirements, or standards of the Minnesota Pollution Control Agency and other applicable federal, state or local agencies. ~~This includes the WDNR 404 water quality certification testing frequencies, parameters, monitoring locations and limiting concentrations requirements.~~

I hope this has not caused you any inconvenience. Please call if you have additional questions.

Thank you!

Scot Johnson  
Mississippi River Hydrologist

1801 South Oak Street  
Lake City, Minnesota 55041  
[REDACTED]

1/26/2010

# Minnesota Department of Natural Resources

DNR Waters, 1200 Warner Road, St. Paul, MN 55106

Telephone: (651) 259-5845 Fax: (651) 772-7977



January 20, 2010

Xcel Energy  
Northern States Power - Minnesota  
c/o, Brent A. Kuhl  
414 Nicollet Mall  
Minneapolis, MN 55401

Dear Mr. Kuhl:

**RE: Permit 2010-0317, Mississippi River-Pool 3 (25001700), Goodhue County,  
Prairie Island Generating Plant**

Enclosed is Permit 2010-0317 authorizing you to excavate approximately 56,000 cubic yards from a 16 acre area within the Prairie Island Generating Plant's approach canal (intake screenhouse to the navigation channel). Please read all the conditions of your permit and assure that the enclosed Notice of Permit (orange card) is conspicuously displayed during construction.

We acknowledge your December 8, 2009 email request for written permission to dredge between March 15 and May 15. As you are aware, DNR Fisheries recommends that no work be done during this time period to minimize impacts on fish spawning and migration. This recommendation is reflected in Condition 14 of this Permit. Additional rationale and justification must be submitted to the Lake City Area Fisheries Manager before the DNR can make a decision on your request to dredge during this time period. Contact Lake City Area Fisheries Manager Kevin Stauffer directly should you have any questions regarding this permit condition:

Please pay special attention to Permit Condition 15 which requires Xcel Energy be in receipt of a Minnesota Endangered Species Takings Permit prior to dredging because of anticipated impacts to state listed mussel species. It is our understanding that DNR Ecological Resources and Xcel Energy have reached a tentative agreement on the conditions for issuance of the Takings Permit.

Note the permit condition regarding wetlands not subject to DNR permit jurisdiction. Contact the appropriate local government unit (County, City, or Soil and Water Conservation District) for a determination concerning compliance with the Wetland Conservation Act.

If you have any questions, please contact Mississippi River Hydrologist Scot Johnson at 651/345-5601 ext. 245 or at 1801 South Oak Street, Lake City, MN, 55066.

Sincerely,

A handwritten signature in black ink, appearing to read "Dale E. Homuth".

Dale E. Homuth  
Regional Hydrologist

ec: Scot Johnson, River Hydrologist  
Goodhue County Planning  
Kevin Stauffer, Area Fisheries Supervisor  
Tyler Quandt, Conservation Officer  
DNR Central Office Permits Unit  
Rich Baker, Eco Resources

Bill Huber, Area Hydrologist  
Goodhue SWCD  
Mike Tenney, Area Wildlife Manager  
COE, Regulatory Branch  
Brian Peterson, City of Red Wing  
Melissa Doperalski, Eco Resources

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# PUBLIC WATERS WORK PERMIT

**Permit Number**  
**2010-0317**

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made a part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform the work as authorized below:

<b>Public Water</b>	<b>County</b>
Mississippi River-Pool 3 (25001700)	Goodhue
<b>Name of Permittee</b>	<b>Telephone Number (Include Area Code)</b>
Xcel Energy, c/o Brent A. Kuhl	651-388-1121 ext 4419
<b>Address (No. &amp; Street, RFD, Box No., City, State, Zip Code)</b>	
414 Nicollet Mall, Minneapolis, MN 55401	
<b>Authorized Work:</b> Excavate approximately 56,000 cubic yards from a 16 acre area within the Prairie Island Generating Plant's approach canal (intake screenhouse to the navigation channel); all according to plans and specifications submitted with the permit application and the following conditions.	
<b>Purpose of Permit:</b>	<b>Expiration Date of Permit</b>
165-Excavation/Dredging	November 30, 2014
<b>Property Described As:</b>	
Section 5, T113N, R15W. UTM: Northing 4,941,200; Easting 529,300	

This permit is granted **subject to** the following **CONDITIONS**:

1. The **permittee** is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning. This permit does not release the **permittee** of any permit requirement of the St. Paul district, U.S. Army Corps of Engineers, Army Corps of Engineers Centre, 190 Fifth Street East, St. Paul, MN 55101-1638.
2. This permit is not assignable by the **permittee** except with the written consent of the Commissioner of Natural Resources.
3. The **permittee** shall notify the Area Hydrologist at least five days in advance of the commencement of the work authorized hereunder and notify him/her of its completion within five days. The Notice of Permit issued by the Commissioner shall be kept securely posted in a conspicuous place at the site of operations.
4. The **permittee** shall make no changes, without written permission previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.
5. The **permittee** shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.
6. This permit may be terminated by the Commissioner of Natural Resources at any time deemed necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the provisions or applicable law of this permit, unless otherwise provided in the Special Provisions.
7. Construction work authorized under this permit shall be completed on or before the date specified above. The **permittee** may request an extension of the time to complete the project, stating the reason thereof, upon written request to the Commissioner of Natural Resources.

8. In all cases where the **permittee** by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the **permittee**, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.
9. This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the **permittee** or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the **permittee**, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the **permittee**, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable provisions of law.
10. Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.
11. Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the **permittee** shall not initiate any work under this permit until the **permittee** has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.
12. The **permittee** shall comply with all rules, regulations, requirements, or standards of the Minnesota Pollution Control Agency and other applicable federal, state or local agencies. This includes the WDNR 401 water quality certification testing frequencies, parameters, monitoring locations and limiting concentrations requirements.
13. Future maintenance required for this project shall not exceed the work herein authorized. Prior to commencing any maintenance work, permittee shall advise the Division of Waters, Region 3 of the location, starting date, and extent of the work. Maintenance work shall not be commenced until the permittee's receipt of Division of Waters' approval.
14. No activity affecting the bed of the Public Water may be conducted between March 15 and May 15 to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the Area Fisheries Manager at 1801 South Oak Street, Lake City, MN 55066 or 651/345-5601 ext. 229.
15. Xcel Energy must be in receipt of a Minnesota Endangered Species Takings Permit prior to dredging of the approach canal.
16. The permittee shall ensure that all equipment used for water resource work has been adequately decontaminated prior to use and upon leaving the project area. All equipment including but not limited to tracked vehicles, barges, boats, turbidity curtains, sheet pile, and pumps that have come in contact with any potentially infested waters must be thoroughly decontaminated. The permittee shall use the following inspection and removal procedures for decontamination:
  - a) Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments and any other areas where water may be trapped.
  - b) Inspect boat hulls, propellers, trailers, tracks, tires and other surfaces, scrape off any mussels, scrape off all mud, remove any aquatic plant material (fragments, stems, leaves, or roots) and dispose of them properly prior to transporting any equipment on public roads.
  - c) Flush the inside and outside of all equipment with hot water of 105 – 110 degrees F for a period of 30 minutes or 140 degrees F for a period of 5 minutes; or, instead flushing equipment, leave the equipment in a location so that it dries completely for a minimum of 5 consecutive full days.

cc: Scot Johnson, River Hydrologist  
Goodhue County Planning  
Kevin Stauffer, Area Fisheries Supervisor  
Tyler Quandt, Conservation Officer  
DNR Central Office Permits Unit  
Rich Baker, Eco Resources

Bill Huber, Area Hydrologist  
Goodhue SWCD  
Mike Tenney, Area Wildlife Manager  
COE, Regulatory Branch  
Brian Peterson, City of Red Wing  
Melissa Doperalski, Eco Resources

Version 12/12/2001  
This information is available in an alternative format upon request

Authorized Signature	Title	Date
 Dale E. Homuth	Regional Hydrologist	Jan. 20, 2010

PERMIT NO. 200-0317

APPROPRIATION AND USE OF WATER

WORK IN THE BEDS OF PUBLIC WATERS

HAS BEEN ISSUED TO

Xcel Energy

By the COMMISSIONER  
MINNESOTA DEPARTMENT OF NATURAL RESOURCES

EXPIRATION DATE November 30, 2014

POST CONSPICUOUSLY AT PROJECT SITE

**Kuhl, Brent A**

---

**From:** Beau Kennedy [REDACTED]  
**Sent:** Monday, December 21, 2009 11:41 AM  
**To:** Kuhl, Brent A  
**Subject:** Permit#2010-0317  
**Attachments:** DSC01007.JPG; DSC01004.JPG

Hi Brent

Thanks for taking the time to meet with me again. I needed to make sure my records were updated for the proposed location of the stockpile again. After review of the site, it appears that no wetlands will be impacted by placing the spoil pile in the proposed location described in the permit application.

If the location of the stockpile will change, please contact me to assure compliance with the Wetland Conservation Act and prevent any wetland impacts.

Thank you for your time.

**Beau Kennedy**

*Water Planner/Wetland Adm.  
Goodhue County SWCD  
104 E 3rd Ave. PO Box 335  
Goodhue, MN 55027*

[REDACTED]

1/28/2010



414 Nicollet Mall  
Minneapolis, Minnesota 55401-1993

December 9, 2009

Richard Baker  
Endangered Species Coordinator  
Minnesota Department of Natural Resources  
Division of Ecological Resources, Box 25  
500 Lafayette Road  
St. Paul, MN 55155-4025

**Re: Mitigation for dredging at Prairie Island Nuclear Generating Plant**

Dear Mr. Baker:

Xcel Energy has reviewed your letter dated October 27, 2009 regarding the Takings Permit with Mitigation for dredging at the Prairie Island Nuclear Generating Plant. The Minnesota Department of Natural Resources (DNR) requires compensatory mitigation for the taking of endangered or threatened species associated with the dredging project. In your letter two options were described for compensatory mitigation.

Please consider this letter acceptance of Option 2. Xcel Energy will provide a payment of \$90,000 to the DNR for compensatory mitigation for the taking of endangered and threatened mussels at the proposed dredge site.

Please feel free to contact Brent Kuhl, 651-388-1121, Ext 4419 or me, 612-330-6278, with any questions or concerns.

Sincerely,

Patrick Flowers, CSP, CHMM  
Xcel Energy Environmental Services  
Manager-Water Quality

cc: Brent Kuhl  
Roth Trulson  
Kari Zipko  
ES Records



## Minnesota Department of Natural Resources

Division of Ecological Resources, Box 25  
500 Lafayette Road  
St. Paul, Minnesota 55155-4025

October 27, 2009

Mr. Roth Trulson  
Mr. Brent Kuhl  
Xcel Energy

Re: Takings Permit with Mitigation for dredging at Prairie Island Nuclear Generating Plant

Dear Mr. Trulson and Mr. Kuhl:

Xcel Energy has proposed to conduct maintenance dredging at the intake channel for the Prairie Island Nuclear Generating Plant in Red Wing. During the review phase of this project, the Minnesota DNR requested that a mussel survey of the proposed dredge site be conducted. A survey was completed for Xcel during June 9-11, 2009, and several species of endangered or threatened mussels were found to occur within the proposed dredge site. Minnesota's endangered species laws (M.S., Sec. 84.0895 and associated rules) prohibit the taking of endangered or threatened species without a permit. Because the proposed dredging cannot avoid the take of these mussel species, Xcel has requested a takings permit from the DNR.

The DNR requires compensatory mitigation for the taking of endangered or threatened species associated with a development project. My analysis of your request leads me to the following options:

- 1) The June 2009 mussel survey found 903 live mussels within the proposed dredge site, including  $\checkmark$ 1.22% endangered species and 0.22% threatened species. Mussel density within the 16 acre site averaged 3.3/m<sup>2</sup>. Extrapolating from these values, 2,603 endangered and 473 threatened individual mussels will be taken by the proposed dredging. Minnesota's restitution laws (M.R. Ch. 6133) places the value of endangered animals at \$2,000/individual and threatened animals at \$500/individual. Based upon these values, compensatory mitigation for the dredging project could be set at \$5,442,500.
- 2) An alternative approach to calculating compensatory mitigation for the dredging project would be to accept the cost of relocation in lieu of requiring relocation of mussels from within the dredge site. The mussel survey found that 18 (~50%) of the 35 timed searches yielded >1 mussel/minute of effort, and required quadrat sampling following the DNR's Mussel Survey and Relocation Protocol. In turn, 9 (50%) of the 18 1/4m quadrats yielded any mussels, indicating that approximately 25% (4 acres) of the site supports a mussel density warranting relocation (>4/ m<sup>2</sup>). Staff estimates that at a rate of one meter per minute, relocation of 4 acres would require 20 days of effort by a crew of 4 divers. The commercial rate of such a dive crew is approximately \$4,500/day. Based upon these estimates, compensatory mitigation for the dredging project could be set at \$90,000.

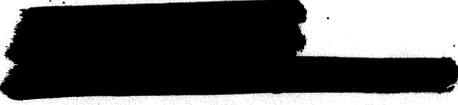
I propose that compensatory mitigation for the proposed dredging be set at \$90,000. The funds would be used to support activities (e.g., research, propagation, restoration, management) contributing to the recovery and eventual delisting of endangered and threatened mussel species within the Mississippi River in Minnesota.

Once we have agreed on mitigation terms for the taking of the endangered and threatened mussels at the proposed dredge site, I will issue a takings permit. I look forward to discussing this proposal with you at your convenience.

Sincerely,



Richard J. Baker  
Endangered Species Coordinator



- C: Steve Hirsch, Director, Division of Ecological Resources
- Bill Huber, Area Hydrologist, Division of Waters
- Melissa Doperalski, Regional Environmental Assessment Ecologist, Division of Ecological Resources
- Mike Davis, Malacologist, Division of Ecological Resources
- Bernard Seitman, Malacologist, Division of Ecological Resources
- Ann Pierce, CMRR Supervisor, Division of Ecological Resources
- Jan Wolff, Regional Manager, Division of Ecological Resources
- Ian Chisholm, SHP Supervisor, Division of Ecological Resources
- Jeff Lee, Barr Engineering Co.



PRAIRIE ISLAND INDIAN COMMUNITY  
LEGAL DEPARTMENT

August 26, 2009

Brian Peterson, Planning Director  
City of Red Wing  
419 Bush Street  
Red Wing, MN 55041

VIA E-MAIL  
[REDACTED]

RE: Prairie Island Nuclear Generating Plant Maintenance Dredging Project,  
Environmental Assessment Worksheet (EAW)

Dear Mr. Peterson:

The Prairie Island Indian Community (the Community) would like to offer the following comments regarding the above-referenced matter. As you are no doubt aware, the Prairie Island Nuclear Generating Plant (PINGP), the site of the maintenance dredging operation and dredge pond location, is located immediately adjacent to our Community. In addition, the intended site for the disposition of the dredged materials, Holst Excavation Pit #3, is also located immediately adjacent to our lands. Because of the close proximity of the two aspects of the project to our lands, we have some serious concerns about the project that have not been evaluated in the EAW.

Scope of Maintenance Dredging Project

According to the EAW, the project encompasses 16 acres and will involve dredging approximately 56,000 cubic yards of sediment from the project area. However, the March 9, 2009 correspondence from the U.S. Army Corps of Engineers (included in the EAW as Attachment G) states that the PINGP is authorized to dredge approximately 43,000 cubic yards of sediments. The table on page 5 of the EAW indicates that there have been adjustments to the expected dredging volumes since the Army Corps of Engineers issued the permit. Nevertheless, this project should be placed on hold until the increase in volume has been evaluated by the Army Corps of Engineers and a new permit has been issued.

Higgins Eye Pearly Mussel

As stated in the EAW, efforts are underway to re-establish the federally-list Higgins eye pearly mussel. Also as correctly noted, the re-establishment area is located one-third of a

Mr. Brian Peterson  
PIIC Comments on PINGP Maintenance Dredging EAW  
August 26, 2009

mile upstream from the project area. The PINGP supported a summer mussel survey to evaluate the mussel population in the dredge area and understand potential impacts from the project. While the mussel survey did not document any Higgins eye mussels within the project area, the EAW noted that the Higgins eye mussels have been documented both upstream and downstream of the project area. It was not clear in the EAW whether there will be any impacts to the re-establishment and survival of the federally-listed Higgins eye pearly mussel. Moreover, the EAW indicated that the MN Department of Natural Resources (MN DNR) would provide guidance relative to mitigation of impacts as part of its review of the EAW. We would like to see the proposed mitigation (or additional restrictions/requirements) before the permit is issued.

#### Sediment Sampling

We understand that Xcel Energy plans to collect additional water and sediment samples, within and upstream of the project area for radiological analyses. We support this effort, as our own research has shown that the surface waters of the Mississippi River actually flows back upstream (back to Sturgeon Lake) when winds are out of the S, SE, SW (varying with the speed of the wind). Accordingly, assumptions that all contaminants in the PINGP's emissions (radioactive or otherwise) only flow downstream must be thoroughly tested with appropriate sampling and analysis of the dredged sediment for radiological contaminants, as well as other potential contaminants from other upstream sources.

#### Traffic Concerns

We are especially concerned about the large volume of heavy truck traffic traveling from the PINGP to the Holst site through the heart of our Community. According to the EAW, there will be 88 daily truck trips, from 8 AM to 5 PM, 5 days a week, for 10 weeks, coming through our residential and business area along Sturgeon Lake Road, the main street of our Community. These 4,400 truck trips will have serious safety and noise impacts on our Community that were not evaluated in the EAW. We are also concerned about the impact that the weight of 4,400 truck loads of sediment will have on Sturgeon Lake Road, whether Sturgeon Lake Road was designed and constructed to handle this large volume of heavy truck traffic, and whether the condition of the road will be adversely affected (i.e. rutting, potholes, etc.).

According to our own communications with Xcel Energy, their preferred route would have had the trucks using Xcel's access road to leave the PINGP site. This route would involve at left-hand turn over four lanes of traffic on Sturgeon Lake Road. Furthermore, it is our understanding that you indicated that Xcel's preferred route would pose a safety hazard to the drivers of these trucks. We appreciate those concerns.

There are, however, other potential impacts and safety hazards that must also be considered. Sturgeon Lake Road provides the only access to our primary residential area, our government center, and our business. Many Community children and adults, as well

Mr. Brian Peterson  
PHC Comments on PINGP Maintenance Dredging EAW  
August 26, 2009

as guests at the Treasure Island Resort & Casino, use the sidewalk along Sturgeon Lake Road for recreational purposes. In addition, school will be in session during the time the trucks will be traveling through our Community; school buses will be traveling through to pick up and drop-off Community children.

As you are no doubt aware, the Community is the largest employer in Goodhue County (approximately 1,600 employees between Treasure Island Resort & Casino and our governmental operations). Based on our employee numbers, we estimate the traffic volume on Sturgeon Lake Road to be the following:

Tribal government, 102 employees, mainly 8:00 AM to 5:00 PM

Treasure Island, employees, 3 shifts: day (6-8 AM -3-5 PM, 600 employees), swing (3 PM to 11 PM, 600 employees), and graveyard (11-12 PM until 8 AM, 400 employees).

Treasure Island Resort & Casino also accommodates up to 16,000 guests (hotel, gaming floor, restaurants, family fun center, RV park, and marina). These guests arrive and depart all day long, but the heaviest volumes would be from 6 PM to 12 AM.

Accordingly, we would prefer that the 4,400 truckloads of material NOT travel from the PINGP through our Community on Sturgeon Lake Road. The PINGP access road should instead be used as the exclusive truck route. A traffic control mitigation plan could easily be developed to help truck drivers cross Sturgeon Lake Road safely (e.g., temporary all-way stop signs, temporary traffic control by law enforcement, etc.). Alternatively, the dredged material could be removed to an alternative location via river barge with no adverse impact on either Sturgeon Lake Road, the Xcel access road, or County Road 18. We would be glad to meet with you to discuss this matter further.

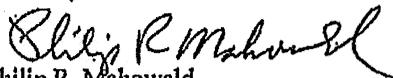
#### Archaeological Sites

We appreciate the effort Xcel has made to ensure that the expansion of the dredge pond and construction of the access road within the boundaries of the PINGP will not impact archaeological sites. We remain concerned about the operational practices of the Holst Excavating Company. There are recorded archaeological sites on the property owned by Holst Excavation. In the past, we have had to involve the U.S. Bureau of Indian Affairs (BIA) to require that Holst Excavation remove the soil that had been placed on top of a recorded burial mound site from their operations. In addition, Holst Excavation has previously expanded its operations to adjacent land that is not owned by the company. The City of Red Wing should ensure that the operation of Holst Excavation Pit #3 would not have similar results.

Mr. Brian Peterson  
PIIC Comments on PINGP Maintenance Dredging EAW  
August 26, 2009

We thank you for this opportunity to provide comments on this Environmental Assessment Worksheet. If you have any questions, please feel free to contact me at (651) 267-4006.

Sincerely,

  
Philip R. Mahowald  
General Counsel  
Prairie Island Indian Community

cc: The Honorable John Howe, Mayor of Red Wing, MN

# Minnesota Department of Natural Resources

Central Region  
1200 Warner Road  
Saint Paul, Minnesota 55106  
(651) 259-5767



August 25, 2009

Brian C. Peterson, Planning Director  
City of Red Wing Planning Department  
419 Bush Street, Red Wing, Minnesota 55066

RE: Prairie Island Nuclear Generating Plant Maintenance Dredging Environmental Assessment Worksheet (EAW)

Dear Mr. Peterson:

The Minnesota Department of Natural Resources (DNR) Central Region has reviewed the EAW for the Prairie Island Nuclear Generating Plant Maintenance Dredging (the project) in the City of Red Wing. From a natural resources perspective, the document appears to be complete and accurate and does not require the preparation of an Environmental Impact Statement (EIS). We offer the following comments for your consideration.

Item 8. Permits and approvals required.

The EAW correctly identifies the need to acquire a public waters permit for the project. The table reviewed on page 5 states that Public Waters Work Permit – Application #2009-0323 (Permit 2009-0323) is submitted and pending completion of the environmental review process. Permit 2009-0323 was amended by Xcel Energy to cover 0.9 acres of dredging and was issued by the DNR in February 2009. The DNR requires the submittal for a new Public Waters Permit Application that will account for the 16-acre dredge area as defined in the EAW. As addressed below, the mussel mitigation negotiations would need to occur during the Public Waters Permit Application process as it would be addressed as a Condition to the permit. Please consult:

[www.dnr.state.mn.us/waters/watermgmt\\_section/pwpermits/applications.html](http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/applications.html) or contact Scot Johnson, DNR Mississippi River Hydrologist, at [scot.johnson@state.mn.us](mailto:scot.johnson@state.mn.us) for more information on the permit application process.

Item 11a. Fish, wildlife, and ecologically sensitive species.

According to the EAW, maintenance dredging will be a short-term impact to fish communities and that fish will avoid the dredging area during activities. Dredge activities are proposed to occur in April 2010 with an estimated completion period of 10-working days. Spring spawning activities typically occur between March 15<sup>th</sup> and June 1<sup>st</sup> for this area. The DNR recommends that dredging activities be scheduled to occur outside of this time period to avoid impacts to spawning fish in the vicinity. This exclusion could be waived if river conditions were favorable to complete the work during the proposed time period.

Based on the review of the Natural Heritage Information System database and early

Mr. Brian C. Peterson  
August 25, 2009  
Page 2

We appreciate the opportunity to review this project and look forward to receiving your 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 EAW please contact me at 651-757-2508.

Sincerely,



Karen Kromar  
Planner Principal  
Environmental Review and Operations Section  
Regional Division

KK:jgo

cc: Kevin Molloy, MPCA, St. Paul  
Craig Affeldt, MPCA, St. Paul



## Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-675-3843 | 651-282-5332 TTY | [www.pca.state.mn.us](http://www.pca.state.mn.us)

August 25, 2009

Mr. Brian C. Peterson, AICP  
Planning Director  
Planning Department  
City of Red Wing  
419 Bush Street  
Red Wing, MN 55066

Re: Prairie Island Nuclear Generating Plant Maintenance Dredging Environmental Assessment Worksheet

Dear Mr. Peterson:

Thank you for the opportunity to review and comment on the Environmental Assessment Worksheet (EAW) for the Prairie Island Nuclear Generating Plant Maintenance Dredging project (Project) in Red Wing, Minnesota. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

### **Permits and approvals required (Item 8)**

This section indicates that a Clean Water Act (CWA) Section 404 Permit from the U.S. Army Corps of Engineers (Corps) for project related wetland impacts may be necessary. Please be aware that if a Corps Section 404 Individual Permit is required for any project activity, then an MPCA CWA Section 401 Water Quality Certification or waiver must also be obtained as part of the permitting process. The Section 401 Water Quality Certification ensures that the activity will comply with the state water quality standards. Any conditions required within the MPCA 401 Certificate are then incorporated into the Corps 404 Permit. You can find additional information the MPCA's 401 Certification process at [www.pca.state.mn.us/water/401.html](http://www.pca.state.mn.us/water/401.html). For further information about the 401 Water Quality Certification process, please contact Kevin Molloy at 651-757-2577.

### **Physical impacts on water resources (Item 12)**

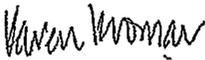
The calculated polycyclic aromatic hydrocarbon (PAH) B(a)P equivalent forms provided in Attachment I for dredge impact area sediment samples EAW 1-5 are incomplete in that the actual concentrations detected in the sediment samples were not filled in. As a result, it is not easily determined that the statement made in this section that all sediment samples were below the Level I Soil Reference Value (SRV) of 2 milligram per kilogram (mg/kg) for PAHs is correct.

It should also be noted that the EAW-5 sediment sample had an arsenic concentration of 10.9 mg/kg which exceeds current the Level 1 SRV for arsenic of 9 mg/kg for residential use. We recommend you check the current listing of SRVs at our MPCA web site located at: <http://www.pca.state.mn.us/publications/risk-tier1srv.xls>

Mr. Brian C. Peterson  
August 25, 2009  
Page 2

We appreciate the opportunity to review this project and look forward to receiving your 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 EAW please contact me at 651-757-2508.

Sincerely,



Karen Kromar  
Planner Principal  
Environmental Review and Operations Section  
Regional Division

KK:jgo

cc: Kevin Molloy, MPCA, St. Paul  
Craig Affeldt, MPCA, St. Paul



Prairie Island Nuclear Generating Plant  
1717 Wakonade Drive East  
Welch, MN 55089

July 29, 2009

Mr. Ronald Johnson  
Tribal Council President  
Prairie Island Indian Community Tribal Council  
5636 Sturgeon Lake Road  
Welch, MN 55089

Re: Issuance of Environmental Assessment Worksheet in Support of  
Dredging Project and Construction of New Access Road

Dear Ron:

I wanted you to be aware of an Environmental Assessment Worksheet ("EAW") that was recently provided to Brian Peterson, City Planner at the City of Red Wing, on July 17, 2009. The EAW was submitted in support of a dredging project the plant is scheduled to undertake in Spring 2010. Publication of the EAW was sent to the PUC for publication on July 27, which will also begin the 30-day public comment period.

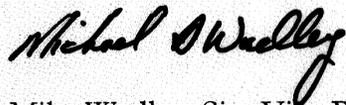
The purpose of the project is to perform maintenance dredging in order to maintain the existing intake approach channel to the plant. Due to natural river activity, changes have occurred in the channel geometry over the years since the initial dredging was completed. Side contours have shifted, sand bars have developed and debris has collected that has led to a reduction of water flow to the plant. As a result, the present approach channel must be dredged to ensure sufficient flow. The dredging project is not associated with the relicensing or the State Certificate of Need projects as the dredging is required to continue operation under the current licenses. I have attached a copy of the public notice for the EAW as well as the EAW for the Community's review (Attachments 1 and 2).

The plant previously notified the Community that we were going to begin construction of the holding pond and we received written approval from the State Historical Preservation Office ("SHPO") on May 4, 2009 (Attachment 3). The holding pond construction has now been completed. On July 21, we

received a second written approval from SHPO for construction of the holding pond access road (Attachment 4). Construction activity is planned to begin in the next couple of weeks and you may see some added construction traffic. The actual dredging is scheduled to begin in April 2010 pending ice out. The dredge material will be placed in the holding pond until February 2011, at which time the plant will begin transporting the dredged material to another location as required by the dredging permit requirements.

Please feel free to contact me if you would like any additional information on the project or timeline.

Respectfully,



Mike Wadley, Site Vice President  
Prairie Island Nuclear Generating Plant  
1717 Wakonade Drive  
Welch, MN 55089

cc: Internal Distribution  
Heather Westra  
Phillip Mahowald



DEPARTMENT OF THE ARMY  
ST. PAUL DISTRICT, CORPS OF ENGINEERS  
SIBLEY SQUARE AT MEARS PARK  
190 FIFTH STREET EAST, SUITE 401  
ST. PAUL MINNESOTA 55101-1638

MAR 09 2009

REPLY TO  
ATTENTION OF

Operations  
Regulatory (2008-05683-EMN)

Mr. Brent Kuhl  
Prairie Island Nuclear Generating Plant  
1717 Wakonade Drive East  
Welch, Minnesota 55089

Dear Mr. Kuhl:

We have reviewed information about your permit application to dredge approximately 43,000 cubic yards of accumulated sediments from the bed of the Mississippi River for maintenance of the existing approach canal, existing plant canal system and the existing intake screenhouse. The project site is located in the E ½ of Section 5, T. 113N., R. 15W., Goodhue County, Minnesota.

This work is authorized by the Department of the Army nationwide permit referenced below and described in the enclosures, provided the enclosed conditions are followed.

This determination covers only your project as described above. If the design, location, or purpose of the project is changed, you should contact us to make sure the work would not result in a violation of Federal law.

This nationwide permit expires on March 18, 2012, unless it is modified, reissued, or revoked. The time limit for completing the work described above ends on that date, OR two years from the date of this letter, whichever occurs later. It is your responsibility to remain informed of changes to the nationwide permit program. A public notice announcing any changes will be issued if and when they occur. If these activities are not undertaken within the stated period, or the project specifications have changed, you must immediately notify this office to determine the need for further approval or re-verification.

It is your responsibility to ensure that the work complies with the terms of this letter and the enclosures, AND THAT YOU OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS AND APPROVALS BEFORE YOU PROCEED WITH THE WORK.

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or

alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

This letter contains an approved jurisdictional determination for your proposed project. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the following address:

James B. Wiseman, Jr.  
Administrative Appeals Review Officer  
Mississippi Valley Division  
P.O. Box 80 (1400 Walnut Street)  
Vicksburg, MS 39181-0080

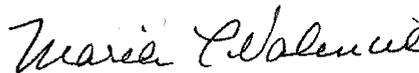


In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by May 4, 2009.

It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter.

If you have any questions, contact Eric Norton in our St. Paul District office at (651) 290-5358. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,



*fo* Tamara E. Cameron  
Chief, Regulatory Branch

Enclosure(s)

Determination: Nationwide Permit(s) (35)

Copy furnished to:  
Mr. Beau Kennedy, Goodhue County SWCD  
Mr. Bill Buber, MDNR

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: Prairie Island Nuclear Generating Plant		File Number: 2008-05683-EMN	Date: March 5, 2009
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

**SECTION I** - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

**A. INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

**ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approve jurisdictional determinations associated with the permit.

• **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B. PROFFERED PERMIT:** You may accept or appeal the permit.

• **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

• **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C. PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D. APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

• **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

• **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E. PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION.**

If you have questions regarding this decision and/or the appeal process you may contact:

Eric Norton  
U.S. Army Corps of Engineers  
Regulatory Branch  
190 5<sup>th</sup> Street East  
St. Paul, Minnesota 55101  
Telephone: 651-290-5358

If you only have questions regarding the appeal process you may also contact:

James B. Wiseman, Jr.  
Administrative Appeals Review Officer  
Mississippi Valley Division  
P.O. Box 80 (1400 Walnut Street)  
Vicksburg, MS 39181-0080  
(601) 634-5820  
(601) 634-5816 (fax)

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
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**GENERAL CONDITIONS APPLICABLE TO ALL  
NATIONWIDE PERMITS IN THE SAINT PAUL DISTRICT**

**March 2007**

**General Conditions**

**Note:** To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

**1. Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on

authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**2. Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that

normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

**3. Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

**4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

**5. Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP's 4 and 48.

**6. Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

**7. Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

**8. Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

**9. Management of Water Flows.** To the maximum extent practicable, the pre-construction course,

condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**10. Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

**11. Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

**12. Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

**13. Removal of Temporary Fills.** Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

**14. Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

**15. Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

**16. Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

**17. Endangered Species.** (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been

satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

**18. Historic Properties.** (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register

of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**19. Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other

waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NHPAs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. (b) For NHPAs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NHPAs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

**20. Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-

construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NHPAs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NHPAs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate

compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

**21. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

**22. Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**23. Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

**24. Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

**25. Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a Nationwide Permit verification, the permittee may transfer the Nationwide Permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

**26. Compliance Certification.**

Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

**27. Pre-Construction Notification.**

(a) **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

- (1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer.

However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of

the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWP's 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the

NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction

Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed

immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) **District Engineer's Decision:** In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee

and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer

has approved a specific mitigation plan.

**28. Single and Complete Project.**

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project

# Minnesota Department of Natural Resources

Central Region Waters – 1200 Warner Road, St. Paul, MN 55106  
Telephone: (651) 259-5845 Fax (651) 772-7977



February 23, 2009

Northern States Power - Minnesota  
Xcel Energy Company  
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414 Nicollet Mall  
Minneapolis, Minnesota 55401

**RE: Permit 2009-0323, Mississippi River - Pool 3 (25001700), Goodhue County**

Dear Mr. Kuhl:

Enclosed is Permit 2009-0323 authorizing you to dredge 0.9 acres of Public Waters from within the Prairie Island Generating Plant's approach canal. The dredging and material placement must be in accordance with the plans and specifications submitted with the permit application as modified by the February 18, 2009 permit application amendment letter. Please read all the conditions of your permit, **especially Condition 13 which restricts work in the bed during fish spawning and migration.** Also, please assure that the enclosed Notice of Permit (orange card) is conspicuously displayed during construction.

Note the permit condition regarding wetlands not subject to DNR permit jurisdiction. Contact the appropriate local government unit (County, City, or Soil and Water Conservation District) for a determination concerning compliance with the Wetland Conservation Act. This permit does not authorize you to proceed with your project until you comply with the Act.

If you have any questions, please contact me at the above phone number or address.

Sincerely,

A handwritten signature in cursive script that reads "Dale E. Homuth".

Dale E. Homuth  
Regional Hydrologist

Enclosures

ec: Scot Johnson, Mississippi River Hydrologist  
Bill Huber, Area Hydrologist  
Goodhue County Planning  
Goodhue SWCD – Beau Kennedy  
Kevin Stauffer, Area Fisheries Supervisor  
Mike Tenney, Area Wildlife Manager  
Tyler Quandt, Conservation Officer  
COE, Regulatory Branch  
DNR Central Office Permits Unit

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# PUBLIC WATERS WORK PERMIT

**Permit Number**  
**2009-0323**

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made a part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform the work as authorized below:

<b>Public Water</b>	<b>County</b>
Mississippi River-Pool 3 (25001700)	Goodhue
<b>Name of Permittee</b> Northern States Power-Minnesota, Xcel Energy Co. c/o Brent A. Kuhl	<b>Telephone Number (Include Area Code)</b> 651-388-1121 ext 4419
<b>Address (No. &amp; Street, RFD, Box No., City, State, Zip Code)</b> 414 Nicollet Mall, Minneapolis, Minnesota 55401	
<b>Authorized Work:</b> To dredge 0.9 acres of Public Waters within the Prairie Island Generating Plant's approach canal; all according to plans and specifications submitted with the permit application, as modified in the February 18, 2009 amendment letter, and the following conditions.	
<b>Purpose of Permit:</b> 165-Excavation/Dredging	<b>Expiration Date of Permit</b> November 30, 2013
<b>Property Described As:</b> SW, NW, Section 5, T113N, R15W. UTM: Easting 529,300; Northing 4,941,200 SW, NW, Section 4, T113N, R15W	

This permit is granted **subject to** the following **CONDITIONS**:

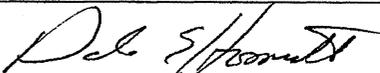
1. The **permittee** is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning. This permit does not release the **permittee** of any permit requirement of the St. Paul district, U.S. Army Corps of Engineers, Army Corps of Engineers Centre, 190 Fifth Street East, St. Paul, MN 55101-1638.
2. This permit is not assignable by the **permittee** except with the written consent of the Commissioner of Natural Resources.
3. The **permittee** shall notify the Area Hydrologist at least five days in advance of the commencement of the work authorized hereunder and notify him/her of its completion within five days. The Notice of Permit issued by the Commissioner shall be kept securely posted in a conspicuous place at the site of operations.
4. The **permittee** shall make no changes, without written permission previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.
5. The **permittee** shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.
6. This permit may be terminated by the Commissioner of Natural Resources at any time deemed necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the provisions or applicable law of this permit, unless otherwise provided in the Special Provisions.
7. Construction work authorized under this permit shall be completed on or before the date specified above. The **permittee** may request an extension of the time to complete the project, stating the reason thereof, upon written request to the Commissioner of Natural Resources.

8. In all cases where the **permittee** by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the **permittee**, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.
9. This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the **permittee** or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the **permittee**, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the **permittee**, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable provisions of law.
10. Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.
11. Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the **permittee** shall not initiate any work under this permit until the **permittee** has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.

**ADDITIONAL CONDITIONS**

12. The permittee shall comply with all rules, regulations, requirements, or standards of the Minnesota Pollution Control Agency and other applicable federal, state or local agencies.
13. No activity affecting the bed of the protected water may be conducted between **March 15** and **May 15**, to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the Area Fisheries Manager, at 1-651-345-5601.
14. Future maintenance required for this project shall not exceed the work herein authorized. Prior to commencing any maintenance work, permittee shall advise the Division of Waters, Region 3 of the location, starting date, and extent of the work. Maintenance work shall not be commenced until permittee's receipt of Division of Waters' approval.
15. No material shall be placed in floodplain areas or on the beds of public waters except as specifically shown on application plans.

ec: Scot Johnson, River Hydrologist  
Bill Huber, Area Hydrologist  
Goodhue County Planning  
Goodhue SWCD - Beau Kennedy  
Kevin Stauffer, Area Fisheries Supervisor  
Mike Tenney, Area Wildlife Manager  
Tyler Quandt, Conservation Officer  
COE, Regulatory Branch  
DNR Central Office Permits Unit

Authorized Signature	Title	Date
 Dale E. Homuth	Regional Hydrologist	2-23-2009

# Minnesota Department of Natural Resources

Central Region Waters – 1200 Warner Road, St. Paul, MN 55106  
Telephone: (651) 259-5845 Fax (651) 772-7977



February 23, 2009

Northern States Power - Minnesota  
Xcel Energy Company  
c/o Brent A. Kuhl  
414 Nicollet Mall  
Minneapolis, Minnesota 55401

Dear Mr. Kuhl:

## **Maintenance Authorization, Amended Permit 1980-5082, Mississippi River, Lock and Dam Pool No. 3 (25-17P), Goodhue County**

As you requested in your February 18, 2009 letter, Xcel Energy is hereby authorized to conduct maintenance dredging of the Prairie Island Nuclear Generating Plant's intake/recirculation canal. This authorization of maintenance work is provided for in Special Provisions of Amended Permit 1980-5082. The authorized maintenance work consists of dredging 3,000 cubic yards of sediment from the intake/recirculation canal.

The maintenance work must be accomplished in accordance with the terms of this letter, your November 26, 2008 letter, and the provisions of Permit 1980-5082 as amended on December 4, 1989. A copy of the original permit and amendments are enclosed. This authorization shall terminate on November 30, 2010.

If you have any question about this matter, please don't hesitate to contact me at the above telephone number or address.

Sincerely,

A handwritten signature in black ink that reads "Dale E. Homuth".

Dale E. Homuth  
Regional Hydrologist

### Enclosures

cc: Brian Peterson, City of Red Wing  
Beau Kennedy, Goodhue SWCD  
Eric Norton, Corps of Engineers – St. Paul  
Mike Tenney, Rochester Wildlife  
Bill Huber, Area Hydrologist  
Scot Johnson, Mississippi River Hydrologist  
Dan Deiterman, Lake City Fisheries  
Tyler Quandt, Conservation Officer

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## Minnesota Department of Natural Resources

1801 South Oak Street  
Lake City, MN 55041  
Phone: (651) 345-5601

February 28, 2006

Brent A. Kuhl  
Xcel Energy  
414 Nicollet Mall  
Minneapolis, MN 55401

Dear Mr. Kuhl:

**Maintenance Authorization, Amended Permit 80-5082, Mississippi River, Lock and Dam Pool No. 3 (25-17P), Goodhue County**

As you requested in your January 16, 2006 letter, Xcel Energy is hereby authorized to conduct maintenance dredging, and to construct erosion control measures in the discharge canal from the Prairie Island Nuclear Generating Plant. This authorization of maintenance work is provided for in Special Provisions of Amended Permit 80-5082. The authorized maintenance work consists of mechanical dredging of 100-200 cubic yards of sediment from the discharge canal, placement of fill in an eroded gully, and placement of natural rock riprap shore protection.

The maintenance work must be accomplished in accordance with your letter, and the provisions of the Amended Permit 80-5082. A copy of the original permit and amendments is enclosed. Please note, except for the gully repair, all dredge spoil must be placed and stabilized in an upland location in compliance with all applicable local, state, and federal regulations. This authorization shall terminate on November 30, 2006.

If you have any question about this matter, please don't hesitate to contact me at the above telephone number or address.

Sincerely,

A handwritten signature in black ink that reads "William P. Huber".

William P. Huber  
Area Hydrologist

cc: Dave Leuthe, Regional Hydrologist  
Mike Tenney, Rochester Wildlife  
Brian Peterson, City of Red Wing  
Brad Johnson, Corps of Engineers - St. Paul

Dan Deiterman, Lake City Fisheries  
Tyler Quandt, Conservation Officer  
Beau Kennedy, Goodhue SWCD

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929





Minnesota Department of Natural Resources

2300 Silver Creek Road  
Rochester, MN 55906  
Ph: (507) 285-7430

August 15, 1996

Mr. Kenneth M. Mueller  
Northern States Power Company  
1717 Wakonade Drive E.  
Welch, MN 55089

Dear Mr. Mueller:

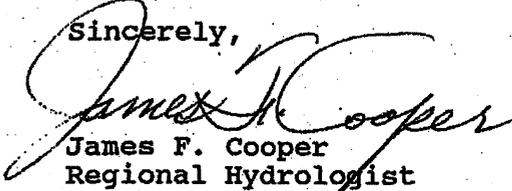
AMENDMENT OF PERMIT 80-5082, MISSISSIPPI RIVER, GOODHUE COUNTY

As you requested, Permit 80-5082 is hereby amended to authorize construction of a dividing wall in the internal intake canal of the Prairie Island Nuclear Generating Plant, located in SE 1/4 of Section 5, T.113N, R.15W. The dividing wall shall be constructed according to the plans and specification submitted in your amendment request dated July 10, 1996.

All other terms and conditions of the original permit remain in effect. A copy of the original permit is enclosed.

If you have any questions about this permit amendment, please call Area Hydrologist Bill Huber in Lake City at (612) 345-5601.

Sincerely,

  
James F. Cooper  
Regional Hydrologist

cc: Bill Huber, Area Hydrologist  
Mike Tenney, Wildlife  
Goodhue County SWCD  
Permits Unit - St. Paul

Tim Schlagenhaft, Fisheries  
Greg Turner, C.O.  
Goodhue Co. Zoning  
Corps of Engineers

DNR Information: 612-296-6157, 1-800-766-6000 • TTY: 612-296-5484, 1-800-657-3929

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STATE OF  
MINNESOTA

DEPARTMENT OF NATURAL RESOURCES

PHONE NO. (507) 285-7430

2300 Silver Creek Road NE  
P.O. Box 6247  
Rochester, MN 55903



FILE NO.

December 4, 1989

Jim Bodensteiner  
Plant Regulatory Analyst  
Northern States Power Company  
414 Nicollet Mall  
Minneapolis, MN 55401-1927

DEC 6 1989

Dear Mr. Bodensteiner:

AMENDMENT, PERMITS 80-5081 and 80-5082, MISSISSIPPI RIVER, GOODHUE COUNTY

As requested in your November 24, 1989 letter, Permits 80-5081 and 80-5082 are hereby amended to include the following Special Provisions. All other terms and conditions of the original permits (copies enclosed) remain in effect.

Special Provisions

\* Future maintenance required for this project shall not exceed the work herein authorized. Prior to commencing any maintenance work, permittee shall advise the Division of Waters, Region 5 of the location, starting date, and extent of the work. Maintenance work shall not be commenced until permittee's receipt of Division of Waters' approval.

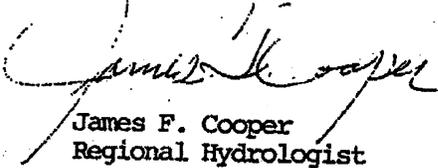
\* Riprap shall consist of natural rock having an average size of 12 inches or larger in its smallest dimension.

Please note that maintenance work proposed in your references letter is approved. Please make sure the enclosed Notice or Permit (orange card) is conspicuously displayed at the project site during construction.

Permit Amendment 80-5081, 80-5082  
Page 2

If you have any questions, please contact Area Hydrologist Jim Haertel at  
Route 2, Box 230, Lake City, MN 55041, or at (612) 345-3331.

Sincerely,



James F. Cooper  
Regional Hydrologist

JFC/JH/lp

enclosures

cc: Jim Haertel, Area Hydrologist ✓  
Goodhue County Zoning Administrator  
Goodhue County SWCD  
Greg Turner, C.O.  
Waters - St. Paul  
U.S. Army Corps of Engineers





**ENCLOSURE 3**

**RESPONSE TO RAI 2 – BIOLOGICAL REPORTS AND ASSESSMENTS  
TO DETERMINE THE EFFECTS OF MAINTENANCE DREDGING ON THE AQUATIC  
ENVIRONMENT**

This enclosure contains the biological reports and assessments prepared as part of the Work in Public Waters permitting process to determine the effects on the aquatic environment from maintenance dredging since the submittal of the Environmental Report. A tabulation of the reports and assessments included in this enclosure is provided below, followed by actual copies of the reports and assessments.

Item Number	Document	Date	No. of Pages
1	E-mail, James J. Holthaus, to Elaine Keegan, providing link for the location of the Environmental Assessment Worksheet	August 20, 2010	1
2	Letter, Xcel Energy, to Minnesota Health Department, forwarding results of sediment and water sampling for radiological analysis in the dredge area	March 24, 2010	4
3	Final Report: Unionid Survey, Mississippi River Mile 798, by Ecological Specialists, Inc.	July 2009	28
4	Letter, United States Department of the Interior, to Xcel Energy, concurring with the mussel survey approach proposed by the Minnesota Department of Natural Resources	May 26, 2009	6

**BIOLOGICAL REPORTS AND ASSESSMENTS  
TO DETERMINE THE EFFECTS OF MAINTENANCE DREDGING ON THE AQUATIC  
ENVIRONMENT**

**39 pages follow**

**Kumar, Paul A.**

---

**From:** Holthaus, James J.  
**Sent:** Friday, August 20, 2010 11:03 AM  
**To:** Kumar, Paul A.  
**Subject:** FW: Website Address to PI Dredging EAW

fyi

---

**From:** Holthaus, James J.  
**Sent:** Friday, August 20, 2010 10:59 AM  
**To:** 'Elaine.Keegan@nrc.gov'  
**Cc:** Eckholt, Gene F.; Kumar, Paul A.  
**Subject:** Website Address to PI Dredging EAW

Elaine:

The EAW for the Dredging can be found at the following Red-Wing Advisory Planning website:  
<http://156.99.117.8/weblink7/DocView.aspx?id=47392>

The packet for the EAW begins on page 25 and ends on page 108. Let me know if this information is sufficient for the EAW review.

Thanks.

**James Holthaus**  
**Xcel Energy | Responsible By Nature**  
**Project Manager**  
414 Nicollet Mall, MP4 - Minneapolis, MN 55401





414 Nicollet Mall  
Minneapolis, MN 55401

March 24, 2010

George F. Johns, Jr.  
Environmental Health Supervisor  
Radiation Control Unit  
Health Department  
625 Robert Street North  
P.O. Box 64975  
St Paul, MN 55164-0975

RE: 2009 Dredging Project Sampling Results

Dear Mr. Johns:

During the public comment period on the Environmental Assessment Worksheet prepared for Prairie Island Nuclear Generating Plant's maintenance dredging project, the Prairie Island Indian Community expressed concern over potential radioactive contaminants in the dredge area. After discussions with the Minnesota Department of Health, the Prairie Island Indian Community and the city of Red Wing, Xcel Energy offered to conduct sediment and water sampling for radiological analysis in the dredge area and background locations and to provide the results to the state Health Department.

The dredging project is necessary to maintain the existing intake approach canal supplying cooling water to the plant. The project involves dredging approximately 56,000 cubic yards of sediment that has accumulated in the approach canal which extends into the Mississippi River. The dredged material will be stored on-site and dewatered immediately west of the plant's substation in an existing storage area. After dewatering, all dredge spoils will be transported to Holst Excavating's Pit #3 in Welch Township. Dredging is scheduled to begin in April 2010.

To address concerns raised during the Environmental Assessment Worksheet comment period, we developed a plan to conduct sediment and surface water sampling from the intake approach canal and background locations for analysis of radioactive materials, including tritium.

Six sediment sampling locations were identified: two from the Prairie Island plant approach canal; two from lower end of Sturgeon Lake; one near Treasure Island Marina; and one from the main river channel near Diamond Bluff. Four surface water samples were also collected: one from the approach canal; one from the lower end of Sturgeon Lake near Treasure Island Marina; one from the Prairie Island Marina, and; one from the main river channel near Diamond Bluff. See attached Exhibits A&B for locations. Diamond Bluff samples were used as control locations.

Approximately one gallon sediment (grab) samples were collected from the six locations by Xcel Energy Environmental Services on Nov. 19, 2009. The plant conducted a gamma isotopic procedure on the sediment samples and detected various quantities of Beryllium (Be-7), Cesium (Cs-137) and Potassium (K-40) in some of the samples. A 50 ml water sample was then decanted from each gallon of sediment sample and sent to the University of Waterloo for independent testing for tritium (H-3).<sup>1</sup>

---

The plant also conducted gamma isotopic procedures on the surface water samples, but did not detect any radioactive isotopes. The surface water samples were also sent to the University of Waterloo lab to test for tritium.

The results of the sediment and surface water analyses are found in the following table:

---

<sup>1</sup> The Waterloo Lab detection level is to 19 pCi/L. The Environmental Protection Agency drinking water standard is 20,000 pCi/L.

Sample	Isotopes Found	Activity (uCi/sample)	Activity (uCi/g)	H-3 Activity (tritium) (pCi/L)
SLUDGE*				
PI Marina	Be-7 Cs-137 K-40 H-3	9.04E-4 1.69E-4 1.69E-2	4.80E-8	48.3
Approach Canal #1	K-40 H-3	3.22E-2		90.9
Approach Canal #2	Be-7 K-40 H-3	1.23E-3 2.39E-2		49.9
Sturgeon Lake 1	K-40 H-3	2.07E-2		32.6
Sturgeon Lake 2	Cs-137 K-40 H-3	1.06E-4 2.42E-2	2.52E-8	42.6
Diamond Bluff	Be-7 K-40 H-3	8.44E-4 3.59E-2		21.8
SURFACE WATER**				
PI Marina	H-3			19.8
Approach Canal	H-3			28.2
Sturgeon Lake	H-3			42.2
Diamond Bluff	H-3			26.9

\* Sludge samples were counted in a 3 liter marinelli for 2000 seconds for gamma emitters.

\*\* Water samples were counted in a liter bottle for 2000 seconds for gamma emitters.

As shown in the results table, the isotopes found vary among sample locations. Be-7 and K-40 are both naturally occurring, and the levels found are consistent with background levels. Where found, the levels of Cs-137 are consistent with expected background levels. Tritium levels in the dredging sediment and surface water samples were all consistent with background levels.

Should you have any questions or need additional information, please feel free to call me at: 612-330-5641.

George F. Johns, Jr.  
March 24, 2010  
Page 4

Sincerely,

A handwritten signature in cursive script that reads "Brian R. Zelenak". The signature is written in black ink and is positioned above the printed name and title.

Brian R. Zelenak  
Manager, Regulatory Affairs

Enclosures

cc: Prairie Island Indian Community  
City of Red Wing

**Final Report:  
Unionid Survey  
Mississippi River Mile 798**

**Prepared for:**

**Barr Engineering Company**  
Minneapolis, Minnesota

**Prepared by:**

**Ecological Specialists, Inc.**  
O'Fallon, Missouri

**July 2009**

(ESI Project # 09-009)

Acknowledgments

Mr. Jeff Lee of Barr Engineering Company coordinated the project. Mr. Roth Trulson and Mr. Brent Kuhl provided project coordination for Xcel Energy. Ms. Rebecca Winterringer of Ecological Specialists, Inc. (ESI) was the project manager. Ms. Winterringer, Mr. Kendall Cranney, Mr. Nathan Wurmb and Mr. Nathan Badgett conducted the field effort. Ms. Winterringer authored this report, and Ms. Heidi Dunn (ESI) assisted with report preparation.

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Appendix A. Photodocumentation

Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.

## 1.0 Introduction

The Prairie Island Nuclear Generating Plant (PINGP) near Red Wing, Minnesota proposes maintenance dredging near Mississippi River mile (RM) 798 in Goodhue County. The purpose of dredging is to remove sediment deposition in the PINGP intake channel along the right descending bank. Approximately 16 acres (64,752m<sup>2</sup>) is proposed for dredging (Figure 1-1). This area of the Upper Mississippi River historically harbored a diverse assemblage of freshwater (unionid) mussels. Forty (40) species have been collected in Pool 3; 20 of which are currently listed in Minnesota as state endangered, threatened, or special concern species (Table 1-1). Two federally endangered species, *Lampsilis higginsii* (Higgins' eye pearlymussel) and *Quadrula fragosa* (winged mapleleaf), and two federal candidate species, *Cumberlandia monodonta* (spectaclecase) and *Plethobasus cyphus* (sheepnose) have historical records in Pool 3; however, they are considered rare (Kelner, 2006). Unionid surveys conducted in 1980 near RM 798 did collect live specimens of two state listed species (*Elliptio dilatata* and *Actinonaias ligamentina*) (see Table 1-1; Clymer and Eberley, 1980). In addition to listed species having records in the area, a *L. higginsii* relocation and cage propagation site are located just upstream of the proposed dredge area (see Figure 1-1). Through 2008, over 5,000 live young *L. higginsii* have been stockpiled in Sturgeon Lake (downstream of the boat access) and 60 propagation cages were placed near the Prairie Island Casino Marina (Kelner *et al.*, 2009). Density of *L. higginsii* in the stockpile location is unknown at this time. The propagation cages did not yield any live juveniles in 2008.

Proposed dredging will entail dredging, barge maneuvering, possibly mooring, and an increase in activity in the area. Dredging can harm unionids directly by removing them from the riverbed or indirectly by re-suspending sediment causing nutritive stress, reduced oxygen consumption, and nitrogen excretion (Yokley, 1976; Aldridge *et al.*, 1987; Payne *et al.*, 2000), which can reduce growth and reproduction (Bartell *et al.*, 2003). Sedimentation can be detrimental to unionids and is implicated in the decline and extinction of numerous species (Stansbery, 1971; Box and Mossa, 1999). Additional indirect effects of dredging include changes in local hydraulics that result in shifts in substrate composition and altered river bottom topography that affect unionid and host fish distribution (Yokley, 1976; Hartfield, 1993; Teresa Newton, USGS, pers.comm., 2008). The Minnesota Department of Natural Resources (MnDNR) has requested that a Level I survey (according to the Minnesota DNR Mussel Survey Protocol, April 2009 rev.) be conducted to determine unionid presence/absence in the proposed dredge area.

Ecological Specialists, Inc. was contracted to survey for unionids within the proposed dredge area. The objective of this project was to identify any unionid resources, including their habitat, and to determine their presence/absence and community composition. This report summarizes the results of the unionid survey and the habitat conditions found in the area.

## 2.0 Methods

The survey area included 16-acres of the Mississippi River along the Minnesota bank. The survey was conducted on June 9-11, 2009. The water elevation of Mississippi River Pool 3 during the survey was 674.70 – 674.76 (MSL 1912). Water temperature during the survey was 60.7°F.

Two methods were used to collect unionids: qualitative dive searches (spot dives) and quantitative quadrats (0.25 m<sup>2</sup>). Qualitative searches entailed a diver searching an area near the boat for 20 minutes while noting the presence of unionids and collecting all shells and live unionids. The MnDNR protocol requires one 20-minute search per 20,000 ft<sup>2</sup> of impact area. Therefore, 35 spot dives (SD) were conducted throughout the area (Figure 2-1). Quantitative samples are warranted in areas where catch per unit effort (CPUE) is >1 mussel per minute (or >20/SD) (MnDNR, 2009). Eighteen quadrats were sampled in the areas that yielded high CPUE (see Figure 2-1).

Depth and substrate composition were recorded from each sample. Substrate was classified by size (Wentworth Scale; Wentworth, 1922) and estimated by the collector/diver. All live unionids encountered, as well as shell material, were placed into a mesh-collecting bag and sent to the surface for processing. Unionids were identified, and at least 20 individuals of each species were measured (length in mm) and aged (external annuli count). Unionids ≤5 years old were classified as juveniles. Zebra mussel infestation was also noted. Following processing, unionids were returned to a relocation area downstream out of the dredge impact area (see Figure 2-1). Global Positioning System or Humminbird DepthFinder was used to mark the positions of each SD and quantitative sample. Photodocumentation of the project is provided in Appendix A.

### 3.0 Results

Overall, 903 live unionids representing 19 species were collected from the proposed dredge area. The dominant species collected were *Obliquaria reflexa*, *Amblema plicata*, and *Quadrula quadrula* (Table 3-1). One additional species, *Fusconaia ebena*, was collected as sub-fossil shell only. Five Minnesota listed species were observed: *Arcidens confragosus* (MNE, N = 5); *Ligumia recta* (MNSC, N = 1); *Megoloniais nervosa* (MNT, N = 2); *Obovaria olivaria* (MNSC, N = 5), and *Quadrula nodulata* (MNE, N = 6) (see Table 3-1). Unionid abundance ranged between one and 161 live unionids per SD, and seventeen SD's yielded high CPUE (>20 unionids per sample) (Table 3-2). Overall, substrate throughout the survey area was predominantly sand, silt and clay; however, most of the area was a mix of silt atop clay (see Table 3-2). River depth ranged between four and 25 ft (1.2 m to 7.6 m) and flow was moderate throughout the area (0.40 ft/sec). All unionids collected were relocated downstream. Species collected for each sample is presented in Appendix B.

#### *Qualitative Sampling*

Of the 35 SD's, all had at least one live unionid; however only seven yielded less than 10 live unionids. As previously mentioned, 17 had >20 live unionids. A total of 888 unionids were collected and moved to the relocation area. The dominant species were *A. plicata* (24.1%), *O. reflexa* (34.3%), and *Q. quadrula* (14.2%). The CPUE was 1.3 unionids/minute and juveniles comprised 3.7% of the total catch. Eight of the 19 species collected were represented by juveniles (including *O. olivaria*). Length and age data collected on unionids is presented in Table 3-3. Zebra mussel infestation was low as only a few individuals (N = 43) had 10 or less zebra mussels attached (only one unionid had 20 zebra mussels attached).

#### *Quantitative Sampling*

Fifteen live unionids were collected from 18 0.25m<sup>2</sup> quadrat samples. Density was 3.3 unionids/m<sup>2</sup> and four species were collected. All species collected were represented by juveniles and adults; juveniles represented 60% of the density (see Table 3-1). Quadrats were placed near the 18 highest CPUE SD locations. Care was given not to place the quadrat within the same corridor that had been searched during SD sampling (determined by GPS and path recoded on the boat depthfinder). No state or federally listed species were collected in quadrats.

#### 4.0 Discussion

North America's unionid fauna is the most diverse in the world, and consists of nearly 300 nominal species; however, populations are declining rapidly due to human activities (Turgeon *et al.*, 1998; Williams *et al.*, 1993). This diverse group of sedentary filter feeding animals is an important ecological component of benthic communities in many riverine systems. However, pollution and modification of riverine systems has resulted in the decline of many unionid species. Over 10% of North American unionid species are presumed to be extinct (McMahon and Bogan, 2001), and approximately one-third of the species in North America are listed or are proposed for listing on the Federal List of Endangered and Threatened Wildlife and Plants (USFWS, 2009a and 2009b). Factors that appear to be contributing to the decline of unionids include damming, dredging, siltation of backwater areas, navigation, floodplain development, commercial harvest, and zebra mussel infestation.

Historical unionid data for this area (RM 798) of the Upper Mississippi River indicates a diverse unionid assemblage with 40 species documented for Pool 3 (see Table 1-1). The species composition of the area has changed little since the last survey conducted in 1980 with an additional two species collected live during this study: *O. olivaria* and *L. recta*, both state listed species (Clymer and Eberley, 1980). It appears that unionids are well scattered throughout the proposed dredge area. High CPUE was observed from 50 m from the bank to the main channel border and along the shoreward downstream edge of the dredge area (Figure 4-1). The downstream limits were primarily silt and vegetation, and shallow (<1m).

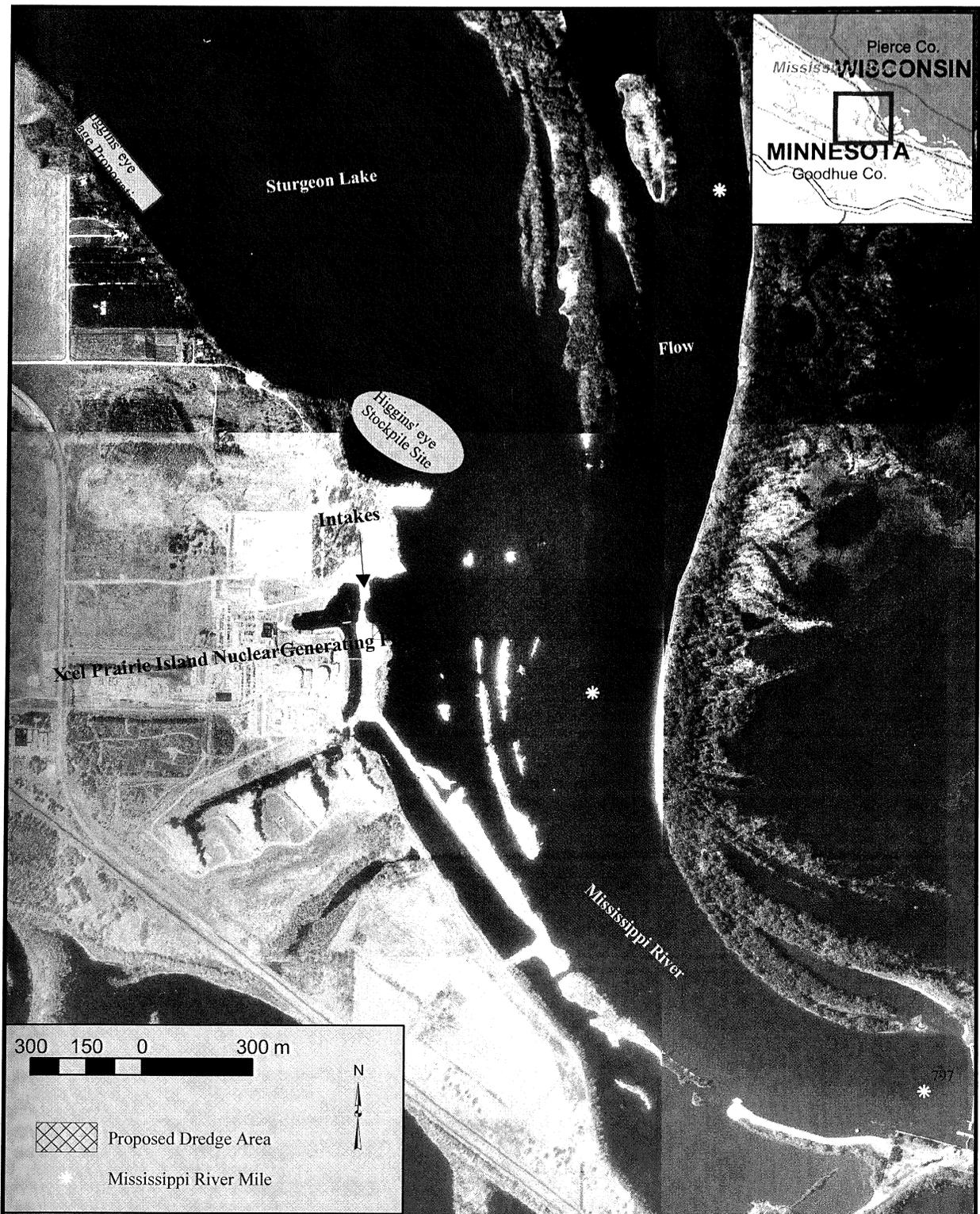
Dense and diverse unionid communities are defined by the U. S. Fish and Wildlife Service as areas where unionid density is >10 unionids/m<sup>2</sup> and harbors at least 15 species, each with densities >0.01 /m<sup>2</sup> (USFWS, 2004). Although the unionid assemblage present in the proposed dredge area is species rich (19 live species), density was low (3.3/m<sup>2</sup>). Low density may due to poor silty substrate conditions. Unionids typically favor a consolidated mix of gravel, sand, clay substrates and the area was predominately silt and clay.

Dredging at this location may directly impact unionids still present in the dredge area. Although over 900 live unionids were removed, it is likely more unionids are scattered throughout the area. State listed species were collected in low abundance (see Table 3-1 and Figure 4-1); however, the poor habitat quality and dominance of common species suggests this project will not have a long-term impact to the unionid community within Pool 3 of the UMR. Best management practices should be used during dredge activities to minimize sedimentation downstream.

**5.0 Literature cited**

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Figure 1. Project location and proposed dredge area in the Mississippi River near mile 798, 2009.

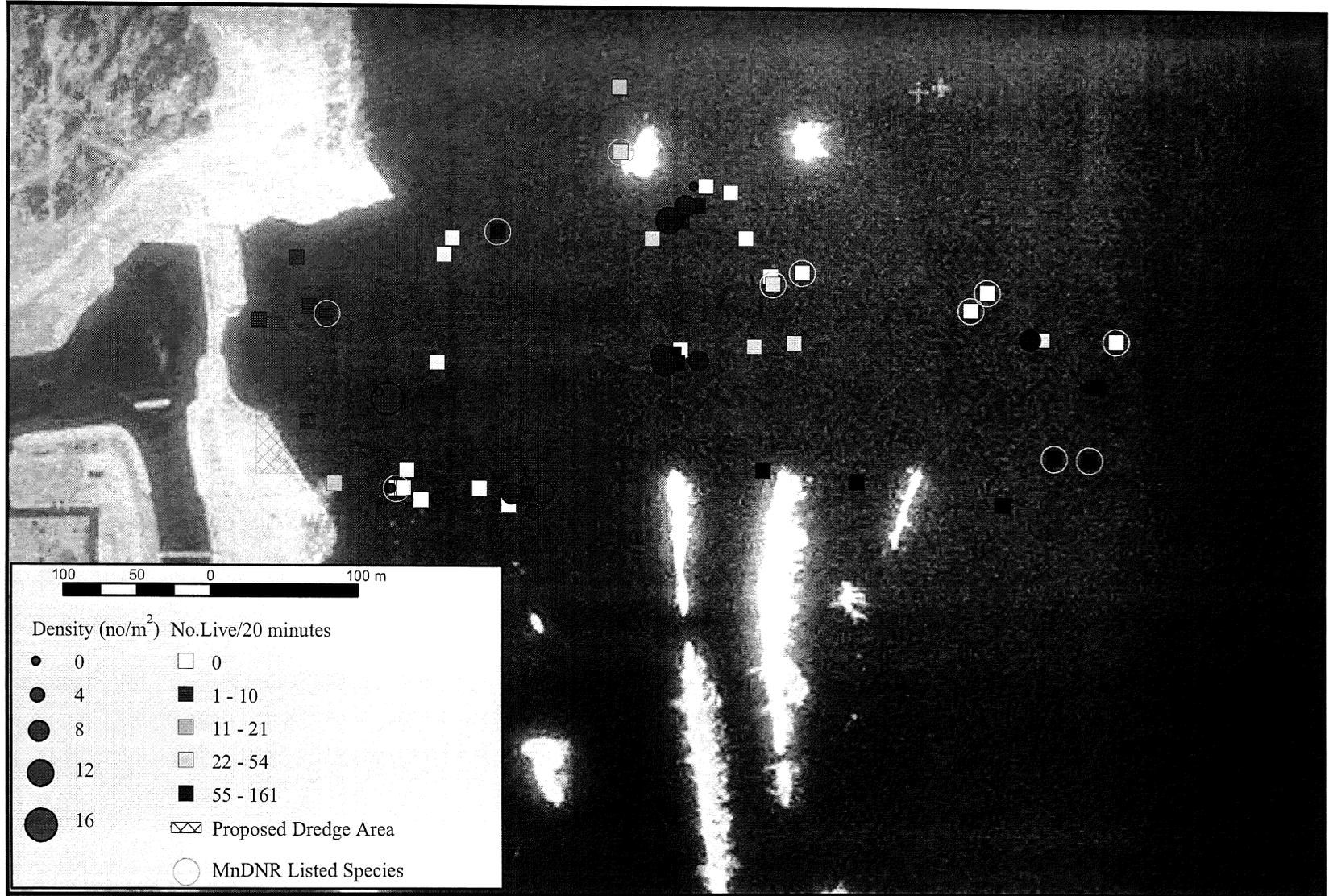
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Figure 2-1. Location of spot dives, quantitative samples, and relocation area for proposed dredging near Mississippi River mile 798.0, 2009.

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Figure 4-1. Unionid abundance and density within the proposed dredge area near Mississippi River mile 798.0, 2009.

**ESI**

Table 1-1. Historical unionid records and species status near Mississippi River mile 798.

Scientific name	Common name	Status <sup>1</sup>	MR Pool 3 <sup>2</sup>	1980 <sup>3</sup>
<u>Subfamily Cumberlandinae</u>				
<i>Cumberlandia monodonta</i>	spectaclecase	MNT; FC	H	-
<u>Subfamily Ambleminae</u>				
<i>Amblema plicata</i>	threeridge	-	A	L
<i>Cyclonaias tuberculata</i>	purple wartyback	-	H	-
<i>Elliptio crassidens</i>	elephant ear	-	H	-
<i>Elliptio dilatata</i>	spike	MNSC	R	L
<i>Fusconaia ebena</i>	ebonyshell	MNE	H	D
<i>Fusconaia flava</i>	Wabash pigtoe	-	A	L
<i>Megaloniais nervosa</i>	washboard	MNT	R	-
<i>Plethobasus cyphus</i>	sheepnose	MNE; FE	H	-
<i>Pleurobema sintoxia</i>	round pigtoe	-	R	L
<i>Quadrula fragosa</i>	winged mapleleaf	MNE; FE	H	-
<i>Quadrula metanevra</i>	monkeyface	MNT	H	-
<i>Quadrula nodulata</i>	wartyback	MNE	C	-
<i>Quadrula pustulosa</i>	pimpleback	-	C	L
<i>Quadrula quadrula</i>	mapleleaf	-	C	D
<i>Tritogonia verrucosa</i>	pistolgrip	MNT	H	-
<u>Subfamily Anodontinae</u>				
<i>Alasmidonta marginata</i>	elktoe	MNT	R	-
<i>Arcidens confragosus</i>	rock pocketbook	MNE	R	-
<i>Lasmigona complanata</i>	white heelsplitter	-	R	-
<i>Pyganodon grandis</i>	giant floater	-	C	L
<i>Simpsonaias ambigua</i>	salamander mussel	MNT	H	-
<i>Strophitus undulatus</i>	strange floater	-	R	-
<i>Utterbackia imbecillis</i>	paper pondshell	-	R	L
<u>Subfamily Lampsilinae</u>				
<i>Actinonaias ligamentina</i>	mucket	MNT	R	L
<i>Ellipsaria lineolata</i>	butterfly	MNT	R	-
<i>Epioblasma triquetra</i>	snuffbox	MNT	H	-
<i>Lampsilis cardium</i>	plain pocketbook	-	C	L
<i>Lampsilis higginsii</i>	Higgins eye	MNE; FE	H	-
<i>Lampsilis siliquoidea</i>	fatmucket	-	R	L
<i>Lampsilis teres</i>	yellow sandshell	MNE	H	-
<i>Leptodea fragilis</i>	fragile papershell	-	R	L
<i>Ligumia recta</i>	black sandshell	MNSC	R	-
<i>Obliquaria reflexa</i>	threehorn wartyback	-	A	L
<i>Obovaria olivaria</i>	hickorynut	MNSC	R	-
<i>Potamilus alatus</i>	pink heelsplitter	-	C	L
<i>Potamilus ohioensis</i>	pink papershell	-	C	L
<i>Toxolasma parvus</i>	lilliput	-	R	L
<i>Truncilla donaciformis</i>	fawnsfoot	-	R	L
<i>Truncilla truncata</i>	deerto	-	C	L
<i>Vemustaconcha ellipsiformis</i>	ellipse	MNT	H	-
Live species			27	17
Total species			40	19

MNE = Minnesota Endangered; MNT = Minnesota Threatened; MNSC = Minnesota Special Concern; FE = Federally Endangered; FT = Federally Threatened; FC = Federal Candidate Species

H = Records of occurrence but no live collections have been documented in the past ~25 years; R = Rare, does not usually appear in sample collections, populations are small either naturally or have declined and may or may not be near extirpation; C = Commonly taken in most samples; can make up a large portion of some samples; A = Abundantly taken in most samples; L = collected live; D = relic shells collected

<sup>1</sup> Minnesota DNR (2009); USFWS (2009)

<sup>2</sup> Kelner (2006)

<sup>3</sup> Clymer and Eberly (1980)

Table 3-1. Summary of unionids collected from the project area in quantitative and qualitative samples.

Method	Species	#Live	#Juveniles	FD	WD	SF
Quantitative	<i>Amblema plicata</i>	4	2	-	-	-
	<i>Fusconaia flava</i>	1	1	-	-	-
	<i>Obliquaria reflexa</i>	5	2	1	-	-
	<i>Truncilla truncata</i>	5	4	-	2	-
Abundance		15	9	1	2	
Species Richness		4				
No. Samples		18				
Density (no/m <sup>2</sup> )		3.3				
%Juveniles		60				
Qualitative <sup>1</sup>	<i>Amblema plicata</i>	214	13	-	1	-
	<b><i>Arcidens confragosus</i></b>	5	-	1	1	-
	<i>Fusconaia ebena</i>	-	-	-	-	2
	<i>Fusconaia flava</i>	87	5	1	4	-
	<i>Lampsilis cardium</i>	10	-	-	2	-
	<i>Lasmigona complanata</i>	5	1	-	2	-
	<i>Leptodea fragilis</i>	1	-	6	8	-
	<b><i>Ligumia recta</i></b>	1	-	-	-	-
	<b><i>Megoloniais nervosa</i></b>	2	-	-	-	-
	<i>Obliquaria reflexa</i>	305	7	6	19	-
	<b><i>Obovaria olivaria</i></b>	5	1	1	-	-
	<i>Potamilus alatus</i>	4	2	-	3	-
	<i>Potamilus ohioensis</i>	2	-	1	1	-
	<i>Pyganadon grandis</i>	8	-	1	11	-
	<b><i>Quadrula nodulata</i></b>	6	-	1	-	-
	<i>Quadrula pustulosa</i>	89	1	1	2	-
	<i>Quadrula quadrula</i>	126	3	1	1	-
	<i>Strophitus undulatus</i>	1	-	-	-	-
	<i>Truncilla donaciformes</i>	1	-	-	-	-
	<i>Truncilla truncata</i>	16	-	-	4	-
Abundance		888	33	20	59	2
Species Richness		19				
No. Samples		35				
CPUE (no/min)		1.3unionids/minute				
%Juveniles		3.7				
<b>Total</b>		<b>903</b>		<b>21</b>	<b>61</b>	<b>2</b>

Bolded species indicate Minnesota state listed unionids; FD = fresh dead shell; WD = weathered shell; SF = sub-fossil shell

<sup>1</sup> Qualitative = 35 20-minute spot dives

Table 3-2. Summary of substrate and live unionids per sample area, Mississippi River mile 798.0, 2009.

Site	No. Live	Depth (ft)	Substrate Type <sup>1</sup>			
			Sd	St	Cl	Other
SD1	16	9	40	60	-	-
SD2	14	8	80	20	-	-
SD3	9	25	40	60	-	-
SD4	8	6	-	10	90	-
SD5	6	6	80	20	-	-
<b>SD6</b>	20	9	50	50	-	-
<b>SD7</b>	29	9	10	80	10	-
<b>SD8</b>	28	8	10	80	10	-
<b>SD9</b>	21	8	-	30	70	-
<b>SD10</b>	30	8	-	30	70	-
SD11	7	10	-	90	10	-
<b>SD12</b>	50	10	40	20	40	-
<b>SD13</b>	24	10	40	20	40	-
<b>SD14</b>	25	11	-	50	50	-
<b>SD15</b>	59	14	-	20	80	-
SD16	15	11	-	20	80	-
SD17	15	12	-	20	80	-
SD18	15	12	-	10	90	-
SD19	1	5	-	50	50	-
SD20	1	7	-	100	-	-
SD21	2	7	-	100	-	-
SD22	8	6	60	40	-	-
SD23	15	10	-	20	80	-
<b>SD24</b>	20	12	-	30	70	-
<b>SD25</b>	22	9	25	25	50	-
<b>SD26</b>	31	9	75	5	20	-
<b>SD27</b>	32	14	-	25	75	-
<b>SD28</b>	161	11	50	30	20	-
<b>SD29</b>	54	12	10	10	80	-
<b>SD30</b>	31	9	10	80	10	-
<b>SD31</b>	32	11	70	30	-	-
<b>SD32</b>	28	14	-	40	60	-
SD33	18	12	-	30	70	-
<b>SD34</b>	23	9	-	50	50	-
SD35	18	11	50	50	-	-
Q1	0	13	20	80	-	-
Q2	1	17	100	-	-	-
Q3	2	20	100	-	-	-
Q4	0	10	-	10	90	-
Q5	1	9	-	-	100	-
Q6	4	9	-	-	100	-
Q7	0	9	-	95	-	5
Q8	0	9	-	95	-	5
Q9	0	9	-	100	-	-
Q10	0	4	-	10	90	-
Q11	0	5	30	40	30	-
Q12	0	7	10	60	30	-
Q13	1	6	-	70	30	-
Q14	2	8	40	30	30	-
Q15	0	5	70	15	15	-
Q16	1	8	60	20	20	-
Q17	2	8	30	30	40	-
Q18	1	8	80	10	10	-

Sites in bold type indicate >20unionids/20minute search

<sup>1</sup> Sd = sand; St = silt; Cl = Clay; Other = vegetation/detritus

Table 3-3. Summary of age and length of unionid species in the proposed dredge area.

Species	No. Measured	Age			Length (mm)		
		Ave.	Min.	Max.	Ave.	Min.	Max.
<i>Amblema plicata</i>	39	10	2	20	75.2	11.0	120.0
<i>Arcidens confragosus</i>	5	8	6	11	94.4	80.0	101.0
<i>Fusconaia flava</i>	20	9	1	17	54.3	15.0	80.0
<i>Lampsilis cardium</i>	8	17	12	21	118.7	13.0	145.0
<i>Lasmigona complanata</i>	5	8	3	14	99.8	60.0	162.0
<i>Leptodea fragilis</i>	1	4	4	4	80.0	80.0	80.0
<i>Ligumia recta</i>	1	16	16	16	190.0	190.0	190.0
<i>Megalonaias nervosa</i>	2	16	14	17	149.0	144.0	154.0
<i>Obliquaria reflexa</i>	41	7	1	12	49.5	11.0	67.0
<i>Obovaria olivaria</i>	4	7	1	11	46.8	29.0	67.0
<i>Potamilus alatus</i>	4	4	4	7	76.5	45.0	119.0
<i>Potamilus ohioensis</i>	2	3	2	3	47.0	41.0	53.0
<i>Pyganadon grandis</i>	3	5	2	7	90.3	50.0	137.0
<i>Quadrula nodulata</i>	6	8	3	11	57.7	45.0	67.0
<i>Quadrula pustulosa</i>	20	9	5	13	56.6	35.0	80.0
<i>Quadrula quadrula</i>	29	9	5	13	62.8	36.0	84.0
<i>Strophitus undulatus</i>	1	8	5	8	115.0	115.0	115.0
<i>Truncilla donaciformes</i>	1	5	8	5	18.0	18.0	18.0
<i>Truncilla truncata</i>	8	4	5	6	24.3	15.0	32.0

**Appendix A. Photodocumentation**



View of plant looking west from MR.



View of channel border of dredge area looking north.



Representative view of unionids collected from the proposed dredge area.



*Lampsilis cardium* (pocketbook)



*Truncilla truncata* (deertoe)



*Arcidens confragosus* (rock pocketbook)



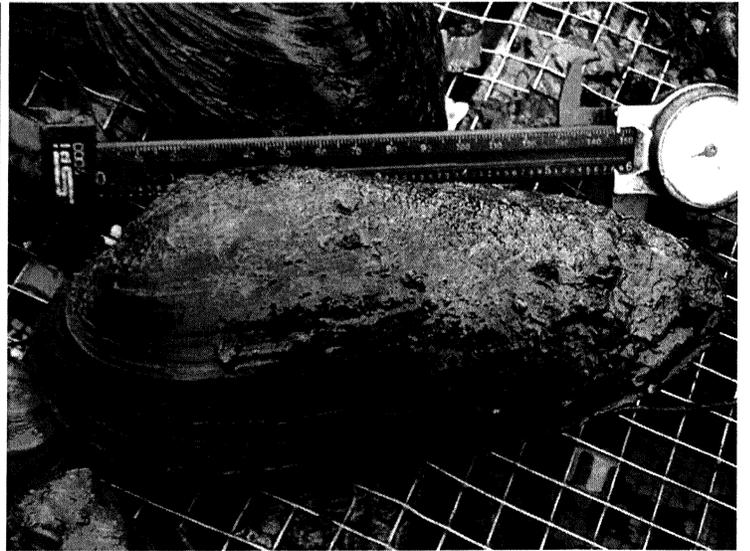
*Quadrula nodulata* (wartyback)



*Quadrula nodulata* and *Megalonaias nervosa* (washboard)



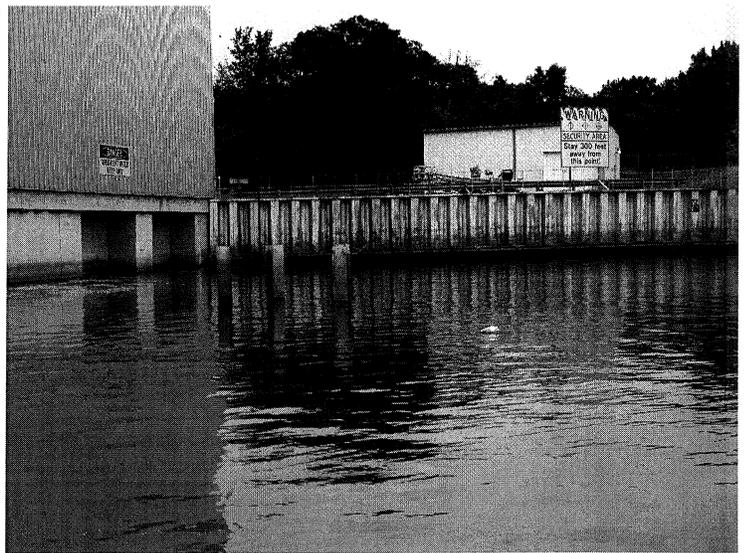
*Obovaria olivaria* (hickorynut)



*Ligumia recta* (black sandshell)



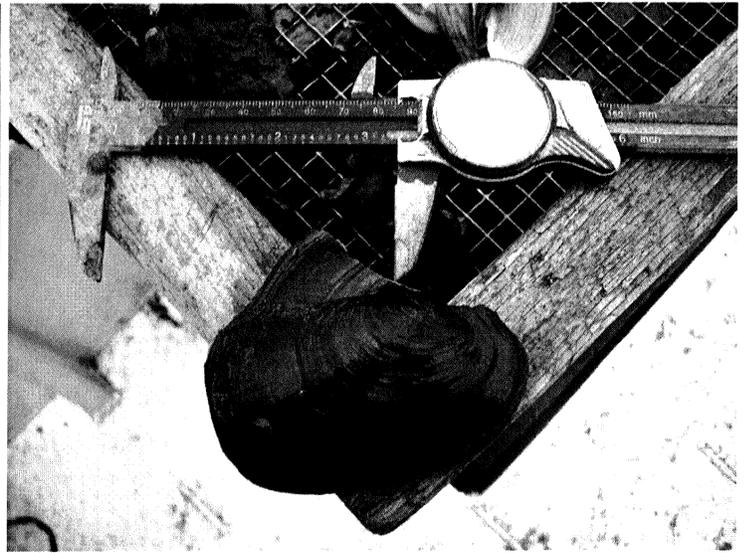
*Truncilla donaciformes* (fawnsfoot)



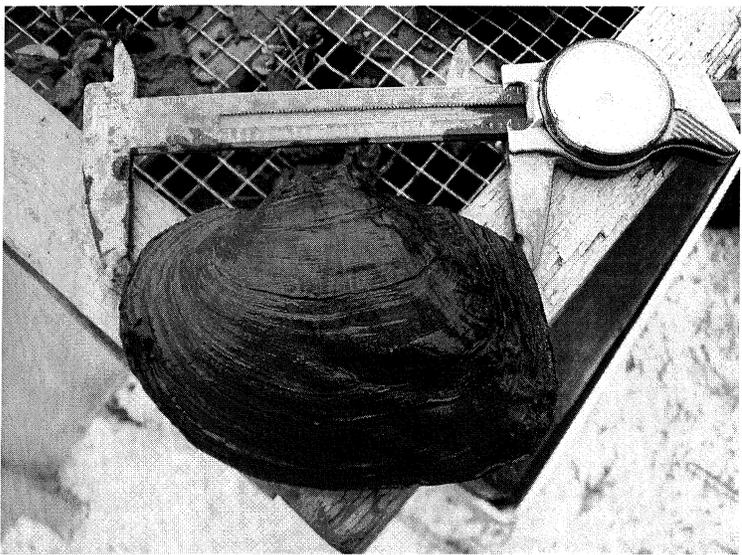
View of intakes in proposed dredge area.



View of shoreward downstream end of proposed dredge area looking south...



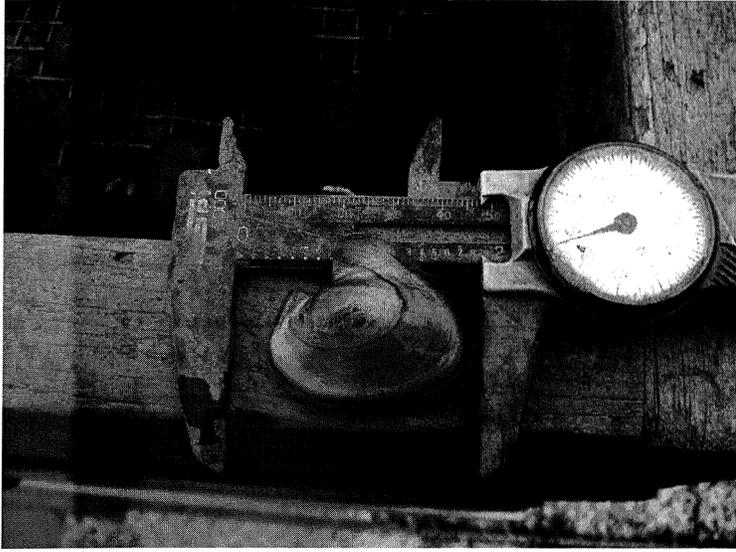
*Potamilus alatus* (pink heelsplitter)



*Arcidens confragosus* (rock pocketbook)



*Quadrula quadrula* (mapleleaf), *Quadrula pustulosa* (pimpleback), *Quadrul...*



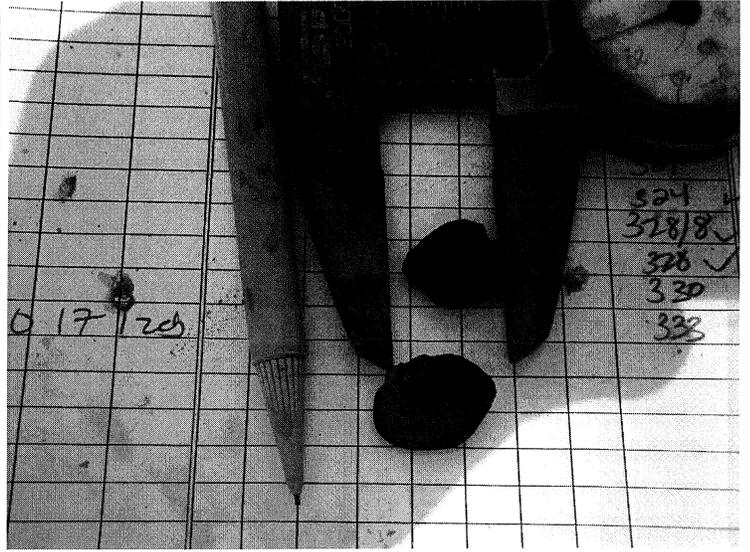
*Potamilus ohiensis* (pink papershell)



View of relocation area downstream of proposed dredge area looking north.



View of relocation area looking south.



Juvenile *Obliquaria reflexa* (threehorn wartyback) and *Fusconaia flava* (Wa...)

**Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.**

## Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.

Site	Species	Total Live
Q1	No unionids	-
Q2	<i>Obliquaria reflexa</i>	1
Q3	<i>Truncilla truncata</i>	2
Q4	<i>Truncilla truncata</i>	-
Q5	<i>Truncilla truncata</i>	1
Q6	<i>Amblyma plicata</i>	1
	<i>Obliquaria reflexa</i>	1
	<i>Truncilla truncata</i>	2
Q7	No unionids	-
Q8	No unionids	-
Q9	No unionids	-
Q10	No unionids	-
Q11	No unionids	-
Q12	<i>Obliquaria reflexa</i>	-
Q13	<i>Obliquaria reflexa</i>	1
Q14	<i>Amblyma plicata</i>	1
	<i>Obliquaria reflexa</i>	1
Q15	No unionids	-
Q16	<i>Amblyma plicata</i>	1
Q17	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	1
Q18	<i>Amblyma plicata</i>	1
SD01	<i>Amblyma plicata</i>	1
	<i>Fusconaia ebena</i>	-
	<i>Fusconaia flava</i>	1
	<i>Lampsilis cardium</i>	1
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	6
	<i>Obovaria olivaria</i>	1
	<i>Potamilus alatus</i>	-
	<i>Quadrula pustulosa</i>	2
	<i>Quadrula quadrula</i>	2
	<i>Truncilla truncata</i>	2
SD02	<i>Amblyma plicata</i>	2
	<i>Lampsilis cardium</i>	2
	<i>Leptodea fragilis</i>	1
	<i>Obliquaria reflexa</i>	6
	<i>Obovaria olivaria</i>	1
	<i>Quadrula pustulosa</i>	1
	<i>Quadrula quadrula</i>	1
SD03	<i>Amblyma plicata</i>	2
	<i>Fusconaia flava</i>	3
	<i>Obliquaria reflexa</i>	4
	<i>Truncilla truncata</i>	-
SD04	<i>Amblyma plicata</i>	-
	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	3
	<i>Quadrula pustulosa</i>	1
	<i>Quadrula quadrula</i>	3
	<i>Truncilla truncata</i>	-

## Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.

Site	Species	Total Live
SD05	<i>Amblema plicata</i>	5
	<i>Quadrula quadrula</i>	1
SD06	<i>Amblema plicata</i>	10
	<i>Lasmigona complanata</i>	1
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	8
	<i>Potamilus ohioensis</i>	-
	<i>Pyganadon grandis</i>	1
SD07	<i>Amblema plicata</i>	11
	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	10
	<i>Pyganadon grandis</i>	1
	<i>Quadrula quadrula</i>	5
SD08	<i>Truncilla truncata</i>	1
	<i>Amblema plicata</i>	13
	<i>Arcidens confragosus</i>	2
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	4
	<i>Potamilus ohioensis</i>	1
	<i>Pyganadon grandis</i>	1
	<i>Quadrula nodulata</i>	1
	<i>Quadrula quadrula</i>	6
	<i>Amblema plicata</i>	7
SD09	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	7
	<i>Quadrula quadrula</i>	6
SD10	<i>Amblema plicata</i>	11
	<i>Arcidens confragosus</i>	-
	<i>Fusconaia flava</i>	-
	<i>Obliquaria reflexa</i>	10
	<i>Quadrula pustulosa</i>	3
	<i>Quadrula quadrula</i>	6
SD11	<i>Amblema plicata</i>	2
	<i>Obliquaria reflexa</i>	1
	<i>Quadrula quadrula</i>	4
SD12	<i>Amblema plicata</i>	13
	<i>Fusconaia flava</i>	-
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	10
	<i>Potamilus ohioensis</i>	-
	<i>Pyganadon grandis</i>	2
	<i>Quadrula pustulosa</i>	2
	<i>Quadrula quadrula</i>	10
	<i>Truncilla truncata</i>	13
SD13	<i>Amblema plicata</i>	12
	<i>Fusconaia flava</i>	4
	<i>Megolonaia nervosa</i>	1
	<i>Obliquaria reflexa</i>	1
SD14	<i>Quadrula quadrula</i>	6
	<i>Amblema plicata</i>	14
	<i>Fusconaia flava</i>	1

## Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.

Site	Species	Total Live
SD15	<i>Obliquaria reflexa</i>	3
	<i>Quadrula pustulosa</i>	2
	<i>Quadrula quadrula</i>	5
	<i>Amblyma plicata</i>	15
	<i>Fusconaia flava</i>	3
	<i>Lasmigona complanata</i>	1
	<i>Megoloniais nervosa</i>	1
	<i>Obliquaria reflexa</i>	10
	<i>Obovaria olivaria</i>	1
	<i>Quadrula nodulata</i>	2
	<i>Quadrula pustulosa</i>	18
SD16	<i>Quadrula quadrula</i>	7
	<i>Strophitus undulatus</i>	1
	<i>Amblyma plicata</i>	4
	<i>Fusconaia ebena</i>	-
	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	10
	<i>Quadrula quadrula</i>	-
SD17	<i>Amblyma plicata</i>	4
	<i>Fusconaia flava</i>	1
	<i>Ligumia recta</i>	1
SD18	<i>Quadrula pustulosa</i>	4
	<i>Quadrula quadrula</i>	5
	<i>Amblyma plicata</i>	3
	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	2
	<i>Quadrula pustulosa</i>	5
SD19	<i>Quadrula quadrula</i>	3
	<i>Truncilla donaciformes</i>	1
	<i>Leptodea fragilis</i>	-
	<i>Potamilus alatus</i>	1
SD20	<i>Amblyma plicata</i>	1
SD21	<i>Arcidens confragosus</i>	1
SD22	<i>Potamilus alatus</i>	1
	<i>Amblyma plicata</i>	3
SD23	<i>Obliquaria reflexa</i>	2
	<i>Pyganadon grandis</i>	3
	<i>Amblyma plicata</i>	2
	<i>Fusconaia flava</i>	5
	<i>Lasmigona complanata</i>	-
SD24	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	5
	<i>Quadrula quadrula</i>	3
	<i>Amblyma plicata</i>	3
	<i>Fusconaia flava</i>	1
	<i>Lampsilis cardium</i>	1
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	6
	<i>Obovaria olivaria</i>	-
<i>Pyganadon grandis</i>	-	
	<i>Quadrula pustulosa</i>	3

## Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.

Site	Species	Total Live
SD24 Cont'd	<i>Quadrula quadrula</i>	6
	<i>Truncilla truncata</i>	-
SD25	<i>Amblyma plicata</i>	7
	<i>Obliquaria reflexa</i>	8
	<i>Potamilus ohioensis</i>	1
	<i>Quadrula pustulosa</i>	4
	<i>Quadrula quadrula</i>	2
SD26	<i>Amblyma plicata</i>	4
	<i>Fusconaia flava</i>	6
	<i>Obliquaria reflexa</i>	12
	<i>Obovaria olivaria</i>	1
	<i>Quadrula pustulosa</i>	4
	<i>Quadrula quadrula</i>	4
	<i>Truncilla truncata</i>	-
SD27	<i>Amblyma plicata</i>	9
	<i>Fusconaia flava</i>	5
	<i>Obliquaria reflexa</i>	10
	<i>Obovaria olivaria</i>	1
	<i>Quadrula pustulosa</i>	3
	<i>Quadrula quadrula</i>	4
	<i>Amblyma plicata</i>	26
SD28	<i>Fusconaia flava</i>	35
	<i>Lampsilis cardium</i>	2
	<i>Lasmigona complanata</i>	2
	<i>Obliquaria reflexa</i>	75
	<i>Potamilus alatus</i>	1
	<i>Quadrula pustulosa</i>	15
	<i>Quadrula quadrula</i>	5
	<i>Amblyma plicata</i>	7
	<i>Arcidens confragosus</i>	1
	<i>Fusconaia flava</i>	10
SD29	<i>Lampsilis cardium</i>	1
	<i>Obliquaria reflexa</i>	17
	<i>Pyganadon grandis</i>	-
	<i>Quadrula pustulosa</i>	8
	<i>Quadrula quadrula</i>	10
	<i>Amblyma plicata</i>	3
	<i>Lampsilis cardium</i>	3
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	16
SD30	<i>Pyganadon grandis</i>	-
	<i>Quadrula pustulosa</i>	4
	<i>Quadrula quadrula</i>	5
	<i>Amblyma plicata</i>	5
	<i>Fusconaia flava</i>	3
	<i>Lampsilis cardium</i>	-
SD31	<i>Obliquaria reflexa</i>	14
	<i>Potamilus alatus</i>	1
	<i>Quadrula nodulata</i>	1
	<i>Quadrula pustulosa</i>	3
	<i>Quadrula quadrula</i>	5

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 Appendix B. Unionids collected by site near Mississippi River mile 798.0, 2009.
 

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Site	Species	Total Live
SD32	<i>Amblema plicata</i>	3
	<i>Fusconaia flava</i>	2
	<i>Lasmigona complanata</i>	1
	<i>Obliquaria reflexa</i>	12
	<i>Quadrula pustulosa</i>	3
	<i>Quadrula quadrula</i>	7
SD33	<i>Amblema plicata</i>	3
	<i>Arcidens confragosus</i>	1
	<i>Obliquaria reflexa</i>	10
	<i>Potamilus alatus</i>	-
	<i>Pyganadon grandis</i>	-
	<i>Quadrula nodulata</i>	1
	<i>Quadrula pustulosa</i>	1
	<i>Quadrula quadrula</i>	2
SD34	<i>Amblema plicata</i>	5
	<i>Fusconaia flava</i>	1
	<i>Obliquaria reflexa</i>	10
	<i>Quadrula nodulata</i>	1
	<i>Quadrula pustulosa</i>	3
	<i>Quadrula quadrula</i>	3
SD35	<i>Amblema plicata</i>	4
	<i>Fusconaia flava</i>	1
	<i>Leptodea fragilis</i>	-
	<i>Obliquaria reflexa</i>	13
	<i>Pyganadon grandis</i>	-
Total		903

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United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Twin Cities Field Office  
4101 American Blvd E.  
Bloomington, Minnesota 55425-1665

MAY 26 2009

REC'D MAY 28 2009

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5/28/09*

Michael D. Wadley  
Site Vice President  
Xcel Energy  
1717 Wakonage Drive East  
Welch, Minnesota 55089

Dear Mr. Wadley:

This responds to your April 30, 2009, letter requesting our concurrence and support for a proposal to conduct a Level I mussel survey in an area proposed to be dredged near the Prairie Island Nuclear Generating Plant. Xcel is proposing to dredge approximately 16,000 cubic yards of accumulated sediment from the 16-acre approach canal near Mississippi River RM 798.2 across the south end of Sturgeon Lake.

The Level I mussel survey (enclosed) proposed by the Minnesota Department of Natural Resources (MNDNR) would be used to estimate mussel density within the project area. The mussel survey work is planned for mid-May to early June so that results would be available by the end of June. The Level I survey will be done concurrently with the preparation of an Environmental Assessment Worksheet. A Corps of Engineers permit would be required for the dredging and the mussel survey information would be very useful in the environmental analysis.

We concur with the mussel survey approach proposed by the MNDNR. If project plans change, additional information on listed or proposed species becomes available, or new species are listed that may be affected by the project, consultation should be reinitiated. If you have any further endangered species questions, please contact Mr. Nick Rowse at (612) 725-3548 x2210.

Sincerely,

Tony Sullins  
Field Supervisor

Cc: Mike Davis, Minnesota Department of Natural Resources, Lake City, MN  
Rich Baker, Minnesota Department of Natural Resources, St. Paul, MN  
Eric Norton, St. Paul District Corps of Engineers, St. Paul, MN

# **MINNESOTA FRESHWATER MUSSEL SURVEY AND RELOCATION PROTOCOL**

Minnesota Department of Natural Resources, Division of Ecological Resources  
U.S. Fish and Wildlife Service, Twin Cities Field Office

May 7, 2009

**REQUIRED PERMITS:** Live mussels cannot be handled in Minnesota without a permit from the Minnesota Department of Natural Resources. Before conducting mussel surveys, contact the Minnesota Endangered Species Coordinator at 651-259-5073 or [rich.baker@dnr.state.mn.us](mailto:rich.baker@dnr.state.mn.us) to request a permit. If you anticipate encountering federally listed species (list attached), a federal permit may also be required. To request a federal permit, contact the U.S. Fish and Wildlife Service at 612-713-5343 or [permitsR3ES@fws.gov](mailto:permitsR3ES@fws.gov).

**TEMPERATURE LIMITATIONS:** Mussel surveys and relocations may only be conducted when air temperature is greater than 32° F. and water temperature is greater than 40° F.

## **LEVEL I MUSSEL SURVEY TO ESTIMATE MUSSEL DENSITY**

### **A. LEVEL I SURVEY METHODS:**

1. Conduct qualitative surveys at a frequency of at least one per every 20,000 square feet of project impact zone. Distribute surveys across the impact area, concentrating on areas with suitable mussel habitat, especially shorelines and dropoffs. Without compromising the safety of the surveyor, Level I Surveys should leave no more than 100 feet between the edges of any two adjacent survey areas or between the edge of a survey area and the edge of the project impact zone. In the context of this protocol, the project impact zone should include not only any substrate directly disturbed by the project, but also any downstream substrate on which material suspended as a result of the project will settle to a depth of ½ inch or more. If more than 1 mussel/minute or a listed species is collected, a Level II Survey will be necessary.
2. Each qualitative survey will be of 20 minutes in duration. Search by feel, wading in shallow water and using SCUBA in deeper water, methodically covering the survey area. All mussels found will be identified to species with one example of each species photographed. All mussels handled will be returned to the substrate. Specimens of live endangered or threatened mussels must be returned to the substrate by hand, placed on their side, and allowed to burrow on their own. Where the substrate is very compacted cobble, a hole just large enough to receive the animal to a depth of ¾ of its length should be excavated and the mussel placed into it with the posterior end (siphons) up. Other species may be returned to the substrate from the water surface.
3. Level 1 survey will include a shoreline search for evidence of endangered mussel presence as indicated by recently dead shells.

**NOTE:** If a federally listed mussel species is encountered during a Level I Survey, the surveyor must contact the Twin Cities Field Office of the U.S. Fish and Wildlife Service at 612-725-3548.

B. LEVEL I SURVEY PRODUCTS

1. Species list for live and dead mussels.
2. Report detailing the conditions found at the site, how they related to freshwater mussels, and the number of mussels encountered per minute.

LEVEL II MUSSEL SURVEY TO ESTIMATE THE NUMBER AND SPECIES OF MUSSELS PRESENT

A. LEVEL II SURVEY METHODS: (Systematic Quadrat Sampling following Davis 2007)

1. A randomly placed systematic grid will be used to locate quadrat sample locations throughout the portion of the project impact zone in which the Level I Survey encountered mussels at a rate of at least 1 mussel per minute. At each grid intersect, a  $\frac{1}{4}$  m<sup>2</sup> total substrate sample will be collected from within a quadrat equipped with a  $\frac{1}{4}$  inch mesh bag (Figure 1).
2. All mussels and substrate will be removed to a depth of 10-15cm, placed into the bag, and brought to the surface. All mussels found will be identified to species and measured for length and aged by counting annual growth arrest lines. This information and the UTM coordinates will be recorded for each quadrat. All mussels handled will be kept cool and out of the sun as much as possible and finally returned to the river at a nearby site out of the project impact area. State listed species will be photographed as documentation of their presence.
3. The total number of quadrats sampled will be determined in consultation with MNDNR personnel based upon the spatial scale of the site and information generated by the Level 1 Survey.

**NOTE: If a federally listed mussel species is encountered during a Level II Survey, the surveyor must contact the Twin Cities Field Office of the U.S. Fish and Wildlife Service at 612-725-3548.**

B. LEVEL II SURVEY PRODUCTS

1. Survey report will include the following mussel community attributes: live and dead species present, live species composition (relative abundance) and density. The report will also include photographs of any state or federal listed species found.
2. Population attributes will include length and age frequencies for each species present, from which recruitment rate, growth rate and condition of the population can be inferred.
3. Survey report will also include a qualitative summary of the physical conditions present at the site including depth, substrate type, and any other pertinent information, a brief description of any dead shell deposits present and a summary of any past mussel records from the vicinity.

RELOCATION

Physically move all mussels within the project impact zone to a suitable translocation habitat upstream of the impact site. In general, mussels within a project impact zone will be systematically collected and relocated to suitable habitat at least 100 ft. upstream of the area of the project impact zone. Specimens of live endangered or threatened mussels must be returned to the substrate by hand, placed on their side, and allowed to burrow on their own. Where the substrate is very compacted cobble, a hole just large enough to receive the animal to a depth of  $\frac{3}{4}$  of its length should be excavated and the mussel placed into it with the posterior end (siphons) up. Other species may be returned to the substrate from the water surface. Unionid density within the relocation area should not exceed  $100/m^2$  after the relocation is complete. Relocation and report details will be determined in consultation with MNDNR staff and specified in a MNDNR permit. Any relocation involving federally listed species will require USFWS approval.

Literature cited

Davis, M. 2007. Population Estimates of Native Freshwater Mussels in Pool 6 of the Upper Mississippi River, 2007. Report to the St. Paul District Corps of Engineers.

**FRESHWATER MUSSELS LISTED UNDER  
MINNESOTA STATE ENDANGERED SPECIES LAW (MN STATUTES 84.0895)  
(including federal status)  
Effective 7/1/1996**

**Endangered**

*Arcidens confragosus*, rock pocketbook  
*Elliptio crassidens*, elephant-ear  
*Fusconaia ebena*, ebonyshell  
*Lampsilis higginsi*, Higgins eye (federal status: endangered)  
*Lampsilis teres*, yellow sandshell  
*Plethobasus cyphus*, sheepnose (federal status: candidate)  
*Quadrula fragosa*, winged mapleleaf (federal status: endangered)  
*Quadrula nodulata*, wartyback

**Threatened**

*Actinonaias ligamentina*, mucket  
*Alasmidonta marginata*, elktoe  
*Cumberlandia monodonta*, spectaclecase (federal status: candidate)  
*Cyclonaias tuberculata*, purple wartyback  
*Ellipsaria lineolata*, butterfly  
*Epioblasma triquetra*, snuffbox  
*Megalonaias nervosa*, washboard  
*Pleurobema coccineum*, round pigtoe  
*Quadrula metanevra*, monkeyface  
*Simpsonaias ambigua*, salamander mussel  
*Tritogonia verrucosa*, pistolgrip  
*Venustaconcha ellipsiformis*, ellipse

**Special Concern**

*Elliptio dilatata*, spike  
*Lasmigona compressa*, creek heelsplitter  
*Lasmigona costata*, fluted-shell  
*Ligumia recta*, black sandshell  
*Obovaria olivaria*, hickorynut

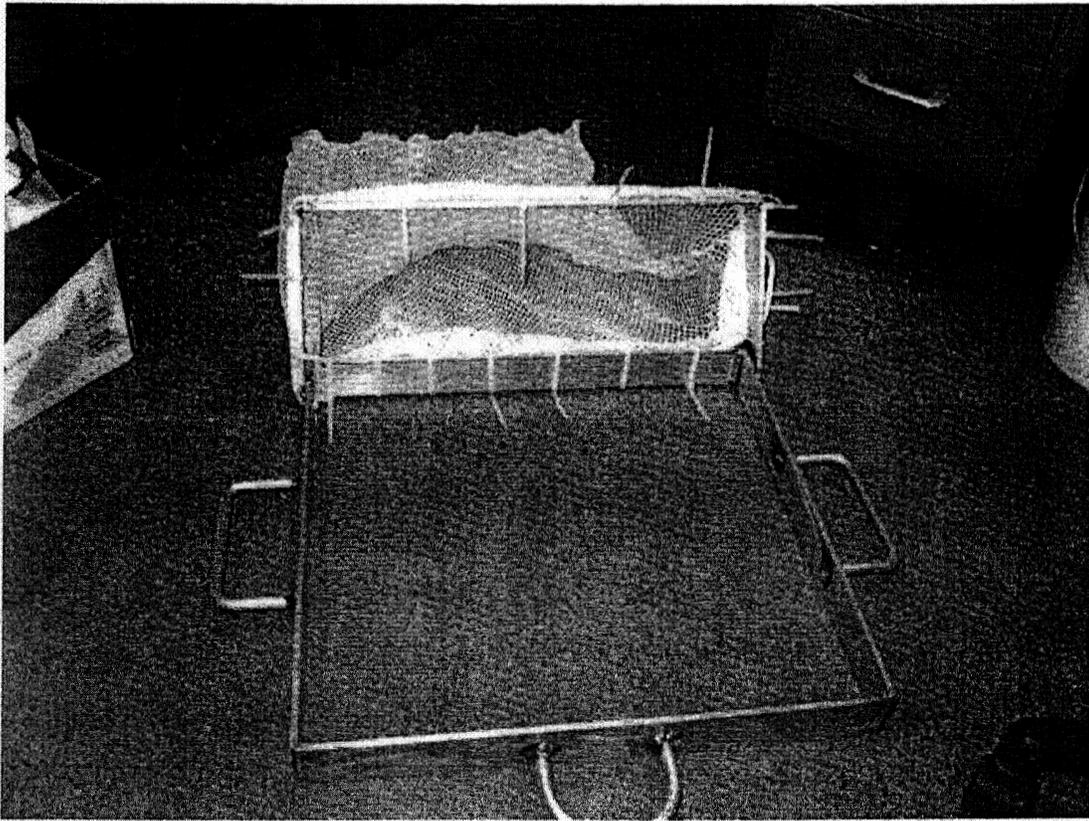


Figure 1.  $\frac{1}{4}$  meter square quadrat sampler with attached  $\frac{1}{4}$  inch mesh bag.