

# ENVIRONMENTAL ASSESSMENT WORKSHEET

**Note to reviewers:** This Environmental Assessment Worksheet (EAW) provides information about a project that may have the potential for significant environmental effects. This EAW was prepared by the Minnesota Department of Natural Resources (MNDNR), the Responsible Governmental Unit (RGU), to determine whether an Environmental Impact Statement (EIS) should be prepared. Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS. A copy of this EAW may be obtained by calling (651) 259-5162. An electronic version of the EAW is available on the MNDNR Website <http://www.dnr.state.mn.us/input/environmentalreview/index.html>.

1. **Project title:** Marsh Lake Ecosystem Restoration Project

2. **Proposer: U.S. Army Corps of Engineers and Department of Natural Resources**

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4. **Reason for EAW preparation** (check one)

EIS scoping                      Mandatory EAW                      Citizen petition                      RGU discretion                      Proposer  
volunteered

If EAW or EIS is mandatory give EQB rule category subpart number and subpart name

EQB Rules 4410.4300, subparts 26 Stream Diversion and 27 Wetland and Public Waters

5. **Project location** City/Township

1/4                      1/4                      Section                      Township                      Range

[EA: Final Report Summary pages 6 and 7]

**Attach each of the following to the EAW:**

- County map showing the general location of the project;

[EA: Section 1.5.1 page 18]

- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable);

[EA: Final Report Summary pages 6 and 7]

- Site plan showing all significant project and natural features.

[EA: Final Report Summary page 7, Section 1.5.1 page 19]

## 6. Description

- Provide a project summary of 50 words or less to be published in the *EQB Monitor*.

[EA: Final Report Summary page 4]

b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

[EA: Section 4.1.4 pages 117-121, 4.1.5 pages 122-125, 4.1.6 pages 125-129, 4.1.7 pages 129-131, 4.1.9 page 131, Section 7.1 pages 182-188, Section 7.2 pages 189-198]

c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

[EA: Final Report Summary pages 2-3, Section 1.4 page 16, Section 3.1 page 98-99, Section 3.2 page 102-103, Section 3.3 page 104-106, Section 3.4 pages 107-108, Feasibility Report Appendix A page 2]

d. Are future stages of this development including development on any outlots planned or likely to happen?  Yes  No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

e. Is this project a subsequent stage of an earlier project?  Yes  No

If yes, briefly describe the past development, timeline and any past environmental review.

[EA: Final Report Summary pages 1-2, Section 1.3 pages 14-15, Section 1.7 page 22-28]

## 7. Project magnitude data

Total project acreage

Number of residential units: unattached          attached          maximum units per building

Commercial, industrial or institutional building area (gross floor space): total square feet

Indicate areas of specific uses (in square feet): This information is irrelevant to this proposed project

Office

Manufacturing

Retail

Other industrial

Warehouse

Institutional

Light industrial

Agricultural

Other commercial (specify)

Building height

If over 2 stories, compare to heights of nearby buildings

[EA: Section 1.7.1 page 25, Section 2.1 pages 29-30, Section 4.1.4 page 118]

8. **Permits and approvals required.** List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.

[EA Section 8.1 pages 201-202, Section 10.3 page 210]

<u>Unit of government</u>	<u>Type of application</u>	<u>Status</u>
State of Minnesota, MNDNR	Public Waters Permit	Pending
State of Minnesota, MNDNR	Wetland/Water Permit - WCA	Pending
State of Minnesota, PCA	Construction Stormwater Permit	Pending
State of Minnesota, MNDNR	Contractor Permit Verification, PW	Pending
State of Minnesota, PCA	Water Quality Certification Permit	Pending

\*Permit applications will be completed during the "Final Design" phase prior to construction.

9. **Land use.** Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

[EA: Section 2.8.2 page 51-53, Section 2.8.11 page 73, Section 2.9.1 page 73-74, Section 2.9.2 page 74-75, Section 2.9.8 pages 78-90, Section 2.10.2 page 91, Feasibility Report Appendix F]

10. **Cover types.** Estimate the acreage of the site with each of the following cover types before and after development:

<b>Before</b>	<b>After</b>
Types 1-8 wetlands	Lawn/landscaping
Wooded/forest	Impervious surfaces
Brush/Grassland	Other (describe)
Cropland	

**TOTAL**

[EA: Section 2.8.2 page 53, Section 2.10.2 page 91, Section 2.10.3 page 92, Section 2.10.1 page 92, Section 2.10.5 pages 93 and 94, Section 2.10.6 page 94]

If **Before** and **After** totals are not equal, explain why:

11. **Fish, wildlife and ecologically sensitive resources**

a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

[Section 2.8.5 pages 55-62, Section 2.8.6 pages 62-65, Section 2.8.7 pages 65, Section 2.8.8 pages 66-68, Section 2.8.9 pages 69-73, Section 2.8.10 page 73, Section 2.10.7 pages 94-95, Section 2.10.8 pages 95-96, Section 6.7.9 page 174, Section 6.7.10 page 174, Section 6.7.11 page 175, Section 6.7.12 page 175, Feasibility Report Appendices D and E]

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site?  Yes  No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the

resources has been conducted and describe the results. If the MNDNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number: ERDB #20040746. Describe measures to minimize or avoid adverse impacts.

[EA: Section 6.7.14 page 176-177, Feasibility Report Appendix C, U.S. Fish and Wildlife Letter July 12, 2011, Feasibility Report Appendices D and Q]

The State of Minnesota Natural Heritage Information System (NHIS) was queried to determine if any rare features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, there are several rare species and native plant communities in the vicinity of the project (see database reports in Appendix A). Mussels are the only rare features that are known to occur within the project area. The Minnesota County Biological Survey (MCBS) has not identified any MCBS Sites of Biodiversity Significance or MCBS Native Plant Communities within or adjacent to the proposed project.

There are several MCBS Sites of Biodiversity Significance outside but near the proposed project area, and these sites contain Dry Hill Prairie and Mesic Prairie native plant communities. The rare plants and butterflies listed on the database reports are associated with these prairies. The upland sandpiper (*Bartramia longicauda*), marbled godwit (*Limosa fedoa*), and the greater prairie-chicken (*Tympanuchus cupido*) are also associated with native prairie. Given that the MCBS Sites are outside of the proposed project area and there are no identified native prairie remnants within the proposed project area, no adverse effects to these rare features are anticipated.

The NHIS identified one bald eagle (*Haliaeetus leucocephalus*) nest in close proximity to the proposed Pomme de Terre River restoration. This nest was inactive when last checked in 2005. Given that eagles will often build several nests in a territory and use different nests in different years, this nest may become active again in the future or there may be additional nest sites in the area. Bald eagles are a state-listed species of special concern, and they are federally protected under the Migratory Bird Treaty Act and under the Bald and Golden Eagle Protection Act. If there will be any tree removal associated with this project, the trees should be inspected for nests prior to being cut down.

The MNDNR conducted pre-project mussel surveys in 2007 and 2010 (Appendix A). The black sandshell (*Ligumia recta*), a state-listed mussel of special concern, and the elktote (*Alasmidonta marginata*), state-listed as threatened, were documented within the proposed project area. It is likely that these species would be adversely affected by the Pomme de Terre River channel restoration. Options for mitigating this loss include relocating mussels, providing a minimum flow into the cutoff channels, and post-project monitoring of mussel colonization. Minnesota's endangered species law (*Minnesota Statutes*, section 84.0895) and associated rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the taking of threatened or endangered species without a permit.

12. **Physical impacts on water resources.** Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch?  Yes  No

If yes, identify water resource affected and give the MNDNR Public Waters Inventory number(s) if the water resources affected are on the PWI: Marsh Lake – DOW Lake #06000100; Pomme de Terre River PWI Natural Watercourse. Describe alternatives considered and proposed mitigation measures to minimize impacts.

[EA: Section 6.7.9 page 174, Section 6.7.10 pages 174-175, Section 6.7.13 pages 176-177, Feasibility Report Appendix D and Appendix J]

13. **Water use.** Will the project involve installation or abandonment of any water wells, connection to or

changes in any public water supply or appropriation of any ground or surface water (including dewatering)?  Yes  No

If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and MNDNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

[EA: Feasibility Report Appendix F5]

14. **Water-related land use management district.** Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district?  Yes  No

If yes, identify the district and discuss project compatibility with district land use restrictions.

[EA: Feasibility Report Appendix F5 and Appendix J]

The Lac qui Parle Wildlife Management Area (WMA) and hence Marsh Lake are not within any state or federally designated wild or scenic river land use districts.

The shoreland zoning districts for both Big Stone and Lac qui Parle Counties extends 1,000 feet from the designated ordinary high water mark for Marsh Lake. Both counties designate Marsh Lake as a Natural Environment Lake, the most restrictive classification.

15. **Water surface use.** Will the project change the number or type of watercraft on any water body?  Yes  No

If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

[EA: Section 7.2.1 page 193, 195-199, Feasibility Report Appendix I]

16. **Erosion and sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be moved:

acres \_\_\_\_\_ ; cubic yards \_\_\_\_\_. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

[EA: Section 2.3 page 39, Section 2.4 pages 40-43, Section 2.5 pages 44-45, Feasibility Report Appendix D]

17. **Water quality: surface water runoff**

a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any stormwater pollution prevention plans.

b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

[EA: Section 2.6 page 46, Section 6.7.13 page 176]

18. **Water quality: wastewaters**

a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

There is no wastewater generated by this project.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

**19. Geologic hazards and soil conditions**

a. Approximate depth (in feet) to ground water:                    minimum                    average  
to bedrock:                    minimum                    average

Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

[EA Feasibility Report Appendix H]

b. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

[EA: Feasibility Report Appendix F]

**20. Solid wastes, hazardous wastes, storage tanks**

a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

[EA: Section 2.8.11 page 73, Feasibility Report Appendix F]

b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

[EA: Feasibility Report Appendix F]

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

[EA: Feasibility Report Appendix F]

21. **Traffic.** Parking spaces added. Existing spaces (if project involves expansion) .  
Estimated total average daily traffic generated. Estimated maximum peak hour traffic generated (if known) and time of occurrence. Provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

[EA Section 2.9.2 page 74-75, Section 6.7.3 page 173, Section 7.2.1 page 196]

No additional parking spaces or parking lots would be constructed as part of this proposed project. A parking lot currently exists at the Marsh Lake Dam operated by the U.S. Army Corps of Engineers (Marsh Lake Day Use Facility). The proposed project does not include the parking lot to be improved or expanded to accommodate more vehicles. The Day Use facility has parking for 44 vehicles.

The MNDNR Division of Fish & Wildlife, Section of Wildlife, through the Lac qui Parle WMA office maintains an additional six parking lots located around Marsh Lake. These lots have a grass or gravel surface and are almost used exclusively by hunters, primarily waterfowl hunters. Each parking lot can hold 10 to 15 vehicles. The proposed project does include an expansion of these parking lots; however, additional gravel may be added to parking surfaces.

The MNDNR does not believe the Marsh Lake Ecosystem Restoration Project would cause traffic congestion or trigger any road improvements. Roads in this area are gravel township roads and WMA roads. WMA roads are lightly travelled except during the fall hunting season or during the days following the fishing opener. While the MNDNR expects improved ecosystem conditions would lead to increase participation in outdoor recreation on the wildlife area and day use facility, the traffic levels would most likely fall within the range recorded (WMA opening day car counts) in the mid-1990s.

During the mid-1990s, the MNDNR recorded its highest vehicle counts for waterfowl and pheasant hunting. Since that time vehicle counts have declined by approximately 40%. The reasons for the decline are multi-faceted (but include fall weather, lake levels, status of wildlife populations, etc.). Wildlife viewing is predicted to have the largest percent increase in participation, but traffic volumes are dispersed throughout the year compared to hunting and fishing openers.

22. **Vehicle-related air emissions.** Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

This is irrelevant to the proposed project.

23. **Stationary source air emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

[EA Section 6.7.8 page 174]

24. **Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation?  Yes  No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

[EA: Section 6.7.1 page 172, Section 6.7.8 page 174]

25. **Nearby resources.** Are any of the following resources on or in proximity to the site?  
Archaeological, historical or architectural resources?  Yes  No

[EA: Section 6.7.15 pages 177-179, Feasibility Report Appendix C SHPO Letter June 3, 2010]

Prime or unique farmlands or land within an agricultural preserve?  Yes  No

Designated parks, recreation areas or trails?  Yes  No

[EA: Section 2.9.9 pages 84-85, Section 7.2.1 page 192]

Scenic views and vistas?  Yes  No

[EA: Section 2.9.9 page 85]

Other unique resources?  Yes  No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

[EA Feasibility Report Memorandum of Understanding, Nov. 2010]

26. **Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks?  Yes  No

[EA: Section 6.7.1 page 172]

If yes, explain.

27. **Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency?  
 Yes  No. If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

To the MNDNR's knowledge, the Marsh Lake Ecosystem Restoration project is not subject or bound to any local comprehensive plans or local land-use regulations.

28. **Impact on infrastructure and public services.** Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project?  Yes  No. If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

[EA: Section 7.2 pages 189-199]



29. **Cumulative impacts.** Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (*or discuss each cumulative impact under appropriate item(s) elsewhere on this form*).

[EA: Section 6.7.17 pages 179-181]

30. **Other potential environmental impacts.** If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

None.

31. **Summary of issues.** *Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.* List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

**RGU CERTIFICATION.** The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature



Date September 22, 2011

Title Principal Planner

**Environmental Assessment Worksheet** was prepared by the staff of the Environmental Quality Board at the Administration Department. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or <http://www.eqb.state.mn.us>

# **Appendix A**