

ATTACHMENT B
AGENCY CONSULTATIONS



United States Steel Corporation
1 North Broadway, MS 70-A
Gary, IN 46402
219 888 4400
Fax: 219 888 5877
Email: jjprusiecki@uss.com

John J. Prusiecki, Jr.
Engineer
Environmental Remediation

August 18, 2015

Mr. Kyle Deming
Planning Division, City of Duluth
City Hall, Room 208
411 West First Street
Duluth, MN 55802

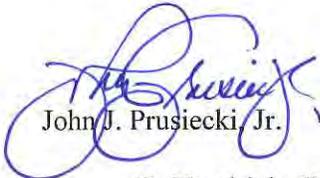
Subject: **Joint Application Form for Activities Affecting Water Resources in Minnesota**

Dear Mr. Deming:

Enclosed for your review is the Joint Application Form for Activities Affecting Water Resources in Minnesota. This form is being submitted for delineation approval and/or jurisdictional determination. Accordingly Parts 1, 2 and 5, and Attachment A have been completed with this submittal.

Please feel free to contact Dennis Hendricks of USS Real Estate at 218-749-7527 or myself at (219) 888-4400 if you have any questions.

Sincerely,



John J. Prusiecki, Jr.

cc: D. Hendricks (USS)
R.F. Casselberry (USS)
M. Rupnow (USS)
E. Williams (USS)
E. Dott (Barr)
T. Renville (AECOM)



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Engineer
Environmental Remediation

August 18, 2015

Mr. Daryl Wierzbinski
U. S. Army Corps of Engineers
600 South Lake Avenue, Suite 211
Duluth, MN 55802

Subject: Joint Application Form for Activities Affecting Water Resources in Minnesota

Dear Mr. Wierzbinski:

Enclosed for your review is the Joint Application Form for Activities Affecting Water Resources in Minnesota. This form is being submitted for delineation approval and/or jurisdictional determination. Accordingly Parts 1, 2 and 5, and Attachment A have been completed with this submittal.

Please feel free to contact Dennis Hendricks of USS Real Estate at 218-749-7527 or myself at (219) 888-4400 if you have any questions.

Sincerely,

John J. Prusiecki, Jr.

cc: D. Hendricks (USS)
R.F. Casselberry (USS)
M. Rupnow (USS)
E. Williams (USS)
E. Dott (Barr)
T. Renville (AECOM)



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John J. Prusiecki, Jr.
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Environmental Remediation

August 18, 2015

Mr. R. C. Boheim
South St. Louis Soil and Water Conservation District
215 North 1st Avenue East, Room 301
Duluth, MN 55802

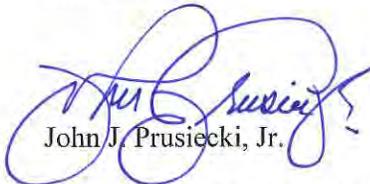
Subject: Joint Application Form for Activities Affecting Water Resources in Minnesota

Dear Mr. Boheim:

Enclosed for your review is the Joint Application Form for Activities Affecting Water Resources in Minnesota. This form is being submitted for delineation approval and/or jurisdictional determination. Accordingly Parts 1, 2 and 5, and Attachment A have been completed with this submittal.

Please feel free to contact Dennis Hendricks of USS Real Estate at 218-749-7527 or myself at (219) 888-4400 if you have any questions.

Sincerely,



John J. Prusiecki, Jr.

cc: D. Hendricks (USS)
R.F. Casselberry (USS)
M. Rupnow (USS)
E. Williams (USS)
E. Dott (Barr)
T. Renville (AECOM)



United States Steel Corporation
1 North Broadway, MS 70-A
Gary, IN 46402
219 888 4400
Fax: 219 888 5877
Email: jjprusiecki@uss.com

John J. Prusiecki, Jr.
Engineer
Environmental Remediation

August 18, 2015

Ms. Patti Fowler
Minnesota Department of Natural Resources
1568 Highway 2
Two Harbors, MN 55616

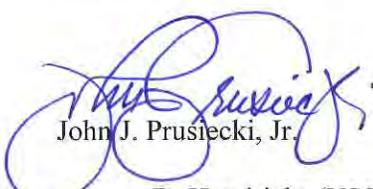
Subject: Joint Application Form for Activities Affecting Water Resources in Minnesota

Dear Ms. Fowler:

Enclosed for your review is the Joint Application Form for Activities Affecting Water Resources in Minnesota. This form is being submitted for delineation approval and/or jurisdictional determination. Accordingly Parts 1, 2 and 5, and Attachment A have been completed with this submittal.

Please feel free to contact Dennis Hendricks of USS Real Estate at 218-749-7527 or myself at (219) 888-4400 if you have any questions.

Sincerely,



John J. Prusiecki, Jr.

cc: D. Hendricks (USS)
R.F. Casselberry (USS)
M. Rupnow (USS)
E. Williams (USS)
E. Dott (Barr)
T. Renville (AECOM)

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx> and select "Minnesota" from the contact information box.

Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (<https://webapps11.dnr.state.mn.us/mpars/public/authentication/login>). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: United States Steel Corporation

Mailing Address: United States Steel Real Estate
Attn: Dennis F. Hendricks
P.O. Box 417
Mountain Iron, MN 55768

Phone: 218-749-7527

E-mail Address: dfhendricks@uss.com

Authorized Contact (do not complete if same as above):

Mailing Address: U. S. Steel Gary Works
Attn: John J. Prusiecki, Jr.
One N. Broadway, MS 70-A
Gary, IN 46402-3199

Phone: 219-888-4400

E-mail Address: jjprusiecki@uss.com

Agent Name: N/A

Mailing Address:

Phone:

E-mail Address:

PART TWO: Site Location Information

County: St. Louis County **City/Township:** Duluth

Parcel ID and/or Address: 88th and Idaho Streets, Duluth, MN 55808

Legal Description (Section, Township, Range): Sec: 34 & 35, Township: 49, Range: 15

Lat/Long (decimal degrees): 560181.10245/5169158.82683

Attach a map showing the location of the site in relation to local streets, roads, highways. Attached

Approximate size of site (acres) or if a linear project, length (feet): 600 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

Attached

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted *prior to* this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements

that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Project Name and/or Number:

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

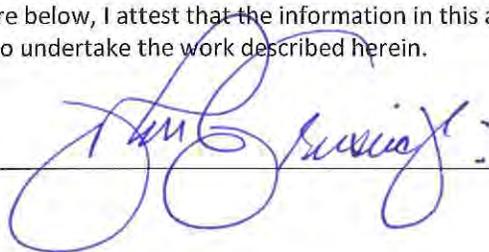
If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:



Date: 8-18-15

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Project Name and/or Number:

Attachment A

Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

Wetland Type Confirmation

Delineation Concurrence. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

Preliminary Jurisdictional Determination. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

Approved Jurisdictional Determination. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).

<http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx>

Attachment B

Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part *if* you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR *if* you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

Attachment C

Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

Attachment D Replacement/Compensatory Mitigation

Complete this part *if* your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit ¹	Corps Mitigation Compensation Technique ²	Acres	Credit % Requested	Credits Anticipated ³	County	Major Watershed #	Bank Service Area #

¹Refer to the name and subpart number in MN Rule 8420.0526.

²Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.

³If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile.....) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number:

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
 - Previously restored or created under a prior approved replacement plan or permit
 - Drained or filled under an exemption during the previous 10 years
 - Restored with financial assistance from public conservation programs
 - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative:

Title:

Signature: _____

Date:

Attachment E

Local Road Replacement Program Qualification

Complete this part *if* you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	Type of Impact (fill, excavate, drain)	Size of Impact (square feet or acres to 0.01)	Existing Plant Community Type(s) in Impact Area ¹	County, Major Watershed #, and Bank Service Area # of Impact ²

¹Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

²Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Part 4 are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative:

Title:

Signature: _____

Date:

Technical Evaluation Panel Concurrence:

Project Name and/or Number:

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? Yes No

Signature: _____

Date:

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? Yes No

Signature: _____

Date:

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? Yes No

Signature: _____

Date:

TEP member:

Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? Yes No

Signature: _____

Date:

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155**



- - - Approximate Unnamed Creek Delta Sediment Investigation Area
- - - Approximate Wire Mill Delta Sediment Investigation Area
- - - Upland Operable Units (OUs)
- ~ ~ ~ Unnamed Creek
- - - Approximate Location of St. Louis River Channel, Based on Orthophoto Interpretation
- - - Approximate U. S. Steel Operations Area (URS, 2008)
- State Boundary

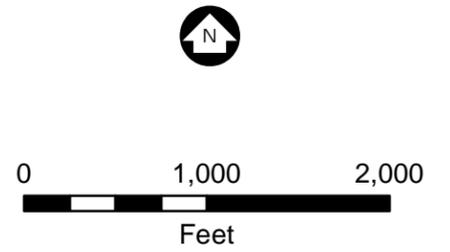


Figure 1-2

SITE LAYOUT
Former U. S. Steel Duluth Works -
Spirit Lake Sediment Site
Saint Louis River
Duluth, Minnesota

Parcel Identification Number	Owner Name	Owner Address	Parcel Location Type
010-0138-00040	MENOR GREGORY E ETUX	1308 HILTON ST DULUTH, MN 55808	UPLAND
010-0138-00080	JOHNSON KEVIN W	1214 HILTON ST DULUTH, MN 55808	UPLAND
010-0138-00090	BASTIE DIXON R	1204 HILTON ST DULUTH, MN 55808	UPLAND
010-0138-00010	MILOSEVICH LONNY S	1316 HILTON ST DULUTH, MN 55808	UPLAND
010-0138-00030	PODEMSKI DANIEL A & AMANDA K	1314 HILTON ST DULUTH, MN 55808	UPLAND
010-0138-00050	MENOR GREGORY E	1308 HILTON ST DULUTH, MN 55808	UPLAND
010-2730-00020	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00070	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	601 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00080	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	602 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00090	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	603 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00100	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	604 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00110	WISCONSIN CENTRAL LTD /TAX DEPT	PO BOX 8100, DOWNTOWN STATION, 8TH FLOOR MONTREAL, QUEBEC, CANADA H3C 3N4	UPLAND
010-2730-00140	WISCONSIN CENTRAL LTD /TAX DEPT	PO BOX 8100, DOWNTOWN STATION, 8TH FLOOR MONTREAL, QUEBEC, CANADA H3C 3N4	UPLAND
010-2730-00180	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2730-00310	SPIRIT LAKE TR RY CO	NOT AVAILABLE	UPLAND
010-2730-00300	WISCONSIN CENTRAL LTD /TAX DEPT	PO BOX 8100, DOWNTOWN STATION, 8TH FLOOR MONTREAL, QUEBEC, CANADA H3C 3N4	UPLAND
010-2730-01231	UNITED STATES STEEL CORPORATION	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2746-01250	UNITED STATES STEEL CORPORATION	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2746-01330	WISCONSIN CENTRAL LTD /TAX DEPT	8TH FLOOR	UPLAND

Parcel Identification Number	Owner Name	Owner Address	Parcel Location Type
010-2746-01331	UNITED STATES STEEL CORPORATION	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2746-01440	SPIRIT LAKE TR RY CO	NOT AVAILABLE	UPLAND
010-2746-01580	MINNESOTA STEEL CO/UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-2746-01662	FOND DU LAC BAND LAKE SUP CHIPPEWA	1720 BIG LAKE RD LAND INFORMATION DEPT CLOQUET MN 55720	ESTUARY
010-3300-04580	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-3300-04570	UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-3300-04620	CITY OF DULUTH	NOT AVAILABLE	UPLAND
010-3300-04630	ST OF MN C278 L35	NOT AVAILABLE	UPLAND
010-3300-04632	VOGTMAN DEAN T & JENA R	1040 84TH AVE W DULUTH MN 55808	UPLAND
010-3300-04633	TURNER MICHAEL & CAROL	1076 84TH AVE W DULUTH MN 55808	UPLAND
010-3300-04645	AM STEEL AND WIRE CO/UNITED STATES STEEL CORP	600 GRANT ST RM 1381 ATTN: TAX DEPT PITTSBURGH PA 15219-2800	UPLAND
010-3304-00110	FRANCISCO GREGORY J & NANCY A	8501 FALCON ST DULUTH MN 55808	UPLAND
Unidentified	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
Dedicated ROW	NOT AVAILABLE	NOT AVAILABLE	UPLAND
Dedicated ROW	NOT AVAILABLE	NOT AVAILABLE	UPLAND

Wetland Delineation Report
Spirit Lake Sediment Site
Former U. S. Steel Duluth Works
St. Louis River
Duluth, Minnesota

Prepared for
U. S. Steel and
U.S. EPA Great Lakes
National Program Office



April 2013

Wetland Delineation Report
Upland Sediment Feasibility Study Area
Former U. S. Steel - Duluth Works Site

Prepared for U. S. Steel
October 2014



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MN 55101-1678

December 17, 2015

Operations
Regulatory (2015-00256-DWW)

Mr. Dennis F. Hendricks
United States Steel Corporation
United States Steel Real Estate
P.O. Box 417
Mountain Iron, Minnesota 55768

Dear Mr. Hendricks:

This letter is in response to United States Steel Corporation (USS) correspondence dated August 18, 2015, requesting Corps of Engineers concurrence with the delineation of aquatic resources within a review area associated with the Upland Sediment Feasibility Study Area at the former USS Duluth Works Site in the City of Duluth. The project site is located in Sec. 2 and 3, T. 48N., R. 15W., and Sec. 34 and Sec. 35, T. 49N., R. 15W., St. Louis County, Minnesota.

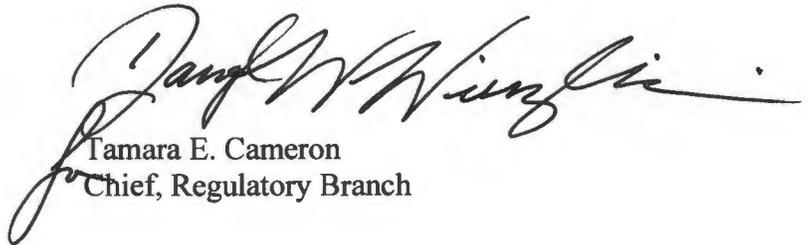
We have completed our review of the Upland Sediment Feasibility Study Area Wetland Delineation Report dated October 2014 and determined that the limits of the aquatic resources have been accurately identified in accordance with current agency guidance including the Corps of Engineers 1987 Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral/Northeast Region. The review included a field visit with the authorized agents on October 5, 2015. This concurrence is only valid for the review area shown on the attached Figure 1 of 5 through Figure 5 of 5. The boundaries shown on attached Figures accurately reflect the limits of the aquatic resources in the review area.

This concurrence may generally be relied upon for five years from the date of this letter. However, we reserve the right to review and revise our concurrence in response to changing site conditions, information that was not considered during our initial review, or off-site activities that could indirectly alter the extent of wetlands and other resources on-site. Our concurrence may be renewed at the end of this period provided you submit a written request and our staff are able to verify that the determination is still valid.

This wetland delineation review does not include a jurisdictional determination as to whether the wetlands or other aquatic resources identified at the site would be subject to Corps of Engineers jurisdiction under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Thank you for your cooperation with the U.S. Army Corps of Engineers regulatory program. If you have any questions, contact Daryl W. Wierzbinski in our Duluth office at (218) 720-5291. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,



Tamara E. Cameron
Chief, Regulatory Branch

Enclosed:
Figure 1 of 5 through Figure 5 of 5

Copy furnished:

John J. Prusiecki, Jr., USS

Scott Cieniawski, USEPA

Kaitlin McCormick, EA

Jamie Beaver, EA

Jeff Lea, Barr

R.C. Boheim, St. Louis County

Patricia Fowler, MNDNR

Steven Robertson, City of Duluth



United States Steel Corporation
1 North Broadway, MS 70-A
Gary, IN 46402
219 888 4400
Fax: 219 888 5877
Email: jjprusiecki@uss.com

John J. Prusiecki, Jr.
Engineer
Environmental Remediation

October 27, 2015

Mr. Daryl Wierzbinski
U. S. Army Corps of Engineers
600 South Lake Avenue, Suite 211
Duluth, MN 55802

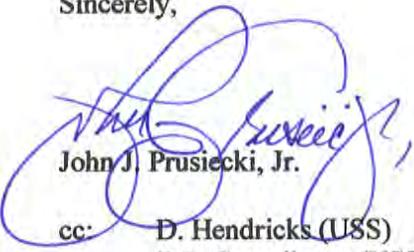
**Subject: Withdrawal of Request for Jurisdictional Determination - Joint Application Form
for Activities Affecting Water Resources in Minnesota**

Dear Mr. Wierzbinski:

United States Steel Corporation (USS) is hereby requesting that a Joint Application Form for Activities Affecting Water Resources in Minnesota, submitted on August 18, 2015, be formally withdrawn. The application requested a jurisdictional determination over wetlands and waters within selected areas of the former USS Duluth Works site. This withdrawal is prompted by the findings of the field wetlands review, completed on October 5, 2015, as well as the necessity to complete this process in an expeditious manner. Accordingly, USS is requesting a preliminary jurisdictional determination of wetlands at the site.

Please feel free to contact Dennis Hendricks of USS Real Estate at 218-749-7527 or myself at (219) 888-4400 if you have any questions.

Sincerely,


John J. Prusiecki, Jr.

cc: D. Hendricks (USS)
R.F. Casselberry (USS)
M. Rupnow (USS)
E. Williams (USS)
S. Cienawoski, (USEPA)
M. Bryant (USEPA)
E. Dott (Barr)
T. Renville (AECOM)
J. Beaver (EA)
P. Fowler, Minnesota DNR
K. Deming, Planning Department, City of Duluth
R.C. Boheim, South St. Louis Soil and Water Conservation District



2012	For Agency Use Only:	#Sec _____ Contact Rqsted? _____
	Received _____ Due _____ Inv _____	#EOs _____ Survey Rqsted? _____
	Search Radius _____ mi. L / I / D EM Map'd _____	#Com _____
	NoR / NoF / NoE / Std / Sub Let _____ Log out _____	Related ERDB# _____

NATURAL HERITAGE INFORMATION SYSTEM (NHIS) DATA REQUEST FORM

Please read the instructions on page 3 before filling out the form. Thank you!

WHO IS REQUESTING THE INFORMATION?

Mr. _____
 Ms. _____

Name and Title _____

Agency/Company _____

Mailing Address _____

(Street) (City) (State) (Zip Code)

Phone _____ e-mail _____ Responses will be sent via email.
 If you prefer US Mail check here:

THIS INFORMATION IS BEING REQUESTED FOR A:

- Federal EA State EAW PUC Site or Route Application Watershed Plan BER
 Federal EIS State EIS Local Government Permit Research Project
 NEPA Checklist Other (describe) _____
 Check here if this project is funded through any of the following grant programs: Lessard-Sams Outdoor Heritage Council (L-SOHC), Conservation Partners Legacy (CPL), or Legislative-Citizen Commission on Minnesota Resources (LCCMR).

INFORMATION WE NEED FROM YOU:

- 1) **Enclose a map** of the project boundary/area of interest (topographic maps or aerial photos are preferred).
- 2) Please **provide a GIS shapefile*** (NAD 83, UTM Zone 15N) of the project boundary/area of interest.
- 3) List the following locational information* (attach additional sheets if necessary):

For Agency Use: Region / MBS Status	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">County</th> <th style="width: 15%;">Township #</th> <th style="width: 15%;">Range #</th> <th style="width: 55%;">Section(s) (please list all sections)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	County	Township #	Range #	Section(s) (please list all sections)																	For Agency Use: TRS Confirmed <input type="checkbox"/>
County	Township #	Range #	Section(s) (please list all sections)																			

- 4) Please provide the following information (attach additional sheets if necessary):

Project Name: _____

Project Proposer: _____

Description of Project (including types of disturbance anticipated from the project): _____

Describe the existing land use of the project site. What types of land cover / habitat will be impacted by the proposed project?

List any waterbodies (e.g., rivers, intermittent streams, lakes, wetlands) that may be affected by the proposed project, and discuss how they may be impacted (e.g., dewatering, discharge, riverbed disturbance).

Does the project have the potential to affect any groundwater resources (e.g., groundwater appropriation, change in recharge, or contamination)?

To your knowledge, has the project undergone a previous Natural Heritage review? If so, please list the correspondence #: ERDB # _____. How does this request differ from the previous request (e.g., change in scope, change in boundary, project being revived, project expansion, different phase)?

To your knowledge, have any native plant community or rare species surveys been conducted within the site? If so, please list:

List any DNR Permits or Licenses that you will be applying for or have already applied for as part of this project:

INFORMATION WE PROVIDE TO YOU:

1) The response will include a Natural Heritage letter. If applicable, the letter will discuss potential effects to rare features.

Check here if you are interested in a list of rare features in the vicinity of the area of interest but you do **not** need a review of potential effects to rare features. Please list the reason a review is not needed:

2) Depending on the results of the query or review, the response may include an Index Report of known aggregation sites and known occurrences of federally and state-listed plants and animals* within an approximate one-mile radius of the project boundary/area of interest. The Index Report and Natural Heritage letter can be included in any public environmental review document.

3) A Detailed Report that contains more information on each occurrence may also be requested. Please note that the Detailed Report may contain specific location information that is protected under *Minnesota Statutes*, section 84.0872, subd. 2, and, as such, the Detailed Report may not be included in any public document (e.g., an EAW).

Check here if you would like to request a Detailed Report. Please note that if the results of the review are 'No Effects' or a standard comment, a Detailed Report may not be available.

FEES / TURNAROUND TIME

There is a fee* for this service. Requests generally take **3-4 weeks** from date of receipt to process, and are processed in the order received.

I have read the entire form and instructions, and the information supplied above is complete and accurate. I understand that material supplied to me from the Natural Heritage Information System is copyrighted and that I am not permitted to reproduce or publish any of this copyrighted material without prior written permission from the DNR. Further, if permission to publish is given, I understand that I must credit the Minnesota Division of Ecological and Water Resources, Minnesota Department of Natural Resources, as the source of the material.

Signature
(required)

Courtney S. Picelli

Note: Digital signatures representing the name of a person shall be sufficient to show that such person has signed this document.

Mail or email completed form to:

Lisa Joyal, Endangered Species Review Coordinator
Division of Ecological and Water Resources
Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, Minnesota 55155
Review.NHIS@state.mn.us

[Online version of the form](#)

Revised March 2, 2012

Instructions for the Natural Heritage Information System (NHIS) Data Request Form

The Division of Ecological and Water Resources maintains the Natural Heritage Information System (NHIS), a collection of databases that provides information on Minnesota's rare plants and animals, native plant communities, and other rare features. The NHIS is continually updated as new information becomes available, and the Minnesota County Biological Survey (MBS) is a major source of this information.

- Use this form to request information on rare features within an approximate one-mile radius of an area of interest. You may reproduce this form for your own use or to distribute. An [electronic copy of the form](#) is available at the DNR's web site.
- If you are interested in obtaining the Rare Features Database electronically as a GIS shapefile, do not fill out this form. Please see [this Natural Heritage Data document](#) for more information on this option.

WHO IS REQUESTING THE INFORMATION?

- The person whose name is entered on the form under the "Who is Requesting the Information" section must sign the form as an acknowledgment of the State of Minnesota's copyright on all generated reports. All correspondence and invoices will be sent to this person. Please do not ask us to send this information to a different party.
- Please include a complete mailing address. Responses will be sent via email unless you specify differently.

INFORMATION WE NEED FROM YOU:

- Include a legible map (topographic maps or aerial photographs are preferred) clearly showing:
 - 1) location and boundaries of the project,
 - 2) associated infrastructure, and
 - 3) any waterbodies that may be affected by the proposed project.
- If the project boundary is large **or** complex, please provide a **GIS shapefile** (NAD 83, UTM Zone 15) of the project boundary/area of interest. Do not include any buffers. An additional "digitizing fee" may be charged for projects that require a substantial amount of time to digitize.
- Provide a complete list of sections that the proposed project or area of interest falls within. Do not include any buffer area. Please double-check this information. Incorrect sections can delay the processing of your request, and may result in an invalid review.
- Please provide a detailed **project description**, attaching separate pages to the form if necessary. Identify the type of development (e.g., housing, commercial, utility, ethanol facility, wind farm) being proposed, the size and # of units (if applicable), construction methods, and **any associated infrastructure** such as access roads, utility connections, and water supply and/or discharge pipelines.
- We cannot begin processing data requests until we receive all parts of the request, including a map and a completed, signed form.

INFORMATION WE PROVIDE TO YOU:

- The Natural Heritage review and database reports are valid for environmental review purposes for one year, and they are only valid for the project location and description provided on the form. Please contact Lisa Joyal at lisa.joyal@state.mn.us if project details change or if a data update is needed.
- Please note that the Natural Heritage review and database reports do not address/contain locations of the gray wolf (*Canis lupus*), state-listed as special concern, or Canada lynx (*Lynx canadensis*), federally-listed as threatened, as these species are not currently tracked in the Natural Heritage Information System. See page 4.

FEES / TURNAROUND TIME:

- There is a fee for this service. All fees are subject to change. The [current fee schedule](#) is available online. The minimum charge is \$90.00, and increases based on the time it takes us to process the request (dependent upon project size and the results of the query). Please do not include payment with your request; an invoice will be sent to you.
- There is generally a **3-4 week turn-around time** to process requests.

PLEASE SEE NEXT PAGE FOR ADDITIONAL SOURCES OF INFORMATION

ADDITIONAL SOURCES OF INFORMATION:

- The DNR [Rare Species Guide](#) is the state's authoritative reference for Minnesota's endangered, threatened, and special concern species. It is a dynamic, interactive source that can be queried by county, ECS subsection, watershed, or habitat.
- Information on the gray wolf (*Canis lupus*):
[DNR website gray wolf Species Profile](#)
[USFWS website Monitoring Report](#)
- Information on the Canada lynx (*Lynx Canadensis*):
[DNR website Canada Lynx Species Profile](#)
[USFWS website Canada Lynx profile](#)
- [Minnesota's Comprehensive Wildlife Conservation Strategy](#) is an action plan focused on managing Minnesota's native animals whose populations are rare, declining, or vulnerable to decline. It identifies Species in Greatest Conservation Need and the Key Habitats that support them.
- [The Minnesota Geospatial Commons](#) allows users to download GIS shapefiles of MBS Sites of Biodiversity Significance, MBS Native Plant Communities, MBS Railroad Rights-of-Way Prairies, and Scientific and Natural Area Boundaries.
- Information on [MBS Site Biodiversity Significance Ranks](#)
- Information on [MBS Native Plant Communities](#)
- Questions? Please contact Lisa Joyal at 651-259-5109 or lisa.joyal@state.mn.us.

Minnesota Natural Heritage Information Data Request Form
Requested Information

Project Name: Spirit Lake Sediment Remediation Proposer:
U.S. Environmental Protection Agency
February 15, 2019

List of Files

GIS shapefiles (provided as separate email attachment)

Attachment A- Data Request Form Information

Project Description

Project Boundary Map (Figure A1)

Project Design Map (Figure A2)

Project Site Land Use and Waterbodies

Project Land Cover Map (Figure A3)

Attachment B- Previous NHIS Review and Survey Documentation

2014 NHIS Review Form

Maple-Basswood Habitat Memorandum

ATTACHMENT A
DATA REQUEST FORM INFORMATION

Project Description

The purpose of this Project is to address contamination, primarily PAHs and associated metals and dioxins, in the Spirit Lake area of the Saint Louis River AOC. The goal of the Project is to improve the environmental condition of the Project area through remediation of contaminated aquatic and upland sediment. This will result in ecological benefits to the Spirit Lake watershed. U.S. Steel (USS) and the U.S. Environmental Protection Agency (USEPA) are proposing remedial actions for the Spirit Lake upland and sediment sites (Figure A1). Project work will consist of 27.8 acres of sediment/soil removal, 61.6 acres of sediment/soil capping, 76.0 acres of both sediment/soil removal and capping, and 37.6 acres of enhanced natural recovery (Figure A2). Material from the remedial projects will be placed in three confined disposal facilities (CDFs). Two CDFs (5.0 and 17.6 acres) are in the upland Project area and one CDF (29.3 acres) is located within the estuary.

These activities will cause physical manipulation of the landscape; temporary disturbances may include an increase in noise from operation of construction equipment, increased water column turbidity, and short-term disruption of benthic communities. However, the ultimate outcome of the Project will be an improved environmental condition of the Project area, and the project final design will take all feasible approaches to maintain a natural landscape appearance. The design of this project will provide habitat benefits including the creation of two shallow sheltered bay areas, as well as creation of more locations with water depth transitions from shallow to deeper water and shoal areas that will be planted with emergent vegetation.

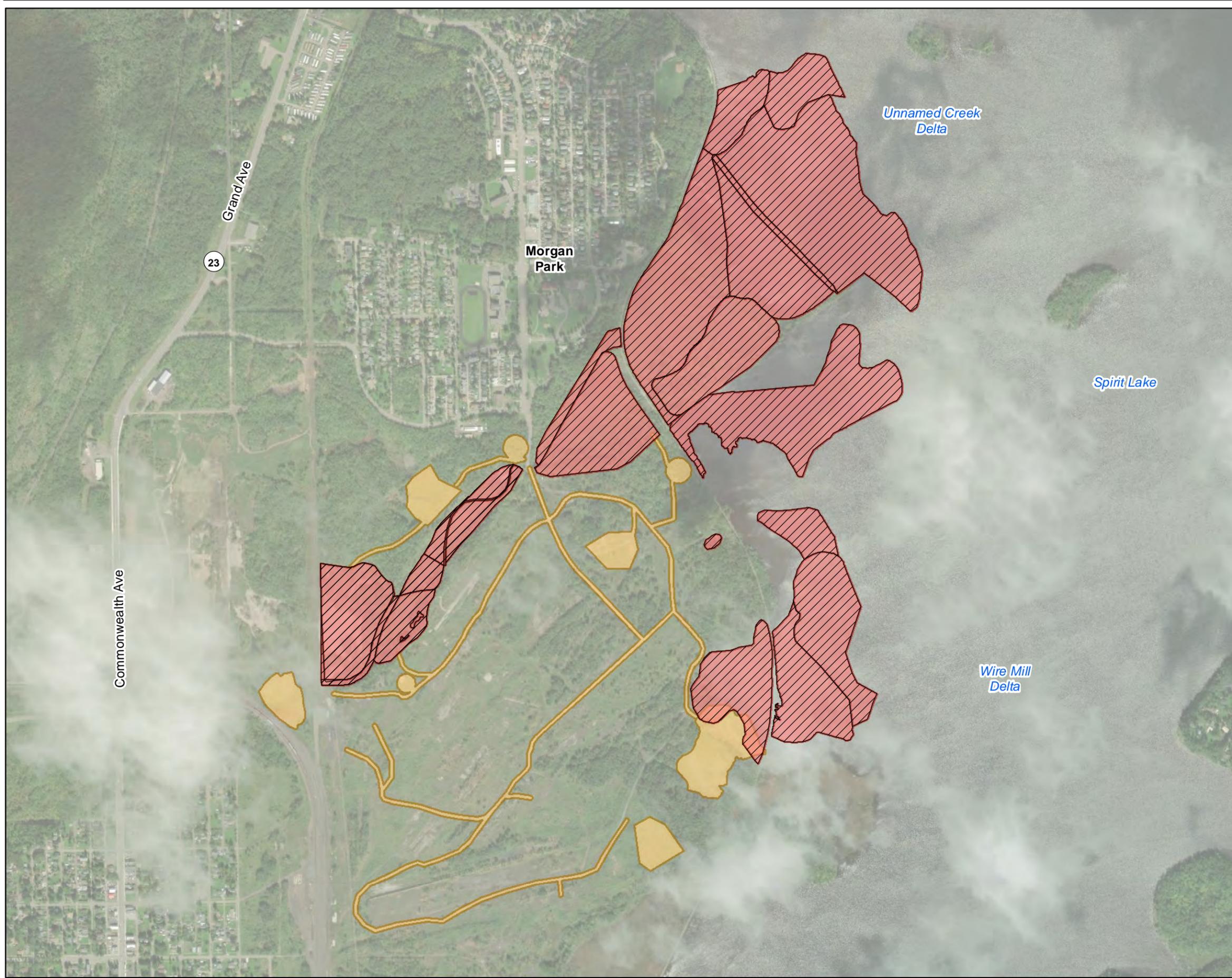
Habitat restoration will also be included as part of the Project. Almost all remedial areas will be planted with appropriate vegetation for the final habitat type or water depth; these include shallow emergent marsh vegetation, mixed vegetation (emergent, submerged, and floating), submerged vegetation, and upland planting. Most wetland areas within the footprint will remain a wetland after habitat restoration is complete; however, the wetland type may change. Implementation of the remedy will result more depth transitions in the estuary, thus providing specific wetland habitat types desired by Minnesota natural resource managers. Areas not planted will serve as deepwater habitat.

Project Site Land Use and Waterbodies

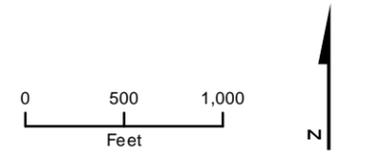
The Spirit Lake site includes freshwater emergent wetlands and freshwater forested/shrub wetlands with the following habitat types: alder thicket, deep marsh, floodplain forest, shallow open water, sedge meadow, shallow marsh, shrub carr, and wet meadow (Figure A3). The City of Duluth has zoned the site as largely industrial general in the estuary portion of the site. The upland portion of the site is defined as mixed use-business park. The upland portion of the site was previously the site of a steel refinery operated by U.S. Steel. Since the facility stopped operating, some of the areas have not been maintained and forested areas have developed. A portion of the site, along an unnamed tributary to Spirit Lake, is a more

natural area that is densely forested. The Lake Superior and Mississippi Railroad runs along the perimeter of the site and is currently operated by a non-profit that offers tourist rides during the summer months.

The site is adjacent to the St. Louis River, which discharges into Lake Superior approximately eight miles downstream of the Site. The estuary portion of the Site is located within Spirit Lake. A small creek and community storm water conveyance channel, referred to as the Unnamed Creek, carries flows from 2,000 acres of upstream watershed within the City of Duluth. It enters through a large culvert located along the western edge, flows through the western portion of the Site and discharges to the St. Louis River. Wire Mill Pond in the southern portion of the site also receives surface water; however, the primary surface water drainage is Unnamed Creek. These waterbodies will be impacted by dredging/soil excavation, creation of a confined disposal facilities in the Unnamed Creek delta and upland, placement of sediment/soil caps within the estuary and in upland portions of the site, and by discharge and surface water drainage.



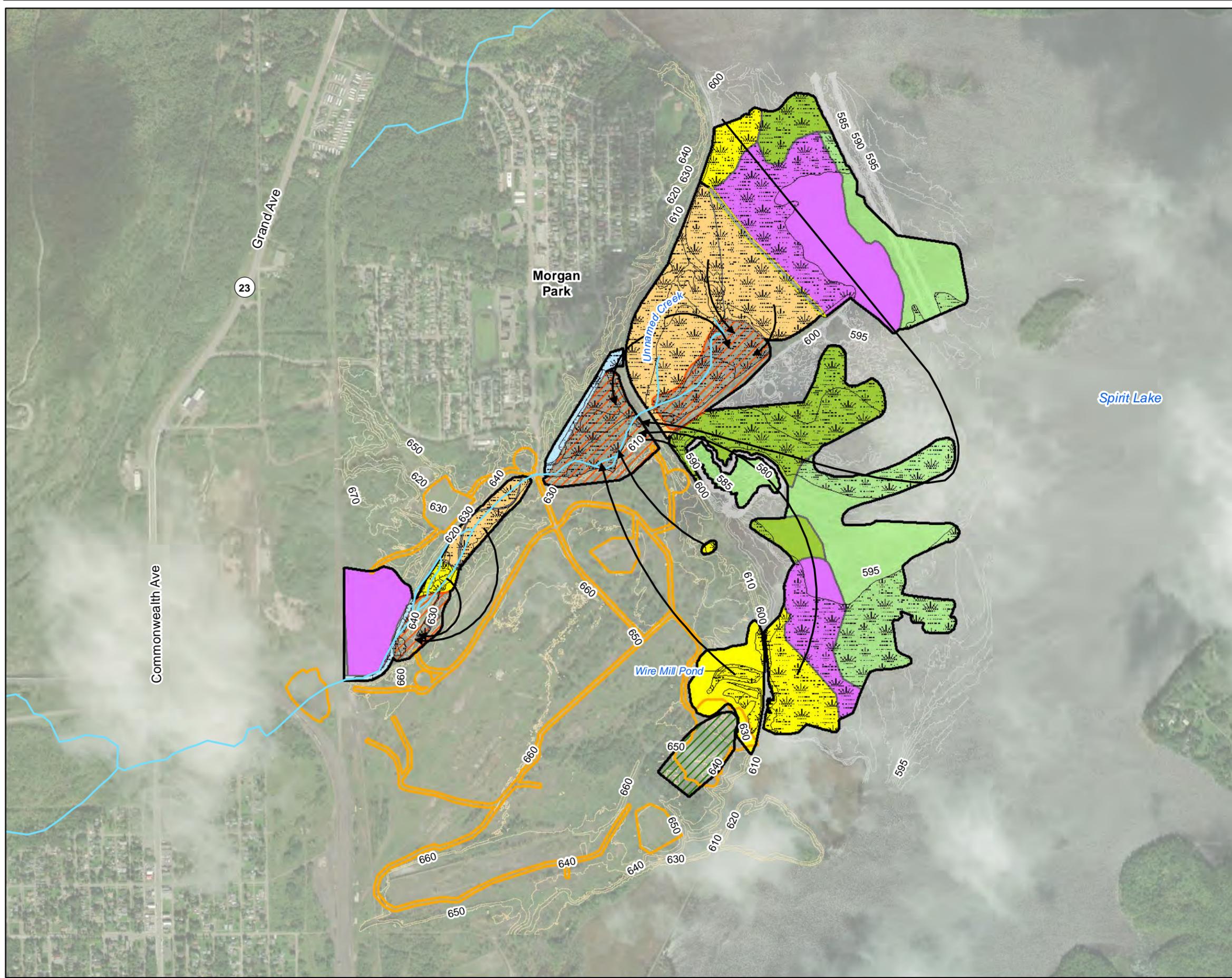
- Legend**
-  Action Area
 -  Remedial Effects
 -  Temporary Effects



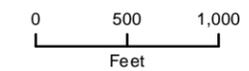
Map Date: 12/21/2018
Base Map: ESRI 2017



Figure A1
Project Boundary Map
Spirit Lake
Duluth, Minnesota



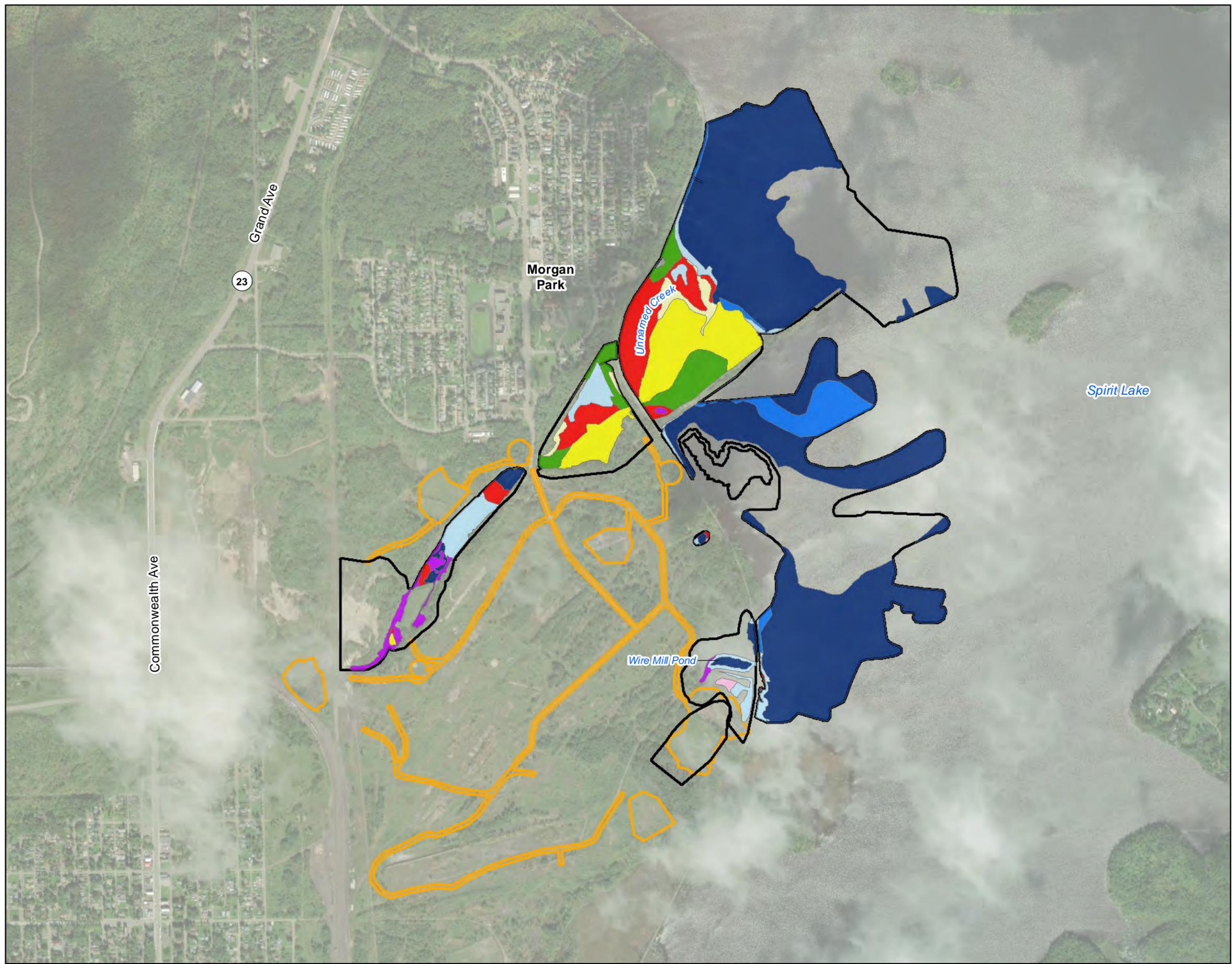
- Legend**
- Elevation Contours (10 ft)
 - Bathymetry Contours (1 ft)
 - Movement and Destination of Removed Material
 - Potential Area of Temporary Effects
 - Shoal Feature
 - Project Boundary
 - Borrow
 - CDF
 - Drainage Feature
 - Dredge
 - Dredge to Set Elevation and Remedial Cap
 - ENR Thin Cover
 - Remedial Cap
 - Monitored Natural Recovery (MNR) Area
- Hydrology**
- Creek
 - Wetland



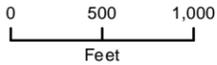
Map Date: 2/18/2019
 Base Map: ESRI 2017
 Rivers: USGS NHD 2013
 Wetlands: Barr 2014, U.S. Steel 2014
 Topography: USGS 2014
 Bathymetry: Barr 2014



Figure A-2
 Spirit Lake Design Summary
 Spirit Lake
 Duluth, Minnesota



- Legend**
- Potential Area of Temporary Effects
 - Project Boundary
- Wetland Type**
- Alder Thicket
 - Deep Marsh
 - Floodplain Forest
 - Fresh Wet Meadow
 - Hardwood Swamp
 - Sedge Meadow
 - Shallow Marsh
 - Shallow Open Water
 - Shrub Carr



Map Date: 2/15/2019
 Base Map: ESRI 2017
 Wetlands: Barr 2014, U.S. Steel 2014



Figure A-3
 Wetland Types
 Spirit Lake
 Duluth, Minnesota

ATTACHMENT B

PREVIOUS NHIS REVIEW AND SURVEY DOCUMENTATION

Included documents:

- Previous NHIS submittal (2014)
- Technical Memorandum: Native Plant Community Classification Study Results (August 2015)

A NHIS review for the Project was previously submitted to DNR in December 2014. In March 2015, Minnesota DNR provided a detailed report and maps containing information on possible rare species, plant communities, and other rare features. Minnesota DNR identified a possible area of Sugar Maple – Basswood (Bluebead Lily) Forest, a high-biodiversity priority habitat, within the Project boundary. A survey was performed in April 2015 by Barr Engineering, the City of Duluth, and U. S. Steel, to evaluate this DNR mapped habitat. Based upon site observations, the survey found that area identified by Minnesota DNR is covered by Aspen over at least 80 to 85 percent of the area, and Maple was only a minor component of these stands. As such, the project team suggested that Minnesota DNR consider revising the classification of this area. In response, Minnesota DNR informed the team that to consider changing the classification the agency would need to receive supporting data such as a relevé or Ecological Classification System transect conducted by a qualified botanist between June and August. In August 2015, Barr Engineering conducted this study to determine the most accurate native plant community classification using the Minnesota DNR Ecological Classification System Key. The results of this survey confirmed the findings of the earlier site observations, that the 16-acre area in question within the Project boundary did not have the characteristics necessary to support the classification of Sugar Maple-Basswood (Bluebead Lily) Forest. Therefore, remedial activities conducted within the project boundary would not impact this priority habitat.



2012	For Agency Use Only:	#Sec _____ Contact Rqsted? _____
	Received _____ Due _____ Inv _____	#EOs _____ Survey Rqsted? _____
	Search Radius _____ mi. L / I / D EM Map'd _____	#Com _____
	NoR / NoF / NoE / Std / Sub Let _____ Log out _____	Related ERDB# _____

NATURAL HERITAGE INFORMATION SYSTEM (NHIS) DATA REQUEST FORM

Please read the instructions on page 3 before filling out the form. Thank you!

WHO IS REQUESTING THE INFORMATION?

Mr. _____
 Ms. _____

Name and Title _____

Agency/Company _____

Mailing Address _____

(Street) (City) (State) (Zip Code)

Phone _____ e-mail _____

Responses will be sent via email.
 If you prefer US Mail check here:

THIS INFORMATION IS BEING REQUESTED FOR A:

- Federal EA State EAW PUC Site or Route Application Watershed Plan BER
 Federal EIS State EIS Local Government Permit Research Project
 NEPA Checklist Other (describe) _____
 Check here if this project is funded through any of the following grant programs: Lessard-Sams Outdoor Heritage Council (L-SOHC), Conservation Partners Legacy (CPL), or Legislative-Citizen Commission on Minnesota Resources (LCCMR).

INFORMATION WE NEED FROM YOU:

- 1) **Enclose a map** of the project boundary/area of interest (topographic maps or aerial photos are preferred).
- 2) Please **provide a GIS shapefile*** (NAD 83, UTM Zone 15N) of the project boundary/area of interest.
- 3) List the following locational information* (attach additional sheets if necessary):

For Agency Use: Region / MCBS Status	County Township # Range # Section(s) (please list all sections)	For Agency Use: TRS Confirmed <input type="checkbox"/>
	_____ _____ _____ _____	

- 4) Please provide the following information (attach additional sheets if necessary):

Project Name: _____

Project Proposer: _____

Description of Project (including types of disturbance anticipated from the project): _____

Describe the existing land use of the project site. What types of land cover / habitat will be impacted by the proposed project? The site is currently undeveloped and covered with areas off the following habitat types: alder thicket, deep marsh, floodplain forest, open water, sedge meadow, shallow marsh, shrub carr, and wet meadow (Figure 3).

List any waterbodies (e.g., rivers, intermittent streams, lakes, wetlands) that may be affected by the proposed project, and discuss how they may be impacted (e.g., dewatering, discharge, riverbed disturbance).

Spirit Lake, Wire Mill Pond, a small Unnamed Pond. Wire Mill Pond receives surface water, however the primary surface water drainage is an Unnamed Creek that discharges to Spirit Lake. These areas will be affected by dredging/excavation of sediment, creation of a confined disposal facility for sediment, placement of sediment/soil caps, and surface water drainage.

Does the project have the potential to affect any groundwater resources (e.g., groundwater appropriation, change in recharge, or contamination)?

The project is being designed to avoid change to groundwater recharge or flow. Groundwater contamination or appropriation of groundwater are not expected to occur as part of this Project.

To your knowledge, has the project undergone a previous Natural Heritage review? If so, please list the correspondence #: ERDB # _____. How does this request differ from the previous request (e.g., change in scope, change in boundary, project being revived, project expansion, different phase)?

N/A

To your knowledge, have any native plant community or rare species surveys been conducted within the site? If so, please list:

A survey for terrestrial vegetation was conducted. It examined species along four different transects - two in the Unnamed Creek Delta and two south of Wire Mill Pond. The survey focused on wetland characteristics of species and was not conducted to determine presence/absence of rare species.

List any DNR Permits or Licenses that you will be applying for or have already applied for as part of this project:

Public Waters Work Permit, Water Appropriation Permit, Aquatic Plant Management Control Permit, Coastal Zone Consistency Certification

INFORMATION WE PROVIDE TO YOU:

1) The response will include a Natural Heritage letter. If applicable, the letter will discuss potential effects to rare features.

Check here if you are interested in a list of rare features in the vicinity of the area of interest but you do **not** need a review of potential effects to rare features. Please list the reason a review is not needed:

2) Depending on the results of the query or review, the response may include an Index Report of known aggregation sites and known occurrences of federally and state-listed plants and animals* within an approximate one-mile radius of the project boundary/area of interest. The Index Report and Natural Heritage letter can be included in any public environmental review document.

3) A Detailed Report that contains more information on each occurrence may also be requested. Please note that the Detailed Report may contain specific location information that is protected under *Minnesota Statutes*, section 84.0872, subd. 2, and, as such, the Detailed Report may not be included in any public document (e.g., an EAW).

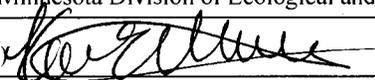
Check here if you would like to request a Detailed Report. Please note that if the results of the review are 'No Effects' or a standard comment, a Detailed Report may not be available.

FEEES / TURNAROUND TIME

There is a fee* for this service. Requests generally take **3-4 weeks** from date of receipt to process, and are processed in the order received.

I have read the entire form and instructions, and the information supplied above is complete and accurate. I understand that material supplied to me from the Natural Heritage Information System is copyrighted and that I am not permitted to reproduce or publish any of this copyrighted material without prior written permission from the DNR. Further, if permission to publish is given, I understand that I must credit the Minnesota Division of Ecological and Water Resources, Minnesota Department of Natural Resources, as the source of the material.

Signature (required)



Note: Digital signatures representing the name of a person shall be sufficient to show that such person has signed this document.

Mail or email completed form to:
Lisa Joyal, Endangered Species Review Coordinator
Division of Ecological and Water Resources
Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, Minnesota 55155
Review.NHIS@state.mn.us

Form is available at
http://files.dnr.state.mn.us/eco/nhnrp/nhis_data_request.pdf

Revised March 2, 2012

* Please see the instructions on page 3.

Instructions for the Natural Heritage Information System (NHIS) Data Request Form

The Division of Ecological and Water Resources maintains the Natural Heritage Information System (NHIS), a collection of databases that provides information on Minnesota's rare plants and animals, native plant communities, and other rare features. The NHIS is continually updated as new information becomes available, and the Minnesota County Biological Survey (MCBS) is a major source of this information.

- Use this form to request information on rare features within an approximate one-mile radius of an area of interest. You may reproduce this form for your own use or to distribute. An **electronic copy** of the form is available at the DNR's web site at http://files.dnr.state.mn.us/eco/nhnrp/nhis_data_request.pdf
- If you are interested in obtaining the Rare Features Database electronically as a GIS shapefile, do not fill out this form. Please see http://files.dnr.state.mn.us/eco/nhnrp/natural_heritage_data.pdf for more information on this option.

WHO IS REQUESTING THE INFORMATION?

- The person whose name is entered on the form under the "Who is Requesting the Information" section must sign the form as an acknowledgment of the State of Minnesota's copyright on all generated reports. All correspondence and invoices will be sent to this person. Please do not ask us to send this information to a different party.
- Please include a complete mailing address. Responses will be sent via email unless you specify differently.

INFORMATION WE NEED FROM YOU:

- Include a legible map (topographic maps or aerial photographs are preferred) clearly showing:
 - 1) location and boundaries of the project,
 - 2) associated infrastructure, and
 - 3) any waterbodies that may be affected by the proposed project.
- If the project boundary is large **or** complex, please provide a **GIS shapefile** (NAD 83, UTM Zone 15) of the project boundary/area of interest. Do not include any buffers. An additional "digitizing fee" may be charged for projects that require a substantial amount of time to digitize.
- Provide a complete list of sections that the proposed project or area of interest falls within. Do not include any buffer area. Please double-check this information. Incorrect sections can delay the processing of your request, and may result in an invalid review.
- Please provide a detailed **project description**, attaching separate pages to the form if necessary. Identify the type of development (e.g., housing, commercial, utility, ethanol facility, wind farm) being proposed, the size and # of units (if applicable), construction methods, and **any associated infrastructure** such as access roads, utility connections, and water supply and/or discharge pipelines.
- We cannot begin processing data requests until we receive all parts of the request, including a map and a completed, signed form.

INFORMATION WE PROVIDE TO YOU:

- The Natural Heritage review and database reports are valid for environmental review purposes for one year, and they are only valid for the project location and description provided on the form. Please contact Lisa Joyal at lisa.joyal@state.mn.us if project details change or if a data update is needed.
- Please note that the Natural Heritage review and database reports do not address/contain locations of the gray wolf (*Canis lupus*), state-listed as special concern, or Canada lynx (*Lynx canadensis*), federally-listed as threatened, as these species are not currently tracked in the Natural Heritage Information System. See page 4.

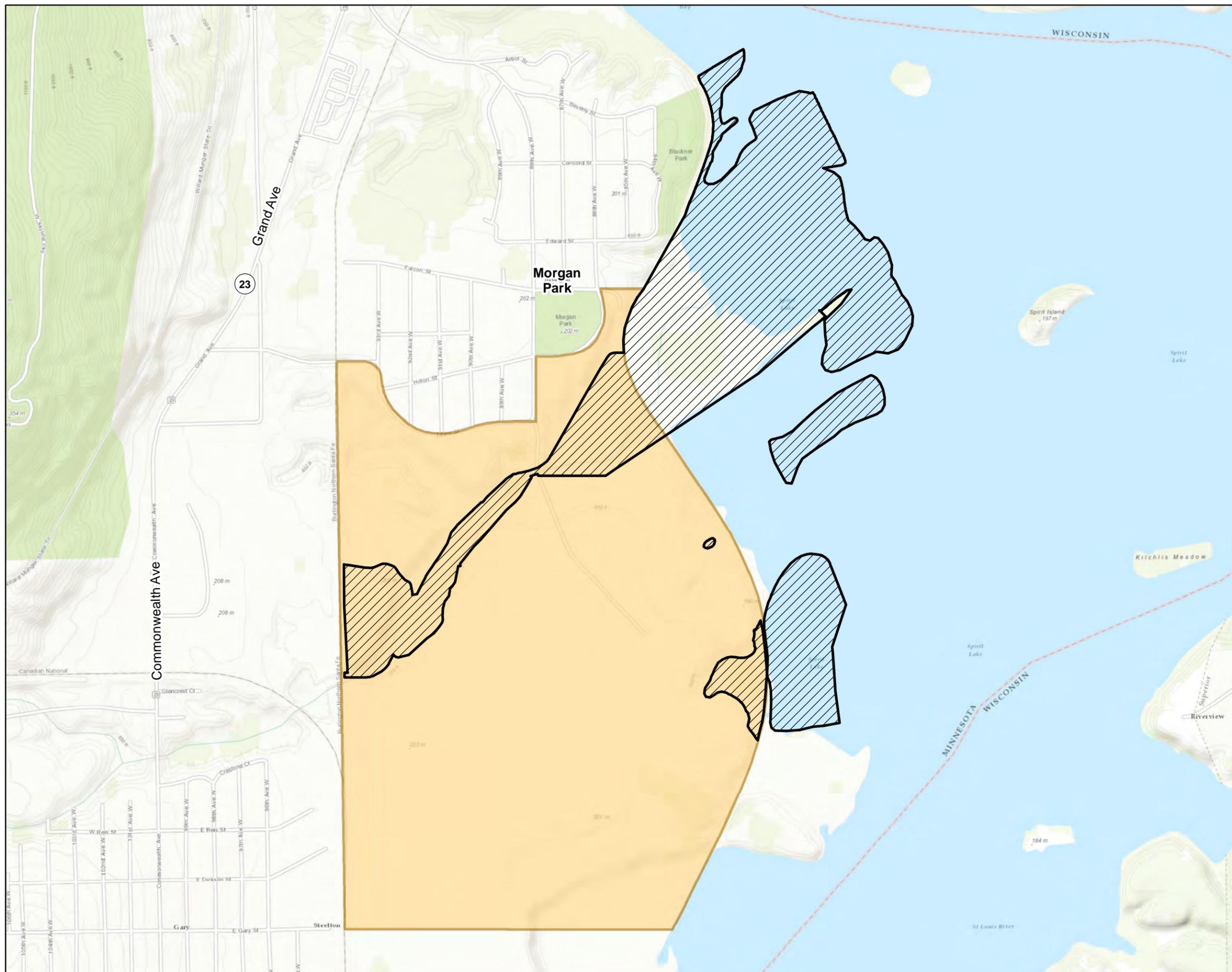
FEES / TURNAROUND TIME:

- There is a fee for this service. All fees are subject to change. The current fee schedule is available at http://files.dnr.state.mn.us/eco/nhnrp/natural_heritage_data.pdf. The minimum charge is \$90.00, and increases based on the time it takes us to process the request (dependent upon project size and the results of the query). Please do not include payment with your request; an invoice will be sent to you.
- There is generally a **3-4 week turn-around time** to process requests.

PLEASE SEE NEXT PAGE FOR ADDITIONAL SOURCES OF INFORMATION

ADDITIONAL SOURCES OF INFORMATION:

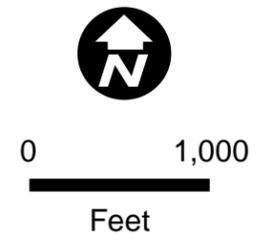
- The DNR Rare Species Guide (<http://www.dnr.state.mn.us/rsg/index.html>) is the state's authoritative reference for Minnesota's endangered, threatened, and special concern species. It is a dynamic, interactive source that can be queried by county, ECS subsection, watershed, or habitat.
- Information on the gray wolf (*Canis lupus*):
 - DNR website: <http://www.dnr.state.mn.us/mammals/graywolf.html>
 - USFWS website: <http://www.fws.gov/midwest/wolf/>
- Information on the Canada lynx (*Lynx Canadensis*):
 - DNR website: <http://www.dnr.state.mn.us/mammals/canadalynx.html>
 - USFWS website: <http://www.fws.gov/midwest/endangered/mammals/lynx/index.html>
- Minnesota's Comprehensive Wildlife Conservation Strategy (<http://www.dnr.state.mn.us/cwcs/index.html>) is an action plan focused on managing Minnesota's native animals whose populations are rare, declining, or vulnerable to decline. It identifies Species in Greatest Conservation Need and the Key Habitats that support them.
- The DNR Data Deli (<http://deli.dnr.state.mn.us/>) allows users to download GIS shapefiles of MCBS Sites of Biodiversity Significance, MCBS Native Plant Communities, MCBS Railroad Rights-of-Way Prairies, and Scientific and Natural Area Boundaries.
- Information on MCBS Sites of Biodiversity Significance can be found at http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html.
- Information on MCBS Native Plant Communities can be found at <http://www.dnr.state.mn.us/npc/index.html>.
- Questions? Please contact Lisa Joyal at 651-259-5109 or lisa.joyal@state.mn.us.



Legend

-  Project Boundary - Permanent Effects
-  Project Boundary - Temporary Effects

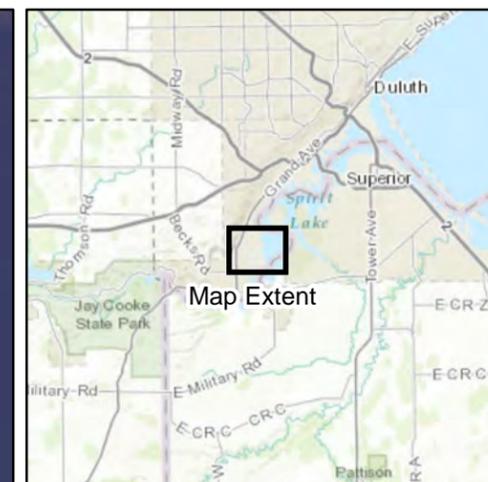
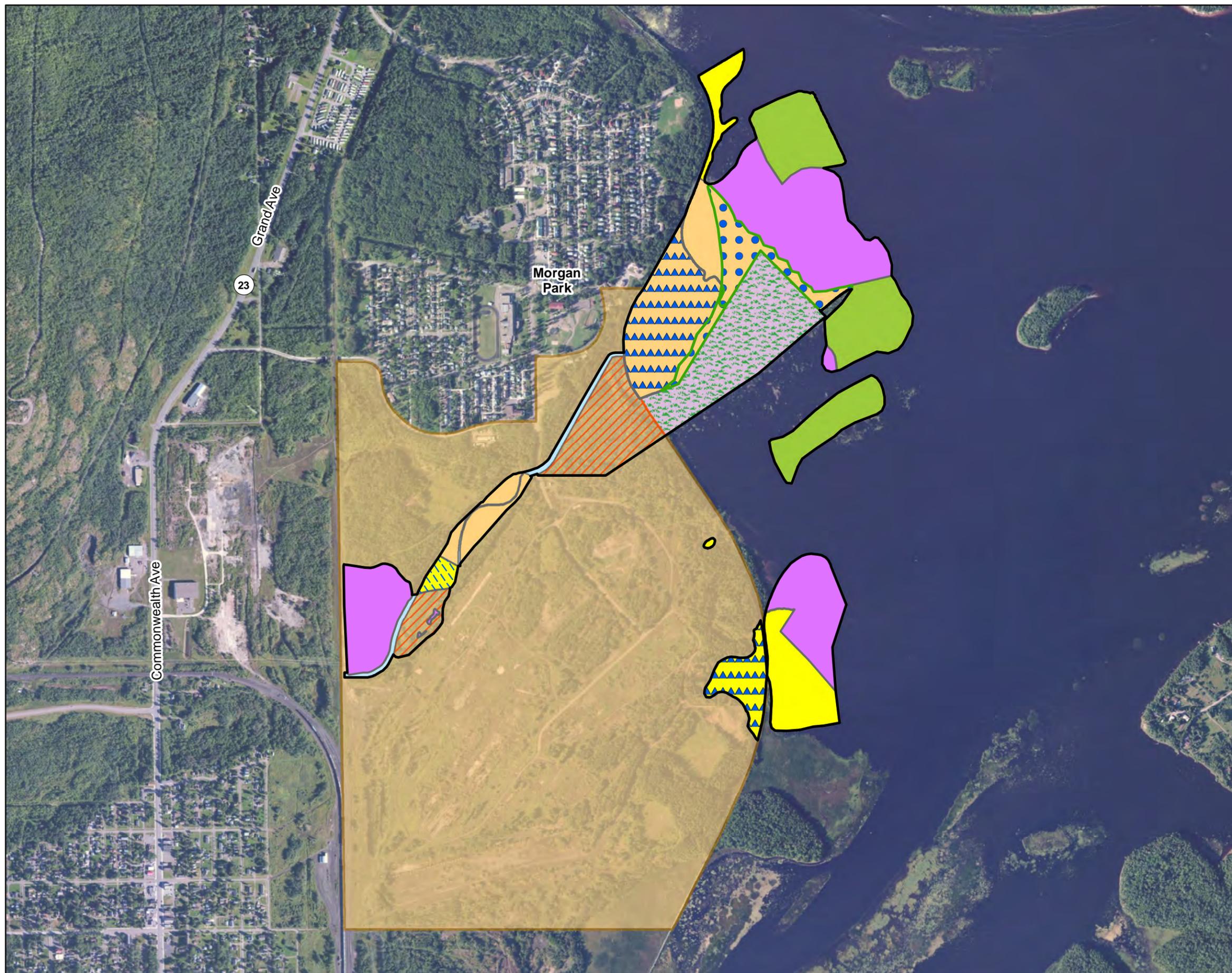
The generalized extent of remedy footprint areas has been provided by Barr Engineering and URS.



Map Date: 12/1/2014
Base Map: ESRI 2011



FIGURE 1
Project Boundary Map
Spirit Lake
Duluth, Minnesota
Natural Heritage Information System



Legend

-  Project Boundary - Permanent Impacts
-  Project Boundary - Temporary Impacts
-  Drainage Feature
-  ENR Thin Cover
-  Remedial Cap
-  Remove
-  Remove to Set Elevation and Remedial Cap
-  Upland CDF
-  Unnamed Creek Estuary Sediment CDF
-  New Open Water
-  Shallow Sheltered Bay Protection-Submerged Shoal Feature
-  Stormwater Ponding Area

The remedy footprint areas have been provided by Barr Engineering and URS.

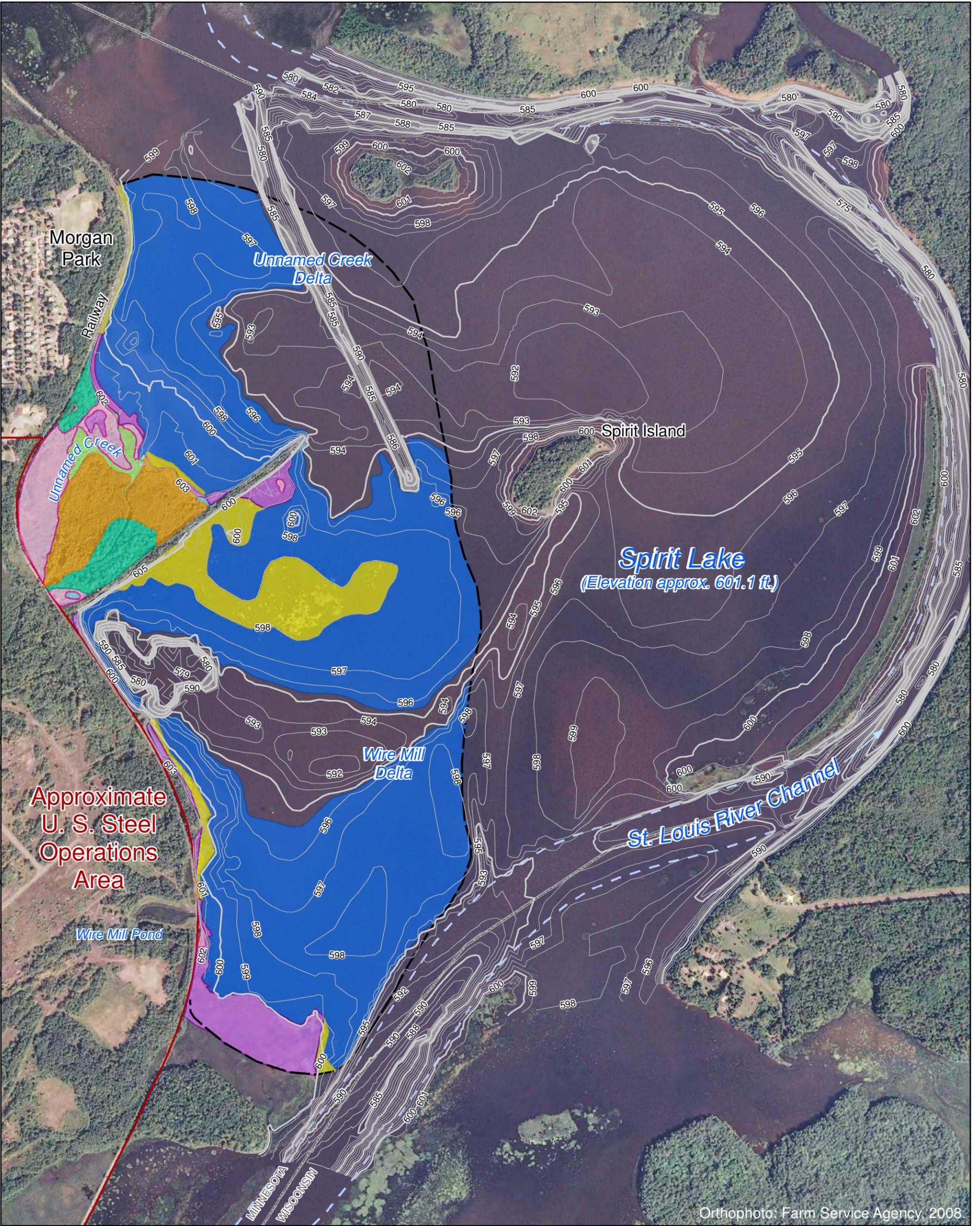


Map Date: 12/1/2014
Base Map: ESRI 2011



FIGURE 2
Project Infrastructure Map
Spirit Lake
Duluth, Minnesota
Natural Heritage Information System

Barr Footer: ArcGIS 10.1, 2013-02-13 15:28 File: I:\Client\USS Duluth Works\Work Orders\Fall 2012\Maps\Reports\Vegetation Survey_SAP\Figure 6 Observed Wetland Communities.mxd User: lc



- Wetland Communities**
- Alder Thicket
 - Deep Marsh
 - Floodplain Forest
 - Open Water
 - Sedge Meadow
 - Shallow Marsh
 - Shrub Carr
 - Wet Meadow
- Approximate U. S. Steel Operations Area (URS, 2008)
 - State Boundary
 - Approximate Outer Study Area Limit
 - Bathymetry Contour (1-Foot)
 - Bathymetry Contour (5-Foot)
 - Approximate Location of St. Louis River Channel, Based on Orthophoto Interpretation

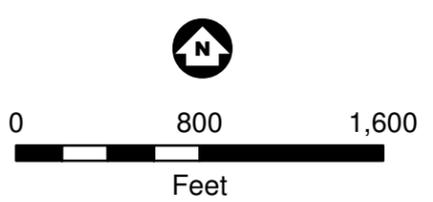
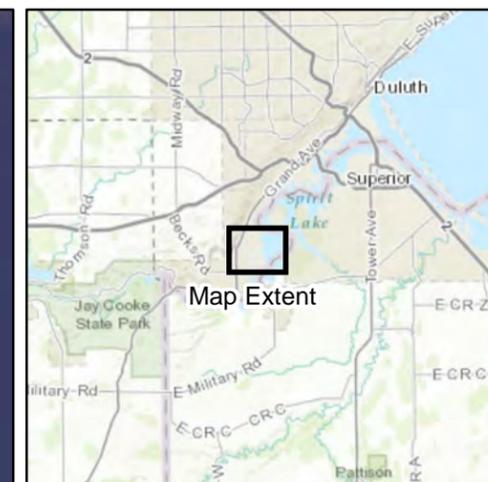
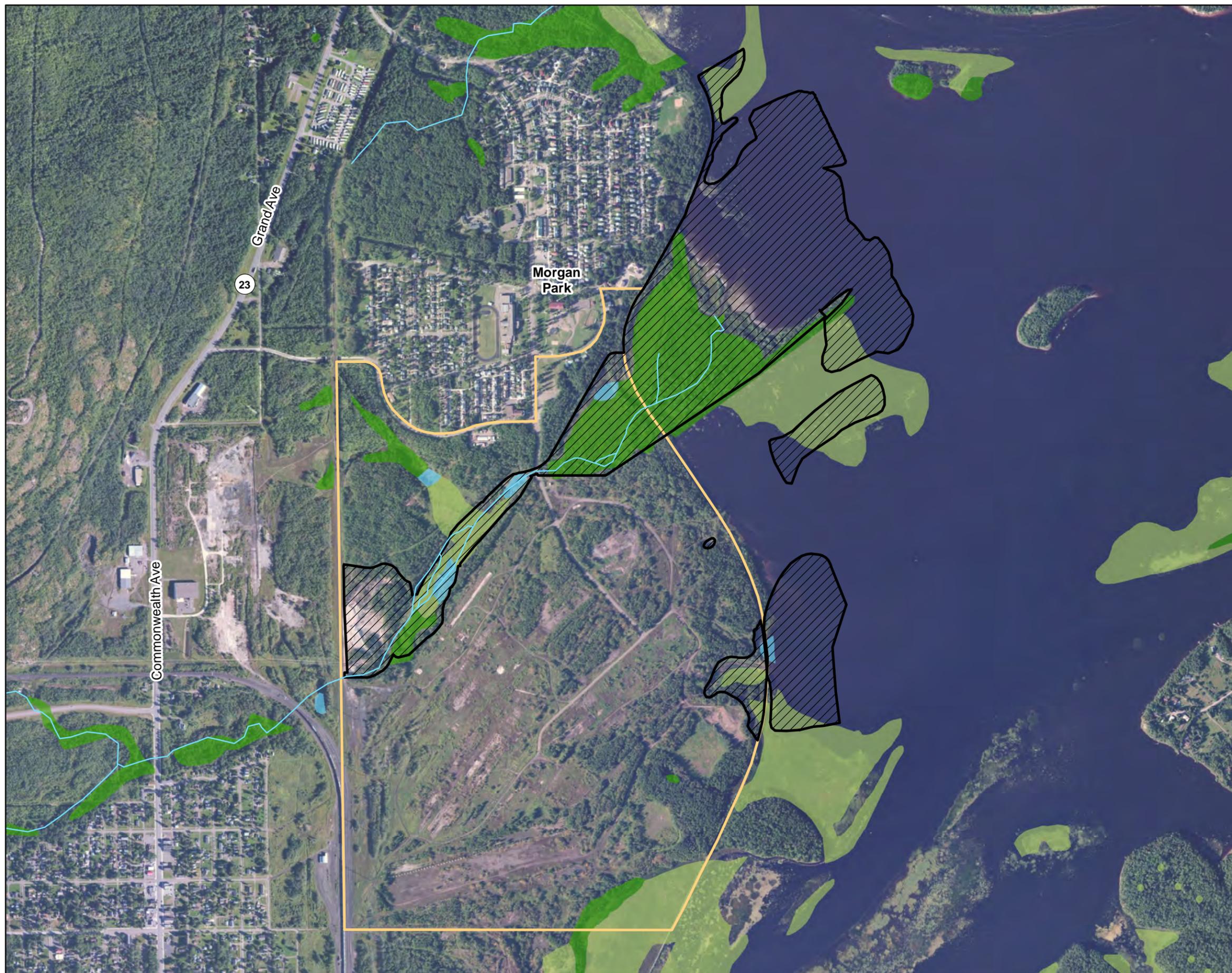


FIGURE 3A
OBSERVED WETLAND COMMUNITIES
 Spirit Lake Sediment Site -
 Former U. S. Steel Duluth Works
 Saint Louis River
 Duluth, Minnesota

Source: Barr Engineering's 2012 Habitat Characterization Report



Legend

-  Project Boundary - Permanent Impacts
-  Project Boundary - Temporary Impacts
-  River
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond

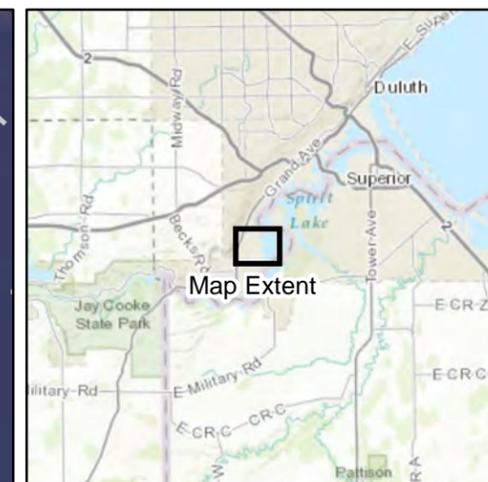
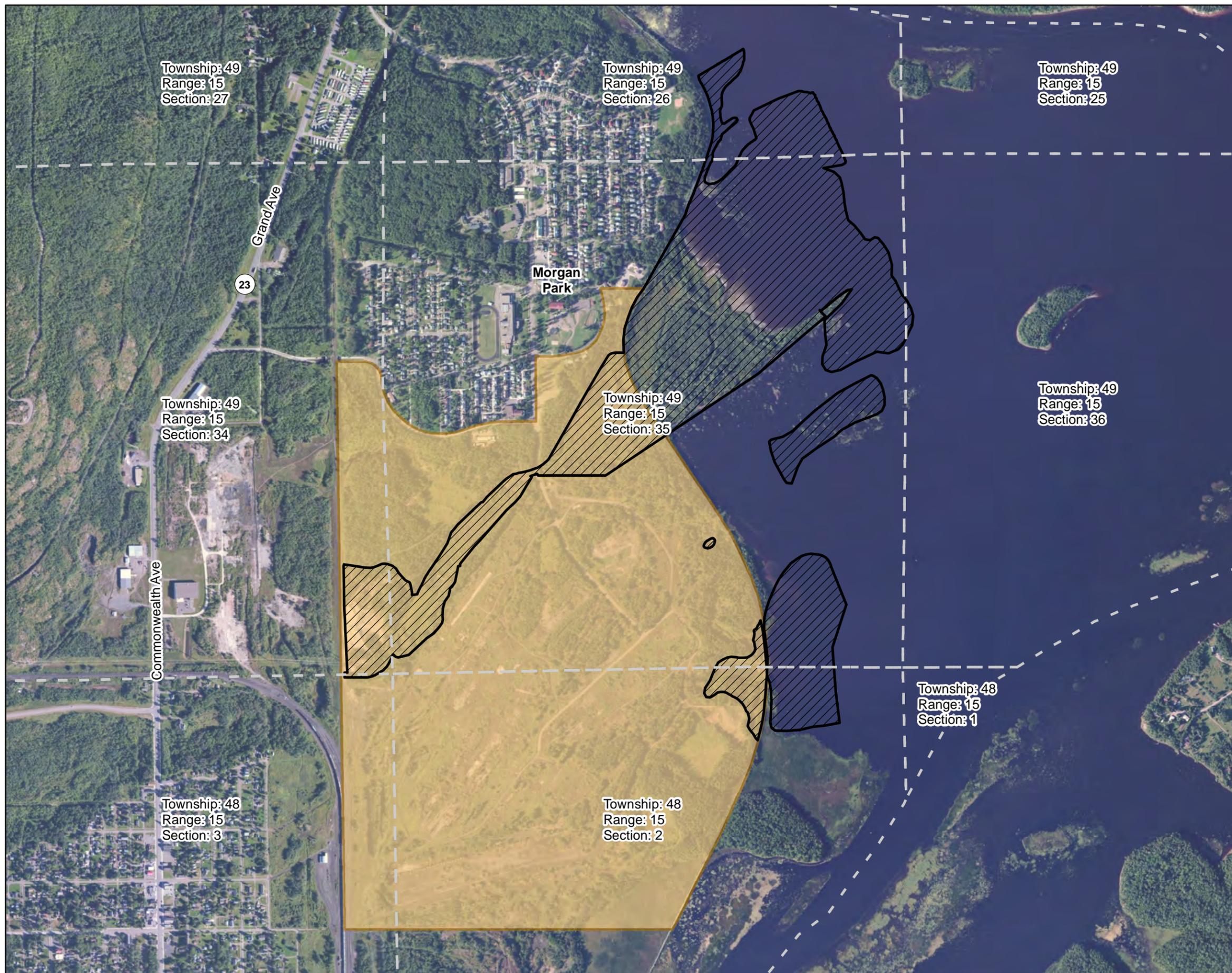
The generalized extent of remedy footprint areas has been provided by Barr Engineering and URS.



Map Date: 12/1/2014
 Base Map: ESRI 2011
 Rivers: USGS NHD 2013
 Wetlands: USFWS 2014



FIGURE 3B
 Hydrology Map
 Spirit Lake
 Duluth, Minnesota
 Natural Heritage Information System



Legend

- Project Boundary - Permanent Impacts
- Project Boundary - Temporary Impacts
- Township, Range, and Section (TRS) Boundary

The generalized extent of remedy footprint areas has been provided by Barr Engineering and URS.



Map Date: 12/1/2014
Base Map: ESRI 2011
TRS Boundaries: USGS 2014



FIGURE 4
Township, Range, and Section Map
Spirit Lake
Duluth, Minnesota
Natural Heritage Information System

Technical Memorandum

To: John Prusiecki, U. S. Steel; Jamie Beaver, EA; Michael Bryant, US Environmental Protection Agency Great Lakes National Program Office (GLNPO)
From: Daniel W. Jones
Subject: U.S. Steel Spirit Lake Site: Native Plant Community Classification Study Results
Date: September 10, 2015
Project: 23691125.10 101 001
c: Mark Rupnow, U. S. Steel

This technical memorandum reports the findings of detailed native plant community (NPC) studies conducted on August 20, 2015 on a 16-acre forested area (study area) at the U.S. Steel Spirit Lake project site. The purpose of the studies was to determine the most accurate NPC classification for the study area, using the Minnesota Department of Natural Resources (MNDNR) Ecological Classification System (ECS)¹ key. The current MNDNR NPC class and type for the study area within the Natural Heritage Information System (NHIS) database is MHn47a, "Northern Rich Mesic Hardwood Forest, Sugar Maple-Basswood-(Bluebead Lily) Forest". In May 2013, U.S. Steel requested that MNDNR revise the NPC classification, based on a site visit that found that the study area is aspen-dominated, without the characteristics of Sugar Maple-Basswood-(Bluebead Lily) Forest. MNDNR responded that, in order to consider changing the classification, the agency "would need to receive supporting data such as a relevé or ECS transect conducted by a qualified botanist during June-August." In response, Barr sent a qualified botanist to the study area to conduct a relevé and transect² with the intent of gathering data that would determine whether the MHn47a classification is appropriate for the study area.

Study Area

The study area is a 16-acre forested area that is part of a larger U.S. Steel property in southwest Duluth, south of the Morgan Park neighborhood and east of the Gary-New Duluth neighborhood. The study area is bounded on the east by railroad tracks, which separate the U.S. Steel property and proposed work area from Boathouse Point. It is bounded on the south by marsh, on the north by a former sand borrow area, and on the west by mixed tree and open space areas. See Figure 1 for the configuration of the study area and the locations of the relevé and transect.

Within the MNDNR ECS system, the study area is in the North Shore Highlands Subsection of the Northern Superior Uplands (NSU) Subsection of the Laurentian Mixed Forest Province. The study area lies on a glacial lacustrine plain (the North Superior Lacustrine Clay Plain). Soils in the study area are generally silty clay, with

¹ The MNDNR Ecological Classification System key for the project area is *Field Guide to the Native Plant Communities of Minnesota; The Laurentian Mixed Forest Province* (MNDNR 2003)

² A relevé is a detailed vegetation survey conducted in a designated area. A transect is a linear survey with vegetation data taken at regular intervals. See detail in main text.

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Date: 09/10/2015
Page: 2

small lenses of fine sandy silt. A former sand borrow pit is located north and west of the study area. The sand layer there is about five to ten feet thick, with silty clay above and below.

Methods

Two primary methods of data collection were utilized during the study. First, a relevé was installed as shown on Figure 1. The relevé was 100 meters by 100 meters. This is larger than a typical relevé; however, the larger size enabled comprehensive data collection through the center of the study area. After establishing the relevé center and corners and recording them with a GPS unit, the study area was thoroughly searched for the plant species present. For each plant species identified, the following information was collected:

- Scientific Name;
- Stratum – Tree, Shrub, Herbaceous or Vine;
- Cover Class – classes were defined as follows:
 - r = <1% cover
 - 1 = 1 – 5 % cover
 - 2 = 5 – 19% cover
 - 3 = 20 – 49% cover
 - 4 = 50 – 75% cover
 - 5 = >75% cover
- Estimated actual cover on relevé.

Overall cover for the four strata was also estimated. The collected relevé data were entered into an Excel spreadsheet and sorted by stratum, cover class and estimated cover. See Table 1 for a complete listing of plant species identified on the site and their corresponding cover classes and cover value.

The transect was approximately 320 meters (~1,050 feet) long, running roughly north-south through the study area (see Figure 1). At every 20 meters, a point was recorded with a GPS unit, for a total of 17 points. At each point, the transect was divided into four quadrants corresponding to the cardinal directions. In each quadrant, the nearest tree species over 3" diameter was recorded. This provided an estimate of the frequency of occurrence of tree species (frequency index) along the transect. Also at each point, the dominant shrub and herbaceous species within a ten-foot radius were recorded. In some cases, two to three co-dominant species were recorded in one or both of the shrub and herbaceous strata. Vine species were recorded as herbaceous in the field, and split out later in the data analysis. As with the relevé, the transect data were entered into an Excel spreadsheet and sorted by stratum, number of occurrences and the resulting frequency index. See Table 2 for a summary of the transect results.

The relevé and transect data were used to go through the MNDNR ECS key to determine the appropriate NPC class. As an alternative and supporting method for determining the NPC class, the relevé and transect data were used to calculate the Probability Key score for wooded native plant communities. The Probability Key is found in Appendix F of the MNDNR ECS key, and is "intended for use when the plants and soil properties used in the main NPC Class keys are not well known" (MNDNR 2003). While the relevé and

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Date: 09/10/2015
Page: 3

transect generated detailed information on plants in the study area, the Appendix F Probability Key provided a reproducible alternative means of determining the NPC class for the study area.

After completing the relevé and transect, additional reconnaissance was made in two areas within the study area outside of the main data-collection effort to verify that native plant communities in these areas were similar to those in the relevé. These are shown on Figure 1 as the points in the northeast and northwest lobes of the study area. Finally, basic vegetation community data were collected in two locations on Boathouse Point, east across the railroad tracks and east of the U.S. Steel property (shown as BP-1 and BP-2 on Figure 1). Portions of the south half of Boathouse Point also have MNDNR-assigned NPC classes, including an area along the south shoreline of the point that has the same NPC class and type (MHN47a) as the study area. Data collection on Boathouse Point was conducted to assess the degree of similarity with the study area, and the accuracy of the assigned NPC class.

Results

A total of 52 plant species were identified in the relevé. Both the relevé and the transect data show that the study area is a forested community dominated by quaking aspen (*Populus tremuloides*). Canopy cover in the relevé and within the overall study area is ~75-80%, made up almost entirely of aspen. Balsam poplar (*Populus balsamifera*) is occasionally present in scattered patches across the relevé and study area. Two sugar maples (*Acer saccharum*) were identified in the relevé, and six total were seen during the visit to the study area. Basswood (*Tilia americana*) is also scarce; one basswood was identified in the relevé, and none occurred along the transect.

Dominant shrub species in the relevé are nannyberry (*Viburnum lentago*) and thimbleberry (*Rubus parviflorus*). Aspen seedlings and saplings also make up a significant percentage of the shrub layer. The herbaceous stratum is dominated by bigleaf aster (*Eurybia macrophylla*), giant goldenrod (*Solidago gigantea*) and dwarf red raspberry (*Rubus pubescens*). Two vine species, American hog-peanut (*Amphicarpaea bracteata*) and Virginia creeper (*Parthenocissus quinquefolia*) are also present in relatively high coverage. Table 1 summarizes the relevé species and coverage.

Frequency data from the transect yielded similar species composition results. Aspen was present at all 16 transect points³, and had a frequency index (65.6%) that was more than twice that of balsam poplar (26.6%), the second most-frequent species. Balsam poplar was present at 8 of the 16 transect points, and also had a relatively high frequency index. There were minor occurrences of sugar maple (3.1%) and river birch (1.6%) along the transect. Shrub species with the highest frequency indices were nannyberry and beaked hazelnut (*Corylus cornuta*). Herbaceous species with the highest frequency indices were giant goldenrod and bigleaf

³ The first of the 17 transect points was outside of the study area and was excluded from the transect analysis. This point was dominated by non-native grasses and had no tree or shrub species present.

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Date: 09/10/2015
Page: 4

aster. Vine species with the highest frequency indices were hog-peanut and Virginia creeper. Table 2 summarizes the transect species and frequency indices.

Using the relevé and transect data to navigate the ECS key, the study area conforms most closely with ECS class MHn46, Northern Wet-Mesic Hardwood Forest. This is based on navigating the ECS Key NSU-A2, Mesic Hardwood Forest Systems as follows:

- For couplet choice "A", the only indicator species listed that is present in the study area is mountain ash (-4 points in the key's system). For couplet choice "A'", there are three of the four indicator species present – nannyberry, speckled alder and red raspberry. These three total 19 points. Since "A + A' > 0" (-4+19 = 15), the key goes to the choice D couplet. This also means that the study area **cannot** key out to MHn47, Northern Rich Mesic Hardwood Forest, or the type MHn47a, Sugar Maple-Basswood-(Bluebead Lily) Forest.
- None of the choice D couplet indicator species are present. For choice D' couplet, there is one indicator species present, rugulose/yellow violet, for 2 points. Since "D + D' > 0" (0+2=2), the ECS key arrives at NPC class MHn46.
- The ECS key did not strongly differentiate between NPC classes MHn44 and MHn46. However, the text description in the key says that MHn44 is "commonly mixed with conifers." There were no conifers present in the relevé or transect, or seen within the study area. Therefore, the more appropriate choice is NPC class MHn46.

Going further to the NPC type level, the survey data suggest that the appropriate NPC type for the study area is MHn46a, Aspen-Ash Forest.

Scoring from the Appendix F Probability Keys ranked MHn46 (27 points), ahead of MHn44, Northern Wet-Mesic Boreal Hardwood-Conifer Forest (25 points). The high percent cover and high frequency index of nannyberry is a strong differentiator for MHn46 in the probability key. The Appendix F Probability Key scores the current MNDNR class MHn47 lowest (13 points) among the available choices. See page A-4 for a copy of the score sheet.

The basic vegetation community data collected east of the U.S. Steel property, at Boathouse Point, found that the south shore slope is dominated by northern red oak (*Quercus rubra*), with basswood as a sub-dominant or subcanopy species. Higher up on the flat above the slope is distinctly basswood-dominated, with no northern red oak present. The south shore slope NPC class keys out to MHn35, Northern Mesic Hardwood Forest. The flatter area above the south slope aligns most closely with MHn47. Vegetation data to further determine specific NPC types within these classes was not collected.

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Date: 09/10/2015
Page: 5

Discussion

Study Area ECS Classification

Despite the availability of the ECS key and other plant community classification protocols, classifying native plant communities remains a challenge, due to the inherent variability between sites and within classes. Nevertheless, certain recurring commonalities between sites allow for the development of standard, generally-reproducible keys to classifying plant communities. The MNDNR ECS guide is an excellent tool for classifying native plant communities, with a hierarchical system of defining plant communities. Using this tool, and based on the August 2015 relevé and transect data, the MNDNR ECS guide indicates that the most-appropriate NPC class for the study area is MHn46, Northern Wet-Mesic Hardwood Forest.

As noted above, the MNDNR NHIS database currently lists the study area as type MHn47a, within class MHn47. Therefore, for comparison, the general vegetation structure and composition as described in the ECS guide for classes MHn46, MHn47 and another close possible class, MHn44, Northern Wet-Mesic Boreal Hardwood-Conifer Forest, are listed below in Table 3, along with their compatibility with study area data:

Table 3: Comparison of ECS Guide Vegetation Structure and Composition

Layer & Composition	MHn46	MHn47	MHn44	Class Best Matched to Study Area Data
Ground layer	50-100% cover; lady fern, wild sarsaparilla, Canada mayflower, dwarf raspberry, bigleaf aster, sweet bedstraw, Penn sedge	5-75% cover; lady fern, wild sarsaparilla, Canada mayflower, sweet cicely, rose twisted stalk, mountain rice grass, Penn sedge, hairy Solomon's seal	50-100%; Canada mayflower, wild sarsaparilla, sweet bedstraw, dwarf raspberry, bigleaf aster.	MHn46 High cover of bigleaf aster, dwarf raspberry and Penn sedge. Bedstraw also present.
Shrub layer	Variable cover; Beaked hazel, chokecherry, and black ash, red maple and basswood seedlings	Sparse to >75%; sugar maple abundant, with beaked hazel, fly honeysuckle. mountain maple, chokecherry, ironwood saplings	Variable cover; beaked hazel, chokecherry, juneberry, bush honeysuckle, mountain maple	MHn46 or MHn44 Beaked hazel frequent. Mountain maple minor. No sugar maple seedlings or saplings present.
Subcanopy	Often present; black ash, basswood, red maple and sugar maple	5-75%; sugar maple usually abundant, with ironwood and basswood	Poorly developed. Aspen, balsam fir, black ash, paper birch, red maple	MHn44 Sparse subcanopy. Some black ash and balsam poplar saplings. No ironwood
Canopy	25-75% cover, dominated by black ash, basswood or aspen.	50-100%; dominated by sugar maple, with basswood and yellow birch.	Variable cover; dominated by aspen, often with paper birch and balsam fir.	MHn46 75% aspen cover; nearly pure stand of aspen. No conifers.

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Date: 09/10/2015
Page: 6

Three different components of the MNDNR ECS guide lead to the classification of the study area as NPC class MHn46, Northern Wet-Mesic Hardwood Forest. The direct comparison of similar classes, as described in the ECS guide and summarized in Table 3, shows that MHn46, Northern Wet-Mesic Hardwood Forest is the most appropriate NPC class for the study area. As noted above in the Results section, the ECS dichotomous key also leads to MHn46 as the correct NPC class. Finally, the Appendix F Probability Key ranks MHn46 as the most probable NPC class.

Furthermore, based on the detailed descriptions of NPC types within the MHn46 class, vegetation in the study area is consistent with NPC type MHn46a, Aspen-Ash Forest. Reconnaissance of the northeast and northwest lobes of the study area verified that these portions of the study area are also NPC type MHn46a.

The currently recorded MHn47 class and MHn47a type are not supported by the relevé and transect data. While there are scattered sugar maples in the study area, and a few basswood trees, the presence of any sugar maple in the subcanopy and shrub layers is lacking. No bluebead lily (*Clintonia borealis*) was found in the relevé, or seen in the study area. The ECS guide keys, the detailed ECS text description of MHn47 and the probability ranks for NSU MHn systems do not support the MHn47 class.

NPCs East of the Study Area

Boathouse Point is east of the railroad tracks and outside of the U.S. Steel property boundary and the proposed work area. Nevertheless, basic plant surveys were conducted in the south half of Boathouse Point to determine whether native plant communities there were similar to the study area. The surveys found distinct differences between the study area and the south half of Boathouse Point. Boathouse Point is dominated by northern red oak plant communities along its south slopes, and by basswood-dominated forested communities on the flats above the south slopes. While the vegetation data collection effort in these areas was not as comprehensive as in the study area, the NPC class along the south slopes of Boathouse Point is most likely MHn35, Northern Mesic Hardwood Forest. Vegetation on the flat above the south slopes is most consistent with NPC class MHn47, due to the canopy dominance of basswood and the high percent cover of Pennsylvania sedge and lady fern, along with the sparse shrub and subcanopy layers.

Summary

The results of the August 20, 2015 detailed vegetation surveys at the study area within the U.S. Steel Spirit Lake site do not support the current MNDNR classification of MHn47a, Sugar Maple-Basswood-(Bluebead Lily) Forest. Instead, the relevé and transect data collected in the study area strongly support re-classification of the area as NPC class and type MHn46a, Northern Wet-Mesic Hardwood Forest, Aspen-Ash Forest. A more accurate example of the MHn47 NPC class is found east of the study area, across the railroad tracks, on the flats above Boathouse Point.

U.S. Steel Spirit Lake Site
Table 1. Plant Species Cover
August 20, 2015 Relevé

Scientific Name	Common Name	Stratum	Cover* (Class)	Cover** (est. percent)
<i>Populus tremuloides</i>	Quaking aspen	T	5	75
<i>Populus balsamifera</i>	Balsam poplar	T	1	5
<i>Tilia americana</i>	Basswood	T	1	1
<i>Acer saccharum</i>	Sugar maple	T	1	1
<i>Viburnum lentago</i>	Nannyberry	S	3	21
<i>Populus tremuloides</i>	Quaking aspen (seedling/sapling)	S	3	20
<i>Rubus parviflorus</i>	Thimbleberry	S	2	18
<i>Rubus idaeus var. strigosus</i>	Wild red raspberry	S	2	7
<i>Fraxinus nigra</i>	Black ash (seedling/sapling)	S	2	6
<i>Lonicera hirsuta</i>	Hairy honeysuckle	S	1	4
<i>Rhamnus cathartica</i>	Common buckthorn	S	1	3
<i>Acer spicatum</i>	Mountain maple	S	1	3
<i>Cornus rugosa</i>	Round-leaved dogwood	S	1	3
<i>Alnus rugosa</i>	Speckled alder	S	1	2
<i>Corylus cornuta</i>	Beaked hazelnut	S	1	2
<i>Amelanchier cf. laevis</i>	Smooth serviceberry	S	1	1
<i>Rosa acicularis</i>	Bristly rose	S	1	1
<i>Ribes americanum</i>	American black currant	S	1	1
<i>Crataegus chrysoarpa</i>	Round-leaved hawthorn	S	1	1
<i>Prunus serotina</i>	Wild black cherry	S	1	1
<i>Ribes cf. cynosbati</i>	Prickly wild gooseberry	S	1	1
<i>Ribes triste</i>	Swamp red currant	S	r	<1
<i>Viburnum opulus ssp. trilobum</i>	High-bush cranberry	S	r	<1
<i>Diervilla lonicera</i>	Bush honeysuckle	S	r	<1
<i>Sorbus cf. decora</i>	Northern mountain-ash	S	r	<1
<i>Lonicera tatarica</i>	Tartarian honeysuckle	S	r	<1
<i>Eurybia macrophylla</i>	Bigleaf aster	H	4	55
<i>Solidago gigantea</i>	Giant goldenrod	H	3	40
<i>Rubus pubescens</i>	Dwarf red raspberry	H	3	22
<i>Calamagrostis canadensis</i>	Bluejoint	H	2	16
<i>Pteridium aquilinum</i>	Bracken fern	H	2	15
<i>Carex pennsylvanica</i>	Pennsylvania sedge	H	2	15
<i>Galium triflorum</i>	Fragrant bedstraw	H	2	6
<i>Solidago canadensis</i>	Canada goldenrod	H	1	5
<i>Fragaria virginiana</i>	Wild strawberry	H	1	3
<i>Bromus ciliatus</i>	Fringed brome	H	1	3
<i>Geum aleppicum</i>	Yellow avens	H	1	2
<i>Equisetum sylvaticum</i>	Woodland horsetail	H	1	2
<i>Cirsium sp.</i>	Thistle	H	1	1

U.S. Steel Spirit Lake Site
 Table 1. Plant Species Cover
 August 20, 2015 Relevé

Scientific Name	Common Name	Stratum	Cover* (Class)	Cover** (est. percent)
<i>Petasites frigidus</i>	Northern sweet colt's-foot	H	1	1
<i>Streptopus roseus</i>	Twisted-stalk	H	r	<1
<i>Ranunculus abortivus</i>	Little-leaf buttedrcup	H	r	<1
<i>Taraxacum officinale</i>	Dandelion	H	r	<1
<i>Plantago major</i>	Common plantain	H	r	<1
<i>Iris versicolor</i>	Northern blue flag	H	r	<1
<i>Ariseama triphyllum</i>	Jack-in-pulpit	H	r	<1
<i>Solanum dulcamara</i>	Deadly nightshade	H	r	<1
<i>Athyrium filix-femina</i>	Lady fern	H	r	<1
<i>Actaea rubra</i>	Red baneberry	H	r	<1
<i>Amphicarpaea bracteata</i>	American hog-peanut	V	4	50
<i>Parthenocissus quinquefolia</i>	Virginia creeper	V	3	20
<i>Lathyrus cf. ochroleucus</i>	Cream pea-vine	V	1	1

*Cover class values

r = <1%

1 = 1-5%

2 = 5-20%

3 = 20-50%

4 = 50-75%

5 = >75%

** Values shown for "Cover class (est. percent)" are estimates of the actual cover

Dominant species for each stratum highlighted in yellow.

U.S. Steel Spirit Lake Site
 Table 1. Plant Species Cover
 August 20, 2015 Relevé

Scientific Name	Common Name	Stratum	Cover* (Class)	Cover** (est. percent)
<i>Petasites frigidus</i>	Northern sweet colt's-foot	H	1	1
<i>Streptopus roseus</i>	Twisted-stalk	H	r	<1
<i>Ranunculus abortivus</i>	Little-leaf buttedrcup	H	r	<1
<i>Taraxacum officinale</i>	Dandelion	H	r	<1
<i>Plantago major</i>	Common plantain	H	r	<1
<i>Iris versicolor</i>	Northern blue flag	H	r	<1
<i>Ariseama triphyllum</i>	Jack-in-pulpit	H	r	<1
<i>Solanum dulcamara</i>	Deadly nightshade	H	r	<1
<i>Athyrium filix-femina</i>	Lady fern	H	r	<1
<i>Actaea rubra</i>	Red baneberry	H	r	<1
<i>Amphicarpaea bracteata</i>	American hog-peanut	V	4	50
<i>Parthenocissus quinquefolia</i>	Virginia creeper	V	3	20
<i>Lathyrus cf. ochroleucus</i>	Cream pea-vine	V	1	1

*Cover class values

r = <1%

1 = 1-5%

2 = 5-20%

3 = 20-50%

4 = 50-75%

5 = >75%

** Values shown for "Cover class (est. percent)" are estimates of the actual cover

Dominant species for each stratum highlighted in yellow.

U.S. Steel Spirit Lake Site
 Table 2. Plant Species Cover
 August 20, 2015 Transect

Stratum	Scientific Name	Common Name	Occurrences*	Frequency
Tree	<i>Populus tremuloides</i>	Quaking aspen	42	65.6
Tree	<i>Populus balsamifera</i>	Balsam poplar	17	26.6
Tree	<i>Acer saccharum</i>	Sugar maple	2	3.1
Tree	<i>Betula nigra</i>	River birch	1	1.6
Shrub	<i>Viburnum lentago</i>	Nannyberry	4	25.0
Shrub	<i>Corylus cornuta</i>	Beaked hazelnut	4	25.0
Shrub	<i>Cornus rugosa</i>	Round-leaved dogwood	3	18.8
Shrub	<i>Populus balsamifera</i>	Balsam poplar (seedling)	2	12.5
Shrub	<i>Populus tremuloides</i>	Quaking aspen (seedling)	1	6.3
Shrub	<i>Fraxinus nigra</i>	Black ash	1	6.3
Shrub	<i>Acer spicatum</i>	Mountain maple	1	6.3
Shrub	<i>Alnus incana</i>	Speckled alder	1	6.3
Herb	<i>Solidago gigantea</i>	Giant goldenrod	7	43.8
Herb	<i>Eurybia macrophylla</i>	Bigleaf aster	4	25.0
Herb	<i>Carex pennsylvanica</i>	Pennsylvania sedge	3	18.8
Herb	<i>Calamagrostis canadensis</i>	Bluejoint	2	12.5
Herb	<i>Rubus pubescens</i>	Dwarf red raspberry	4	25.0
Herb	<i>Pteridium aquilinum</i>	Bracken fern	1	6.3
Herb	<i>Geum aleppicum</i>	Yellow avens	1	6.3
Vine	<i>Amphicarpaea bracteata</i>	American hog-peanut	6	37.5
Vine	<i>Parthenocissus quinquefolia</i>	Virginia creeper	4	25.0

*Occurrences: For trees, 16 points, four quadrants/point = 64 total possible. For shrub, herb and vine strata, number of dominant or co-dominant occurrences in 16 plots along transect

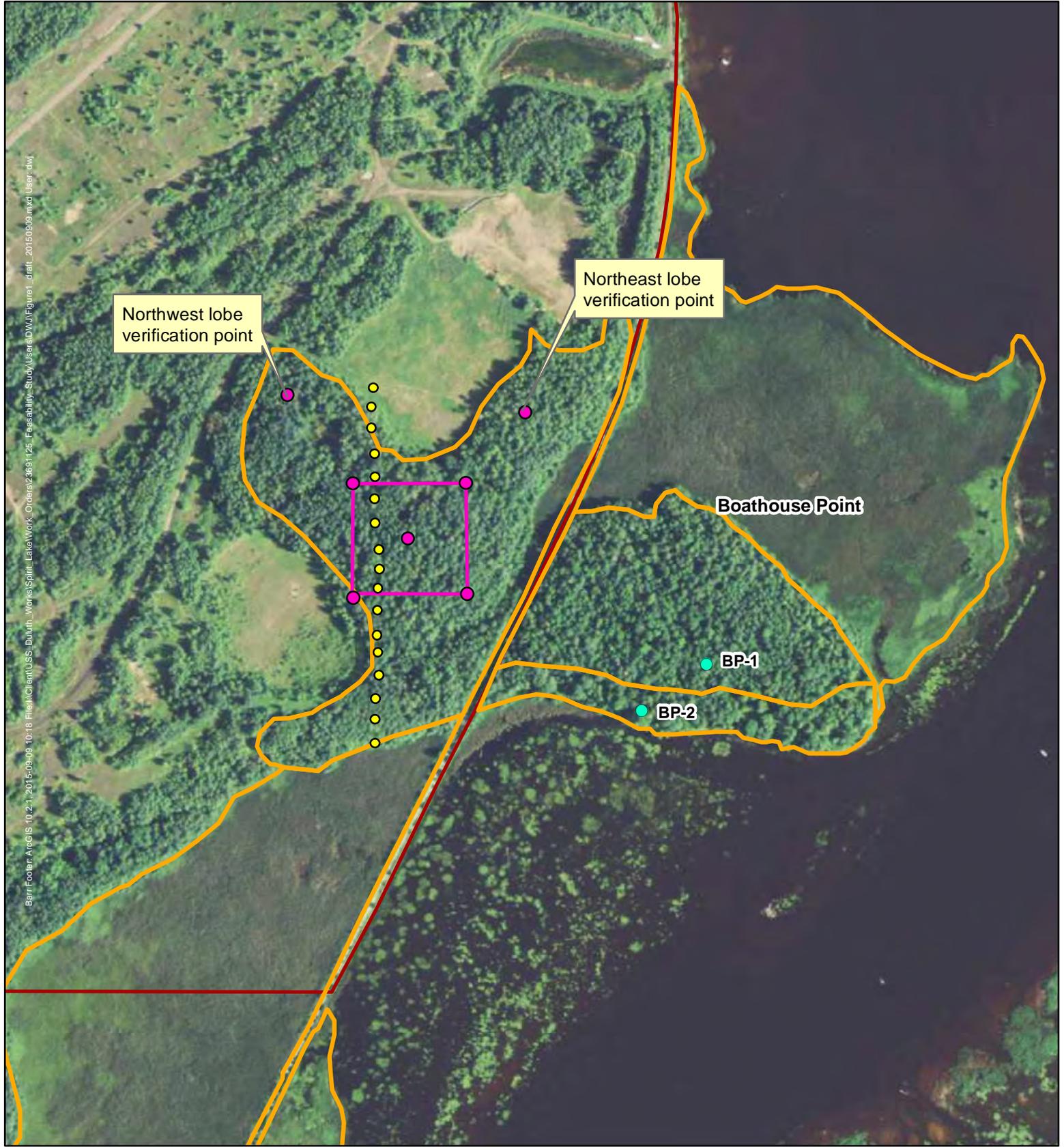
Most frequently-occurring species for each stratum highlighted in yellow.

ECS Guide Appendix F Probability Key
 NSU – MHn, Northern Mesic Hardwood Systems
 Scoring for U.S. Steel Spirit Lake Study Area

Mesic Hardwood Forest System							
 NSU	Key MHn Northern Mesic Hardwood Forests	MHn35	MHn47	MHn45	MHn44	MHn46	Site
		Alpine enchanter's nightshade	<i>Circaea alpina</i>	-	3	3	2
American elm (U)	<i>Ulmus americana</i>	1	2	0	3	4	
Basswood (U)	<i>Tilia americana</i>	3	3	-	1	3	✓
Bluebead lily	<i>Clintonia borealis</i>	2	2	3	2	1	
Bracken	<i>Pteridium aquilinum</i>	3	-	1	4	2	✓
Bunchberry	<i>Cornus canadensis</i>	1	-	1	6	2	
Com. enchanter's nightshade	<i>Circaea lutetiana</i>	-	3	0	-	7	
Common false Solomon's seal	<i>Smilacina racemosa</i>	3	3	2	-	2	
Common oak fern	<i>Gymnocarpium dryopteris</i>	1	3	3	1	2	
Downy arrowwood	<i>Viburnum rafinesquianum</i>	3	-	-	4	3	
Hairy honeysuckle	<i>Lonicera hirsuta</i>	4	-	-	4	2	✓
Hooked crowfoot	<i>Ranunculus recurvatus</i>	-	1	0	1	8	
Ironwood (C,U)	<i>Ostrya virginiana</i>	4	4	-	-	2	
Jack-in-the-pulpit	<i>Arisaema triphyllum</i>	-	4	1	1	4	✓
Lowbush blueberry	<i>Vaccinium angustifolium</i>	4	0	0	6	-	
Mountain ashes (U)	<i>Sorbus spp.*</i>	1	1	7	1	-	✓
Naked miterwort	<i>Mitella nuda</i>	1	1	1	4	3	
Nannyberry	<i>Viburnum lentago</i>	-	-	0	4	6	✓
Northern red oak (U)	<i>Quercus rubra</i>	4	2	-	1	3	
Pale bellwort	<i>Uvularia sessilifolia</i>	3	2	-	2	3	
Panicked bluebells	<i>Mertensia paniculata</i>	0	-	8	1	1	
Paper birch (U)	<i>Betula papyrifera</i>	3	-	1	4	2	
Red raspberry	<i>Rubus idaeus</i>	1	1	2	3	3	✓
Rugulose and yellow violets	<i>Viola spp.*</i>	2	3	2	1	2	✓
Speckled alder	<i>Alnus incana</i>	-	0	1	5	4	✓
Shield and wood ferns	<i>Dryopteris spp.*</i>	1	2	3	2	2	
Thimbleberry	<i>Rubus parviflorus</i>	1	1	7	1	-	✓
Veiny pea	<i>Lathyrus venosus</i>	4	-	0	5	1	
White baneberry	<i>Actaea pachypoda</i>	1	4	5	-	0	
White spruce (U)	<i>Picea glauca</i>	1	2	4	2	1	
Zigzag goldenrod	<i>Solidago flexicaulis</i>	3	3	0	1	3	
Sum of Scores		15	13	21	25	27	✗
Go to appropriate Native Plant Community Class fact sheet:							
MHn35	Northern Mesic Hardwood Forest						page 136
MHn47	Northern Rich Mesic Hardwood Forest						page 147
MHn45	Northern Mesic Hardwood (Cedar) Forest						page 142
MHn44	Northern Wet-Mesic Boreal Hardwood-Conifer Forest						page 139
MHn46	Northern Wet-Mesic Hardwood Forest						page 144

* Mountain ashes (*Sorbus decora*, *S. americana*); Rugulose and yellow violets (*Viola canadensis*, *V. pubescens*); Shield and wood ferns (*Dryopteris carthusiana*, *D. intermedia*)

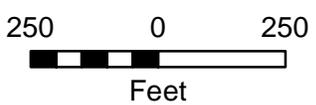
Barri Footer ArcGIS 10.2.1 2015-09-08 10:18 File\KClient\USS_Duluth_Works\Spirit_Lake\Work_Orders\23691125_Feasibility_Study\User\DWJ\Figure1_draft_20150908.mxd User.dwg



-  Relevé Location
-  Transect Points
-  Native Plant Community (MBS).lyr
-  Approximate U. S. Steel Operations Area

Additional field survey points

-  BP-1
-  BP-2



1 Inch = 375 Feet

Figure 1

ECS Relevé and Transect
Former U. S. Steel Duluth Works -
Spirit Lake Sediment Site
Saint Louis River
Duluth, Minnesota



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

January 3, 2018

From: William J. Murray
U.S. Environmental Protection Agency – Great Lakes National Program Office
77 West Jackson Boulevard
Chicago, Illinois 60604

To: Peter Fasbender
U.S. Fish and Wildlife Service
Minnesota-Wisconsin Ecological Services Field Office
4101 American Boulevard East
Bloomington, Minnesota 55425

Re: Project Review Request - Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota; Consultation Code: 03E19000-2019-SLI-0281; Event Code: 03E19000-2019-E-00704

Dear Mr. Fasbender,

The U.S. Environmental Protection Agency (USEPA) has been working throughout the Great Lakes region to implement contaminated sediment cleanups under the Great Lakes Legacy Act, focusing on sediment remediation at known areas of concern (AOCs). GLNPO, in conjunction with U.S. Steel Corporation (the project private partner), is planning to address sediment contamination in and adjacent to Spirit Lake, which is part of the Saint Louis AOC (Figure 1). The Spirit Lake Project (Project) action area is located in an open reach of the St. Louis River referred to as Spirit Lake, near the Morgan Park neighborhood of Duluth, Minnesota and adjacent to the former U.S. Steel Duluth Works Steel Mill Superfund site (Figure 2). The purpose of this Project is to address contamination, primarily polycyclic aromatic hydrocarbons and associated metals, in the Spirit Lake area.

USEPA initially submitted a project review package to the U.S. Fish and Wildlife Service for this Project in December 2014, and completed consultation under Section 7 (Attachment A) receiving concurrence on the following:

- The proposed action may affect, but is not likely to adversely affect the northern long-eared bat (September 22, 2015)
- The proposed action will not affect bald eagles, and no permit under the Bald and Golden Eagle Protection Act (BGEPA) will be required (April 29, 2015); and
- The proposed action will not affect the gray wolf (September 22, 2015).

As it has been over one year since concurrence was received for this Project, we have completed an updated project review on December 18, 2018, and are submitting our project package for USFWS review. This project review is necessary because the project includes an action by the USEPA and will require a Section 10/Section 404 permit from the U.S. Army Corps of Engineers. In 2015, USFWS requested that USEPA provide further evaluation on the Project potential impacts on both the northern



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

long-eared bat and the gray wolf; therefore, our updated project review includes updated additional evaluation of these species.

The location of the Project and action area are identified on the enclosed maps (Figures 1 and 2). The Project uses multiple remedial technologies including capping, sediment removal, sediment removal followed by capping, and enhanced natural recovery. Removed material will be placed onsite in confined disposal facilities. These activities will result in permanent changes to the project area; however, the outcome of the Project will be a restored and improved environmental condition of the area, including creation of new habitat types, as well as revegetation throughout the action area. These activities may produce temporary local disturbances during the construction windows due to noise, presence of construction equipment, and increased traffic. Best management practices will be implemented to reduce these impacts. The remediation work is expected to begin in 2019 and continue through 2021.

The enclosed materials provide information about the species, critical habitat, and bald eagles which were considered in our review. Because of the lack of suitable habitat at the Project site, USEPA concludes that the project will have “no effect” on the following listed species: Canada Lynx (*Lynx canadensis*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Gray Wolf (*Canis lupus*). USEPA also concludes that due to lack of documentation in the Project area, the Project will have “no effect” on any nesting bald eagles that may be present. While the northern long-eared bat (*Myotis septentrionalis*) has been documented in St. Louis County and potential habitat is present within the Project area, USEPA will complete tree clearing between October 1 and March 30 to avoid impacting roosting trees. For this reason, USEPA is requesting USFWS concurrence that the Project “may affect but is not likely to adversely” affect this species. The species conclusions table, also enclosed, provides more detail on our determinations for the resources that may be affected by the Project.

For additional information, please contact me at the address listed above or murray.williamj@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "William J. Murray".

William J. Murray
Project Manager

Enclosures:

- 1) Figures
- 2) IPaC Project Review
- 3) Attachment A- Previous Section 7 Consultation

Species Conclusions Table

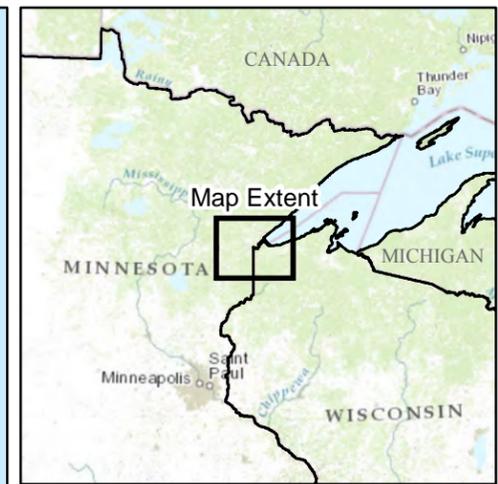
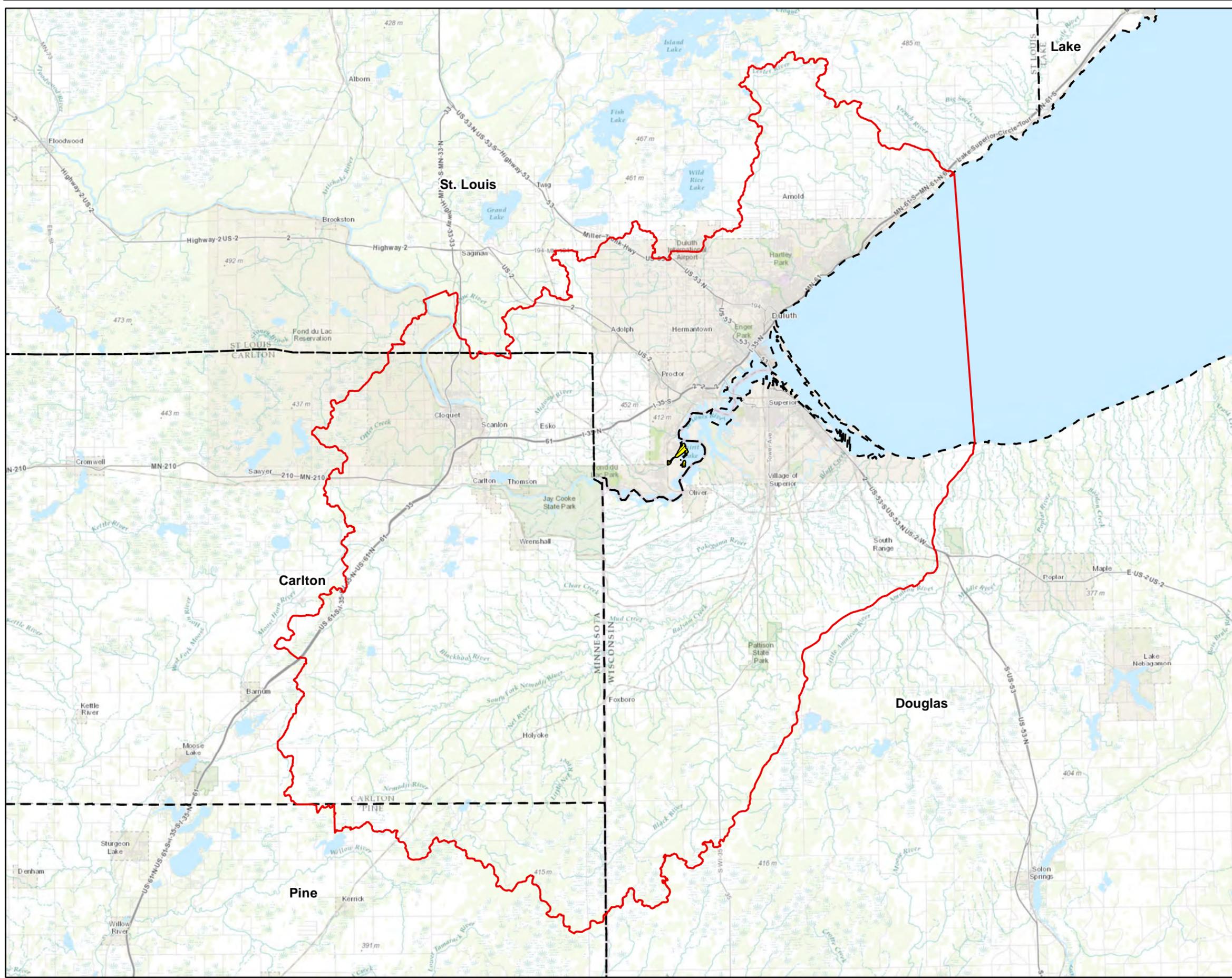
Project Name: Spirit Lake Sediment Remediation Project

Date: December 18, 2018

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Additional Information / Documentation
Red Knot (<i>Calidris canutus rufa</i>)- Threatened	<ul style="list-style-type: none"> Suitable habitat not present Shoreline and wetland habitat survey conducted. 	<ul style="list-style-type: none"> No effect 	<ul style="list-style-type: none"> Species found in muddy or sandy coastal areas, more specifically the mouths of bays and estuaries, unimproved tidal inlets, and tidal flats.
Piping Plover (<i>Charadrius melodus</i>)- Endangered	<ul style="list-style-type: none"> Suitable habitat not present. Shoreline and wetland habitat survey conducted. 	<ul style="list-style-type: none"> No effect. 	<ul style="list-style-type: none"> Historically, piping plovers nested along the beaches of western Lake Superior but no nests have been documented since 1987 Piping plovers nest, feed, and rear their young in open, sparsely vegetated sandy areas during spring and summer (April through August) in the Great Lakes. The Project site has narrow sandy shoreline and heavy vegetation, which is not conducive to piping plover nesting. Majority of project construction would occur outside of window of piping plover presence in Great Lakes region
Canada Lynx (<i>Lynx canadensis</i>)- Threatened	<ul style="list-style-type: none"> Suitable habitat not present No current habitat survey conducted. 	<ul style="list-style-type: none"> No effect 	<ul style="list-style-type: none"> Species found in boreal habitats where snowshoe hare are present. Minnesota Department of Natural Resources (DNR) has records of this species in St. Louis County and unverified and probable records in the general region of the project site in St. Louis County.
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)- Threatened	<ul style="list-style-type: none"> Potential habitat present No current survey conducted. 	<ul style="list-style-type: none"> May affect, but not likely to adversely affect 	<ul style="list-style-type: none"> Minnesota DNR has records of this species in St. Louis County. To avoid impacts to the northern long-eared bat, the USEPA is proposing to complete tree clearing associated with the Project between the period of

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Additional Information / Documentation
			October 1 and March 30. This will eliminate impacts to potential forested habitat and roosting trees that may be used by the northern long-eared bat during the period that the species may be present in the area.
Gray Wolf (<i>Canis lupus</i>)- Threatened	<ul style="list-style-type: none"> • Suitable habitat not present • No current habitat survey conducted. 	<ul style="list-style-type: none"> • No effect 	<ul style="list-style-type: none"> • Gray wolves in the Great Lakes primarily use forested habitat and gray wolves have been historically documented in St. Louis County • Upland habitat present in the Project site is a riparian area of approximately 67 acres and cleared areas with slab and remnant foundations of the former steel operations. • The gray wolf needs ample space with minimal human disturbance, or at a minimum, areas where human disturbance will allow for both gray wolves and their prey to survive; the forested areas that remain at the site are too small to support the gray wolf. • There are no corridors around the site that could be utilized by a gray wolf to connect to other larger forested areas or agricultural tracts (neither of which are present in the surrounding area).
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	<ul style="list-style-type: none"> • Unlikely to disturb nesting bald eagles • No documented nests. 	<ul style="list-style-type: none"> • No Eagle Act permit required 	<ul style="list-style-type: none"> • None
Other Migratory Birds (not including Bald Eagle)- 19 identified by IPaC review	<ul style="list-style-type: none"> • Suitable habitat not present or species rarely documented in project area (per consultation of Cornell eBird mapping tool) 	<ul style="list-style-type: none"> • May affect, but not likely to adversely affect 	<ul style="list-style-type: none"> • According to the IPaC review Probability of Presence summary, most migratory birds on the species list for the Project, do not have a high probability of presence during the construction window • The Rusty Blackbird, Lesser Yellowlegs, and Harris Sparrow have a comparatively higher chance of presence; however, suitable breeding habitat for Rusty Blackbird and Harris Sparrow is not present at the site. Preferred habitats include

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Additional Information / Documentation
			<p>bogs, wet forests, and muskeg for the blackbird, and semiforested tundra for the sparrow.</p> <ul style="list-style-type: none"> • Lesser Yellowlegs (fewer than 10 individuals) have been sighted along the shoreline of Spirit Lake within the last 5 years. • All practicable management and conservation techniques will be utilized to minimize any impacts on migratory birds that may be present during construction. Some stressors such as noise during will be present during construction; however, these impacts will be temporary and limited to daylight hours during the project period.
Critical Habitat	<ul style="list-style-type: none"> • None present. 	<ul style="list-style-type: none"> • No effect 	<ul style="list-style-type: none"> • None



Legend

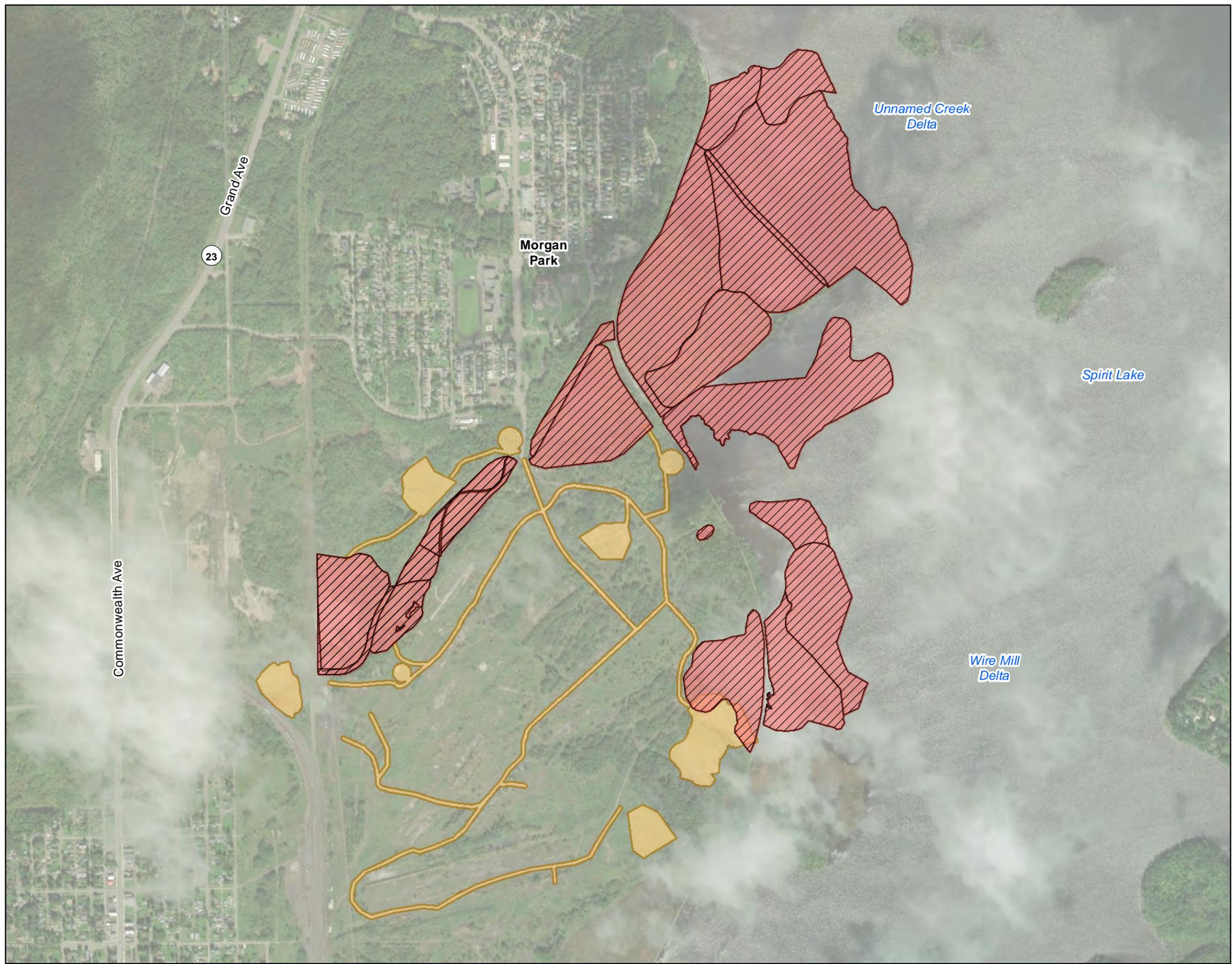
-  Action Area
-  County Line
-  St. Louis River AOC



Map Date: 11/26/2014
 Base Map: ESRI 2011
 Other Data: EPA 2014



FIGURE 1
 General Location Map
 Spirit Lake
 Duluth, Minnesota



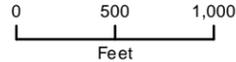
Legend

-  Action Area
-  Remedial Effects
-  Temporary Effects

Action Area Coordinates*

X- 2849109.064555
 Y- 397424.601362

*NAD 1983 StatePlane Minnesota North
 FIPS 2201 Feet



Map Date: 12/21/2018
 Base Map: ESRI 2017



Figure 2
 Action Area Map
 Spirit Lake
 Duluth, Minnesota



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Minnesota-Wisconsin Ecological Services Field Office
4101 American Blvd E

Bloomington, MN 55425-1665

Phone: (952) 252-0092 Fax: (952) 646-2873

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

December 18, 2018

Consultation Code: 03E19000-2019-SLI-0281

Event Code: 03E19000-2019-E-00704

Project Name: Spirit Lake Sediment Remediation Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the action area the area that is likely to be affected by your proposed project. The list also includes any designated and proposed critical habitat that overlaps with the action area. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representatives) must consult with the Service if they determine their project may affect listed species or critical habitat. Agencies must confer under section 7(a)(4) if any proposed action is likely to jeopardize species proposed for listing as endangered or threatened or likely to adversely modify any proposed critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/>

[s7process/index.html](#). This website contains step-by-step instructions that will help you determine if your project will have an adverse effect on listed species or critical habitat and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within the action area.

Although no longer protected under the Endangered Species Act, be aware that bald eagles (*Haliaeetus leucocephalus*) are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles (*Aquila chrysaetos*). Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near a bald eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html>. The information available at this website will help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Minnesota-Wisconsin Ecological Services Field Office

4101 American Blvd E

Bloomington, MN 55425-1665

(952) 252-0092

Project Summary

Consultation Code: 03E19000-2019-SLI-0281

Event Code: 03E19000-2019-E-00704

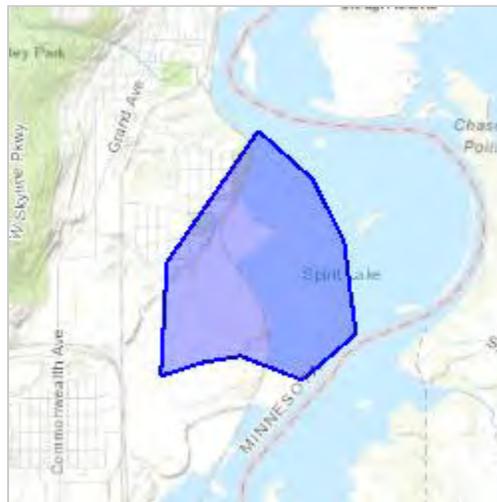
Project Name: Spirit Lake Sediment Remediation Project

Project Type: ** OTHER **

Project Description: The U.S. Environmental Protection Agency Great Lakes National Program Office (GLNPO) implements contaminated sediment cleanups under the Great Lakes Legacy Act, focusing on known areas of concern (AOCs). The Great Lakes AOCs are areas that have experienced severe environmental degradation as a result of past pollution or industrial activity. GLNPO, with US Steel Corporation, is planning to address sediment contamination in and adjacent to Spirit Lake, which is part of the Saint Louis River AOC.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/46.68486358479322N92.20247342221725W>



Counties: St. Louis, MN

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> Population: Wherever Found in Contiguous U.S. There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Gray Wolf <i>Canis lupus</i> Population: MN There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4488	Threatened
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
<p>Piping Plover <i>Charadrius melodus</i> Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039</p>	Endangered
<p>Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864</p>	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Bittern <i>Botaurus lentiginosus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6582	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

NAME	BREEDING SEASON
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cape May Warbler <i>Setophaga tigrina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Jul 31
Connecticut Warbler <i>Oporornis agilis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 15 to Aug 10
Dunlin <i>Calidris alpina arctica</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Harris's Sparrow <i>Zonotrichia querula</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NAME	BREEDING SEASON
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481</p>	Breeds elsewhere
<p>Nelson's Sparrow <i>Ammodramus nelsoni</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Sep 5
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds elsewhere
<p>Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Jul 20
<p>Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Whimbrel <i>Numenius phaeopus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483</p>	Breeds elsewhere

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

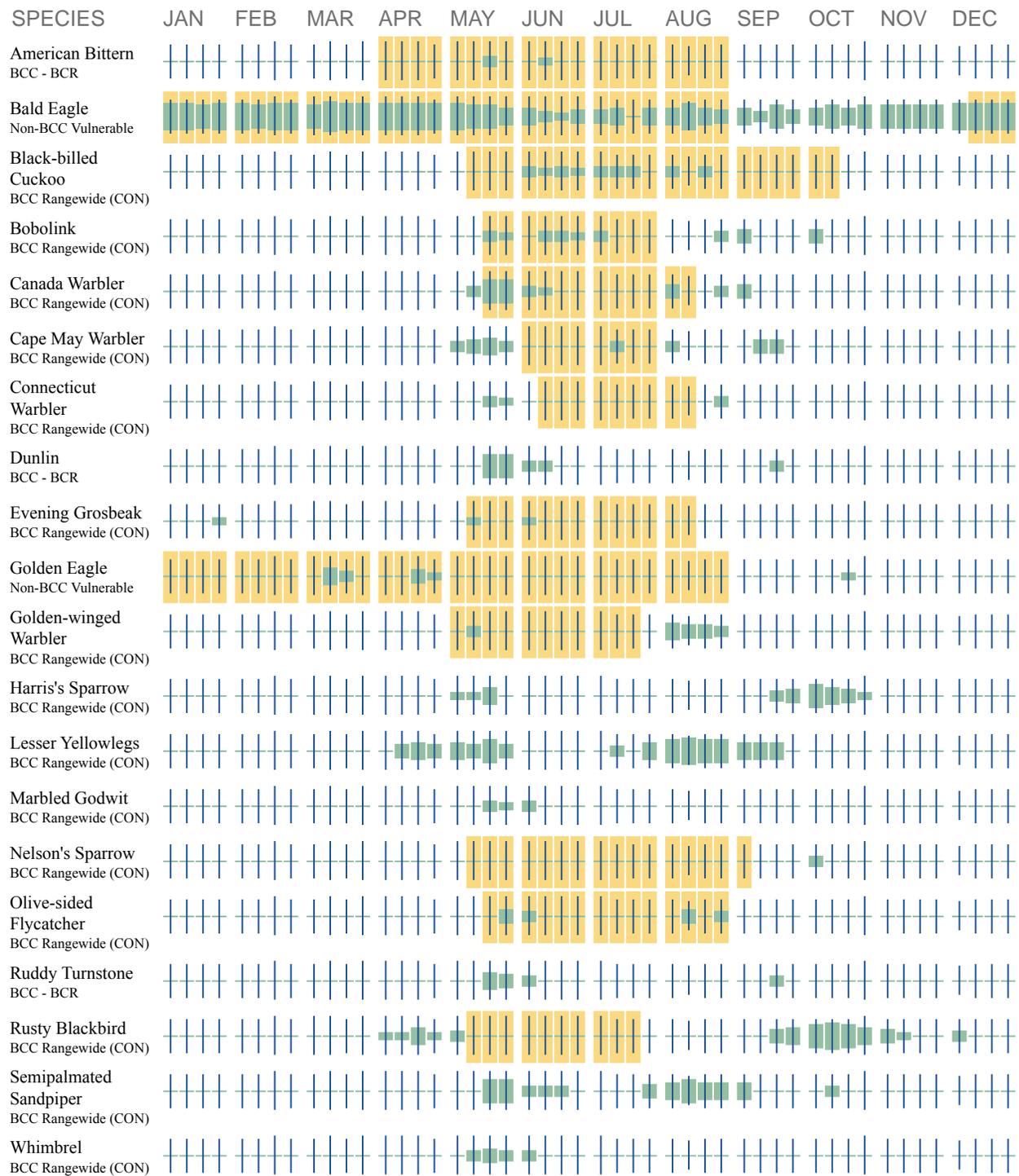
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>

- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and

how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location?”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

ATTACHMENT A

**PREVIOUS SECTION 7 CONSULTATION FOR THE SPIRIT LAKE SEDIMENT
REMEDICATION PROJECT**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

23 DEC 2014

REPLY TO THE ATTENTION OF:

U.S. Fish and Wildlife Service
Twin Cities Ecological Services Field Office
4101 American Boulevard East
Bloomington, Minnesota 55425

Re: Project Review Request, Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota

The U.S. Environmental Protection Agency Great Lakes National Program Office has been working throughout the Great Lakes region to implement contaminated sediment cleanups under the Great Lakes Legacy Act, focusing on sediment remediation within areas of concern (AOCs). The Great Lakes AOCs are areas that have experienced severe environmental degradation as a result of past pollution or industrial activity. The Great Lakes National Program Office (GLNPO), in conjunction with U.S. Steel Corporation (the project private partner), is planning to address sediment contamination in and adjacent to Spirit Lake, which is part of the Saint Louis River AOC (Figure 1). The Spirit Lake Project (Project) action area is located in an open reach of the St. Louis River referred to as Spirit Lake, near the Morgan Park neighborhood of Duluth, Minnesota and adjacent to the former U.S. Steel Duluth Works Steel Mill Superfund site (Figure 2). The purpose of this Project is to address contamination, primarily polycyclic aromatic hydrocarbons and associated metals, in the Spirit Lake area.

The Project includes areas of sediment removal, capping, sediment removal and capping, and enhanced natural recovery. Some of the material removed will be placed in onsite confined disposal facilities. These activities may produce temporary local disturbances due to associated noise, views of construction equipment (e.g., dredges and bulldozers), and increased traffic in the area; however, the ultimate outcome of the Project will be an improved environmental condition of the Project area.

We have reviewed the referenced Project using the U.S. Fish and Wildlife Service's (USFWS's) online project review process. We completed our review on November 21, 2014, and are submitting our project review package for further review. We are requesting input from USFWS regarding the candidate species northern long-eared bat (*Myotis septentrionalis*) and its presence in the Project area and potential impacts.

The location of the Project and the action area are identified on the enclosed maps (Figures 1 and 2). Coordinates for the site are shown in Table 1.

Table 1. Coordinates for the Action Area*

X	2849109.064555
Y	397424.601362
*NAD 1983 State Plane Minnesota North FIPS 2201 Feet	

The project is expected to be completed late 2015/early 2016 through 2018.

This project review is necessary because the project includes an action by the USEPA and will require a Section 10/Section 404 permit from the U.S. Army Corps of Engineers.

The enclosed project review package provides information about the species, critical habitat, and bald eagles which were considered in our review. The species conclusions table, also included in the package, identifies our determinations for the resources that may be affected by the project.

For additional information, please contact me at the address listed above or murray.williamj@epa.gov.

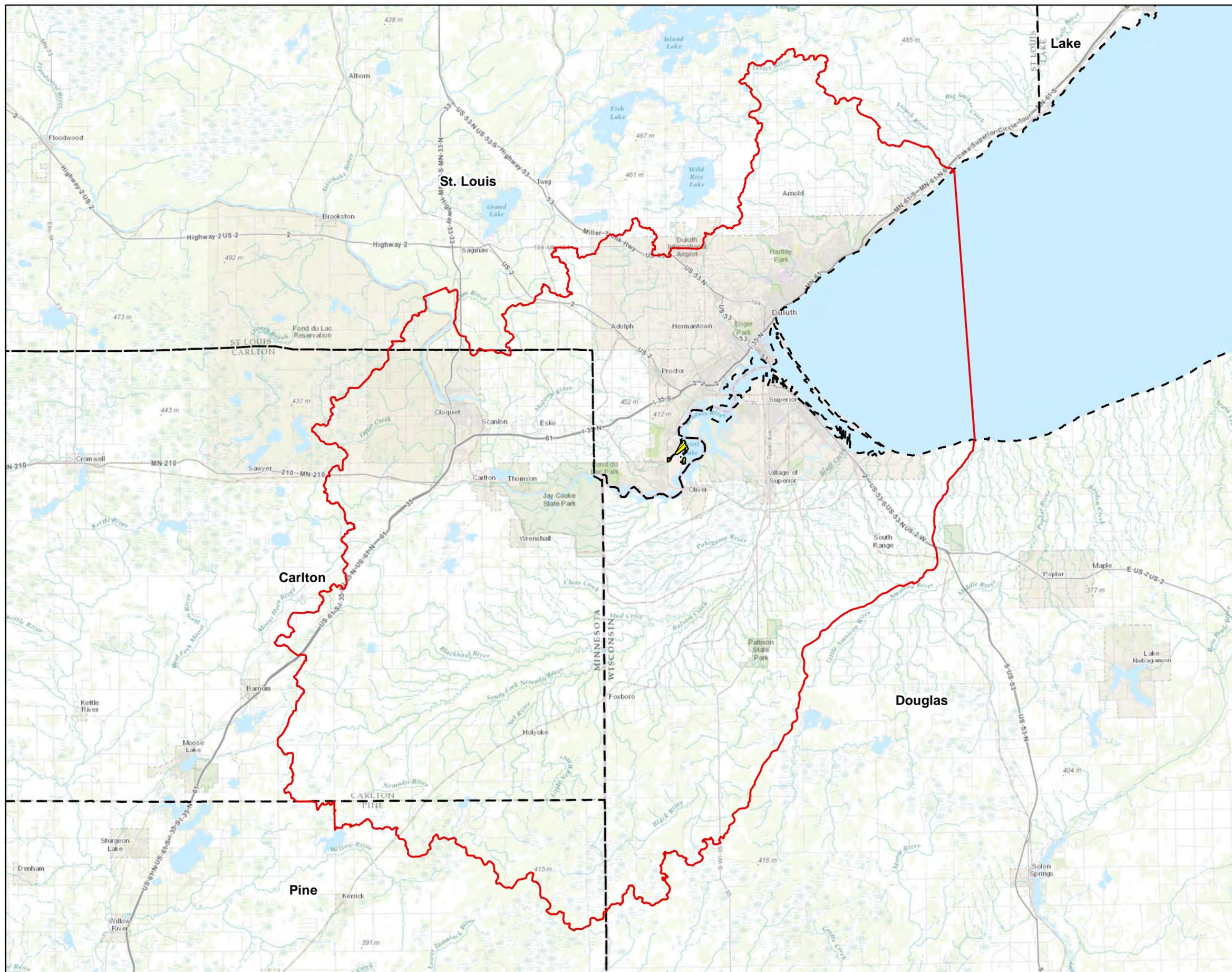
Sincerely,

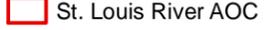
William J. Murray
Project Manager



Enclosures:

- 1) Figures
- 2) IPAC Project Review Package



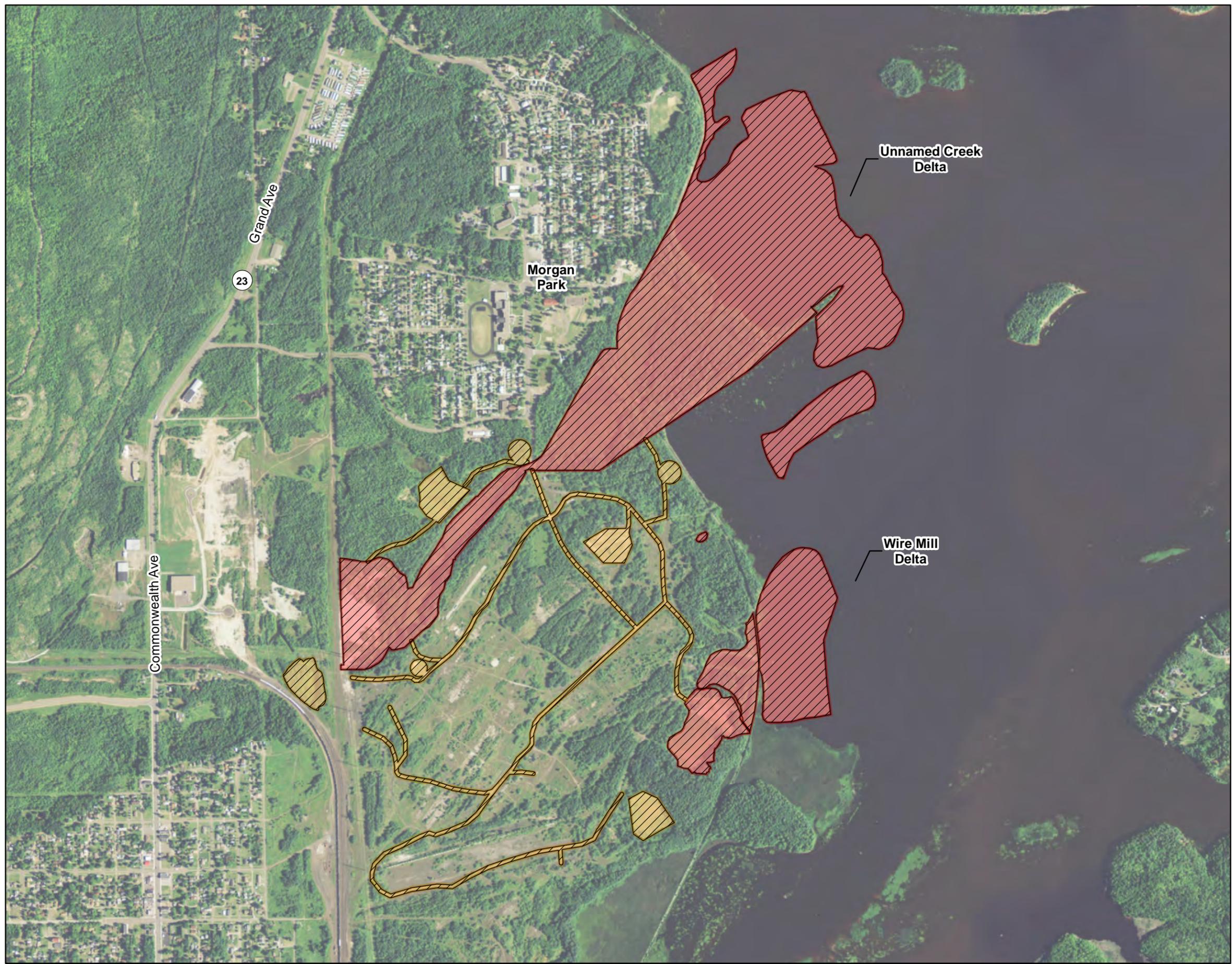
- Legend**
-  Action Area
 -  County Line
 -  St. Louis River AOC



Map Date: 11/26/2014
 Base Map: ESRI 2011
 Other Data: EPA 2014

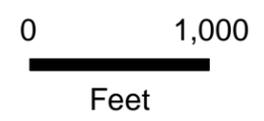


FIGURE 1
 General Location Map
 Spirit Lake
 Duluth, Minnesota



Legend

-  Action Area
-  Permanent Effects
-  Temporary Effects



Map Date: 6/10/2015
Base Map: ESRI 2011



FIGURE 2
Action Area Map
Spirit Lake
Duluth, Minnesota



United States Department of the Interior

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

April 29, 2015

Mr. William Murray
Project Manager
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE: FWS No 03E19000-2015-TA-0127
Spirit Lake Sediment Remediation Project

Dear Mr. Murray:

This letter responds to the project review request letter dated December 23, 2014, by William J. Murray, Project Manager, U.S. Environmental Protection Agency (EPA) to this office of the U.S. Fish and Wildlife Service (Service) regarding the Spirit Lake Project. The proposed project is being developed to remediate contaminated sediments within a portion of the U.S. Steel Duluth Works Steel Mill Superfund Site (Site) in Duluth, Minnesota. The EPA letter transmitted a project review package which included an initial effects analysis of the proposed project based on information EPA obtained November 18, 2014, from the Service's Information, Planning, and Conservation (IPaC) decision support system (<http://ecos.fws.gov/ipac/>). EPA has requested additional information from this office to assist with consultation under the Endangered Species Act. The project review package also included information considered by EPA regarding potential impacts to bald eagles in the project area.

This response includes information and guidance necessary to fulfill consultation requirements under the Endangered Species Act, as well as coordination requirements under the Bald and Golden Eagle Protection Act, in the selection, design, and implementation of remedial actions in the Spirit Lake portion of the Site. In addition to the information EPA provided in the project review request letter, the Service has also considered information about proposed remedial alternatives presented in the (Draft) Feasibility Study and Appendices, Former Duluth Works and Spirit Lake Sediment Site, November 2014. Accordingly, we provide the following comments and recommendations.

Endangered Species

The Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Section 7(a), requires Federal agencies to consult with the Service to “insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an “agency action”) is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.”

At the time of EPA's initial effects analysis, the IPaC system identified the following species which may occur in the proposed project area: rufa red knot (*Calidris canutus rufa*, ESA status: "Proposed Threatened"), Canada lynx (*Lynx canadensis*, ESA status: "Threatened"), and northern long-eared bat (*Myotis septentrionalis*, ESA status: "Proposed Endangered"). Since then, the Service has completed several ESA determinations, and the status of both the rufa red knot and the northern long-eared bat is now "Threatened." Further, the gray wolf (*Canis lupus*) has since been re-listed with an ESA status of "Threatened." Our nearest known record for the species is within five miles of the proposed action area. The initial effects analysis determined that there would be "no effect" on the rufa red knot and the Canada lynx in the proposed project area, and that the project "may affect" the northern long-eared bat.

Based on EPA's initial effects analyses, and the change in the status of the species noted above, we provide the following comments and recommendations to assist completion of EPA's requirements under the ESA for the proposed project.

Comment: Due to the lack of evidence of the occurrence of Canada lynx and rufa red knot in the project area, or to the existence of suitable habitat there, the EPA has determined that the proposed modification would have no effect on these species. No Service response is necessary for this determination.

Recommendation: Since the gray wolf was re-listed as a Threatened species under the ESA on December 19, 2014, EPA should develop a determination under Section 7 of the ESA and send it to this office when a final remedial alternative has been selected.

Comment: The northern long-eared bat was listing as a Threatened species under the ESA on April 2, 2015 with an effective date of May 4, 2015. No critical habitat has been proposed at this time. The state of Minnesota is within the known range of the northern long-eared bat and the nearest known record to the proposed project area is approximately seven miles. During the summer, northern long-eared bats typically roost singly or in colonies in a wide variety of forested habitats, in cavities or crevices or underneath loose bark of both live trees and snags (>3 inches dbh). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, northern long-eared bats predominately hibernate in caves and abandoned mine portals. Additional habitat types may be identified as new information is obtained.

Recommendation: Based on the above information, the northern long-eared bat and its suitable habitat are anticipated to be present within the project action area (when potential upland disposal areas for contaminated sediments are considered as part of the proposed action area). If suitable summer roosting habitat will be removed as part of the proposed project, we recommend that all tree clearing be conducted outside of the species' summer roost season of April 1 through September 30. Between the dates of October 1 to March 30, the Service anticipates the species would not be present in the proposed action area. If the project removes suitable northern long-eared bat maternity roost trees during the summer roost season, the possibility of take under ESA Section 7 exists. In that event, consultation with the Service would be necessary to determine the extent of those

impacts. If EPA believes this to be the case in the design of the final remedial alternative, our office should be contacted for formal consultation before project implementation.

Bald Eagles

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 et. seq.) prohibits the unauthorized "taking" of bald eagles, including their parts, nests, or eggs. BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturbance" (as further defined by regulations at 50 CFR §22.3) means to agitate or bother an eagle to a degree that causes injury, decrease in its productivity, or nest abandonment. EPA's initial effects analysis determined that there would be no disturbance to nesting bald eagles in the proposed project area, and that no BGEA permit would be required.

Comment: The Service notes that bald eagle nests currently documented in the vicinity of the proposed project area are approximately one-half mile and one mile away from anticipated remedial activity. Therefore, the Service concurs with the EPA determination that a permit under the BGEPA would not be required.

Recommendation: Should EPA and/or the Service become aware of additional eagle nest documentation prior to the final design and implementation of proposed remedial construction, this determination will need to be reconsidered.

We hope this letter assists EPA in ensuring that federally-listed threatened and endangered species (as well as bald and golden eagles) which may occur in the project area are not adversely affected by response actions and other remedial construction activities to be developed at the U.S. Steel Site. Please contact this office as the proposed project further develops and any new information indicates potential effects of the action to listed species or critical habitat to an extent not addressed in the original EPA letter. If you have questions, please contact Mr. Andrew Horton, Fish and Wildlife Biologist, at 612-725-3548 (extension 2208) or via email at andrew_horton@fws.gov.

Sincerely,



Peter Fasbender
Field Supervisor

cc (email only): Kaitlin McCormick, EA Engineering



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

July 7, 2015

From: Mr. Michael J. Bryant
U.S. Environmental Protection Agency – Region 5
77 West Jackson Boulevard (G-17J)
Chicago, Illinois 60604

To: Mr. Peter Fasbender
U.S. Fish and Wildlife Service
Twin Cities Ecological Services Field Office
4101 American Boulevard East
Bloomington, Minnesota 55425

Re: FWS No. 03E19000-2015-TA-0127 - Endangered Species Act Consultation - Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota

This letter is in response to the U.S. Fish and Wildlife Service's (USFWS's) letter regarding the Spirit Lake Sediment Remediation Project (the Project) dated April 29, 2015 (Attachment A). As requested, the U.S. Environmental Protection Agency (USEPA) is providing its determination on potential effects to the gray wolf (*Canis lupus*) and additional information regarding best management practices that will be implemented during Project implementation to protect the northern long-eared bat (*Myotis septentrionalis*).

Gray Wolf (*Canis lupus*)

The gray wolf has been documented in Saint Louis County, Minnesota, which is where the proposed project is located (Figures 1 and 2). However, the habitat present varies greatly throughout the County, and the upland habitat present within the project boundary consists of an area of riparian forest (approximately 67 acres) along unnamed creek (Figure 2) and a larger cleared area that was previously used as part of industrial operations by United States Steel Corporation's (U.S. Steel's) and is now demolished with only remnant foundations and slabs remaining. The project boundary is also surrounded by other development, including the Morgan Park residential neighborhood within 1,000 feet to the north, and Spirit Lake. There are undeveloped or sparsely developed areas that would allow for wolves to move from this area to other areas of larger habitat with greater prey availability.

Gray wolves in the Great Lakes primarily use forested habitat, though have also expanded to use areas that include both forest and agricultural lands (USFWS 2011). Generally, the gray wolf needs ample space with minimal human disturbance, or at a minimum areas where human disturbance will allow for both gray wolves and their prey to survive (Snyder 1991, USFWS 2011). Territory for each gray wolf ranges from 25 square miles (16,000 acres) to 120 square miles (76,800 acres) (Snyder 1991). The forested habitat along unnamed creek is an isolated pocket of forested habitat and too small to support a gray wolf. In Minnesota, the primary prey species for the gray wolf is white-tailed deer (*Odocoileus*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

virginianus). Other prey species include moose (*Alces alces*), beaver (*Castor canadensis*), and snowshoe hare (*Lepus americanus*). Beaver and white-tailed deer are known to occur at the Project site.

There is no designated critical habitat for the gray wolf in the Project area. Critical habitat for the gray wolf was designated in 1978 for several areas in Minnesota, including areas of St. Louis County located within Zones 1, 2, and 3, as designated in the final rule (43 FR 47). The City of Duluth and the proposed Project site are located within Zone 4 and are not considered critical habitat for the gray wolf (42 FR 47).

The USEPA has determined that while there is forested habitat at the Project site, it is isolated and covers an area insufficient to support gray wolves. In the unlikely event that a gray wolf is found in the Project area or vicinity, it is likely to be a transient, lone wolf, given the large range of this species. Even a transient wolf is unlikely because there are no undeveloped or sparsely developed corridors around the site connecting the Project site to larger forested or forested and agricultural tracts. Given the lack of sufficient habitat area at the Project site and surrounding area as a result of current and past human development, the USEPA has determined that the proposed project will have no effect on the gray wolf. The USEPA is requesting concurrence from the USFWS on this finding.

Northern Long-eared Bat (*Myotis septentrionalis*)

The USEPA has reviewed the USFWS's recommendations in its April 29, 2015, letter regarding potential impacts to the northern long-eared bat and potential summer roosting habitat for this species. To avoid impacts to the northern long-eared bat, the USEPA is proposing to complete tree clearing associated with the Project between the period of October 1 and March 30. This will eliminate impacts to potential forested habitat and roosting trees that may be used by the northern long-eared bat during the period that the species may be present in the area. By adhering to this clearing window, the USEPA has determined that the proposed project may affect, but is not likely to adversely affect, the northern long-eared bat. The USEPA is requesting concurrence from the USFWS on this finding.

For additional information, please contact me at the address listed above or bryant.michael@epa.gov.

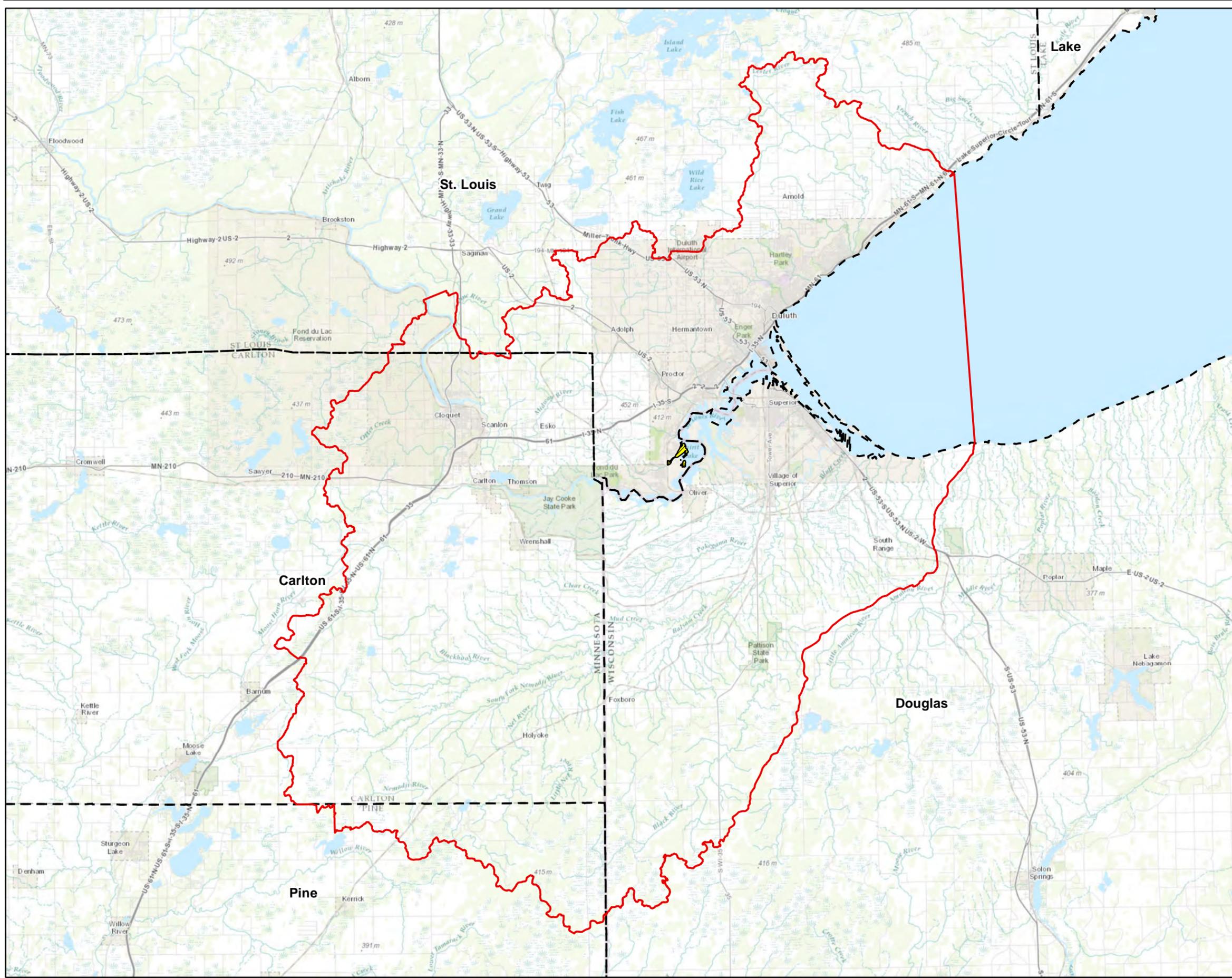
Sincerely,

A handwritten signature in black ink that reads "Michael J. Bryant".

Michael J. Bryant
Physical Scientist

Enclosures:

- 1) Figures
- 2) USFWS letter to USEPA dated April 29, 2015



Legend

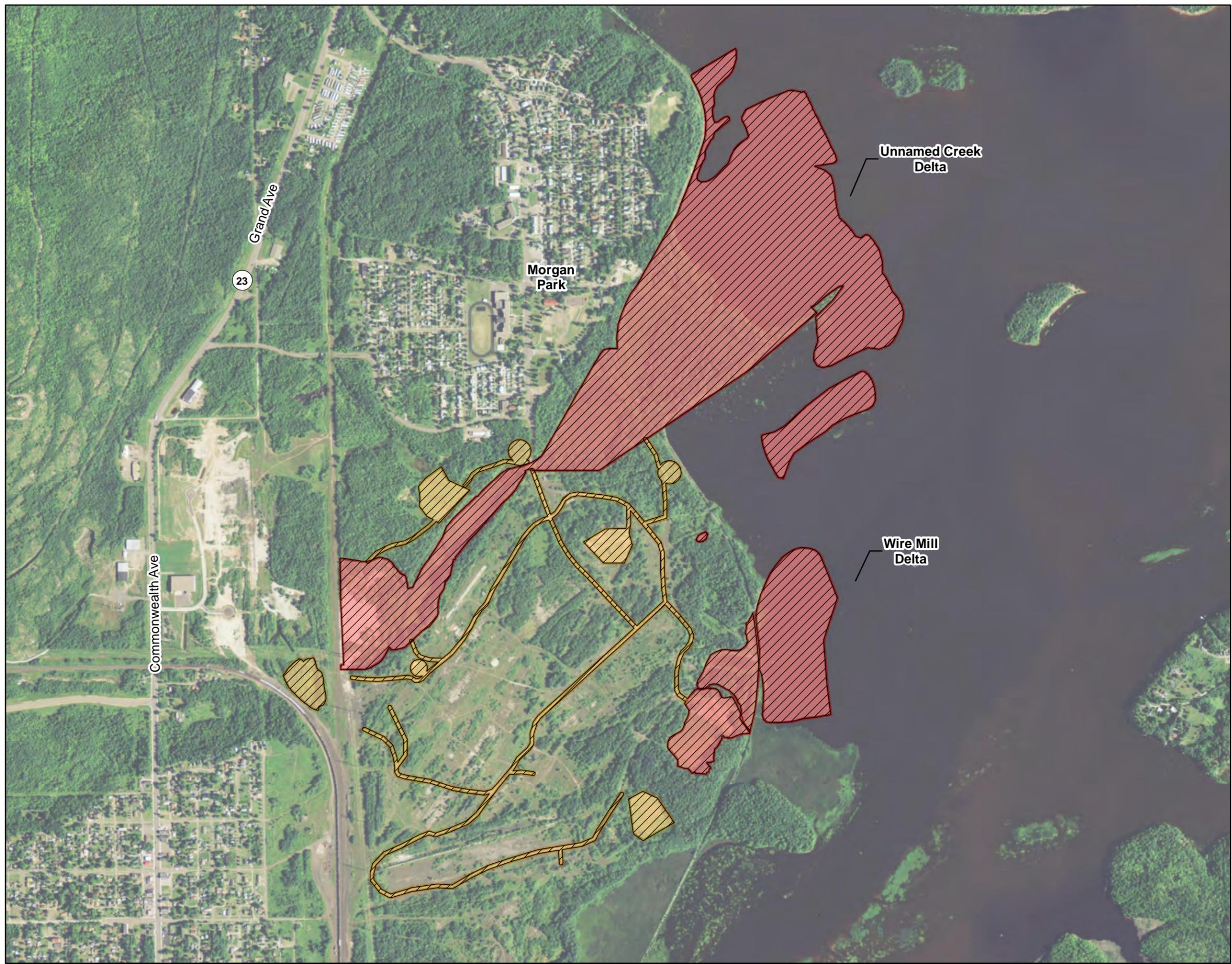
-  Action Area
-  County Line
-  St. Louis River AOC



Map Date: 11/26/2014
 Base Map: ESRI 2011
 Other Data: EPA 2014

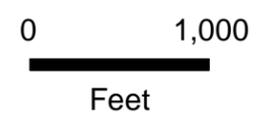


FIGURE 1
 General Location Map
 Spirit Lake
 Duluth, Minnesota



Legend

-  Action Area
-  Permanent Effects
-  Temporary Effects



Map Date: 6/10/2015
Base Map: ESRI 2011



FIGURE 2
Action Area Map
Spirit Lake
Duluth, Minnesota



United States Department of the Interior

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

April 29, 2015

Mr. William Murray
Project Manager
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE: FWS No 03E19000-2015-TA-0127
Spirit Lake Sediment Remediation Project

Dear Mr. Murray:

This letter responds to the project review request letter dated December 23, 2014, by William J. Murray, Project Manager, U.S. Environmental Protection Agency (EPA) to this office of the U.S. Fish and Wildlife Service (Service) regarding the Spirit Lake Project. The proposed project is being developed to remediate contaminated sediments within a portion of the U.S. Steel Duluth Works Steel Mill Superfund Site (Site) in Duluth, Minnesota. The EPA letter transmitted a project review package which included an initial effects analysis of the proposed project based on information EPA obtained November 18, 2014, from the Service's Information, Planning, and Conservation (IPaC) decision support system (<http://ecos.fws.gov/ipac/>). EPA has requested additional information from this office to assist with consultation under the Endangered Species Act. The project review package also included information considered by EPA regarding potential impacts to bald eagles in the project area.

This response includes information and guidance necessary to fulfill consultation requirements under the Endangered Species Act, as well as coordination requirements under the Bald and Golden Eagle Protection Act, in the selection, design, and implementation of remedial actions in the Spirit Lake portion of the Site. In addition to the information EPA provided in the project review request letter, the Service has also considered information about proposed remedial alternatives presented in the (Draft) Feasibility Study and Appendices, Former Duluth Works and Spirit Lake Sediment Site, November 2014. Accordingly, we provide the following comments and recommendations.

Endangered Species

The Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Section 7(a), requires Federal agencies to consult with the Service to "insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species."

At the time of EPA's initial effects analysis, the IPaC system identified the following species which may occur in the proposed project area: rufa red knot (*Calidris canutus rufa*, ESA status: "Proposed Threatened"), Canada lynx (*Lynx canadensis*, ESA status: "Threatened"), and northern long-eared bat (*Myotis septentrionalis*, ESA status: "Proposed Endangered"). Since then, the Service has completed several ESA determinations, and the status of both the rufa red knot and the northern long-eared bat is now "Threatened." Further, the gray wolf (*Canis lupus*) has since been re-listed with an ESA status of "Threatened." Our nearest known record for the species is within five miles of the proposed action area. The initial effects analysis determined that there would be "no effect" on the rufa red knot and the Canada lynx in the proposed project area, and that the project "may affect" the northern long-eared bat.

Based on EPA's initial effects analyses, and the change in the status of the species noted above, we provide the following comments and recommendations to assist completion of EPA's requirements under the ESA for the proposed project.

Comment: Due to the lack of evidence of the occurrence of Canada lynx and rufa red knot in the project area, or to the existence of suitable habitat there, the EPA has determined that the proposed modification would have no effect on these species. No Service response is necessary for this determination.

Recommendation: Since the gray wolf was re-listed as a Threatened species under the ESA on December 19, 2014, EPA should develop a determination under Section 7 of the ESA and send it to this office when a final remedial alternative has been selected.

Comment: The northern long-eared bat was listing as a Threatened species under the ESA on April 2, 2015 with an effective date of May 4, 2015. No critical habitat has been proposed at this time. The state of Minnesota is within the known range of the northern long-eared bat and the nearest known record to the proposed project area is approximately seven miles. During the summer, northern long-eared bats typically roost singly or in colonies in a wide variety of forested habitats, in cavities or crevices or underneath loose bark of both live trees and snags (>3 inches dbh). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, northern long-eared bats predominately hibernate in caves and abandoned mine portals. Additional habitat types may be identified as new information is obtained.

Recommendation: Based on the above information, the northern long-eared bat and its suitable habitat are anticipated to be present within the project action area (when potential upland disposal areas for contaminated sediments are considered as part of the proposed action area). If suitable summer roosting habitat will be removed as part of the proposed project, we recommend that all tree clearing be conducted outside of the species' summer roost season of April 1 through September 30. Between the dates of October 1 to March 30, the Service anticipates the species would not be present in the proposed action area. If the project removes suitable northern long-eared bat maternity roost trees during the summer roost season, the possibility of take under ESA Section 7 exists. In that event, consultation with the Service would be necessary to determine the extent of those

impacts. If EPA believes this to be the case in the design of the final remedial alternative, our office should be contacted for formal consultation before project implementation.

Bald Eagles

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 et. seq.) prohibits the unauthorized "taking" of bald eagles, including their parts, nests, or eggs. BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturbance" (as further defined by regulations at 50 CFR §22.3) means to agitate or bother an eagle to a degree that causes injury, decrease in its productivity, or nest abandonment. EPA's initial effects analysis determined that there would be no disturbance to nesting bald eagles in the proposed project area, and that no BGEA permit would be required.

Comment: The Service notes that bald eagle nests currently documented in the vicinity of the proposed project area are approximately one-half mile and one mile away from anticipated remedial activity. Therefore, the Service concurs with the EPA determination that a permit under the BGEPA would not be required.

Recommendation: Should EPA and/or the Service become aware of additional eagle nest documentation prior to the final design and implementation of proposed remedial construction, this determination will need to be reconsidered.

We hope this letter assists EPA in ensuring that federally-listed threatened and endangered species (as well as bald and golden eagles) which may occur in the project area are not adversely affected by response actions and other remedial construction activities to be developed at the U.S. Steel Site. Please contact this office as the proposed project further develops and any new information indicates potential effects of the action to listed species or critical habitat to an extent not addressed in the original EPA letter. If you have questions, please contact Mr. Andrew Horton, Fish and Wildlife Biologist, at 612-725-3548 (extension 2208) or via email at andrew_horton@fws.gov.

Sincerely,



Peter Fasbender
Field Supervisor

cc (email only): Kaitlin McCormick, EA Engineering



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services

Twin Cities Field Office

4101 American Boulevard East

Bloomington, Minnesota 55425-1665

Phone: (612) 725-3548 Fax: (612) 725-3609



September 22, 2015

Mr. Michael Bryant
Physical Scientist
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Action Agency: U.S. Environmental Protection Agency

USFWS Tails #: 2015-I-0127

Concurrence requested by: letter email

Dated: July 7, 2015

Project: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota

Location: Section 35 of Township 49N, Range 15W and Section 2 of Township 48N, Range 15W

Dear Mr. Bryant,

This letter is in response to your request for informal consultation and concurrence that the proposed project may affect, but is not likely to adversely affect the northern long-eared bat (*Myotis septentrionalis*), pursuant to consultation under section 7(a)(2) of the Endangered Species Act of 1973, as amended.

As described in your letter, the proposed action is anticipated to impact forest habitat that may provide suitable roosting habitat for the northern long-eared bat, as described as trees greater than 3 inches at diameter breast height (DBH) with loose bark, cracks or crevices. Due to the forested nature of this site and its relative proximity to recorded locations for the species, the northern long-eared bat may be present in the affected area during the roosting season, from approximately April 1 to September 30.

- Tree removal will not take place during a period when the species would be present in the action area. Therefore, we do not expect any direct effects to the species as a result of the action.
- Tree clearing may occur during the period when the northern long-eared bat may be present in the affected area but will be avoided during the northern long-eared bat pupping season of June 1 through July 31.
- Tree clearing associated with this project is anticipated to remove less than one acre of suitable roosting habitat for the northern long-eared bat.
- Removal of forested habitat is not anticipated to appreciably change the usability of northern long-eared bat habitat in the action area.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

July 7, 2015

REPLY TO THE ATTENTION OF Michael Bryant

Minnesota Historical Society
State Historic Preservation Office
Government Programs and Compliance
Attention: Sarah J. Beimers, Manager
345 Kellogg Blvd. West
St. Paul, Minnesota 55102

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota - Project Review Request

Dear Ms. Beimers:

The U. S. Environmental Protection Agency (USEPA) is actively developing a remedy for impacted sediment in Spirit Lake, which is located in Saint Louis County (Figure 1). USEPA has determined that the project is subject to compliance with Section 106 of the National Historic Preservation Act and fulfills the definition of an undertaking as defined in 36 CFR Part 800 – Protection of Historic Properties. USEPA seeks to initiate consultation with the Minnesota State Historic Preservation Office (SHPO) for this undertaking. This project is being partially funded by federal USEPA funds, with a matching contribution from U. S. Steel Corporation (U. S. Steel), and will require a Section 10/Section 404 permit from the U. S. Army Corps of Engineers. Below is the information about this project.

Project Description: The USEPA Great Lakes National Program Office (GLNPO) has been working throughout the Great Lakes region to implement impacted sediment cleanups under the Great Lakes Legacy Act, focusing on sediment remediation within areas of concern (AOCs). The Great Lakes AOCs are areas that have experienced severe environmental degradation as a result of past pollution or industrial activity. GLNPO, in conjunction with U. S. Steel (the project private partner), is planning to address sediment contamination in and adjacent to Spirit Lake, which is part of the Saint Louis River AOC (Figure 1). The Spirit Lake Project (Project) action area is located in an open reach of the St. Louis River referred to as Spirit Lake, near the Morgan Park neighborhood of Duluth, Minnesota (Figure 2). The project is located in Sections 34 and 35 in Township 49 North, Range 15 West and in Sections 2 and 3 in Township 48 North, Range 15 West. The purpose of this Project is to address impacts, primarily polycyclic aromatic hydrocarbons (PAHs) and associated metals, in the Spirit Lake area.



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The Project includes areas of sediment removal, capping, and enhanced natural recovery (Figures 2 and 3). Some of the material removed will be placed in onsite confined disposal facilities (CDFs).

Construction activities may produce temporary local disturbances due to associated noise, views of construction equipment (e.g., dredges, pile drivers, truck traffic and bulldozers), and increased traffic in the area; however, the ultimate outcome of the Project will be a significantly improved environmental condition of the Project area.

Project work proposed by U. S. Steel and the USEPA consists of 27.8 acres of sediment/soil removal, 61.6 acres of sediment/soil capping, 76.0 acres of sediment/soil removal and capping, and 37.6 areas of enhanced natural recovery (ENR). As a result of this work, 29.8 acres of existing land will be converted to open water. Material from the remedial projects will be placed in three CDFs. Two CDFs (5.0 and 17.6 acres) are located in the upland Project area and one CDF (29.3 acres) is within the Unnamed Creek Delta.

The upland components of the project are located in two principal areas: (1) along an unnamed creek that flows east to Spirit Lake along the northern margin of the project area; and, (2) an area along the lake shore known as the Wire Mill Pond. Up to 10 ft of sediment/soil will be excavated from upland areas marked as "remove" and between two and nine feet will be removed and then a 1.6 foot-thick of clean soil will cover areas marked "remove and remedial cap." The sediment/soil removed from the designated areas will be placed in three permanent repository locations or CDFs. A small CDF in the western edge of project area will encompass approximately five acres and fits into space between previous disposal area and a natural relief. The area will feature a 25-foot high berm to contain the material placed in the CDF. A second CDF will be located near the shoreline in the north-central part of the project area. This CDF will encompass approximately 17.8 acres; the area will be surrounded by a nine-foot high berm.

The third CDF will encompass the southern half of the unnamed creek's delta. The sediment/soil removed from the north half of the delta will be deposited in this third CDF, which will encompass approximately 29.3 acres with an elevation of 16.3 feet above the current land surface. The berm for this CDF will rise only six feet and lie below the maximum capped elevation of the CDF. A final upland remediation area, marked as "Remedial Cap", is located in the western margin of the project area and consists of a concrete disposal area (CDA) that will be covered by two feet of clean soil. A temporary stormwater ponding area is located in an existing wetland situated between railroad tracks and the western margin of the U. S. Steel Operations Area; current plans indicate that disturbance may extend up to five feet below grade in this area.

The offshore portions of Unnamed Creek Delta and Wire Mill Delta will receive a Remedial Cap or an ENR Thin Cover. Mechanical dredging may be required to remove sediments in shallow areas to accommodate the remedial cap thickness. Sediments adjacent to the shoreline near Morgan Park (within the Wire Mill project component) will be removed to a depth of less than 2 feet. Sediments will be removed using mechanical methods and require the infrastructure to control sediment re-suspension, limit sediment re-deposition, and support the treatment, transport and disposal of dredged sediments. Shallow areas (zero to three feet) adjacent to the excavated area on the Unnamed Creek



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77 WEST JACKSON BOULEVARD

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Delta will receive either: a remedial cap of 1.6 feet of clean soil and topsoil, or ENR Thin Cover, which will measure about 0.5 feet of topsoil. The majority of excavated materials will be confined to an onsite CDF located near-shore, within the sheltered portion of the Unnamed Creek Delta and extending into the estuary as described above (CDF 3).

In order to complete this remediation it is anticipated that numerous borrow areas for sand, clay and other clean fill will be needed. It is anticipated that these areas will be located within the former U. S. Steel Operations area and may require excavation up to 19 feet below grade. Temporary haul roads will connect borrow areas and CDF areas. It is also anticipated that several small temporary stockpile and laydown areas will be necessary. Current plans also anticipate that a barge dock will be required on the shoreline south of the largest CDF area. It is assumed that the barge dock will be suitable for material transport, debris handling and transport activities. The dock construction methods will depend upon the type of structure installed. Typically, associated construction activities include a pile-driving hammer and a jack-up barge equipped with a crane to mount the platform decking onto the foundation. The platform decking could potentially remain in place long-term to provide increased public access to the area.

The final project design has not yet been determined so the precise method of excavation and transport of the contaminated sediments from the excavation area to the CDFs is not yet known. It is likely that additional docking locations, offsite staging areas and barge anchoring systems, jack-up locations will be determined as design plans are finalized. The project is expected to be completed from 2016 through 2018.

Recorded Cultural Resources: A Phase Ia Cultural Resource Survey was completed for the project in May 2015 (see enclosed). That study determined that no known cultural resources were located within the project areas or on the former U. S. Steel property. The steel mill was demolished during the 1980's and no structures remain standing on the property, with the exception of a small sanitary lift station that is no longer in use. Two archeological sites are located within 1 mile of the project area; one is the remains of poured concrete and steel dock (21SL0826) and the other site is a mixed lithic and historic artifact scatter on Spirit Island (21SL1203); neither has been evaluated for the eligibility for listing on the National Register of Historic Places (NRHP). Several architectural properties are located near the project area, including four that are eligible for listing on the NRHP. The eligible properties include the Morgan Park Historic District (SL-DUL-0705), Bardon's Peak East Overlook (SL-DUL-2316), Bardon's Peak West Overlook (SL-DUL-2317), and Bardon's Peak Segment (SL-XXX-002). A review of General Land Office (GLO) map from 1857 determined that several structures may have been situated within the project area before the US Steel facility was constructed.

The Phase Ia study also notes that Spirit Island, located approximately 1,000 feet east of the project area, which has an important role in the Anishinabe migration story, was recently purchased by the Fond du Lac Band of the Lake Superior Chippewa who are preparing a National Register Nomination for the island. The study also observes that the Lake Superior and Mississippi Railroad bisects the project area. Although currently only seasonally used for tourist excursions, this railway was one of the earliest in the region.



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CHICAGO, IL 60604-3590

Preliminary Area of Potential Effect: The USEPA anticipates defining an area of potential effect (APE) for the project comprised of an APE for direct effects that includes all areas that will be physically impacted during construction and an APE for indirect effects that will encompass potential visual impacts to historic resources. The APE for direct effects coincides with the limits of disturbance and encompasses the U. S. Steel property and adjacent offshore areas where remedial work will be conducted for this project. The spatial extent of this preliminary APE for direct effects is shown on Figure 4. The depth of disturbance is variable depending on the remedial activities planned. Disturbance in most areas will be comparatively shallow but may extend to 10 feet deep in some areas where sediment/soils are to be removed and to 19 feet deep in borrow areas. The excavated sediments will be disposed of in CDFs that may rise between two and 16.3 feet above the existing grade with small berms extending to 25 feet above grade. It is anticipated that ground disturbance in these areas will be limited to less than one foot and include impacts from driving heavy equipment across the surface of the area.

The APE for direct effects offshore includes any area in which sediment disturbance (intermittent or temporary) will occur from construction and decommissioning activities. This includes areas to be capped or covered and areas where contaminated sediments will be removed and deposited in CDF locations within the project area. Although much of the lake bottom to be effected by the project will receive between 0.5 and 1.7 feet of fill or topsoil to cap contaminated sediments, approximately two to five feet of sediment will be removed from two areas offshore. In addition, about half of the land that is currently part of the Unnamed Creek Delta will be removed to create a shallow sheltered bay at the mouth of the creek.

As noted above, preliminary analysis of currently available data identified that changes in the post remediation landscape pose the potential to introduce visual changes in the setting of historic properties. The APE for such indirect effects will be defined through the development of a computer generated visibility model integrating existing conditions in the vicinity of the project area, including topography, current development, and vegetative cover as captured through such sources as existing high resolution Light Detection and Ranging (LIDAR) or topographic data, and post-projected conditions within the project boundaries, including the projected final elevations of the upland CDFs and changes in open water. The computer model then will be analyzed to identify projected areas that will have views to the completed project. These areas of projected visibility are proposed as the APE for visual (indirect) effects.

The USEPA has initiated consultation with federally recognized Indian Nations and has met with and received input on the project from several including the Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, Grand Portage Band of Chippewa Indians, Lac du Flambeau Band of Lake Superior Chippewa Indians, Mole Lake Band of Lake Superior Chippewa Indians, Great Lakes Indian Fish & Wildlife Commission, potentially Lac Vieux Desert Band of Lake Superior Chippewa Indians, and the 1854 Treaty Authority.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

The enclosed project review package provides detailed maps of the project and the results of a Phase Ia cultural resource survey completed for the project.

For additional information, please contact me at the address listed above or bryant.michael@epa.gov.

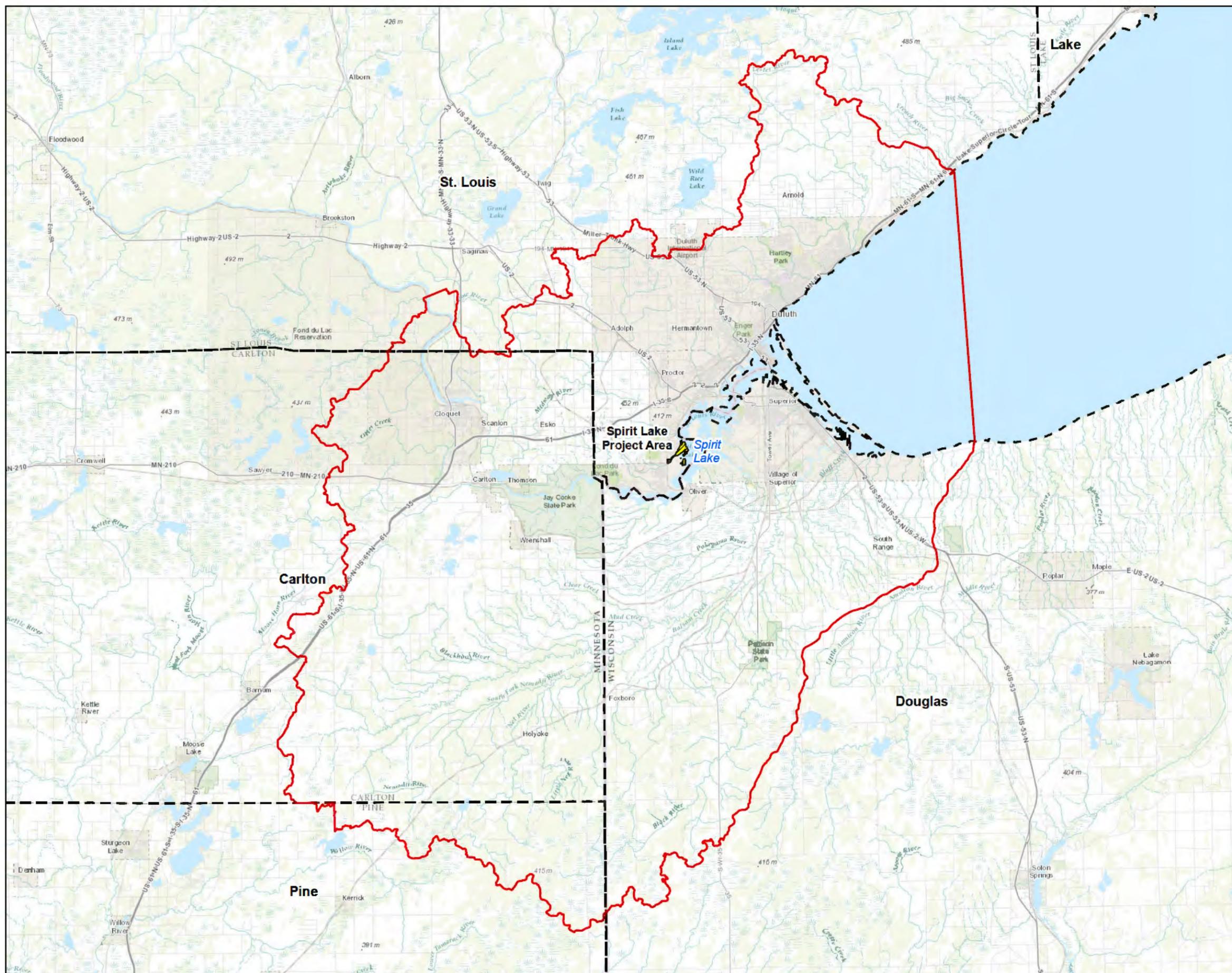
Sincerely,

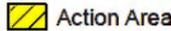
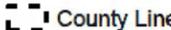
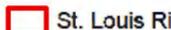
A handwritten signature in black ink that reads "Michael J. Bryant". The signature is written in a cursive style.

Michael Bryant

Enclosures:

- 1) Figures
- 2) Phase Ia Cultural Resource Survey



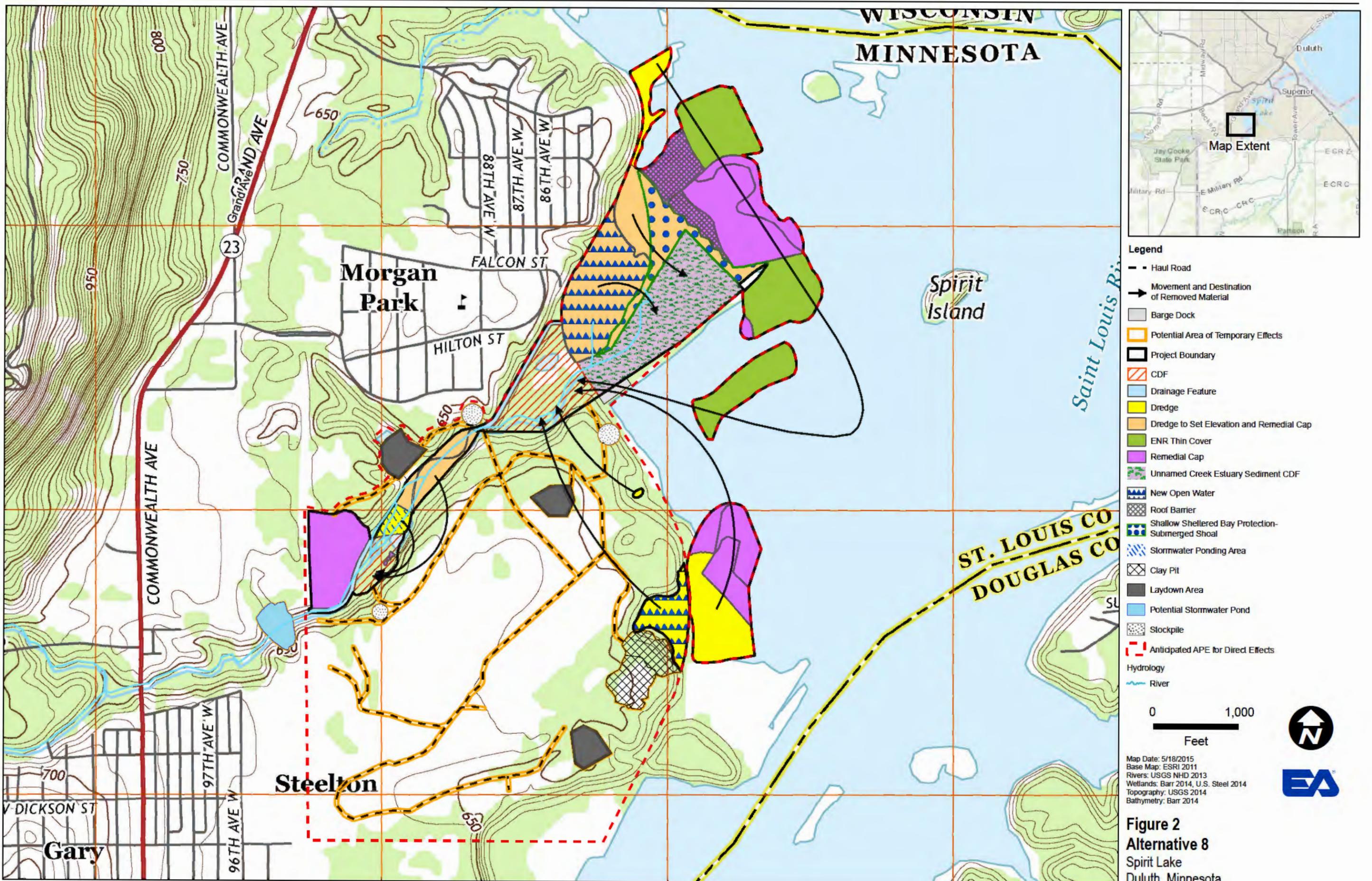
- Legend**
-  Action Area
 -  County Line
 -  St. Louis River AOC



Map Date: 5/1/2015
 Base Map: ESRI 2011
 Other Data: EPA 2014



Figure 1
General Location Map
 Spirit Lake
 Duluth, Minnesota



- Legend**
- - Haul Road
 - ➔ Movement and Destination of Removed Material
 - ▭ Barge Dock
 - ▭ Potential Area of Temporary Effects
 - ▭ Project Boundary
 - ▨ CDF
 - ▭ Drainage Feature
 - ▭ Dredge
 - ▭ Dredge to Set Elevation and Remedial Cap
 - ▭ ENR Thin Cover
 - ▭ Remedial Cap
 - ▨ Unnamed Creek Estuary Sediment CDF
 - ▨ New Open Water
 - ▨ Roof Barrier
 - ▨ Shallow Sheltered Bay Protection-Submerged Shoal
 - ▨ Stormwater Ponding Area
 - ▨ Clay Pit
 - ▨ Laydown Area
 - ▨ Potential Stormwater Pond
 - ▨ Stockpile
 - - Anticipated APE for Direct Effects

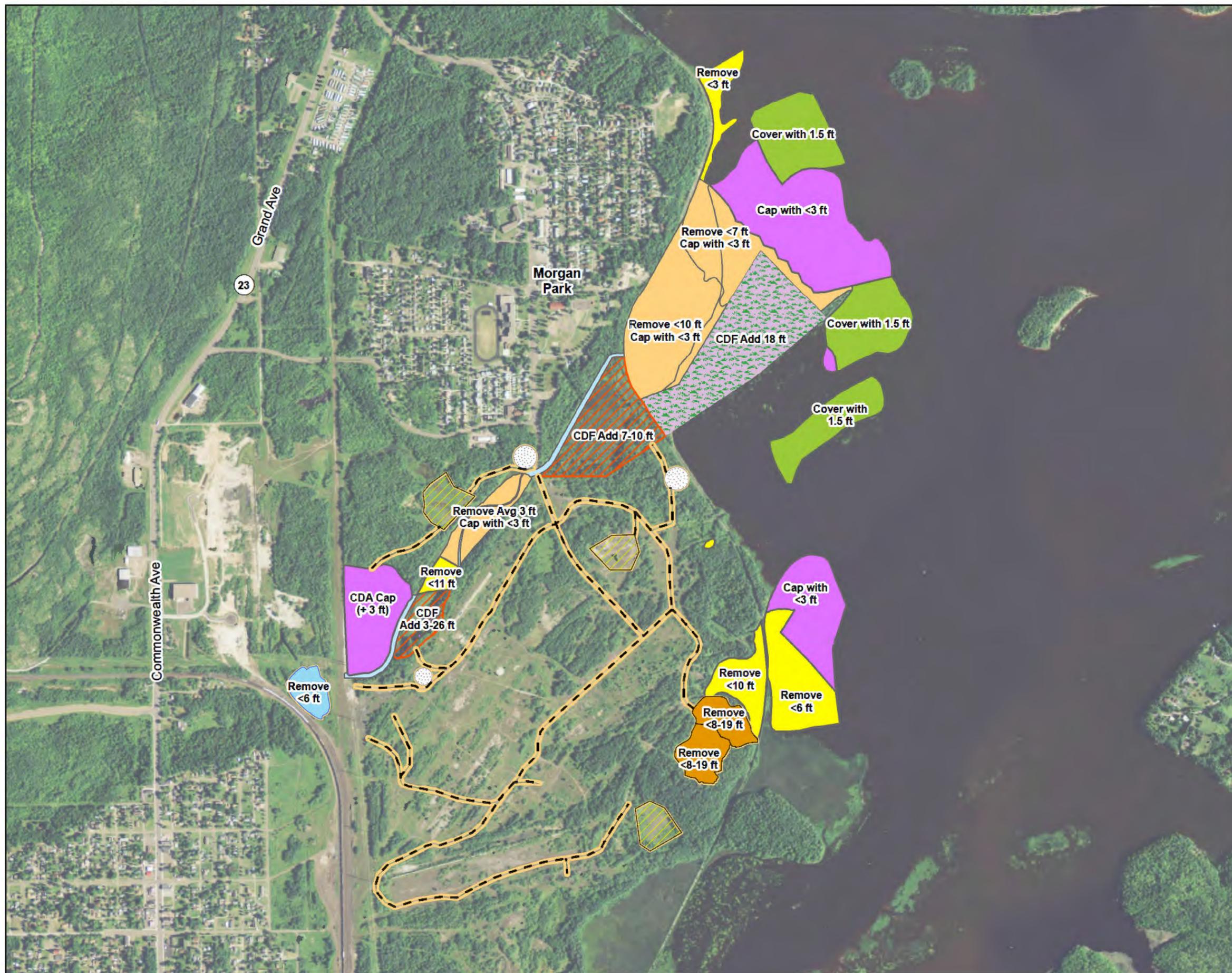
Hydrology
 ~ River

0 1,000
 Feet

Map Date: 5/18/2015
 Base Map: ESRI 2011
 Rivers: USGS NHD 2013
 Wetlands: Barr 2014, U.S. Steel 2014
 Topography: USGS 2014
 Bathymetry: Barr 2014

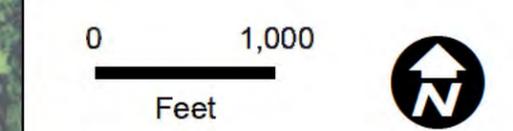


Figure 2
Alternative 8
 Spirit Lake
 Duluth, Minnesota



- Legend**
- Drainage Feature
 - ENR Thin Cover
 - Remedial Cap
 - Remove
 - Remove to Set Elevation and Remedial Cap
 - Upland CDF
 - Unnamed Creek Estuary Sediment CDF
 - Potential Area of Temporary Effects
 - Haul Road
 - Clay Pit
 - Laydown Area
 - Potential Stormwater Pond
 - Stockpile

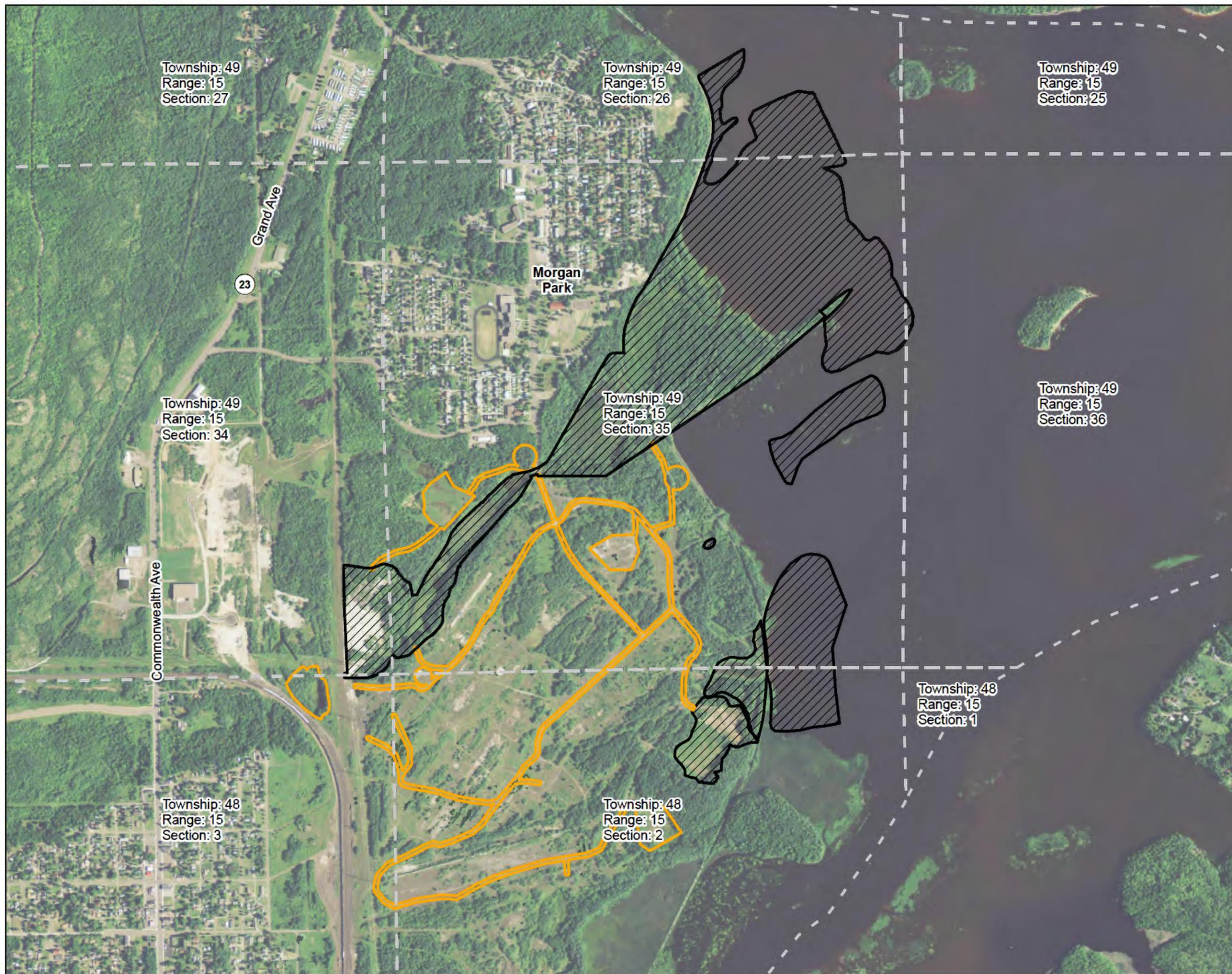
Note:
Horizontal and vertical extents of excavation or dredging and capping or cover are based on evaluations performed in the remediation feasibility study, which may be modified during the upcoming remediation design.



Map Date: 5/19/2015
Base Map: ESRI 2013



FIGURE 3
Area of Disturbance
Spirit Lake
Duluth, Minnesota



Legend

-  Project Boundary
-  Potential Area of Temporary Effects
-  Township, Range, and Section (TRS) Boundary



Map Date: 7/9/2015
 Base Map: ESRI 2013
 TRS Boundaries: USGS 2014



FIGURE 4
Township, Range, and Section Map
 Spirit Lake
 Duluth, Minnesota
 Natural Heritage Information System



Spirit Lake Project

Phase Ia Cultural Resource Survey

St. Louis County, Minnesota

Township 49 N, Range 15 W,
Sections 25-26 and 34-36
and

Township 48 N, Range 15 W,
Sections 2-3 and 10-11

Project No. 250212 Dept. 147

July 7

2015

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Abstract

In March 2015, HDR Engineering, Inc. (HDR) completed a Phase Ia Cultural Resource Survey (Phase Ia) for the Spirit Lake Project (Project) in St. Louis County, Minnesota. EA Engineering, Science, and Technology, Inc. PBC (EA) has been retained by the U.S. Environmental Protection Agency (USEPA) Great Lakes National Program Office (GLNPO) to assist with permitting and design services for the Project. The Project plans to address sediment impacts in and adjacent to Spirit Lake, which is part of the Saint Louis River Area of Concern (AOC).

HDR was contacted by EA to conduct a Phase Ia in the form of a desk-top literature review and provide recommendations for future Project-specific cultural resource identification strategies. For the Project, HDR understands that the USEPA is the lead federal agency responsible for all consultation relating to Section 106 of the National Historic Preservation Act of 1966, as amended, and implementation of regulations found at 36 CFR 800. The Principal Investigator for the Project is Michael Justin, M.S. and Project staff included Erika Eigenberger, M.A., Andrew Kurth, M.S., Pamela Hale, M.A., and Michelle Porwoll, B.A.

As there had been no prior formal definition of the Project's area of potential effects (APE) as required by federal regulations, HDR defined a Study Area, based on the Project's area of probable construction impacts, which will likely encompass the APE once it is developed. In order to adequately address resources that may be affected by the project components, Minnesota SHPO guidelines suggest reviewing a larger study area to establish a context and determine site density as it relates to the proposed project. This larger study area typically includes a one-mile buffer around either project components or the defined project APE. The Study Area is defined as a one-mile buffer surrounding all project components and includes portions of Sections 1-3 and 10-11 in Township 48N, Range 15W and Sections 25-27 and 34-36 in Township 49N, Range 15W. The Project Study Area is within the Lake Superior Shore South archaeological sub-region of the Lake Superior Shore archaeological region.

Staff from HDR conducted background research at the Minnesota State Historic Preservation Office (SHPO) and the Minnesota Historical Society (MHS) in March 2015. The Phase Ia resulted in the identification of two previously recorded archaeological sites, 254 previously recorded architectural properties, including 238 properties within the Morgan Park Historic District, and six previously recorded cultural resource surveys within the Study Area. The two previously recorded archaeological sites have not been evaluated for National Register of Historic Places (NRHP) eligibility. The Morgan Park Historic District (SL-DUL-0705), Bardon's Peak East Overlook (SL-DUL-2316), Bardon's Peak West Overlook (SL-DUL-2317), and the Bardon's Peak Segment (SL-XXX-002) are eligible for the NRHP. The remaining architectural properties have not yet been evaluated.

Because no site specific surveys have been completed to date, it is not possible to determine whether archeological resources will be affected by the Project. Though intact precontact archaeological properties may not be extant because of the disturbance from past industrial activities at the site, remnants of early historic structures may remain. Therefore, HDR recommends an intensive archaeological survey that includes consideration of partially

submerged/submerged resources, a standing structures survey of the APE, once defined, National Register evaluations of archaeological resources and standing structures, and assessments of effects to eligible or listed properties. Recommended mitigation measures should be included in a report of these findings for any eligible properties subject to adverse effects.

In addition, due to the sensitive nature of the Study Area and the potential visual impacts that may result from Project implementation, HDR recommends the development of a visual APE that will specifically address potential effects to Traditional Cultural Properties. Based on proposed Project plans, HDR recommends that a Traditional Cultural Properties APE be based on viewshed and include locations from which the proposed Project may be visible. HDR recommends consultation with interested Native American groups, specifically the Fond Du Lac Band of Lake Superior Chippewa, in addition to the SHPO to address concerns and determine what effects the Project may have in relation to the Spirit Island/Spirit Lake area. Consultation should be implemented early and should be conducted prior to the intensive archaeological and standing structures survey.

Spirit Lake Project

Phase Ia Cultural Resource Survey

St. Louis County, Minnesota

Township 49 N, Range 15 W, Sections 25-26 and 34-36 and
Township 48 N, Range 15 W, Sections 2-3 and 10-11

Project No. 250212 Dept. 147

Prepared For:



EA Engineering, Science, and Technology, Inc. PBC
225 Schilling Circle
Hunt Valley, Maryland 21031

Prepared by:



HDR
701 Xenia Avenue South, Suite 600
Minneapolis, Minnesota 55416

Principal Investigator:
Michael Justin, M.S.

Report Author:
Erika Eigenberger, M.A.

July 7, 2015

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Contents

Abstract	1
1.0 Introduction	1
2.0 Environmental Context	7
2.1 Environmental History	7
2.2 Conditions of the Study Area	8
3.0 Historical and Cultural Context	9
3.1 Cultural Context.....	9
3.1.1 Precontact Cultural Contexts	9
3.1.2 Protohistoric/Early Historic Context.....	10
3.1.3 Historic Context	12
3.2 Background Research	14
3.2.1 Previous Archaeological Surveys.....	14
3.2.2 Previously Recorded Archaeological Sites.....	15
3.2.3 Previously Recorded Architectural Properties	15
3.2.4 Historic Map Review	15
4.0 Areas of Special Consideration	19
4.1 Spirit Island	19
4.2 Morgan Park Historic District	21
4.3 The Lake Superior and Mississippi Railroad.....	24
5.0 Implications for the Project	27
5.1 Archaeological Site Potential.....	27
5.1.1 Prehistoric Site Potential	27
5.1.2 Historic Site Potential.....	27
5.2 Architectural Property Site Potential	28
5.3 Traditional Cultural Property Site Potential	29
6.0 Recommendations	31
6.1 Recommendations for Additional Phase I Intensive Survey	31
6.1.1 Geomorphological Assessment.....	31
6.1.2 Ethnographic/Traditional Cultural Properties Study.....	31
6.1.3 Phase I Archaeological Survey	32

6.1.4 Underwater Archaeological Survey	32
6.1.5 Intensive Architectural Survey.....	33
7.0 References.....	35

Tables

Table 1. Previous Archaeological Surveys within the Study Area.....	14
Table 2. Previously Identified Archaeological Sites with the Study Area.....	15
Table 3. Previously Identified Architectural Properties with the Study Area	16
Table 4. General Land Office Resources within the Study Area	17

Figures

Figure 1. Project Overview	2
Figure 2. Study Area and Project Components - Topographic Map.....	4
Figure 3. Study Area and Project Components - Aerial Map	5
Figure 4. Previously Recorded Resources in the Study Area	6
Figure 5. 1887 General Land Office Map Showing the Study Area.....	18
Figure 6. Spirit Island Detail Map	20
Figure 7. Morgan Park Historic District Detail Map	23
Figure 8. Lake Superior and Mississippi Railroad Overview	25

1.0 Introduction

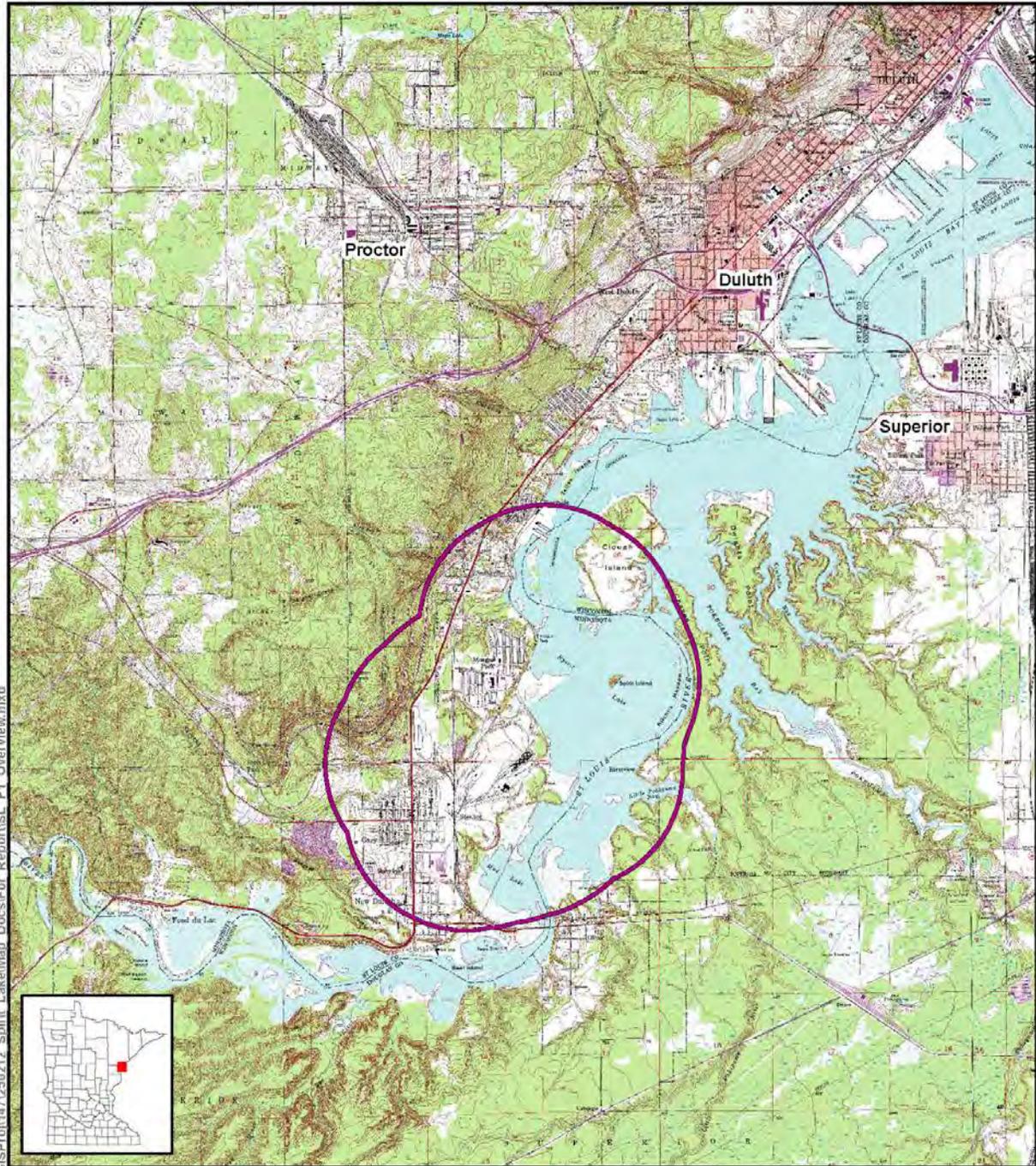
In March 2015, HDR Engineering, Inc. (HDR) completed a Phase Ia Literature Search (Phase Ia) for the Spirit Lake Project (Project) in St. Louis County, Minnesota (Figure 1). EA Engineering, Science, and Technology, Inc. PBC (EA) has been retained by the U. S. Environmental Protection Agency (USEPA) Great Lakes National Program Office (GLNPO) to assist with permitting and design services for the Project within the St. Louis River Area of Concern (AOC). As part of the Great Lakes Legacy Act, the GLNPO and USEPA are implementing contaminated sediment cleanups, focusing on sediment remediation at known areas of concern. These areas include locations that have experienced severe environmental degradation as a result of past pollution or industrial activity.

Project components are on the grounds of the former U. S. Steel Duluth Works site. This area included a fully integrated steel manufacturing plant that was constructed in 1907. In 1979 the MPCA was informed of the intent to close the plant and by the end of 1988 many of the buildings on site were demolished. The site was placed on the State of Minnesota's Superfund listing in 1984 (MPCA 2015). Based on the historic use of the area, including demolition of all structures at the facility, it is assumed that considerable filling and grading has occurred on-site and surface/subsurface disturbance is extensive.

HDR was contracted by EA to recommend the Project's Area of Potential Effects (APE), conduct a desktop Phase Ia cultural resources survey, and provide recommendations for future Project-specific cultural resource identification strategies. However, HDR understands that the U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for all consultation relating to Section 106 of the National Historic Preservation Act of 1966, as amended, and implementation of regulations found at 36 CFR 800, including formally establishing an APE in consultation with SHPO (36 CFR Part 800.4(a)(1)).

HDR was provided shapefiles and project information from EA on February 23, 2015, showing individual project components and the proposed action area. Project components include areas such as laydown areas, confined disposal facilities, stockpile areas, borrow areas, ponding areas, haul roads, etc.

In order to adequately address resources that may be affected by the project components, Minnesota SHPO guidelines suggest reviewing a larger study area to establish a context and determine site density as it relates to the proposed project (Anfinson 2001). This larger study area typically includes a one-mile buffer around either project components or the defined project APE. As the Project APE has not been formally designated by a federal agency in consultation with SHPO, HDR defined a Study Area, based on the Project's area of probable construction impacts, which will inform the development of the APE. This Study Area incorporates a one-mile



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Project Overview

 Study Area

0 0.5 1 2 Miles

Spirit Lake Project
St. Louis County, MN

Figure 1. Project Overview

buffer surrounding all project components and includes portions of Sections 1-3 and 10-11 in Township 48N, Range 15W and Sections 25-27 and 34-36 in Township 49N, Range 15W (Figures 2 and 3).

Staff from HDR conducted background research at the Minnesota State Historic Preservation Office (SHPO) and the Minnesota Historical Society (MHS) in March 2015. Research gathered included previous cultural resource surveys, previously identified archaeological sites, and previously identified historic properties. General Land Office (GLO) maps from the nineteenth century were also examined online at <http://www.gis.state.mn.us/GLO/Index.htm>.

Two previously recorded archaeological sites, 254 previously recorded architectural properties, including 238 properties within the Morgan Park Historic District, and six previously conducted cultural resource surveys are within the Study Area (which includes one-mile from Project components). The two previously recorded archaeological sites have not yet been evaluated for National Register of Historic Places (NRHP) as there have been no requests to date to evaluate the NRHP eligibility of these sites. The Morgan Park Historic District (SL-DUL-0705), Bardon's Peak East Overlook (SL-DUL-2316), Bardon's Peak West Overlook (SL-DUL-2317), and the Bardon's Peak Segment (SL-XXX-002) are eligible for the NRHP. The remaining architectural properties within one-mile of project components have not yet been evaluated.

At this time, none of the previously recorded archaeological sites or architectural properties intersect proposed project components. In addition, none of the previously recorded archeological surveys intersect proposed project components and one previously recorded archaeological survey (SL-14-06) intersects the area of direct effects.

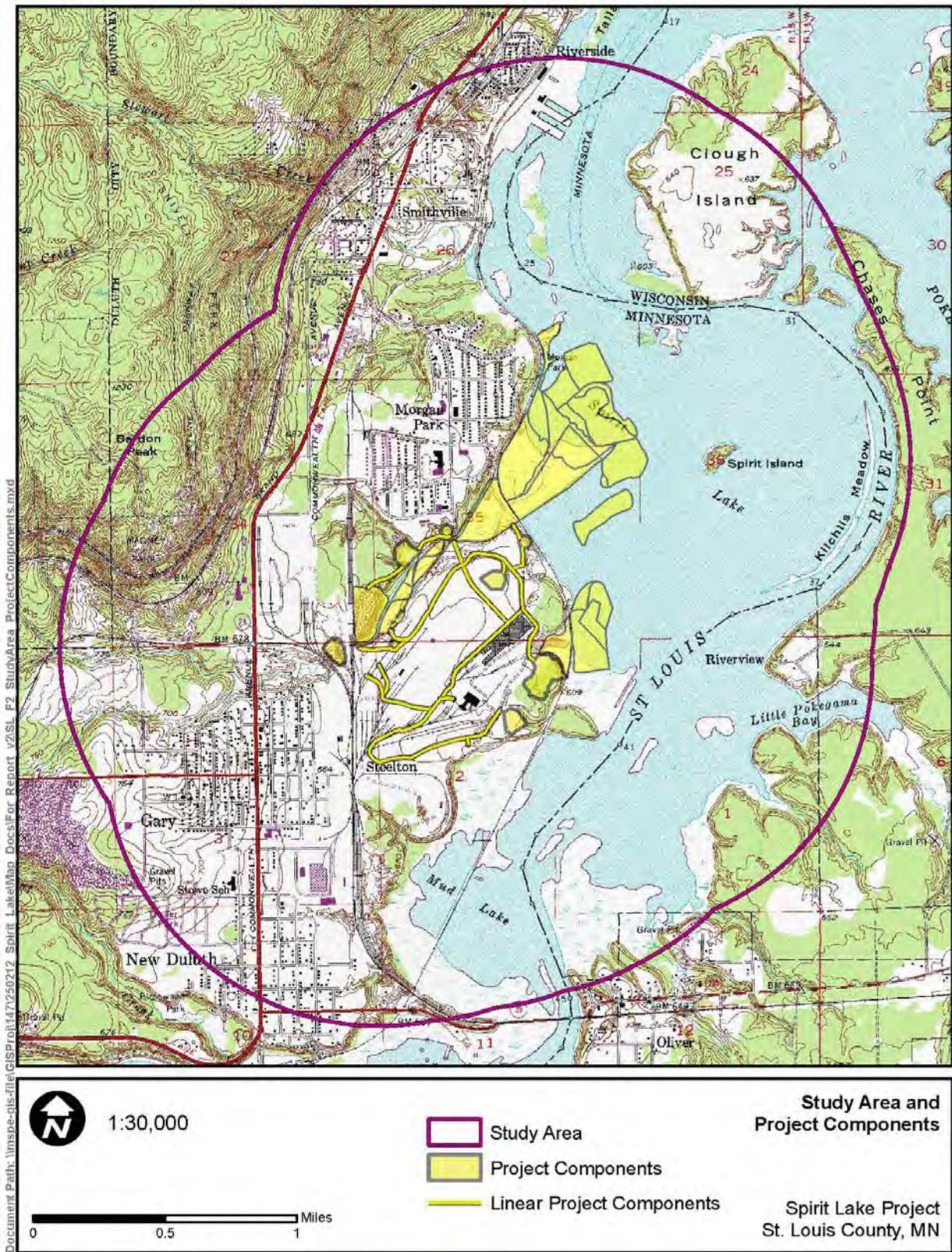


Figure 2. Study Area and Project Components - Topographic Map

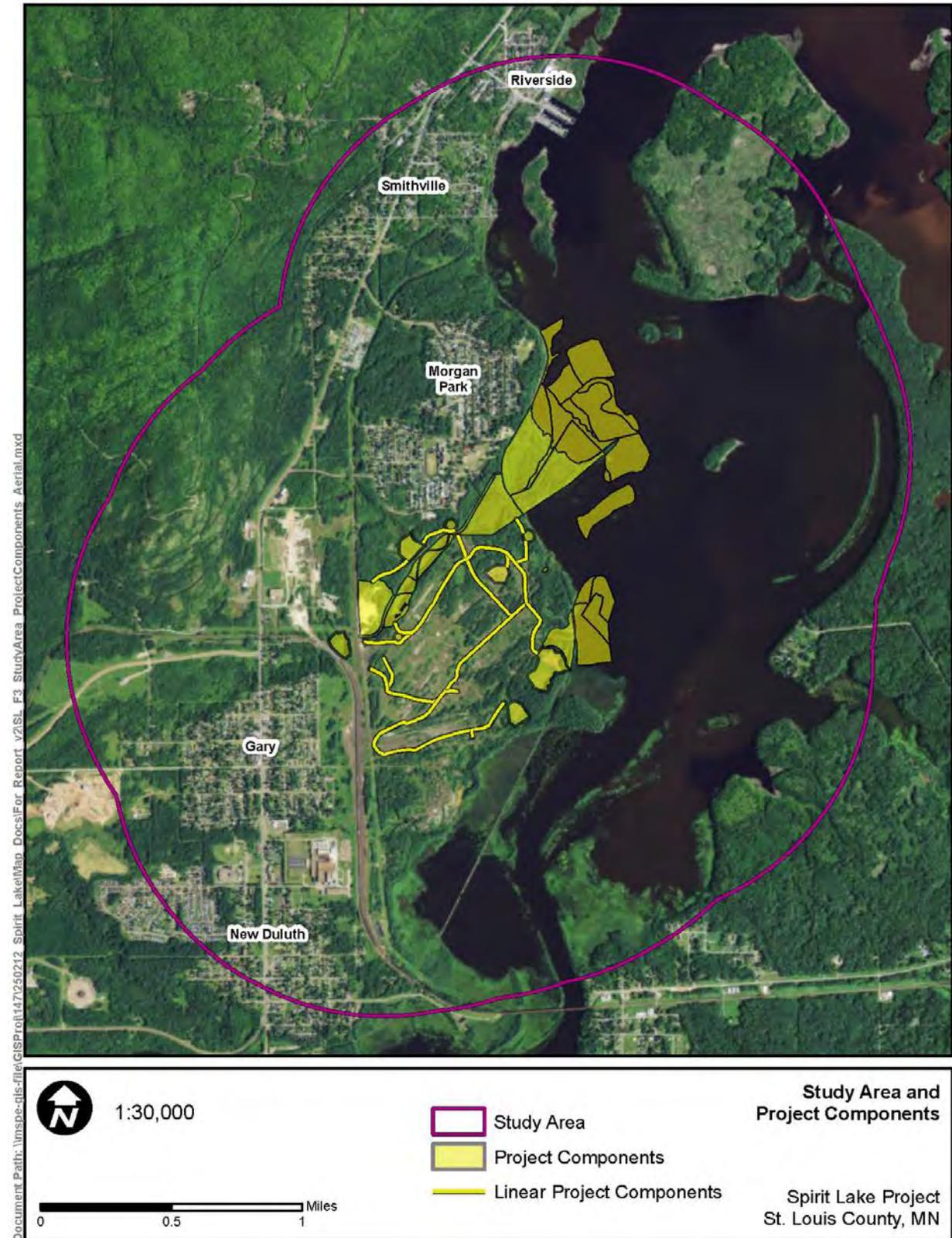


Figure 3. Study Area and Project Components - Aerial Map



Figure 4. Previously Recorded Resources in the Study Area

2.0 Environmental Context

This section presents a discussion of the regional physiography along with the current conditions of the Study Area.

2.1 Environmental History

The Project is located within the Lake Superior Shore South Archaeological Sub-region of the Lake Superior Shore Archaeological Region. The following environmental history of this region is based on information contained in an overview entitled *Minnesota's Environment and Native American Culture History* by Gibbon, Johnson, and Hobbs (2002).

The Lake Superior Shore Region includes the eastern edges of Carlton, Cook, Lake, and St. Louis counties and also extends along Lake Superior into Ontario as far as Thunder Bay. The shoreline of Lake Superior contains rocky cliffs with numerous small bays and points. Precambrian bedrock exposures are abundant and waterfalls are common and formed as a result of short streams and rivers descending the 900-1500 foot drop down the eastern slope of the highland to Lake Superior. The Study Area is within the southern tip of the region, which includes the flat plain of Glacial Lake Duluth, drained by the St. Louis and Nemadji rivers. Soils in the Lake Superior Shore Region consist of fine to coarse textured forest soils scattered between rock outcrops and fine silty and clayey soils on the glacial lake plain in the southwest portion of the region. Copper nuggets can be found throughout the Lake Superior Shore Region. Soil complexes within the Study Area include Urban Land-Cuttre-Rock Outcrop, Bowstring and Fluvaquents, Cuttre, Miskoaki-Cuttre, Miskoaki-Fluvaquents, Rock Outcrop-Mesaba-Barto, and Udalfs-Eutrudepts (USDA Web Soil Series).

Due to the "lake effect" the climate of the Lake Superior Shore Region is more moderate than adjacent regions to the west. The frost-free season ranges from 120 to 140 days. High temperatures in July are generally 75 degrees Fahrenheit (F) or less and highs in January range from 20 to 24 degrees F. During very cold winters, Lake Superior occasionally freezes. Annual precipitation in the Lake Superior Shore Region averages between 29 and 30 inches.

Native vegetation in the Lake Superior Region was dominated by white pine with inclusions of birch and aspen. Game animal populations were not dense during the Late Holocene, although some deer, moose, caribou, bear, and beaver were present. Waterfowl were seasonally found along the shore and Brown trout could be found in major streams below cataracts and large fish populations were present in Lake Superior. Wild rice was not abundant.

Recorded archaeological remains are scarce in the Lake Superior Shore Region. Early Prehistoric sites should be associated with Lake Duluth and Lake Minong beaches, however, these beaches are submerged in Minnesota and sites may either be buried or destroyed. Archaic remains consist mostly of a few copper tools and sites are generally associated with major waterways. Woodland ceramics are rare and mounds are absent along the Lake Superior shoreline from Duluth to Thunder Bay. It is likely that Woodland use of the shoreline was limited and settlement was instead focused along inland lakes and waterways. If Woodland base camps are present, they may be concentrated in the estuary of the St. Louis River at Duluth a portion of which is within the Study Area. As with the Northern Bog and Border Lakes Regions,

the Assiniboine and Cree probably controlled much of the Lake Superior Shore Region before being displaced by the Ojibwe in ca. 1700. French missionaries were in the region in the mid-1600s and French trading posts were established soon after, with Grand Portage serving as a major regional center. Both English and American traders re-used many of the old French trading posts and travel routes, and also constructed new posts including one near present-day Duluth, Minnesota.

2.2 Conditions of the Study Area

A field visit was not completed as part of the Phase Ia. All observations regarding the current conditions of the Study Area are based on desktop analysis and available background material and aerial and topographic map review.

A large portion of the Study Area is urban and/or developed and includes portions of Riverside, and New Duluth, as well as the entirety of Smithville, Gary, and Moran Park (Figures 2 and 3). Other development includes numerous roadways, including Highway 23 (Grand Avenue), rail yards and rail lines associated with the Canadian National Railway and the Lake Superior and Mississippi Railroad, and industrial and commercial buildings scattered throughout.

Project components within the Study Area are on the grounds of the former U. S. Steel Duluth Works site. This area included a fully integrated steel manufacturing plant that was constructed in 1907. Plant processes included coke production, primary rolling and roughing, hot and cold finishing, and galvanizing. Production began in 1916 and continued through 1981. In 1979 the MPCA was informed of the intent to close the plant and by the end of 1988 many of the buildings on site were demolished. The site was placed on the State of Minnesota's Superfund listing in 1984 (MPCA 2015). Based on information provided by EA, HDR understands that construction, operation, and demolition of the U. S. Steel Plant has extensively altered the immediate environment (filling, grading, deposition of sediment, etc.). In addition, runoff from industrial activities and natural deposition of sediment from Unnamed Creek on the Steel Creek delta and deposition at Wire Mill delta has resulted in burial of the historical lake bottom.

Water features in the Study Area include multiple small drainages, Steward Creek and U. S. Steel Creek, Mud Lake and Spirit Lakes, as well as the St. Louis River estuary and multiple adjacent marsh and wetland areas. Multiple islands are within the Study Area, including Spirit Island located east of Morgan Park approximately 1,700 feet offshore.

The northwestern portion of the Study Area includes a section of Magney-Snively Natural Area, which includes a portion of Skyline Parkway, the Superior Hiking Trail, the Duluth Winnipeg and Pacific (DWP) Trail, and the Willard Munger State Trail (Alex Laveau Memorial Trail).

3.0 Historical and Cultural Context

3.1 Cultural Context

3.1.1 Precontact Cultural Contexts

The following summaries of cultural contexts are based partially on information contained in a series of statewide historic contexts developed by the Minnesota SHPO (Dobbs 1990a; Dobbs 1990b; SHPO 1993), and an overview entitled *Minnesota's Environment and Native American Culture History* by Gibbon, Johnson, and Hobbs (2002).

Paleoindian Tradition (9500-6000 B.C.)

The earliest human inhabitants of Minnesota entered the area about 11,000 years ago as the glacial front was pushed out of northern Minnesota. These peoples, comprising the Paleoindian Tradition, are believed to be migratory groups of mobile hunter-gatherers that followed herds of large game animals such as bison, woodland caribou, and mastodon into the tundra and open pine and oak forests that characterized Minnesota as the glaciers retreated. There is little archeological evidence of Paleoindian inhabitants in Minnesota, as they did not generate large artifact deposits. Cultural materials left by these people are often deeply buried underneath more recent sediment. Archaeological finds from this period consist mainly of isolated discoveries of large and distinct projectile points that are characteristic of this tradition. These points are divided into the Fluted Point Pattern (Clovis and Folsom points) and the non-fluted Lanceolate Point Pattern (Plano). Other tool types associated with the Paleoindian tradition include bifacially flaked knives, simple choppers, and large scrapers for processing kills.

Archaic Tradition (6000-500 B.C.)

As Minnesota became warmer and drier, expanses of prairie began to displace the previous forested land. The melting ice exposed new land surfaces with extensive lakes and large, swift rivers quite unlike any in present-day Minnesota. The landscape was interspersed with large lakes and swiftly flowing rivers fed by the glacial run-off.

The Pleistocene megafauna died out and the human inhabitants had to adapt to the altered landscape. As a result, new tool types and means of subsistence associated with the Archaic Tradition were developed. The Archaic Tradition is distinguished from the Paleoindian period by an increased diversity in tool types, the raw materials they were made from, and the exploitation of a larger variety of animal and plant communities. This diversity has been attributed to the adaptation of Archaic peoples to local resources and a relative abundance of animal and plant resources. The archaeological record of the Archaic Tradition displays evidence of the beginnings of cultural variation. Notched and stemmed projectile points, along with groundstone tools and chipped-stone scrapers, knives, punches, and drills, are found in the Archaic toolkit. About 7,000 years ago, copper implements appeared and continued to about 3,500 years ago.

Four distinct Archaic contexts have been identified in Minnesota including the Shield Archaic, Lake-Forest Archaic, Prairie Archaic, and Eastern Archaic. Site locations during this time period are generally tied to locations near water. These locations would have been occupied for longer periods and would show larger amounts of artifact deposition. However, small encampments can be found scattered throughout the environment. These types of sites often represent an

area of specific resource extraction or a location that takes advantage of a seasonal event such as a bison kill site, a flora gathering site, or a waterfowl breeding site. Artifact deposition at these locations is generally very minimal.

Woodland Tradition (500 B.C.-A.D. 1650)

Beginning about 3,000 years ago, Minnesota's climate began to stabilize and resembled the climate that exists today. Expanses of prairie were found in the western portion of the state. A swath of oak savanna, stretching from the northwest to the southeast, separated the prairie from the pine forests of the arrowhead region.

Woodland period cultures exhibit evidence of an increasingly more sedentary lifestyle. Domestication of plants, ceramic technology, long-term re-occurring occupation of seasonal village sites, and mound construction emerged in the Woodland period. These innovations were not adopted in all areas of the state at the same time or necessarily together. Because they are not as deeply buried, Woodland sites are encountered more often than Paleoindian or Archaic sites. Woodland sites can also be more definitively attributed to a tradition based on ceramics and distinct tool types. Known ceramic traditions have allowed the Woodland period to be divided into an Early, Middle, and Late chronological framework. In Minnesota, the Woodland tradition is also divided into an earlier Initial Woodland period (including the Early and Middle periods, ca. 500 B.C. - AD 500) and a later Terminal Woodland period (including the Late period, ca. AD 500-1650).

Regional differences in the Woodland period resulted in the identification of distinct regional complexes such as such as Howard Lake, Fox Lake, Malmo, and Laurel. Within central Minnesota, a Transitional Woodland period, from 500 to 1000 A.D., has been defined and is associated with St. Croix and Onamia ceramics. Within Northern Minnesota, the geographic distribution of the distinctive ceramics and burial practices of the period have allowed archaeologists to identify archaeological cultures such as Kathio, Blackduck, and Psinomani. In northern Minnesota, it was Terminal Woodland people who met the first Europeans to visit the state in the middle of the seventeenth-century (Gibbon, Johnson, and Hobbs, 2002).

3.1.2 Protohistoric/Early Historic Context

The following summaries of protohistoric/early historic contexts relevant to the Study Area are based primarily on information found in the Minnesota Historical Society's *History of Minnesota's Lake Superior* (2010), *Duluth-Superior Harbor Cultural Resources Study* by Stephen Hull (1976), *Ojibwe in Minnesota* by Anton Treuer (2010), and *The Sioux* by Guy Gibbon (2003).

Protohistoric/Early Historic (1500s–1600s)

The precontact history of Lake Superior in Minnesota is poorly understood due to a scarcity of archaeological sites, and history during the early contact period is largely based on evidence from adjacent areas and accounts from early explorers.

It is during this period that the cultures in northern Minnesota shifted from mobile foraging to a pattern of local collecting. Native groups in northern Minnesota settled in villages or seasonal camps near waterways and lakes, hunted large and small game, and exploited seasonal plant resources including wild rice and maple sugar. Subsistence also focused largely on fishing and

hunting waterfowl from spring to fall, and woodland game of all sizes. The intensive harvest of wild rice, fishing, and seasonal incursions into areas for big game hunting, along with increased reliance on food storage and the use of maize, squash, and tobacco were an established part of native lifeways by the seventeenth century. The period is marked by larger settlements, population growth, and the organization and development of larger social organizations.

During the protohistoric period, the Cree likely controlled much of the region on the western shore of Lake Superior. Dakota (Sioux) were present to the south, and Ojibwe lived to the north. As the Ojibwe slowly expanded into the region, the Dakota and Cree moved west. The initial population movement appears to have been in response to other groups moving in the Midwest, and to a change in climate which saw colder winters that affected the nature and availability of food resources. By the end of this period, the Ojibwe were becoming the primary inhabitants of northern Minnesota, and the fur trade was the major influence on the region.

Fur Trade/Contact (1600s-1858)

By the 1620s, the first European goods may have reached the upper Midwest through trade with the Ottawa and Huron. The first fur trade contact in this area occurred between 1659 and 1660 when two French explorers named Sieur des Groseilliers and Sieur de Radisson entered present day Minnesota in search of natural resources. Increasing numbers of explorers and fur traders would reach the area in the years following first contact. This time period is recognized by the establishment, operation, and adaptation of gathering mammals of a fur bearing nature in exchange for other goods and materials. This exchange linked the Northern Plains to a worldwide economic and political system. By the late 1670's a trade agreement had been established between merchants in Quebec and Montreal with the Dakota. This relationship initiated the French period of exploration and occupation in Minnesota, which lasted into the early 1760's. By the mid seventeenth century, French explorers had mapped out the major watersheds and portages in the region. The first documented portage at the mouth of the St. Louis River was made in 1679 by Daniel Greysolon Sieur du Lhut, and the area became a focal point for the fur trade through the historic period. During this period of French influence much of the state and the surrounding region were occupied with an extensive network of forts and fur trading posts including along Grand Portage and the Duluth harbor area.

The 1760's following the Treaty of Paris brought a half-century period of British activity in northern Minnesota and the fur trade industry continued to be a primary influence on socio-economic and settlement patterns in the region. At the end of the American Revolutionary war, the British conceded half of the Great Lakes waterway to the United States; however, British traders continued to operate freely. In 1793, the North West Company commenced construction on Fort St. Louis, a settlement that served as an economic center in the harbor region. Local fur traders no longer needed to travel north into Canada and many established residency at or near the fort. Other competing companies including John Jacob Astor's American Fur Company established settlements in the region. British influence, and the influence of the North West Company, came to an end in 1815 when the United States passed a law prohibiting foreign trade.

Native settlement patterns in northern Minnesota were greatly affected by involvement and interactions with the French and British. Many native peoples involved in the fur trade industry pushed westward across the Great Lakes in search of new trapping grounds, and depopulation

of native peoples occurred in some areas due to introduced diseases and warfare. The Native American populations in Minnesota also began to switch from hunting for subsistence to hunting for trade, and Native American manufacturing materials began to be replaced by European materials.

A gradual movement of the Ojibwe into northern Minnesota coincided with the movement of Dakota (Sioux) into southern Minnesota. Groups of Sioux had expanded westward by the time the Ojibwe arrived in the seventeenth century; however, the events of the eighteenth century accelerated their emigration from northwest Minnesota. Increased European settlement in the eastern Great Lakes and competition among Native American tribes for access to European trade goods provided an impetus for large population shifts. Groups of Ojibwe living in the central and eastern Great Lakes became embroiled in a conflict with the Iroquois over land and fur trade resources. Seeking refuge from the conflict and in search of new trapping grounds, the Ojibwe moved west into present-day Wisconsin and Minnesota, into areas previously inhabited by groups of the Sioux. In 1736, hostilities erupted between the Ojibwe and the Sioux when they became embroiled in a conflict involving French, Cree, and Assiniboine near Lake of the Woods. An intense territorial conflict between the Sioux and Ojibwe continued for several decades. By 1770, the Ojibwe had established control of the lakes and forests of northern Minnesota and worked extensively in the fur trade.

After a peace treaty with the British in 1763, the United States gained legal possession of the state. The Ojibwe ceded territory inland from Lake Superior in 1837 and shoreline territory in 1842. In 1837 the Dakota, Winnebago, and Ojibwe signed treaties that opened up east-central Minnesota to logging and settlement and by 1849 Minnesota had become organized as a Territory. In Minnesota, the fur industry declined by the mid nineteenth century due to decreased demand and resources. In 1847, the remnants of The American Fur Company withdrew from the area, but individually licensed traders continued to operate in the area and trade with native peoples. Eventually, economics shifted from trading in furs to other industries. Following the creation of the Sault St. Marie canal in 1855 and the establishment of Minnesota as a state in 1858, an influx Euro-American settlement brought a wave of new towns, cities, and non-fur trade-related enterprises.

3.1.3 Historic Context

The following historic context relevant to the Study Area are based primarily on information found in *Lost Duluth: Landmarks, Industries, Buildings, Homes, and the Neighborhoods in Which They Stood* (Dierckins and Norton 2012), and *This is Duluth* (McDonald 1950).

Duluth, Minnesota and the Surrounding Area (1850s-1930s)

Prior to European settlement, the area around present day Duluth, Minnesota and Superior, Wisconsin was known as Fond du Lac (French for “bottom of the lake”). The first non-Native structure in the area now known as Duluth was a trading post on the southern end of Minnesota Point, constructed by George Stuntz in 1850. In 1854, the Treaty of La Pointe opened land north of Lake Superior for American and Euro-American settlement and by 1856, the area began developing. Between 1856 and 1859 eleven townships were established from Fond du Lac in the west to Belville in the east. Around this time, approximately 1,500 people lived in the area. In 1857 a financial panic struck and many of the early settlers left before the decade ended.

During the 1860s few settlers remained in the Duluth area and many who did remain during the financial crisis left to fight for the Union during the Civil War. In 1860 the three largest townships, Duluth, Oneota, and Fond du Lac, included only 353 people. At this time, no deliveries were made to the Minnesota townships and all goods were purchased in Superior. Early pioneers were left with little to eat, other than the fish that Lake Superior provided. As such, early residents called themselves the “Fish Eaters.” By the mid-1860s, an ambitious plan from Jay Cooke was in motion to construct the Northern Pacific Railroad from the Duluth area to Seattle’s Puget Sound and the Lake Superior and Mississippi Railroad from St. Paul to the Duluth area. News of the railroad brought prosperity, manpower, and materials. By 1869, the Lake Superior and Mississippi Railroad approached Duluth and the population reached nearly 3,000. The inhabitants who stuck out the financial crisis of 1857 would call these new comers “Sixty-Niners.”

On March 6, 1870, Duluth became a city with a population of 3,130. At that time, approximately sixty percent of the population consisted of foreign laborers, with most having ties to western and northern Europe. Scandinavians comprised nearly half of the workforce with Irish, Germans, and Canadians of French heritage making up most of the rest. Approximately forty percent of the population was comprised of American-born professionals and businessmen. Most of these citizens hailed originally from New England, Maryland, Michigan, Illinois, Wisconsin, Ohio, and Pennsylvania.

In 1871, the initial cut of the Duluth Ship Canal was completed and Duluth now boasted a railroad, canal, and safe port. Although the canal brought in a welcome source of revenue, citizens on the east side of the canal were not happy, as the canal essentially cut them off from the rest of Duluth and created an island community. It would not be until 1904 before this issue was addressed and the Park Point residents would have a connection to the mainland. Between 1904 and 1905, the suspended car or gondola-style Aerial Lift Bridge was constructed to ferry passengers from one side of the canal to the other.

These improvements and advancements positioned the city to become a major center of commerce and businesses and warehouses began establishing themselves along the waterfront. Unfortunately, in 1873 a storm claimed the entirety of Freemont Township when the St. Louis River swelled, the old canal shifted, and Freemont Island was broken apart. Even more devastating to the early community, later that year, Jay Cooke went bankrupt, sending the nation in the “Panic of 1873.” Unfortunately, Duluth was hit hardest and with no money coming in, progress in the city stopped. By 1877, Duluth lost its city charter and areas and boundaries reverted back to independent townships.

The 1880s marked a turn around, thanks in large part to the ship canal and the railroads and Duluth was turned into a major grain center. Flour mills and grain elevators popped up on Rice’s Point and the lumber industry and the construction of lumber mills also gained steam. During this time of prosperity, the Village of Duluth continued to pay off debts and in 1887 Duluth was once again a city. The expansion of the city continued through the 1890s and the area was gradually becoming an industrial center.

The western neighborhoods of Duluth were platted in the 1880s and 1890s, but remained sparsely populated until U. S. Steel constructed Morgan Park in 1913. This planned community

provided housing for the steel mill workers, creating a draw for skilled laborers, managers, and foremen. Unskilled laborers, recent immigrants, and African Americans largely populated New Duluth and also Gary. During World War I, the McDougall-Duluth Shipbuilding Company constructed naval vessels for the United States government, developing the community of Riverside, between Morgan Park and West Duluth. By 1918, approximately 1,000 people called Riverside home and many more shipyard workers also moved to nearby Smithville.

By the 1920s the majority of Duluth’s neighborhoods were established. During the 1920s and 1930s, the population remained much the same. Duluth would experience its population peak in the 1960s at nearly 104,000. Today, approximately 85,000 people call the City of Duluth home.

3.2 Background Research

In March 2015, HDR staff conducted a site file search at MHS and SHPO in St. Paul, Minnesota. This site file search focused on previously identified archaeological sites and surveys within the Project Study Area. In order to adequately address cultural resources that may be affected by the project components, Minnesota SHPO guidelines suggest reviewing a larger study area to establish a context and determine site density as it relates to the proposed project. This larger study area typically includes a one-mile buffer around either project components or the defined project APE. In addition to the background research conducted at MHS and SHPO, HDR reviewed GLO maps accessed online through the GLO Historic Map Retrieval System at <http://www.mngeo.state.mn.us/glo/index.htm>.

3.2.1 Previous Archaeological Surveys

The cultural resources records search revealed that six previous archaeological surveys have been conducted within the Study Area (Table 1 and Figure 4). These surveys included Phase Ia literature searches and Phase I surveys for road improvement projects, airport expansions, trail projects, and National Register evaluations of Duluth Harbor resources.

Table 1. Previous Archaeological Surveys within the Study Area

Report Number	Date	Report Title	Author(s)
MULT-12-16	2012	Carlton and St. Louis Counties: Willard Munger State Trail – Thomson (12-TR-WM-2)	Timothy Tumberg
SL-08-12*	2008	Sky Harbor Airport: Cultural Resource Review Task 1 – Literature Search	Susan C. Mulholland and Stephen L. Mulholland
SL-14-06	2014	Archaeological Phase I Reconnaissance Survey for the Canadian National Rail Line in Duluth and Midway Township, St. Louis County, Minnesota	Susan C. Mulholland and Stephen L. Mulholland
SL-96-20	1996	A National Register Evaluation of Underwater and Water’s-Edge Cultural Resources Duluth Harbor, Minnesota	Jeanne A. Ward and John P. McCarthy
SL-97-25	1997	A National Register Evaluation of Underwater and Water’s-Edge Cultural Resources Duluth Harbor, Minnesota	Jeanne A. Ward and John P. McCarthy
THY-93-01	1992	The Minnesota Trunk Highway Archaeological Reconnaissance Study Annual Report – 1992	Leslie D. Peterson, David J. Mather, and Wanda Watson Radford

*Literature review only, survey is not depicted on Figure 4.

3.2.2 Previously Recorded Archaeological Sites

The cultural resources records search revealed two previously recorded archaeological sites within the Study Area (Table 2 and Figure 4). Previous sites include one Euro-American structural ruin (21SL0826) and one multi-component (containing both prehistoric and Euro-American materials) artifact scatter (21SL1203). Site 21SL0826 includes the remnants of a poured concrete and steel dock. Site 21SL1203 includes two prehistoric lithic flakes, glass and stoneware fragments, and logs that may be associated with dock remnants. The two sites do not intersect the individual project components and neither site has been evaluated for National Register of Historic Places (NRHP) eligibility.

Table 2. Previously Identified Archaeological Sites with the Study Area

Site Number	Site Name	Site Type	SHPO NRHP Recommendation
21SL0826	Connie's Landing	Euro-American Structural Ruin	Unevaluated
21SL1203	Spirit Island Locality 1	Multi-Component Scatter	Unevaluated

3.2.3 Previously Recorded Architectural Properties

The cultural resources records search revealed 254 previously recorded architectural properties within the Study Area (Table 3 and Figure 4). Of the 254 properties, 238 are within the Morgan Park Historic District and nine are recorded individually. The remaining seven properties are noted in SHPO files, however, site forms were not available for review and the exact location of these properties is unclear at this time. Therefore, these seven properties are included in the Table but are not represented on Figure 4. The Morgan Park Historic District (SL-DUL-0705), Bardon's Peak East Overlook (SL-DUL-2316), Bardon's Peak West Overlook (SL-DUL-2317), and the Bardon's Peak Segment (SL-XXX-002) are eligible for the NRHP. The remaining architectural properties have not been evaluated. None of the previously recorded architectural properties intersect the individual project components.

3.2.4 Historic Map Review

Official GLO survey plat maps corresponding with the Study Area were examined to identify areas that may have potential for containing historical era cultural resources. Historic archaeological sites may be present in locations where historic resources have been documented on the GLO maps.

A review of GLO maps revealed sparse settlement and early development in the Study Area (United States 1857). Depicted features include homes, cultivated fields, and unnamed trails as well as natural features including granite outcroppings and prominent landforms (Table 4 and Figure 5). Slopes/hillsides, swamps, drainages, and other waterbodies such as rivers, bays, and lakes are also noted. Three of the depicted homes and a small portion of trail are immediately adjacent to project components. The first home is depicted in the NW ¼ of Section 35, and the GLO also shows a trail leading from this home north towards the center of Section 26. The second home depicted in the SE ¼ of Section 35, Township 49N, Range 15W. A third home (T. Hayes) is in the NE ¼ of Section 2 Township 48N, Range 15W.

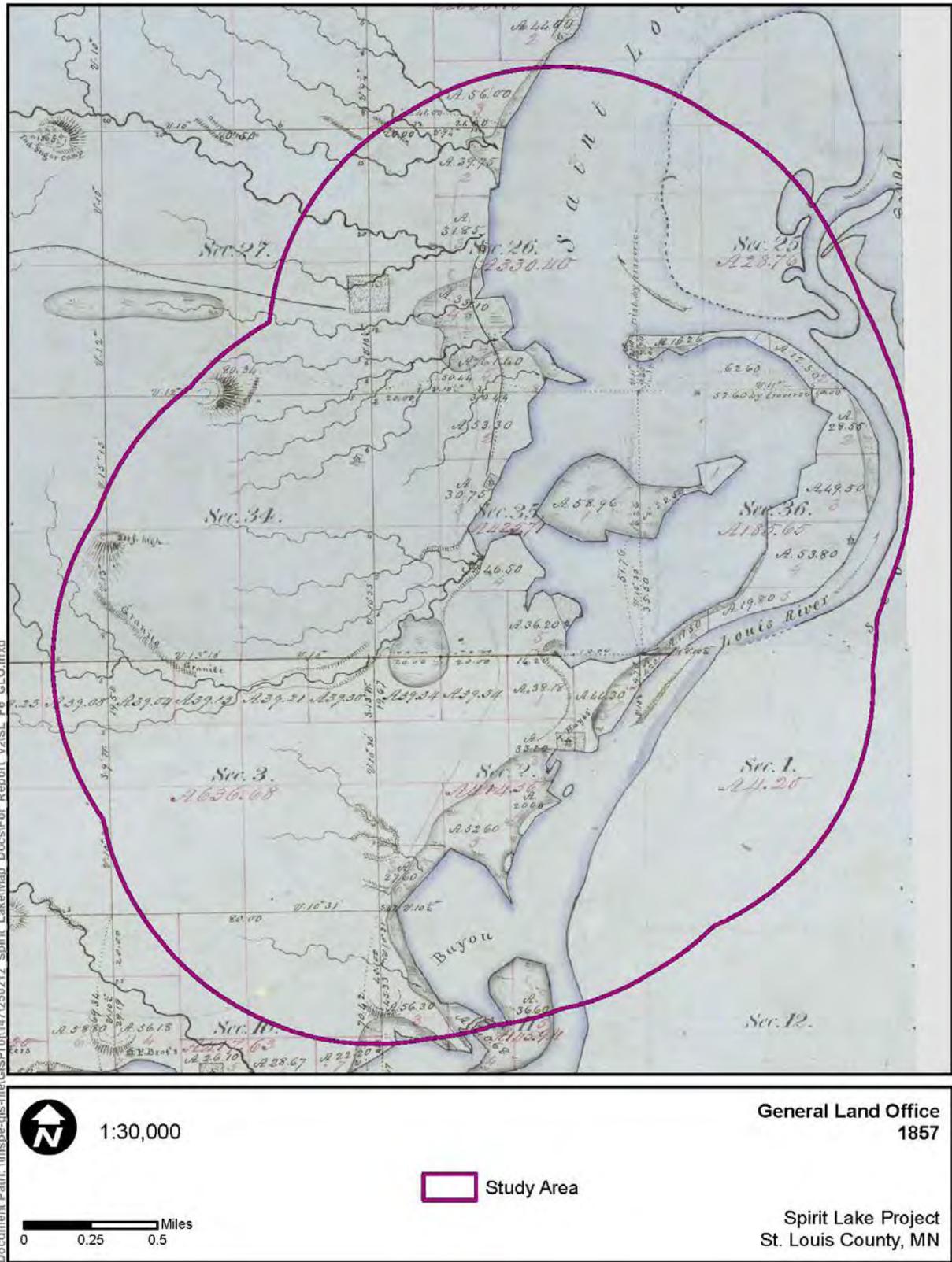
Table 3. Previously Identified Architectural Properties with the Study Area

Site Number	Site Name	Site Type	SHPO NRHP Recommendation
SL-GRC-001	Bridge No. 7622	Bridge	Unevaluated
SL-DUL-0705	Morgan Park Residential Historic District	Historic District (includes 238 properties)	Eligible
SL-DUL-2316	Bardon's Peak East Overlook	Overlook	Eligible
SL-DUL-2317	Bardon's Peak West Overlook	Overlook	Eligible
SL-DUL-2433	Bridge No. L6008	Bridge	Unevaluated
SL-DUL-2439	Bridge No. L8524	Bridge	Unevaluated
SL-DUL-2447	Bridge No. L6119	Bridge	Unevaluated
SL-DUL-2456	Bridge No. 6540	Bridge	Unevaluated
SL-DUL-2459	Bridge No. 5866	Bridge	Unevaluated
SL-DUL-2652	Bridge No. 7622	Bridge	Unevaluated
SL-DUL-2655*	Bridge No. 7622	Bridge	Unevaluated
SL-DUL-2664*	Bridge No. L6118	Bridge	Unevaluated
SL-DUL-3144*	Steelton Viaduct 1	Viaduct	Unevaluated
SL-DUL-3145*	Steelton Viaduct 2	Viaduct	Unevaluated
SL-DUL-3146*	Commonwealth Avenue Viaduct	Viaduct	Unevaluated
SL-DUL-3154*	Bridge 1.0 on Line Segment 235	Bridge	Unevaluated
SL-XXX-002*	Bardon's Peak Segment	Parkway Segment	Eligible

*No site form available for review, property is not depicted on Figure 4.

Table 4. General Land Office Resources within the Study Area

County	Township	Range	Section(s)	Date	Feature(s)/Location
St. Louis	49N	15W	26	1857	<ul style="list-style-type: none"> • House in the NE ¼ at the end of an unnamed trail • Unnamed trail extends north from the bottom of the section through the western half of the section • House in the SE ¼ adjacent to the unnamed trail • Cultivated field in the SE ¼
St. Louis	49N	15W	27	1857	<ul style="list-style-type: none"> • Cultivated field in the SW ¼ • A portion of unnamed trail extending southeast from the NW corner of the SE ¼
St. Louis	49N	15W	34	1857	<ul style="list-style-type: none"> • House in the NE ¼ • A steep landform is depicted in the NW ¼ • “300 ft. high” landform noted in the SW ¼ • Granite outcropping noted in the SW ¼
St. Louis	49N	15W	35	1857	<ul style="list-style-type: none"> • Unnamed trail extending north from near the lakeshore through the NW ¼ • House and cultivated field at the end of the unnamed trail in the NW ¼ • House adjacent to the lake in the SE ¼ • The west half of Spirit Island is depicted as swamp in the NE ¼
St. Louis	49N	15W	36	1857	<ul style="list-style-type: none"> • The east half of Spirit Island is depicted (with the west half as swamp) in the NW ¼ and a small portion of the SW ¼ • House adjacent to the St. Louis River in the SE ¼
St. Louis	48N	15W	2	1857	<ul style="list-style-type: none"> • “T. Hayes” house and cultivated field depicted in the NE ¼
St. Louis	48N	15W	3	1857	<ul style="list-style-type: none"> • Granite outcropping noted in the NW ¼



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Figure 5. 1887 General Land Office Map Showing the Study Area

4.0 Areas of Special Consideration

Three areas of special consideration are included within the Study Area. These areas include Spirit Island, a location of traditional cultural significance, the Morgan Park Historic District, an eligible NRHP district, and the Lake Superior and Mississippi Railroad. These areas are discussed in more detail below.

4.1 Spirit Island

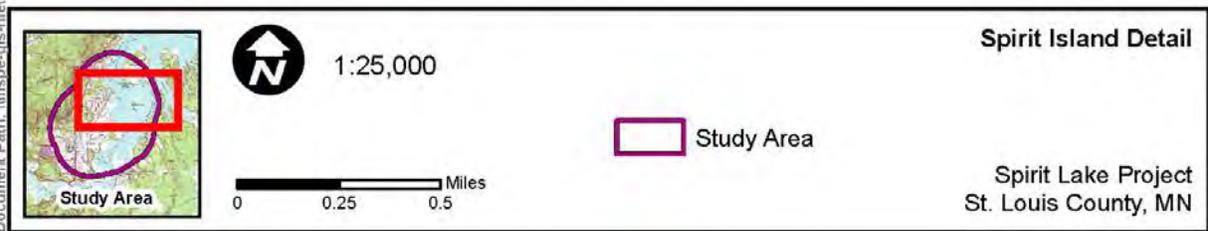
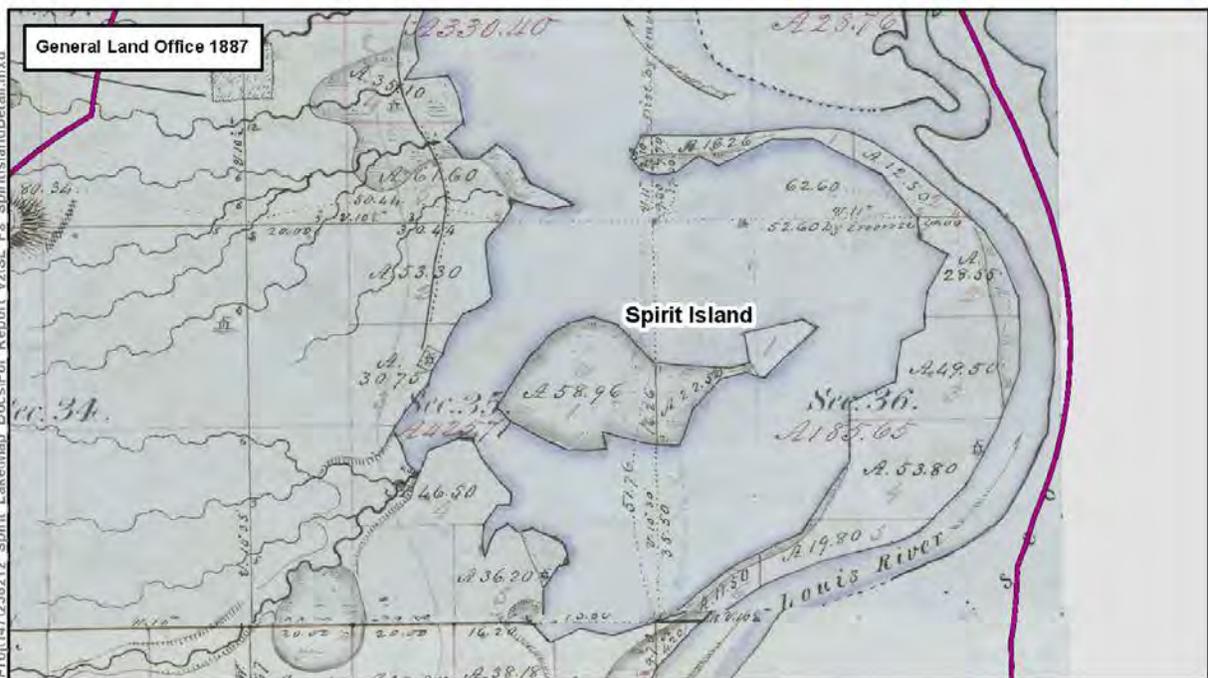
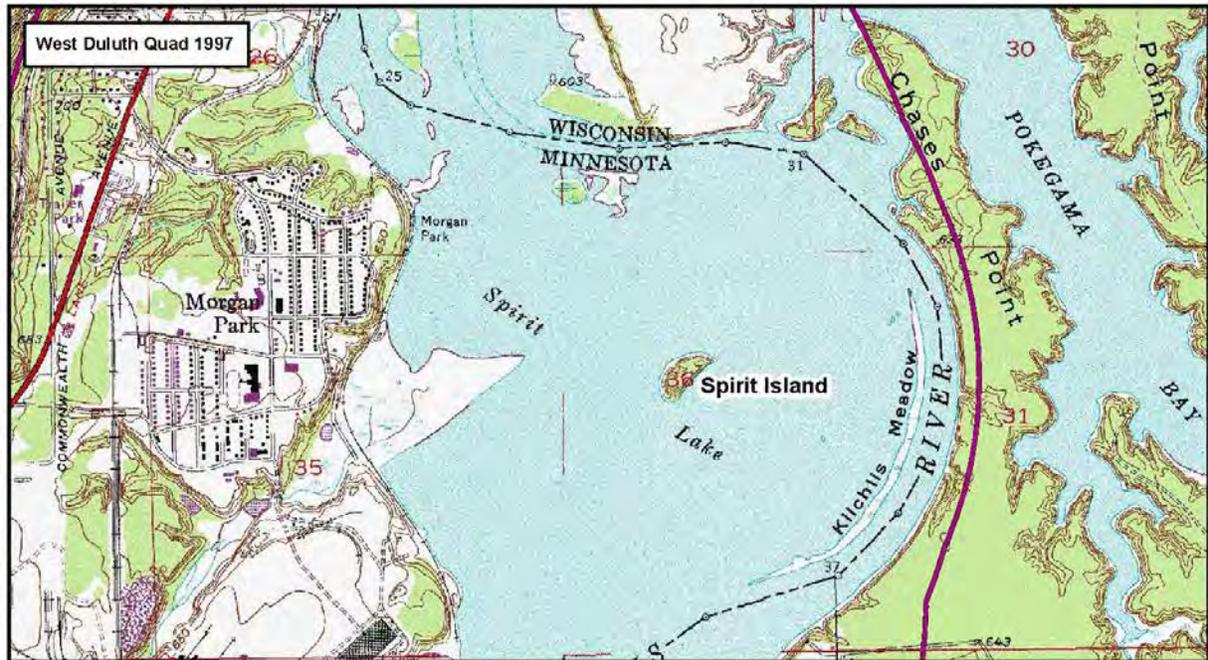
Spirit Island is a small island within the St. Louis estuary between Minnesota and Wisconsin, approximately 1,800 feet from the shoreline and approximately 1,100 ft. from the closest project component. It is east of the City of Morgan Park, Minnesota, and directly south of Clough Island, Wisconsin, in the NW1/4 of Section 36 of Township 49N, Range 15W. Spirit Lake separates Spirit Island from the Minnesota mainland (Figure 6).

Based on the 1887 GLO map, Spirit Island was once considerably larger, although the majority of the island was depicted as swamp at that time (Figure 6). The portion of the Island visible today is represented as higher ground, with a thin strip of land connecting the eastern portion of the island to the large western, swampy side. At its closest point, as represented on the GLO, Spirit Island is approximately 925 feet from the mainland. There are no structures or specific features depicted on the GLO.

Spirit Island is noted as one of the seven major stopping places in the Anishinabe migration. The story of the migration and portions of this section are based on information obtained from the Waasa-Inaabida “We Look in All Directions” website (PBS 2015), the Waasa-Inaabida: The Anishinabe Great Migration web presentation (LeAnne Littlewolf 2012), Fond Du Lac Band of Lake Superior Chippewa web content (2015), White Earth Nation web content (2015), and the texts, *History of the Ojibway Nation* (William 1885), and *Tales of Spirit Mountain* (Crooks 2007).

Before contact with Euro-Americans, the Anishinabe people occupied the area near the mouth of the St. Lawrence River in the present day Canadian Province of New Brunswick, as well as Maine and other New England States. It was during this time that the Seven Spirits (or Grandfathers) visited to deliver seven prophecies, including the coming of the white race. The people were told that a Megis (cowry [or cowrie] shell) would appear and they would need to follow. The journey would come to an end when they found the “food that grows on water” (wild rice). This prophecy marks the beginning of the Anishinabe migration to the west which included seven major stopping places.

It is said that while the Anishinabe were living in the east, on the shore of the Atlantic, “*the great Megis showed itself above the surface...and the rays of the sun for a long period were reflected from its glossy back. It gave warmth and light to the An-ish-in-aub-ag.*” When the shell submerged, the ancestors were no longer blessed by its light. The Megis reappeared and submerged at the turtle-shaped island on the St. Lawrence River near present day Montreal. This marked the first stopping place in the migration. As time passed, the shell again appeared and began to move. The people followed the Megis to Kichi-Ka-Be-Kong (Niagara Falls), the second stopping place. The Megis continued to move and at the third stopping place, the Detroit River, the tribe divided into three groups; the Ojibwe (also Ojibwa or Chippewa), the Odawa



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Figure 6. Spirit Island Detail Map

(also Ottawa or Odaawaa), and the Potawatomi (also Pottawatomie or Pottawatomi). Here, the Ojibwe were given the task to be keepers of the faith (keepers of spirituality).

The fourth stopping place was north of Lake Huron, near Manitoulin Island. The fifth stopping place was Ba-Wa-Ting (Sault Ste. Marie) and it is at this point in the migration that the tribe divided into two groups. One group traveled north around Lake Superior and the second group traveled south around Lake Superior. It is said that the northern group reached the sixth stopping place first, at Spirit Island (Duluth, Minnesota). The seventh and final stopping place was near modern-day Bayfield, Wisconsin on Madeline Island. This migration spanned over 500 years and it is estimated that the Ojibwe reached Madeline Island in 1395. By ca. 1540, the Ojibwe begin to move off Madeline Island and spread inland in what is now northern Wisconsin and Minnesota.

The Anishinabe migration story differs slightly depending on the source. The main variation comes from the Fond Du Lac Band of Lake Superior Chippewa in which the great otter becomes the figurative creature the people follow to each destination. This migration variation begins at the great salt water (Atlantic Ocean), and continues to the St. Lawrence River, then to Lake Huron, then to La Pointe, and finally to Fond Du Lac at the end of Lake Superior. Variations are described in *History of the Ojibwe Nation* (Warren 1885).

Spirit Island and the surrounding area are of great cultural significance and importance, specifically to Native groups. In 2013, the University of Minnesota Duluth – Geospatial Analysis Center initiated the mapping of culturally significant features near Spirit Mountain (which included Spirit Lake and Spirit Island) (University of Minnesota Duluth 2013a). As part of the project, Geographic Information System (GIS) layers were used to encourage conversations regarding the location and significance of sacred places. Ideally, this study could be used as a starting point from both a regulatory and environmental perspective, to kick-start conversations regarding local cultural resources before project development and implementation (University of Minnesota Duluth 2013a).

Of particular interest to the Spirit Lake Project, is a GIS layer that includes the Spirit Island viewshed. This GIS layer allows the user to identify areas on the mainland where Spirit Island is visible (University of Minnesota Duluth 2013b). This is an important portion of the University mapping project, as these locations (as represented by the viewshed) were the sites of many Ojibwe ceremonies, even as recently as the early 1900's (University of Minnesota Duluth 2013a). Many individuals within the Ojibwe community consider the areas from which Spirit Island is visible to be culturally significant (University of Minnesota Duluth 2013b). These culturally significant areas include portions of the proposed Project.

4.2 Morgan Park Historic District

The following information about the Morgan Park Historic District is based on information obtained from the Morgan Park Historic District National Register of Historic Places Inventory-Nomination Form on file at the SHPO (1973), the City of Duluth, Minnesota Neighborhood Revitalization Planning 2008 (2008), and Morgan Park: Historic Past, Bright Future (2015).

The Morgan Park Historic District is at the western edge of the City of Duluth, approximately 10 miles from the central business district on a low plateau overlooking Spirit Lake in the S1/2 of Section 26 and the N1/2 of Section 35, Township 49N, Range 15W (Figure 7). The Morgan Park neighborhood was constructed by U. S. Steel Corporation in 1913 as a planned industrial community and during its early planning stages, the company town was referred to as “The Model City.” The purpose of the planned community was to provide better housing conditions close to the steel plant. In 1914, the community was officially named Morgan Park after the late J.P. Morgan who was a primary financial backer of U. S. Steel and also after the “park-like” setting and surrounding beauty of the area.

The town site originally included approximately 190 acres (approximately 80 acres of permanent construction exists) out of the total 1600 acres purchased by U. S. Steel Corporation for the plant of the Minnesota Steel Company. The area was developed using modern town-planning methods and included educational and recreational facilities as well as residential space. By the early 1920’s the U. S. Steel Corporation had constructed over 500 new homes, two churches, a school, a hospital, a clubhouse, retail and service buildings, and a steel plant office for the 2,000 new residents of Morgan Park. As the town was owned and managed by the U. S. Steel Corporation, potential residents/employees were screened and the town and plant were carefully integrated. The company supplied its residents with services such as water, garbage collection, and coal delivery as well as fire and police protection. Although Morgan Park was within the city limits of Duluth, the town remained independent until annexed into the City in 1933. By the mid 1940’s residents began to have more control of their neighborhood and in 1942, U. S. Steel commissioned a real estate company to market houses to residents and non-employees. This marked the first time homes in Morgan Park could be privately owned.

During the mid-1950s a new housing development was constructed in Morgan Park. Although this portion of the town was planned, it was not part of the original construction. This new area of development included the addition of several hundred single family homes constructed to the north and west of the school site. In the mid-1970s a new townhome and apartment complex were constructed, contributing to the number of multi-family units. In addition to residential units, a commercial district still exists along 88th Avenue West, although it is considerably smaller than when originally constructed and run by U. S. Steel.

The Morgan Park Historic District is comprised of 238 buildings, and is an example of a “modern” industrial suburb which was originally intended to serve as the center of a permanent industry. The buildings constructed between 1914 and 1922 are of architectural interest as one type of material was used in the construction. Concrete, either block (machine and/or hand-molded) or stucco, was used for all buildings, yet the monotony of standard appearance was avoided in this community. Housing in Morgan Park was designed for all types of workmen and for all represented salaried employees. The area has changed significantly over the years; however, Morgan Park remains a predominantly residential area, with all but one of the original 1914 homes being still intact today. Housing within the community includes five-room, six room, seven room, eight room, and nine room houses as well as duplex structures, fourplex structures, four-unit row houses, six-unit row houses, and boarding houses. Low rental housing was also constructed. These units include low-rental housing, single family housing, duplexes, and low-rental four-unit, six-unit, eight-unit, and ten-unit row houses.

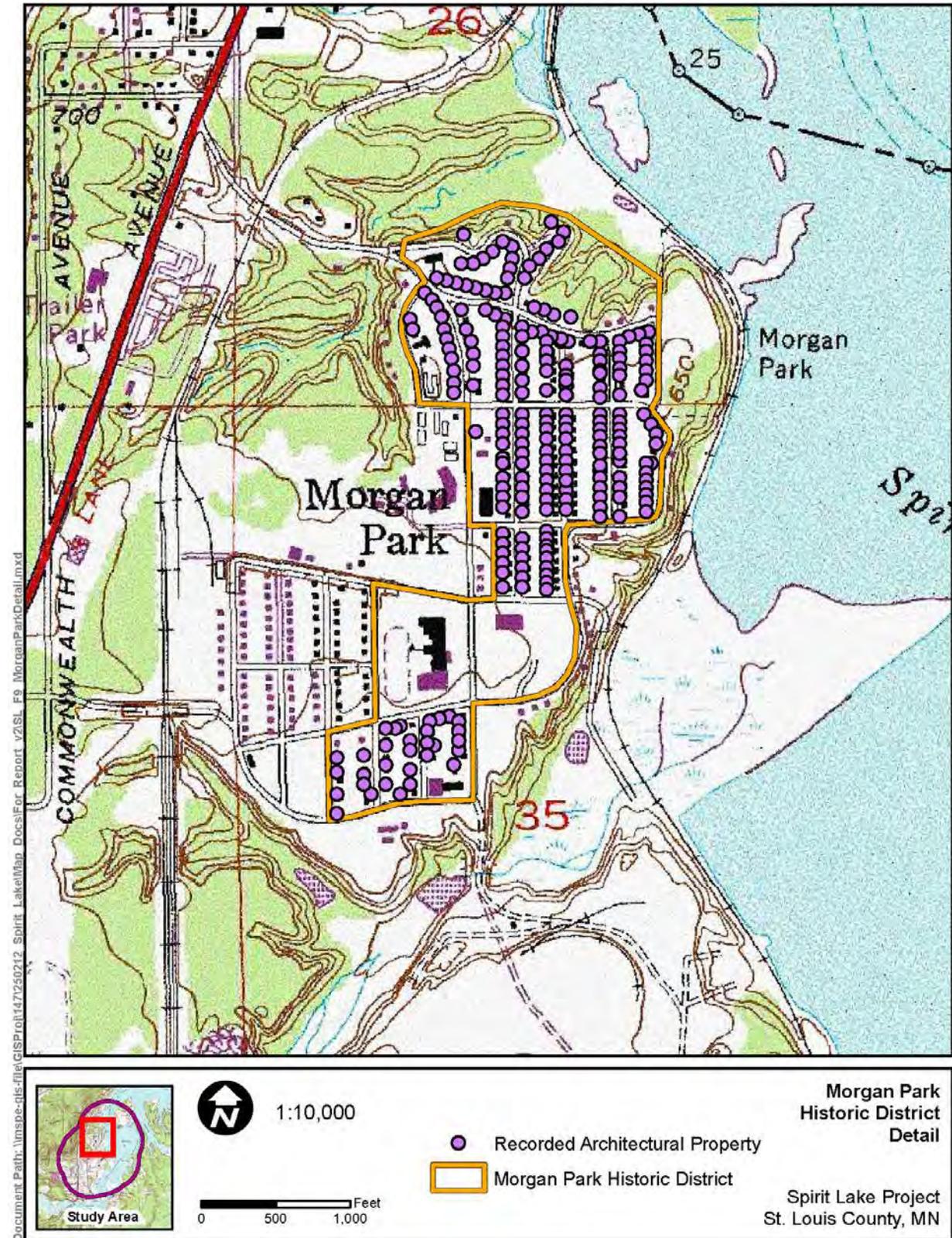


Figure 7. Morgan Park Historic District Detail Map

Non-residential buildings include crescent garages, ten-stall garages, maintenance buildings and garages, the Morgan Park School, the Morgan Park Company Store, the Good Fellowship Center, the Saint Margaret Mary Catholic Church, and the United Presbyterian Church.

In 2007, a city revitalization plan was created, marking the first official attempt at neighborhood planning in nearly 100 years. Revitalization efforts are now led by residents of Morgan Park through the Morgan Park Community Club. This is in stark contrast to a large industrial company making all city planning decisions. Community projects include beautification of the neighborhood as well as public works projects, such as rebuilding neighborhood infrastructure. Morgan Park residents are interested in maintaining the historic charm of the community as well as actively investing in its future.

4.3 The Lake Superior and Mississippi Railroad

The following information about the Lake Superior and Mississippi Railroad is based on information obtained from *Lost Duluth: Landmarks, Industries, Buildings, Homes, and the Neighborhoods in Which They Stood* (Dierckins and Norton 2012), the Lake Superior and Mississippi Railroad Company website (2015), and Zenith City Online (2015).

In 1861, the Lake Superior and Mississippi (LS&M) Railroad, Duluth's first railroad, was incorporated by investors in St. Paul, Minnesota. Construction began on St. Paul side of the line in 1863 and the line was designed as a portage railway to connect Minneapolis/St. Paul to the Northern Pacific (NP). This connection would stretch from the Head of the Lakes region to Puget Sound in Washington State. Prior to deciding the location of the proposed rail, both Duluth, Minnesota and Superior, Wisconsin were busy lobbying for the line as both knew it would bring workers and money into the area. As the City of Duluth, with the help of additional St. Louis County funds, was able to raise the most money, Jay Cooke chose Duluth as the destination city. As expected, news of the railroad brought prosperity, manpower, and materials.

Although construction on the rail segment north from St. Paul started in the early 1860s, construction on the rail segment southward from Duluth did not begin until 1868. On August 1, 1870, the final spike was driven and passenger service began a few weeks later, on August 22. By the end of 1870, trains ran the 154-mile stretch daily between Duluth and St. Paul.

This link provided a viable way to transport goods from Lake Superior for shipping to eastern markets. The creation of this rail line has been considered an important event in the history of the State of Minnesota. The track connected the head of navigation on Lake Superior with the head of navigation on the Mississippi River (LS&M 2015).

The Lake Superior and Mississippi Railroad has changed hands several times over the years. At one time it was known as the St. Paul and Duluth Railway and it later became part of the Northern Pacific Railway. The present-day Lake Superior and Mississippi Railroad was originated in 1980 by volunteers from the Lake Superior Transportation Club. A portion of the original rail line is now used as a tourist excursion train, with the 1 hour 40 minute trips following the shoreline of the St. Louis River estuary (Figure 8). Based on this preliminary research, it is likely that the Lake Superior and Mississippi Railroad is eligible for the NRHP.

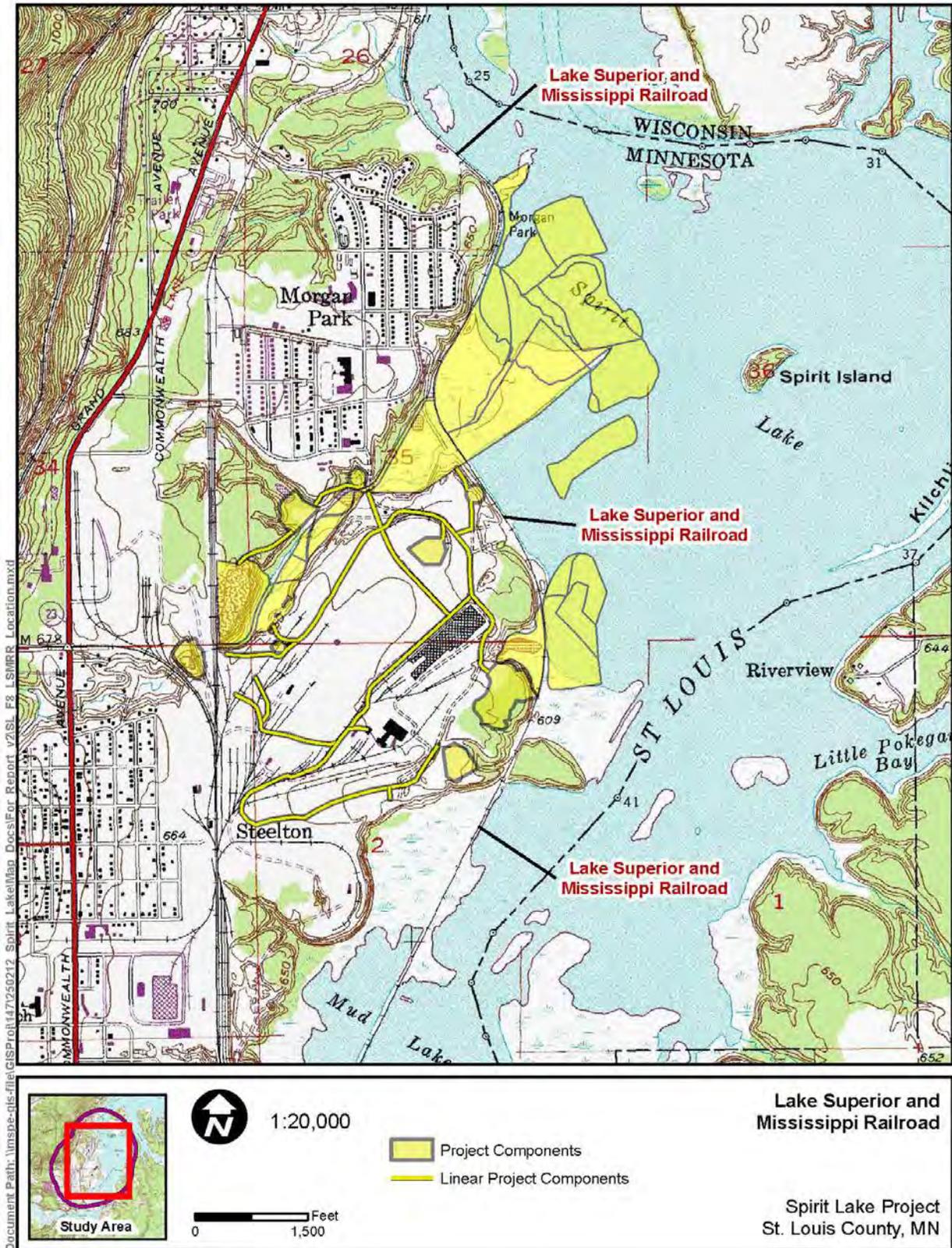


Figure 8. Lake Superior and Mississippi Railroad Overview



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5.0 Implications for the Project

Resources of particular concern that may be directly or indirectly affected within the Study Area include:

- Archaeological sites associated with the early settlement of the area
- Archaeological sites associated with U. S. Steel Duluth Works
- Archaeological sites associated with the Lake Superior and Mississippi Railroad
- Archaeological sites within and adjacent to project components
- Submerged and/or partially submerged archaeological sites within and adjacent to the St. Louis estuary
- Historic buildings, structures, and features associated with U. S. Steel Duluth Works
- Historic buildings, structures, and features associated with the Lake Superior and Mississippi Railroad
- Historic buildings, structures, and features associated with adjacent communities
- Traditional Cultural Properties, specifically areas associated with Spirit Lake and Spirit Island

5.1 Archaeological Site Potential

Two previously recorded archaeological sites were identified within the Study Area. Previous sites include one Euro-American structural ruin (21SL0826) and one multi-component (containing both prehistoric and Euro-American materials) artifact scatter (21SL1203).

5.1.1 Prehistoric Site Potential

Background research identified one site within the Study Area with a prehistoric component (21SL1203). Due to the effects of urban and industrial activities within the Study Area, the potential to encounter intact prehistoric sites or features within the project components is low.

Over time, natural and artificial forces have altered the shoreline and areas that were formerly upland may be submerged. As mentioned in *Minnesota's Environment and Native American Culture History* (Gibbon et al. 2002), within the Lake Superior Shore Archaeological Region, Woodland (prehistoric) base camps (if present) may be concentrated in the estuary of the St. Louis River. As project components are adjacent to and in some cases inside the St. Louis estuary, there is a moderate potential for encountering submerged and/or partially submerged prehistoric period archaeological sites.

5.1.2 Historic Site Potential

Background research identified one historic site (21SL0826) and one site with a historic component (21SL1203). The Study Area is within an urban setting and individual project components currently fall within portions of the U. S. Steel Duluth Works property. A review of available aerial photographs revealed the remnants of many structures and features associated with the U. S. Steel Duluth Works facility and potentially a rail yard. Some of these features may

be from the early development of the site and have the potential to be historically significant. In addition, the GLO map depicts features include homes, cultivated fields, and unnamed trails as well as natural features including granite outcroppings and prominent landforms. Although industrial and urban use has caused extensive landscape disturbance, there may still be a potential for encountering historic period archaeological sites.

The Lake Superior and Mississippi Railroad is also within and adjacent to Project components and has not been evaluated for listing on the NRHP. This link provided a viable way to transport goods from Lake Superior for shipping to eastern markets. The creation of this rail line has been considered an important event in the history of the State of Minnesota. The track connected the head of navigation on Lake Superior with the head of navigation on the Mississippi River (LS&M 2015). This portion of the rail line has not been recorded or assigned an official Minnesota State site number. It will require further consideration and consultation with SHPO to determine the significance of the rail line. It is possible that in addition to the active track, archaeological materials and features associated with the Lake Superior and Mississippi Railroad may also be encountered.

In addition, as project components are adjacent to and in some cases inside the St. Louis estuary, and based on the region's historic shipping and maritime activities, there is a high potential for encountering submerged and/or partially submerged historic period archaeological sites. The Minnesota Historical Society lists 54 recorded shipwrecks in Lake Superior (<http://www.mnhs.org/places/nationalregister/shipwrecks/list.php>) and there are at least two known shipwrecks within the St. Louis River within a few miles of the Project area (Daniels 2008).

5.2 Architectural Property Site Potential

Historic architectural properties, including districts, structures and buildings, can be found wherever conditions are suitable (as in the case of houses and homesteads on areas of higher elevation or areas suitable for agriculture) or areas where structures were necessary (such as a bridge crossing a river or stream or a road through a swamp). In general, these types of properties tend to be located in areas that have a built environment already and/or are located adjacent to road, railroad, and water transportation routes. Architectural properties mainly include farmsteads, homes, businesses, civic works, religious structures and buildings, and industry works.

The Study Area includes multiple communities and residential areas, the previous site of U. S. Steel Duluth Works, and also an active portion of the Lake Superior and Mississippi Railroad. At this time, the U. S. Steel Duluth Works area and the portion of the LS&M rail line have not been recorded or assigned an official Minnesota State site number. As such, there is a high potential to encounter additional NRHP-eligible architectural properties.

Within the Study Area, previously recorded architectural properties include structures associated with the Morgan Park Historic District, as well as bridges, viaducts, overlooks, and parkway segments. Properties from the early Euro-American settlement period through the modern industrial development period may be encountered. Visual impacts on the historic properties and districts need to be assessed. This would entail conducting a visual assessment

study - the details of which would be negotiated among the federal agency, SHPO, and other consulting parties.

5.3 Traditional Cultural Property Site Potential

As discussed in Section 4 (Areas of Special Consideration), Spirit Island and the surrounding area are of great cultural significance and importance, specifically to Native groups. Because the area figures prominently in the Anishinabe migration story, the Project area may contain areas that have special traditional or religious significance. As stated by the University of Minnesota study, any area from which Spirit Island is visible may hold special significance. In addition, there may be traditional use areas or traditional cultural landscape features of importance that may be affected by project components. Further consultation with the Anishinabe Bands is needed to pinpoint the exact locations of these traditional cultural properties.



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6.0 Recommendations

There is potential for impacts to archaeological sites, architectural properties, and traditional cultural properties. Potential impacts may include both physical impacts and visual impacts.

6.1 Recommendations for Additional Phase I Intensive Survey

6.1.1 Geomorphological Assessment

Due to the disturbed/industrial nature of the Project, the unknown amount of overburden and/or fill material present on-site, and the proximity to significant water features and areas that may have experienced flooding episodes in the past, a desktop geomorphological assessment of the direct effects APE is recommended, once it is defined.

The geomorphological assessment should focus on the identification and mapping of landforms and the underlying deposits that may have potential to contain archaeological remains that are not accessible through standard excavation methods (shovel testing). Criteria for assessing the geomorphic level of potential should include; consideration of the deposit age, the depositional environment, and post-depositional modifications.

To complete the geomorphological assessment, a desktop evaluation will be performed which may include researching geological and geo-archaeological reports and publications, a review and analysis of 1:24,000 scale contour maps, a review and analysis of available aerial photographs and light detection and ranging (LIDAR) images, and a review of Natural Resources Conservation Service (NRCS) soil maps.

As this component will dictate the likelihood of encountering buried archaeological deposits and the nature of potential subsurface testing, the geomorphological assessment should be completed prior to the initiation of the Phase I Archaeological Reconnaissance Survey.

6.1.2 Ethnographic/Traditional Cultural Properties Study

Due to the sensitive nature of Spirit Island and the potential visual impacts that may result from Project implementation, USEPA initiated consultation with interested regional Native American groups by sending letters in December 2014 and holding a meeting with interested tribal groups on March 24, 2015. To determine what effects the Project may have in relation to the Spirit Island/Spirit Lake area, an ethnographic/TCP study is recommended.

As an initial effort, elements of an ethnographic/TCP study would include a detailed literature and records search that would focus on previous ethnographic studies in the area, review of cultural resources compliance reports, and site files at MHS, SHPO, and the Office of the State Archaeologist. Additional information provided from tribal representatives obtained as part of the consultation with the THPOs would be incorporated, as well an assessment of the effects the Project will impose on properties of traditional religious and cultural importance. Tribal input would be obtained prior to commencing a Phase I Archeological Reconnaissance Survey to ensure that archaeological testing methods are appropriate and do not negatively impact the values of Traditional Cultural Properties.

6.1.3 Phase I Archaeological Survey

HDR recommends a Phase I archaeological survey within the Study Area that considers partially submerged/submerged resources that could be directly affected by construction (see Section 6.3.4) and National Register evaluations of archaeological resources and assessments of effects to eligible or listed properties. Recommended mitigation measures for any eligible properties subject to adverse effects would be included in a report of these findings.

The methodological approach for the Phase I Archaeological Survey will be dependent on the results of the geomorphological assessment and the ethnographic study. Based on the geomorphological findings, subsurface testing of the upland portions of the Project area may or not be required. The Phase I Archaeological Survey should include a pedestrian survey where direct effects could occur at intervals no greater than 15 meters. As most cultural materials and potential sites within this area will likely be historic in nature, the survey crew should include a Secretary of Interior qualified archaeologist with experience documenting and evaluating historic-period resources.

All work should be conducted in accordance with the SHPO Manual for Archaeological Projects in Minnesota (Anfinson 2001), the Guidelines for History/Architecture Projects in Minnesota (Minnesota Historical Society 2010), and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (National Park Service 1983).

6.1.4 Underwater Archaeological Survey

Project activities are located within and adjacent to major water features, including Spirit Lake, the St. Louis River, and the St. Louis River estuary. Several individual Project components extend into these waterbodies. Given the historic use of the area, there is potential to encounter partially submerged and/or submerged resources (such as piers or other structural remains). The file search completed at SHPO did not identify any previously recorded partially submerged and/or submerged resources where direct effects could occur. Submerged cultural resources surveys have not been conducted within the in-water portion of the remediation project boundary and may be needed in certain remedy areas to investigate the presence of archaeological resources.

As portions of the Project extend into adjacent waterbodies, an underwater component to the Phase I Archaeological Reconnaissance Survey is recommended. The underwater archaeological survey should include a thorough map review and records search to identify potential resources that may be encountered. Use of geophysical and remote sensing technology may be appropriate to refine search areas and characterize the likelihood of encountering significant archaeological remains.

Testing and survey methods may be applied incrementally depending on the resources identified during an initial archaeological reconnaissance and the information and materials collected during the intensive research stage. Testing and survey methods may include the documentation of visible or partially visible resources (such as piers or other structural remains) from the shoreline and pedestrian survey (wading) in the tidal zone/shallows. A sampling approach may be used for deep-water areas and may include a sample search of high probability areas completed by a diver utilizing visual search techniques. If a sampling approach

is not appropriate and a complete coverage survey is necessary, a Phase I survey by watercraft equipped with sonar and potentially a magnetometer may be warranted. If a complete coverage survey is required, verification by divers may be warranted to describe and evaluate identified submerged resources.

Alternatively, if EPA in consultation with the consulting parties determines that conditions or safety factors are not conducive for investigating submerged resources prior to initiation of Project activities, a discovery plan may be warranted to take into account effects to historic properties encountered. A discovery plan would specify procedures for notifying appropriate parties when a discovery occurs and the recordation and consultation steps to be followed prior to proceeding with Project activities.

6.1.5 Intensive Architectural Survey

The Study Area includes multiple communities and residential areas. In addition, individual Project components are immediately adjacent to the Morgan Park Historic District as well as within the previous site of U. S. Steel Duluth Works. The Lake Superior and Mississippi Railroad also transects the proposed Project components, extending northward along the shoreline, adjacent the St. Louis River. Given the location of the Project, there is a high potential to encounter additional architectural properties. In addition properties/areas of special consideration include the Morgan Park Historic District, the site of U. S. Steel Duluth Works, and the Lake Superior and Mississippi Railroad.

An Intensive Architectural Survey is recommended within the APE to identify and evaluate architectural properties for National Register eligibility, beyond those already included in the Morgan Park District. The areas for the Architectural Survey would be identified by modelling of the visual APE. The focus of an Intensive Architectural Survey is to identify properties that could be directly or indirectly affected by Project activities, and evaluate individual properties or historic districts. To complete this effort, a thorough literature search and detailed archival research is needed to complete context development and property type refinement. Following the archival documentation process, an architectural survey would be completed, including inventory forms for each property, NRHP eligibility determinations, and findings of effect. Adverse effects can be direct or indirect and include the following:

- physical destruction or damage
- alteration inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties
- relocation of the property
- change in the character of the property's use or setting
- introduction of incompatible visual, atmospheric, or audible elements
- neglect and deterioration
- transfer, lease, or sale of a historic property out of federal control without adequate preservation restrictions

Standards for identification, field methods, reporting and documentation, and evaluation methods would follow the Guidelines for History/Architecture Projects in Minnesota (Minnesota Historical Society 2010) and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (National Park Service 1983). Recommended mitigation measures for any eligible properties subject to adverse effects should be included in a report of these findings.

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STATE HISTORIC PRESERVATION OFFICE

August 6, 2015

Michael Bryant
United States Environmental Protection Agency
Region 5
77 West Jackson Blvd
Chicago, IL 60604-3590

RE: Spirit Lake Sediment Remediation Project
Duluth, Saint Louis County
SHPO Number: 2015-2457

Dear Mr. Bryant:

Thank you for the opportunity to comment on the above project. Information received in our office on 10 July 2015 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

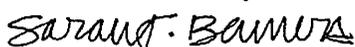
In addition to reviewing your letter dated 7 July 2015, which included the survey report entitled *Spirit Lake Project: Phase Ia Cultural Resource Survey, St. Louis County, Minnesota* (HDR, July 2015), our office participated in a conference call/web presentation on July 20th and the project stakeholder meeting held in Duluth, Minnesota on July 22nd.

It is our understanding that your July 7th submittal is intended as initiation of the Section 106 consultation process with our office for the Federal undertaking, as well as providing initial determinations and documentation regarding the proposed project's area of potential effect (APE) for direct and indirect effects. Based upon the information and documentation provided regarding your agency's APE determination for direct effects, we agree that this determination is generally appropriate to take into account the potential direct effects of the proposed undertaking as we currently understand it. As the project's scope of work is further defined, or if it is significantly altered from the current scope, additional consultation with our office may be necessary in order to revise the current APE for direct effects.

Regarding your agency's approach to determining the APE for indirect effects as described in your July 7th letter, while we agree that taking into account potential visual effects is a critical aspect for consideration and the analysis to determine this as described in your letter is appropriate, the definition of APE provided in 36 CFR 800.16 indicates that any effects that may "indirectly cause alterations to the character or use of a historic property" should be taken into consideration when determining the undertaking's APE.

We look forward to continuing consultation with your agency on this important project. Please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions regarding our comment letter.

Sincerely,



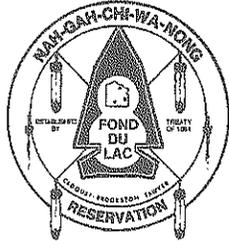
Sarah J. Beimers, Manager
Government Programs and Compliance

Fond du Lac Reservation

Resource Management

1720 Big Lake Road
Cloquet, MN 55720
Phone (218) 878-7101
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January 22, 2015



William J. Murray
EPA/Great Lakes National Program Office
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Administration
Conservation
Environmental
Fisheries
Forestry
Natural Resources
Wildlife

Dear Mr. Murray,

The Fond du Lac Band of Lake Superior Chippewa (Band) appreciates your invitation to consult and coordinate with United States Environmental Protection Agency's Great Lakes National Program Office (EPA/GLNPO) in your efforts to complete a feasibility study for the Spirit Lake Estuary Sediment Project, ultimately leading to a remedy that is protective of human health and the environment. We accept your invitation, and we look forward to working with you. As the Interim Tribal Historic Preservation Officer or THPO, I will serve as the primary consultation representative for Fond du Lac.

We are one Band of the Anishinaabe (Chippewa) Nation that holds sacred the significance of Spirit Island (which we have purchased), found in the St. Louis River Estuary; there are at least eleven Bands that share the prophecies centered around the Spirit Island area. We have been strongly advising the EPA/GLNPO of the need for tribal consultation since first learning of the Great Lakes Legacy Act funding that is being brought to this process. We further encourage you to contact and consult with the other Bands that share our prophecies.

Some potential cleanup strategies involve dredging and concentrating huge volumes of toxic waste into *permanent structures* in Spirit Lake – in full view of Spirit Island. As the EPA, MPCA, and U.S. Steel get close to choosing a cleanup strategy, the agencies must take into account tribal expertise and preference, the cultural significance of Spirit Island, and the close proximity of the Superfund site to such a sensitive and important area.

As you alluded to in your letter, the EPA has a Presidentially-mandated policy to consult with tribes and to “have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” The stated intention of the policy is to ensure that tribal consultation is “a standard EPA practice and not an additional requirement.” *EPA Policy on Consultation and Coordination with Indian Tribes.*

In addition to the EPA’s policy, the National Historic Preservation Act (NHPA) requires Federal agencies to take into account effects of undertakings on historic properties; NHPA further places strong emphasis on consultation with Indian tribes, regardless of the location of the historic property. This consultation must be designed around acknowledged tribal sovereignty and the government-to-government relationship between the Federal and Tribal governments. The tribe must be given the opportunity to meaningfully participate in the resolution of the adverse effects of actions that will affect places of traditional religious and cultural significance, such as Spirit Island. 36 C.F.R. §800.2.

We would like to offer to host an initial consultation meeting with the Band, EPA/GLNPO, and any other interested tribes here at Fond du Lac. Please contact me for scheduling at your earliest convenience.

Miigwech,

A handwritten signature in cursive script, appearing to read "Wayne Dupuis".

Wayne Dupuis, Environmental Program Manager/Interim THPO

cc: Karen Diver, Chairwomen, Fond du Lac Band of Lake Superior Chippewa
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office

Fond du Lac Band of Lake Superior Chippewa

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William Murray
Project Manager
USEPA Great Lakes National Program Office
77 W. Jackson Blvd.
Chicago, IL 60604

December 19, 2014

Re: Comments on draft Feasibility Study, US Steel Superfund Site

Ms. Johnson, Mr. Murray:

Thank you for the opportunity to review and comment on the pre-public release draft Feasibility Study (FS) for the US Steel (USS) Superfund site. The Fond du Lac Band of Lake Superior Chippewa (the Band), as you are aware, is a federally recognized Indian tribe, and is a member of the Minnesota Chippewa Tribe (MCT). Along with other MCT tribes, the Band retains hunting, fishing and other usufructuary rights within northeastern Minnesota under the Treaty of LaPointe¹ (the 1854 Ceded Territory), which encompasses in the area of the Project. In the Ceded Territory, the Bands have a legal interest in protecting natural resources and all federal agencies share in the federal government's trust responsibility to the Bands to maintain those treaty resources.²

First, we note a few issues:

- SHPO/THPO App G p 845/2396 notes the need for consultation prior to initiating remedial activities. We have been recommending tribal consultation since our first notification of the Great Lakes Legacy Act remedial process in 2012. It is critical for consultation to commence immediately so that tribal concerns can be appropriately and meaningfully addressed in this process, not just as an afterthought.

¹Treaty with the Chippewa, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/chi0648.htm> (last visited March, 2014).

²See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating “the United States has recognized Indian tribes as domestic dependent nations under its protection . . .,” there is a “trust relationship with Indian tribes,” and “[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.”), available at <http://ceq.hss.doe.gov/nepa/regs/eos/eo13175.html> (last visited March, 2014)

- ARARs App H p 850: Applicable or Appropriate and Relevant Requirements can and should incorporate location-specific considerations that reflect tribal concerns under the National Historic Preservation Act (NHPA). Special locations include sensitive ecosystems or habitat, coastal zones, historic places, Indian Reservations, or sacred sites. NHPA provides for the protection of historic resources from effects on properties included or eligible for the National Register of Historic Places. Relevant Executive Orders include E.O. 13175 (Consultation with Indian Tribal Governments) and E.O. 13007 (Protection of Indian Sacred Sites). Consultation procedures under NHPA Section 106 are laid out in *Advisory Council on Historic Preservation (ACHP)* regulations at 36 CFR Part 800.

The Band is providing the report *Documentation of Information for National Register of Historic Places Regarding Spirit Island in the St. Louis River, St. Louis County, Minnesota* (Mulholland and Mulholland, May 2013) for the project managers' consideration, prior to consultation. Note page 17: "...Spirit Island retains integrity of location, setting, feeling and association. Development on the western shore of Spirit Lake is visible but about 0.5 miles away, *reducing the impact* (emphasis added). The former steel facility is no longer in operation, although the legacy of contamination lingers on the land and in the waters." Through the Section 106 consultation process, when assessing effects of an undertaking on historic properties, agencies and THPOs apply the following criteria of adverse effect: will this undertaking alter, directly or indirectly, any of the characteristics of the historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association?

- Fig 1-2 should show the entire legal parcel for Spirit Island; tribal ownership may affect the decision on how sediments further from the shore may be managed under the remedial project.

Review of Alternatives

The company-identified recommended alternative, Alternative 8 (Shallow Sheltered Bay with Delta Sediment CDF and Upland CDFs), was chosen through the company's screening evaluation of effectiveness at achieving remedial action objectives, implementability, and relative cost, and through subsequent detailed analysis of four alternatives identified through the screening evaluation. While the draft FS notes that the alternatives retained for detailed analysis were based, in part, through consultation with resource managers, it is not clear how input gathered in the meetings that included resource managers was incorporated into the alternatives analysis.

The discussion of the recommended alternative provides a rationale that it is "...reflective of important priorities identified by stakeholder input such as the creation of two shallow sheltered bay habitat areas; features which are currently absent in Spirit Lake." Although it is true that the *Lower St. Louis River Habitat Plan*, which the regional resource managers consistently reference, discusses the general need for additional shallow sheltered bay habitat within the estuary, the primary purpose of the resource managers' accelerated production of the *Strategies Implementation Planning Worksheet: Spirit Lake Conceptual Restoration Plan* was to provide the remedial managers a much more site-specific vision of habitat goals for this discrete area within the St. Louis River AOC. This work product was delivered in a timely fashion, such that it could inform precisely this kind of detailed alternatives analysis and incorporate, to the extent possible, habitat restoration features that are specific and appropriate for Spirit Lake, not generic to the wider AOC.

We defined Spirit Lake functionally as a unique “back bay” system, with hydrology that maintained pulse-stable wetland communities, large areas of open shallow and deep waters, and depositional islands. None of the remedial alternatives address the significant hydrological alteration that results from the point of land constructed of slag, boulders and coke deposits decades ago by US Steel. This point eliminates the potential for reestablishing a more natural hydrologic regime in Spirit Lake, including emergent wetland/island complexes.

It should be noted that the resource managers emphasized that the most desirable objective would be to consolidate the maximum volume of contaminants out of the water and west of the railroad grade, and *no loss* of aquatic habitat, not necessarily the “creation” of more open water habitat. This was the overriding message given to the MPCA and GLNPO project managers at the January 2014 meeting, where we were first presented with a series of remedial conceptual designs and asked to provide input. While the Band has not had adequate time to fully evaluate the alternatives with respect to their consistency with meeting remedial objectives, it appears that alternatives other than Alternative 8 may provide more benefits with regards to meeting resource management and cultural preservation objectives. Alternative 4 at least removes contaminants entirely out of the estuary for consolidation, with no loss of open water. Alternative 7 removes contaminants out of the estuary and consolidates them entirely within the upland portion west of the railroad grade, with no loss of open water. Alternative 9 removes some of the delta contaminants and consolidates them with the wire mill area contaminants in upland CDF, with no loss of open water. Alternative 10 removes all site contaminants and consolidates them in an upland landfill, with no loss of open water.

Cost estimates do not appear to evaluate either long-term monitoring/management/maintenance costs, or to compare the relative regulatory costs associated with permitting and mitigation between alternatives. And at this time, there is a fair amount of uncertainty associated with the ‘permitability’ of various features in the array of alternatives.

All of the alternatives retained for more detailed evaluation include confined disposal facilities (CDFs) as a component. However, at a nearby Superfund site (Ashland/NSP) in Chequamegon Bay, Wisconsin, EPA as the lead agency rejected the CDF/landfill alternative, partly because state law requires protection of the lakebed for public use and benefit, but additionally because:

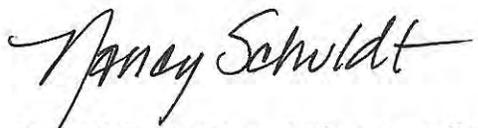
“...it is not as effective in the long-term as other cleanup alternatives that remove and treat waste. This alternative would not remove or treat any of the contaminated sediment, but would consolidate the waste and contain it in an engineered landfill. The CDF alternative would also require long-term monitoring and potential additional cleanup in the future if the landfill leaks or erodes. And, as mentioned above, EPA received comments expressing strong community support for removing all the waste from Chequamegon Bay.”³

The remedial lead agencies will certainly have an opportunity to hear from the local community about their support for the various alternatives when the draft FS is released for public comment, but again, consultation with the affected tribal community has not begun, and public

³USEPA *Community Update About Cleanup Plans, Ashland/Northern States Power Lakefront Site, Ashland, WI, November 2013.*

acceptance – tribal and non-tribal - of any of the alternatives is, as yet, unknown. Given that this is the largest PAH-contaminated site in the Great Lakes, and its status as the single largest source of contaminants to the St. Louis River AOC, it is important for everyone that the ultimate remedial plan is permanently protective of human health and the environment, provides the greatest opportunity for integrating appropriate habitat restoration to achieve local objectives, and provides the public the greatest assurance that the land and water is no longer 'polluted'. The Band looks forward to further conversations with the project managers, and initiating consultation with USEPA as soon as possible.

Sincerely,

A handwritten signature in black ink that reads "Nancy Schuldt". The signature is written in a cursive, flowing style.

Nancy Schuldt, Water Projects Coordinator
Fond du Lac Environmental Program

Fond du Lac Band of Lake Superior Chippewa

Resource Management Division

1720 Big Lake Rd
Cloquet, MN 55720
Phone (218)878-7101
Fax (218)878-7130

Erin Endsley
Superfund/RCRA Project Leader
Minnesota Pollution Control Agency
525 S. Lake Avenue, Suite 400
Duluth, MN 55802



Administration
Conservation
Enforcement
Environmental
Forestry
Fisheries
Natural Resources
Wildlife

August 27, 2015

Re: Comments on revised draft Feasibility Study, US Steel Superfund Site

Ms. Endsley:

Thank you for the opportunity to review and comment on the revised draft Feasibility Study (FS) for the US Steel (USS) Superfund site. The Fond du Lac Band of Lake Superior Chippewa (the Band), as you are aware, is a federally recognized Indian tribe, and is a member of the Minnesota Chippewa Tribe (MCT). Along with other MCT tribes, the Band retains hunting, fishing and other usufructuary rights within northeastern Minnesota under the Treaty of LaPointe¹ (the 1854 Ceded Territory), which encompasses the area of the Project. In the Ceded Territory, the Bands have a legal interest in protecting natural resources and all federal agencies share in the federal government's trust responsibility to the Bands to maintain those treaty resources.² Additionally, Fond du Lac's ownership of Spirit Island, a place of great historical and cultural significance to the Anishinaabe people, and its proximity to the USS site, create even more compelling circumstances for serious consideration of this state/federal action and its potential effects on this traditional cultural property (TCP).

First, we reiterate several key issues that were previously communicated in our comments on the November 2014 draft FS:

- (SHPO/THPO) App. G pp. 845/2396 notes the need for consultation prior to initiating remedial activities. It is critical that a robust Section 106 *consultation process* be conducted so that tribal concerns can be appropriately and meaningfully addressed in this process, not just as an afterthought. We appreciated the initial consultation meeting that took place in April of this year, and the subsequent development of an additional remedial alternative (Alternative 12) that more adequately addresses the concerns expressed by tribal participants. Section 106 consultation is a defined process, and that process must continue in order to accomplish what this federal statutory requirement is intended to facilitate: to determine the area of potential

Treaty with the Chippewa, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/chi0648.htm> (last visited March, 2014).

See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating “the United States has recognized Indian tribes as domestic dependent nations under its protection . . .,” there is a “trust relationship with Indian tribes,” and “[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.”), available at <http://ceq.hss.doe.gov/nepa/regs/eos/eo13175.html> (last visited March, 2014)

- effect (APE), assess effects on historic properties, and resolve any adverse effects. That final step, the resolution of adverse effects, provides an opportunity for the national Advisory Council on Historic Properties to participate. It is intended to reflect a good-faith effort to avoid where possible, minimize, or mitigate for adverse effects. Without a timely resumption of the consultation process, that sequence of options available to resolve adverse effects is inequitably truncated. We fully understand that this is a federal requirement and thereby EPA's responsibility to expedite, but the MPCA should recognize that this process also pertains to the requirement to consult and coordinate with the State Historic Preservation Office on effects to other potential historic properties, beyond the tribally significant Spirit Island.
- (ARARs) App H p. 850: Applicable or Appropriate and Relevant Requirements can and should incorporate location-specific considerations that reflect tribal concerns under the National Historic Preservation Act (NHPA); this is still missing from Appendix H, Tables 1 and 3. Special locations include sensitive ecosystems or habitat, coastal zones, historic places, Indian Reservations, or sacred sites. NHPA provides for the protection of historic resources from effects on properties included or eligible for the National Register of Historic Places. Relevant Executive Orders include E.O. 13175 (Consultation with Indian Tribal Governments) and E.O. 13007 (Protection of Indian Sacred Sites). Consultation procedures under NHPA Section 106 are laid out in *Advisory Council on Historic Preservation (ACHP)* regulations at 36 CFR Part 800. The Band responded on June 18, 2015 to MPCA's written request for more detailed information about the consideration of location-specific ARARs in the selection of a remedy for the USS site. As stated in our correspondence to MPCA, included in the matrix of examples (from the EPA guidance document *CERCLA Compliance with Other Laws Manual, Interim Final, August 1998, EPA/540/g-89/006*) of specific locations that are potential ARARs, are locations where historically significant cultural resources are present. The statutory requirement is that the action must take into account effects on properties included in, or eligible for, the National Register of Historic Places, and to preserve or minimize harm. As of this date, we have not yet seen the MPCA's anticipated memorandum of response or any indication of how the agency intends to address protection of the integrity of this traditional cultural property in their remedial decision.

Natural Resource Trustees

Section 6.1, Recommended Project Alternative, discusses consistency of the identified preferred alternative with EPA guidance regarding sediment management principles, including coordination with states, local governments, tribes and Natural Resource Trustees. The Band notes that the Natural Resource Trustees are identified as the US Fish & Wildlife Service, the National Oceanographic and Atmospheric Administration (both correctly), and the St. Louis River Alliance (incorrectly). Other Natural Resource Trustees include tribes and tribal agencies (the Fond du Lac Band, the 1854 Treaty Authority, and Bureau of Indian Affairs), the Minnesota Department of Natural Resources, and the MPCA. The state Attorney General's Office and the federal Department of Justice provide legal support to the Natural Resource Trustees. While this particular site RI/FS process has provided opportunities over the past several years for local resource managers to review draft documents and submit comments and recommendations, this has been a relatively informal component of the remedial alternative development process. If in fact a Natural Resource Damage Assessment and Restoration action commences for this site, it is important to be clear about who the Natural Resource Trustees are for this distinct federal course of action.

Consideration of Cultural and Recreational Values

Section 3.5.1 states "...Spirit Island and the lands owned by the Fond du Lac Band are beyond the project area, and are not anticipated to be directly affected by a potential Project remedy." This is apparently the only 'consideration' given to tribal concerns, and summarily dismisses any potential indirect effects to an identified TCP. This foregone conclusion is more than disappointing; it represents a clear deficiency in the process of evaluating the effectiveness of the various alternatives in 'Achieving RAOs and Considerations'.

Review of Alternatives

The company-identified recommended alternative, Alternative 8 (Shallow Sheltered Bay with Delta Sediment CDF and Upland CDFs), was chosen through the company's screening evaluation of effectiveness at achieving remedial action objectives, implementability, and relative cost, and through subsequent detailed analysis of four alternatives identified through the screening evaluation. Fond du Lac appreciates MPCA's and EPA's responsiveness in directing US Steel to more fully develop the scope and costs for an additional remedial alternative, Alternative 12, that we believe would have the least impact to the historical integrity of Spirit Island, and would least diminish tribal members' experiences engaging in traditional practices today and for future generations. We note however, that from the Band's perspective, Alternative 12 is still a compromise; the targeted removal (Alternative 10) and full dredge and removal (Alternative 11) remedial alternatives had already been eliminated from consideration.

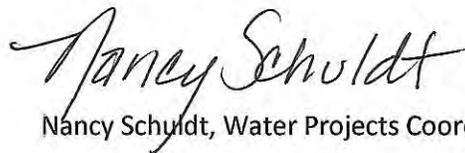
Alternative 12 scores well in the screening level evaluation of alternatives, captured in Table 5-2, and addresses resource managers' and tribally expressed preferences for consolidating maximum volume of contaminated sediment west of the railroad grade and maintaining as much open water habitat as possible. This last factor (open water acreage) is a relevant issue for consideration with regards to regulatory permitting, as well; Alternative 12 has an advantage over Alternative 8 in this respect. The detailed analysis summary also notes that Alternative 12 provides the lowest risk option for managing storm water in the future consolidation/capping areas. One apparent difference between Alternatives 8 and 12 in this evaluation is the conclusion regarding "eliminating the possibility for development", which is highly questionable. It is difficult to find specific information regarding the 'footprint' or areal extent of the various remedial features, but the Landfill Borrow Site CDF that would be constructed for Alternative 12 appears to have a smaller areal footprint than the Delta Sediment CDF planned for Alternative 8. The Landfill Borrow Site CDF acreage, at least through visual comparison of Figures 5-8 and 5-12, represents less than 10% of the land available for potential redevelopment at the conclusion of remedial actions. While certainly there would be limitations imposed through institutional controls and other restrictions, Alternative 12 does not universally prohibit any future beneficial use of that part of the site.

Alternative 12 receives the second-highest score in the alternatives comparison presented in Table 5-10, where a lower score is more desirable. The lower score is apparently attributable to a longer construction schedule and higher cost. The relative cost for Alternative 12, when considered alongside all eleven alternatives presented in the FS, is less than the cost of implementing either Alternatives 7, 10 or 11. Section 4.1 acknowledges that "relative costs used for the technology screening were based on engineering judgement, rather than detailed estimates," so the cost factor itself has inherent limitations in providing for definitive comparison. The statement regarding

removed material having to be moved a greater distance in Alternative 12 does not distinguish between contaminated material dredged from the OU-M delta and that from the Wire Mill delta. Dredged contaminated sediments from the Wire Mill delta, under Alternative 12, in fact are moved a significantly shorter distance than they would be under Alternative 8. The borrow site that will be used in Alternative 12 for a CDF provides material for necessary earthwork, reducing the need for importing clean material and lessening construction-related traffic. The Band questions the unsubstantiated conclusion, in the detailed analysis summary, that “the level of effort associated with long-term O&M of the three CDFs is anticipated to be more than Alternatives 6 & 8 because the third CDF is located a significant distance away from the other two CDFs”.

A final factor to consider, one that is relevant to the resource managers’ expressed preferences and concerns as well as the habitat restoration goals for the St. Louis River Area of Concern, is the final bathymetry and habitat restoration potential (post-remedy). Alternative 12 provides for significantly more open water, but with generally shallower depth (1-3 feet) than may be desirable for certain aquatic habitats and natural resource services, than the smaller shallow bay provided by Alternative 8 (3-5 feet, on average). The Band suggests that MPCA and GLNPO consider the feasibility of adjusting the ‘removal to set elevation’ and/or remedial cap thickness (i.e., a thinner cap could be applied in conjunction with an activated carbon mat) to allow for a post-remedial bathymetry in Alternative 12 with an average depth of 2-4 feet. This would allow for more sustainable aquatic habitat restoration opportunities, and a lower risk of habitat conversion (transition to emergent habitat) under variable water level regimes in the future.

The Band appreciates the opportunity to comment on the USS revised draft FS, and looks forward to further discussions with the agencies involved as we make progress towards this long-awaited remedial action.


Nancy Schudt, Water Projects Coordinator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Ervin Soulier
Natural Resources Director
Bad River Band of Lake Superior Chippewa
P.O. Box 39
Odanah, WI 54861

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Mr. Soulier,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Bad River Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, MN. EPA understands that the Bad River Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on the MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Bad River Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Michael Wiggins, Tribal Chairman, Bad River Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Seth Moore
Director, Environmental Department
Grand Portage Band
27 Store Road
Grand Portage, MN 55605

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Mr. Moore,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Grand Portage Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, MN. EPA understands that the Grand Portage Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on the MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Grand Portage Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Norman Deschampe, Chairman, Grand Portage Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Levi Brown
Environmental Manager
Leech Lake Band
115 Sixth St. N.W. – Suite E
Cass Lake, MN 56633

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Mr. Brown,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Leech Lake Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, MN. EPA understands that the Leech Lake Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on the MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Leech Lake Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Carri Jones, Chairwoman, Leech Lake Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Perry Bunting
Environmental Program Manager
Mille Lacs Band
43408 Oodena Drive
Onamia, MN 56359

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Mr. Bunting,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Mille Lacs Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Mille Lacs Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Mille Lacs Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Melanie Benjamin, Chief Executive Officer, Mille Lacs Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Melonee Montano
Environmental Director
Red Cliff Band of Lake Superior Chippewa
88385 Pike Road - Highway 13
Bayfield, WI 54814

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Ms. Montano,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Red Cliff Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Red Cliff Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Red Cliff Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Rose Gurnoe-Soulier, Chairperson, Red Cliff Band of Lake Superior Chippewa
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Cody Charwood

Director, Environmental Programs

Red Lake Band of Chippewa Indians, Minnesota

P.O. Box 279

Red Lake, MN 56671

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Mr. Charwood,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Red Lake Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Red Lake Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Red Lake Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Darrell Seki, Chairman, Red Lake Band of Chippewa Indians, Minnesota
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

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CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Monica Hedstrom
Manager, Environmental Affairs
White Earth Band
2209 271 Avenue – Unit 2
Mahnomen, MN 56557

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Ms. Hedstrom,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the White Earth Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the White Earth Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the White Earth Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Erma J. Vizenor, Chairwoman, White Earth Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

March 4, 2015

Johnathan Eagleman
Water Resources Director
Chippewa-Cree Tribe of Rocky Boy's Reservation
P.O. Box 544
Box Elder, MT 59521

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Mr. Eagleman,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Chippewa-Cree Tribe of Rocky Boy's Reservation regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Chippewa-Cree Tribe of Rocky Boy's Reservation may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

<http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Chippewa-Cree Tribe of Rocky Boy's Reservation would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Richard Morsette, Chairman, Chippewa-Cree Tribe of Rocky Boy's Reservation
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

March 4, 2015

Char Spruce
Environmental Director
Keweenaw Bay Indian Community
14359 Pequaming Road
L'ance, MI 49946

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Ms. Spruce,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Keweenaw Bay Indian Community regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Keweenaw Bay Indian Community may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

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Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Keweenaw Bay Indian Community would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,

A handwritten signature in black ink that reads "Scott Cieniawski". The signature is written in a cursive style with a large, looping initial "S".

Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Warren Schwartz, President, Keweenaw Bay Indian Community
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

March 4, 2015

Daniel Tyrolt
Environmental Director
Lac Courte Oreilles Band of Lake Superior Chippewa Indians
13394 West Trepania Road, Building 1
Hayward, WI 54843

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Mr. Tyrolt,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Lac Courte Oreilles Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Lac Courte Oreilles Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

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Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Lac Courte Oreilles Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Michael Isham, Chairman, Lac Courte Oreilles Band of Lake Superior Chippewa
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

March 4, 2015

REPLY TO THE ATTENTION OF:

Dee Allen
Environmental Director
Lac Du Flambeau Band of Lake Superior Chippewa
P.O. Box 67
Lac du Flambeau, WI 54538

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Ms. Allen,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Lac Du Flambeau Tribe regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Lac Du Flambeau Tribe may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

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Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Lac Du Flambeau Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Henry St. Germane, President, Lac Du Flambeau Band of Lake Superior Chippewa
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

March 4, 2015

REPLY TO THE ATTENTION OF

George Beck
Environmental Director
Lac Vieux Desert Band of Lake Superior Chippewa
P.O. Box 249
Watersmeet, MI 49969

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Mr. Beck,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Lac Vieux Desert Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Lac Vieux Desert Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

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Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Lac Vieux Desert Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,

A handwritten signature in cursive script that reads "Scott Cieniawski".

Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: James Williams, Chairperson, Lac Vieux Desert Band of Lake Superior Chippewa
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

March 4, 2015

REPLY TO THE ATTENTION OF:

Tina Van Zile
Environmental Director
Sokaogon Chippewa Community
3051 Sand Lake Road
Crandon, WI 54520

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Ms. Van Zile,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Sokaogon Chippewa Community regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Sokaogon Chippewa Community may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

<http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Sokaogon Chippewa Community would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,

A handwritten signature in blue ink that reads "Scott Cieniawski". The signature is fluid and cursive, with a large loop at the end of the last name.

Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Chris McGeshick, Chairman, Sokaogon Chippewa Community
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
GREAT LAKES NATIONAL PROGRAM OFFICE
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

March 4, 2015

Cora Champagne
Environmental Director
Turtle Mountain Band of Chippewa Indians
P.O. Box 900
Belcourt, ND 58316

Re: Notification of Offer of Consultation on the Spirit Lake Estuary Sediment Project

Dear Ms. Champagne,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Turtle Mountain Band of Chippewa Indians regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, Minnesota. EPA understands that the Turtle Mountain Band of Chippewa Indians may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, and as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once a large industrial facility in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Maps showing the location of the site and potentially impacted areas are provided in Attachments 1 and 2. Additional information regarding this site is available on MPCA's website at:

<http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>.

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel), is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals at the former U.S. Steel site will be completed. U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm). If the Turtle Mountain Band of Chippewa Indians would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

Wayne Dupuis, Environmental Program Manager for the Fond du Lac Band of the Lake Superior Chippewa, has offered to host EPA and all interested tribes at an initial consultation meeting in Cloquet, Minnesota on March 23-24, 2015. EPA personnel will be present to provide a brief overview of the site, and obtain a better understanding of the perspectives, interest, and concerns of the tribes. We value your input and you are invited to attend this meeting, if you are available and interested. A draft agenda is attached (Attachment 3). If you are interested in attending, please let me know and I will provide additional details as they are available.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,

A handwritten signature in cursive script that reads "Scott Cieniawski".

Scott Cieniawski, Project Lead
Spirit Lake Estuary Sediment Project
U.S. EPA - Great Lakes National Program Office

Attachments: 3

Cc: Richard McCloud, Chairman, Turtle Mountain Band of Chippewa Indians
Chris Korleski, Director, U.S. EPA – Great Lakes National Program Office
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Acting Branch Chief, Technical Assistance & Analysis Branch



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 16, 2015

Gabrielle Holman
Environmental Services Manager
Bois Forte Band
5344 Lakeshore Dr.
Nett Lake, MN 55772

Re: Notification of Offer of Consultation and Coordination on the Spirit Lake Estuary Sediment Project

Dear Ms. Holman,

The U.S. Environmental Protection Agency's Great Lakes National Program Office (EPA) is respectfully initiating consultation and coordination with the Bois Forte Band regarding EPA's effort to complete a feasibility study at the Spirit Lake Estuary Sediment Project (Project) located in the St. Louis River Area of Concern in Duluth, MN. EPA understands that the Bois Forte Band may have historic connections to Spirit Lake including spiritual, cultural and in some cases, reserved rights under the Treaty of 1854. EPA recognizes this project may have implications for your Tribe, as such, we are inviting you to participate in government-to-government consultation with EPA regarding the completion of the feasibility study (including the evaluation of remedial alternatives) and the selection of a proposed remedy.

The U.S. Steel Duluth Works was once the largest employer in the city of Duluth, producing up to 715,000 tons of steel annually. The plant was completely shut down by 1981. In 1989, the Minnesota Pollution Control Agency (MPCA) issued a Record of Decision (ROD) outlining the requirements for cleaning the upland portion of the site. Multiple cleanup projects on this upland portion have since been undertaken by U.S. Steel. Although these cleanup projects have substantially decreased the risk to human health and the environment, contaminants remain in the estuary sediments surrounding the property. Additional information regarding this site is available on the MPCA's website at: <http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/remediation-sites/st.-louis-river-u.s.-steel-superfund-site/index.html>

Under the Great Lakes Legacy Act, the EPA, in partnership with the U.S. Steel Corporation (U.S. Steel) is completing a feasibility study to select a remedial alternative for addressing contaminated sediments in the Spirit Lake estuary. The Project is a voluntary collaboration between EPA, MPCA and U.S. Steel. Following completion of the feasibility study, a remedial design addressing estuary sediments impacted with Polycyclic Aromatic Hydrocarbons (PAHs) and metals at the former U.S. Steel site will be completed. Under a current agreement, U.S. Steel will provide at least 35 percent of the funding for the feasibility study and remedial design.

This consultation and coordination process will be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes* (www.epa.gov/tribal/consultation/consult-policy.htm).

If the Bois Forte Band would like to enter into consultation with EPA, please send an official letter designating the primary consultation representative for the Tribe within 30 calendar days of receipt of this letter. The letter may be scanned and sent electronically.

If you have questions about the consultation process, please call Eloise Mulford, GLNPO's contact person for this consultation and coordination process at 312-353-2022 or by email at: 'mulford.eloise@epa.gov'. As the project lead, I may be reached at 312-353-9184 or by email at: 'cieniawski.scott@epa.gov'.

I look forward to meeting and working with you on this important effort.

Sincerely,



Scott Cieniawski
Project Lead; Spirit Lake Estuary Sediment Project
Great Lakes National Program Office

Cc: Kevin Leecy, Chairman, Bois Forte Band
Chris Korleski, Director, GLNPO
Kestutis Ambutas, Acting Director, Indian Environmental Office
Eloise Mulford, Program Analyst, Indian Environmental Office
Marc Tuchman, Deputy Branch Chief, Technical Assistance & Analysis

STATE HISTORIC PRESERVATION OFFICE

September 22, 2017

William Murray
United States Environmental Protection Agency, Region 5
Great Lakes National Program Office
77 West Jackson Blvd.
Chicago, IL 60604-3590

RE: Spirit Lake Sediment Remediation Project
Duluth, Saint Louis County
SHPO Number: 2015-2457

Dear Mr. Murray,

Thank you for continuing consultation on the above project. Information received in our office on 14 August 2017 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

We have completed our review of your letter dated 10 August 2017, a submittal which included the following survey reports:

- *Phase I Archaeological Investigations for the Spirit Lake Sediment Remediation Project, City of Duluth, St. Louis County, Minnesota* (R. Christopher Goodwin & Associates - July 27, 2017);
- *Architectural Reconnaissance Survey for the Spirit Lake Remediation Project in Duluth, St. Louis County, Minnesota* (R. Christopher Goodwin & Associates - July 2017); and
- *Evaluation and Determination of Eligibility for Listing of the Lake Superior and Mississippi Railroad in Duluth, St. Louis County, Minnesota on the National Register of Historic Places* (EA Engineering, Science, and Technology, Inc., PBC – September 2016).

In your August 10th letter your agency did not provide written findings at this time, but have instead requested that our office review and provide concurrence “with the conclusions of the attached reports.” Our comments and recommendations on these reports are provided below.

Clarification Regarding Undertaking and APE

On 16 June 2017 our office provided comments and recommendations pertaining to your agency’s determination and documentation for the proposed APE, with delineations for both direct effects and indirect visual effects, for what we assumed was the federal undertaking defined at Alternative 8B. While your subsequent letter dated 7 July 2017 does provide clarification that your agency’s preferred remedial alternative is Alternative 8B, we have not yet received written clarification from your agency that the currently proposed APE has taken into consideration all potential direct and indirect effects. As recommended in our previous correspondence, the determination for an area of potential direct effects should include the “footprint of the proposed remedy for the Project” as well as all potential access, staging, and other areas utilized for the project’s construction. Also, while the area of potential indirect effects will need to include, but not be solely limited to, potential indirect visual effects, it also needs to include potential indirect effects such as noise and atmospheric effects, and potential indirect effects to the setting or use of historic properties, which may be caused by the project. The APE as a whole must also take into account reasonably foreseeable potential effects that may occur later in time or be cumulative. We again request that your agency provide narrative response to comments and recommendations we have expressed in previous correspondence as well as this letter as it pertains to clarification on your agency’s APE determination for the proposed undertaking.

Identification of Historic Properties: Archaeology

Chapter V of the Phase I archaeological report does include some discussion as it pertains to potential historic properties within the area of potential effects (both direct and indirect) for the proposed undertaking and it is our understanding that the archaeological reconnaissance survey focused solely on “examining the potential and sensitivity” for archaeological resources within the area of potential effect (APE) for direct effects as illustrated on Figure 2 of the report. It is also our understanding as summarized in the report that the investigation comprised of “archival research, examination of land use...and examination of previous geotechnical data” and that no on-site field investigation or survey was completed as part of the investigation. Based upon information presented in this report, we agree with the following recommendations as presented on page 61 of the report:

- Due to the extensive, prior ground disturbance by the now demolished USS Duluth Works, there is a very low probability of any intact pre-industrial archaeological sites within these areas and therefore an archaeological survey is not warranted for those areas identified as previously disturbed by the USS Duluth Works facility;
- Extant archaeological remains of the USS Duluth Works, if any, would likely lack the integrity and/or research potential to be eligible for listing in the National Register of Historic Places (NRHP); and
- An archaeological survey should be conducted for what is identified on Figures 13 & 14 of the report and described as the “small wooded area located in the far southeastern portion of the direct APE” where it appears that there has been no extensive, prior disturbance by the USS Duluth Works facility.

Because the identification efforts are incomplete as it pertains to the undisturbed area within the APE and we have not received information and documentation from your agency as it pertains to the potential for direct effects in this undisturbed area, we will consider this information in partial fulfillment of requirements that your agency has to identify historic properties of archaeological significance within the proposed undertaking’s APE.

Identification of Historic Properties: History/Architecture

Our comments are provided below as they pertain to each of the two (2) survey reports submitted recently:

1. Architectural Reconnaissance Survey; and
2. Historic Property Evaluation (Intensive Level) Survey for the railroad property.

Architecture/History Intensive Level Survey and Evaluation

Based upon information presented to our office at this time, we concur with the report’s finding that the **Lake Superior & Mississippi Railroad Corridor Historic District: West Duluth Segment** (Minnesota Inventory # n/a) is eligible for listing in the NRHP under Criterion A (primarily in the area of Transportation). The segment is six (6) miles in length with its northern terminus at South 67th Avenue West and southern terminus at Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth as illustrated on Figure 3 of the report. Because the report does not present a convincing argument regarding the railroad’s period of significance, which recommends ending it at 1956 when the *Railroads in Minnesota* MHPR ends, we recommend the NRHP Period of Significance for this line to be beginning in 1870 when the line was constructed and likely ending either sometime in the 1940s or early 1950s when passenger service ended in Fond du Lac and the remaining railroad infrastructure was removed, or earlier as freight had ceased using this line and the segment between Fond du Lac and Thomson had been removed by 1897 and freight traffic had been rerouted to the St. Paul & Duluth/Northern Pacific “Skally Line.” Additional archival research will need to be undertaken in order to determine an appropriate end date for the Period of Significance.

The evaluation report for the Lake Superior & Mississippi Railroad Corridor Historic District: West Duluth Segment did not include an inventory form for our records. Your agency will need to prepare and submit to our office a *Minnesota Multiple Property Inventory Form* for the Lake Superior & Mississippi Railroad Corridor Historic District: West Duluth Segment and this inventory form will need to incorporate recommendations we have made in this letter regarding Period of Significance, an appropriate map of the historic property, and other required fields. Please follow the guidelines for linear resources which are included in our newly issued *Historic and Architectural Survey Manual*. Both the manual and the inventory form can be found on our website at www.mnhs.org/shpo/survey/.

Architectural Reconnaissance Survey

Our office will require clarification as it pertains to the scope of the architectural reconnaissance survey report, as there is conflicting information presented in regards to the survey area. One page 3, under "Research Objectives", there is a statement that says that the reconnaissance survey was undertaken "within the project area (direct APE) and visibility area (indirect APE) to identify built resources 50-years of age and older." We consider both the "direct APE" and the "visibility area" as being sub-areas of the larger APE. The "visibility area" and corresponding larger APE boundary are both illustrated on Figure 2.1 of the report. This scope of survey within the "visibility area" is further discussed on pages 6-7, 9, and 21 of the report. Again, it is our understanding that this "visibility area" is only part of the larger APE.

Based upon this limited survey area, and corresponding limited evaluation criteria, we are able to provide agreement that the following properties do not appear to be *individually* eligible for listing in the National Register of Historic Places:

- Residence at 1150 86th Avenue West, Duluth (SL-DUL-3371)
- Residence at 1204 Hilton Street, Duluth (SL-DUL-3359)
- Residence at 1214 Hilton Street, Duluth (SL-DUL-3360)

Unfortunately, the report contradicts itself in Chapter V (page 26) Potential Effects, as it is stated that "archival research, architectural reconnaissance survey, and data analysis identified four properties over 50 years of age within the direct and indirect APE for the proposed remediation project." This is not an accurate statement it is clear that the survey only covered areas within the area of potential direct effects and within the "visibility area" of the larger APE.

While we agree that no further evaluation work is necessary for the three (3) individual properties listed above, we believe that the reconnaissance survey efforts for architectural and historic properties is incomplete. While the report includes information regarding other properties, some of which have been determined eligible through previous review, as being in the APE for the proposed undertaking (Figure 3.3) and some even appear to be partially within the "visibility area", they are not mentioned in the survey results or the potential effects narrative. According to our records, these properties which are located within the larger APE include:

- Morgan Park Residential Historic District – determined **eligible** for listing in the NRHP through previous review;
- Bridge L6119 (SL-DUL-2447) – determined to be **not individually eligible** for listing in the NRHP;
- Bridge L6008 (SL-DUL-2433) – determined to be **not individually eligible** for listing in the NRHP;
- Bridge 7622 (SL-DUL-2652) – determined to be **not individually eligible** for listing in the NRHP through previous review;
- Northern Pacific Railroad Historic District: Duluth Short Line Segment (xx-RRD-025) – currently known as the DWP Short Line Trail, a historic property determined to be **eligible** for listing in the NHRP through previous review;
- St. Paul & Duluth Railroad/Northern Pacific "Skally Line" Railroad Corridor Historic District (xx-RRD-036) – currently Willard Munger State Trail, a historic property determined to be **eligible** for listing in the NRHP through previous review; and
- Skyline Parkway: Bardon's Peak Segment (SL-DUL-2312), Bardon's Peak East Overlook (SL-DUL-2316), and Bardon's Peak West Overlook (SL-DUL-2317) – determined to be **eligible** for listing in the NRHP through previous review.

Please provide clarification from your agency as it pertains to architectural and historic property identification efforts for areas within the larger APE which were not surveyed as part of this reconnaissance. Along with consideration of the properties listed above which have been recorded in our statewide inventory, including the NRHP-eligible historic properties which may require reevaluation pursuant to 36 CFR 800.4(c)(1), any reconnaissance survey in this area will need to include any properties of this type which are less than 45 years old.

As an example, there may be a need to reevaluate the previously identified boundaries for the Morgan Park Historic District in order to confirm that the boundary is still valid. For instance, we do not believe that the previous evaluation considered a

remnant of the USS Duluth Works plant access road from the neighborhood was located in the area where the three (3) surveyed residential properties are located. This road is identified today as Falcon Street.

While we did receive unbound, individual architecture-history inventory forms for the three (3) residential properties listed above, these inventory forms need to be corrected before we can accept them into our files. The inventory forms need location maps for each of the three (3) properties and these location maps should be to a higher scale and level of detail than the map presented on Figure 4.1 of the report. Please update these inventory forms accordingly and submit to our office for acceptance into our statewide inventory records.

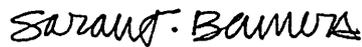
Also, please delete the statement "may be contributing to potential historic district" from the NR Eligibility section as the "potential historic district", whether an expanded Morgan Park Residential Historic District or other unnamed historic district, has not been presented or evaluated at this time, and these properties are located outside the currently delineated Morgan Park Residential Historic District.

Consulting Parties Comments Regarding Identification Efforts

Please provide a summary of any comments and/or recommendations that your agency may have received from consulting parties, including Native American tribes, as it pertains to identification efforts presented to our office thus far, or any other consultation that has been completed which has resulted in identification of historic properties eligible for listing in the NRHP for which our office has not yet been presented documentation and had the opportunity to review.

We look forward to continuing consultation with your agency on this important project. Please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions regarding our comment letter.

Sincerely,



Sarah J. Beimers, Manager
Government Programs and Compliance

cc: Curtis Sedlacek, U.S. Army Corps of Engineers, Detroit District
Lynne Harrington Hall, Lake Superior and Mississippi Railroad
Jill Hoppe, Tribal Historic Preservation Officer, Fond du Lac Band of Lake Superior Chippewa



**Evaluation and Determination of Eligibility
for Listing of the Lake Superior and Mississippi
Railroad in Duluth, St. Louis County, Minnesota
on the National Register of Historic Places**

Prepared for

U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
225 Schilling Circle, Suite 400
Hunt Valley, Maryland 21031
(410) 584-7000

September 2016
Version: FINAL
EA Project No. 62561.27

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**Evaluation and Determination of Eligibility
for the Lake Superior and Mississippi Railroad
in Duluth, St. Louis County, Minnesota**

Prepared for

U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Prepared by

EA Engineering, Science, and Technology, Inc., PBC
225 Schilling Circle, Suite 400
Hunt Valley, Maryland 21031
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September 2016
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TABLE OF CONTENTS

	<u>Page</u>
LIST OF FIGURES	ii
LIST OF ACRONYMS AND ABBREVIATIONS	iii
EXECUTIVE SUMMARY	ES-1
1. INTRODUCTION	3
2. FIELD AND RESEARCH METHODS	4
2.1 BACKGROUND RESEARCH	4
2.2 FIELDWORK	4
3. THE LAKE SUPERIOR AND MISSISSIPPI RAILROAD	5
4. HISTORIC PROPERTY INVENTORY AND EVALUATION	10
4.1 DESCRIPTION OF THE SIX-MILE SEGMENT OF THE LAKE SUPERIOR & MISSISSIPPI RAILROAD	10
4.2 EVALUATION	12
4.2.1 National Register of Historic Places Evaluation Criteria	12
4.2.2 Description of Historic Property	15
4.2.3 Statement of Significance	15
4.2.4 National Register of Historic Places Eligibility	16
4.2.5 Integrity	16
4.2.6 Period of Significance	18
4.2.7 Boundary	18
5. CONCLUSION	19
6. REFERENCES	20
APPENDIX A: SITE FORM (BUILDER) AND USGS TOPO MAP	
APPENDIX B: PHOTO LOG	

LIST OF FIGURES

<u>Number</u>	<u>Title</u>
1	Former U. S. Steel Duluth Works Steel Mill Superfund Site
2	Lake Superior and Mississippi Railroad Alignment
3	Lake Superior and Mississippi Railroad Corridor

LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
ft	Foot (feet)
GLLA	Great Lakes Legacy Act
GLNPO	Great Lakes National Program Office
I-35	Interstate 35
LS&M	Lake Superior and Mississippi Railroad
NHPA	National Historic Preservation Act of 1966, as amended
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Office

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EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) Great Lakes National Program Office (GLNPO) has been working throughout the Great Lakes region to implement contaminated sediment cleanups under the Great Lakes Legacy Act, focusing on sediment remediation.

The GLNPO, in conjunction with U. S. Steel (the project private partner), is planning to address sediment contamination in and adjacent to Spirit Lake. The project area is located in an open reach of the St. Louis River, referred to as Spirit Lake, near the Morgan Park neighborhood of Duluth, Minnesota and adjacent to the former U. S. Steel Duluth Works Steel Mill facility.

Some alternatives could be considered undertakings under Section 106 of the National Historic Preservation Act of 1966, as amended, and may affect historic properties. EPA is required to identify, evaluate, and protect historic properties within its jurisdiction and must ensure that the actions it takes do not inadvertently harm or destroy properties deemed historic.

The Lake Superior and Mississippi Railroad is within the project area. This report documents the evaluation of the historical significance and integrity of a 6-mile segment of the railroad. This 6-mile segment of rail road was donated to the City of Duluth by Burlington Northern Rail Road, and is currently used by the The Lake Superior and Mississippi Railroad Company for tour rides. The evaluation concludes that the Lake Superior and Mississippi Railroad is eligible for listing in the National Register of Historic Places under Criterion A as a railroad corridor historic district. It has local significance. It was the first railroad to connect the Duluth port on Lake Superior to the Mississippi River in St. Paul and contributed to the economic growth of Duluth and tourism in the state of Minnesota.

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1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Great Lakes National Program Office (GLNPO) has been working throughout the Great Lakes region to implement contaminated sediment cleanups under the Great Lakes Legacy Act (GLLA), focusing on sediment remediation at known areas of concern (AOCs). The GLLA provides federal funding to increase the speed of sediment remediation in the Great Lakes AOCs, which are areas that have experienced severe environmental degradation as a result of past pollution or industrial activity. Remediation in the AOCs is being done to address human health and ecological risks, habitat degradation, and water quality degradation.

The GLNPO, in conjunction with U. S. Steel (the project private partner), is planning to address sediment contamination in and adjacent to Spirit Lake, which is part of the St. Louis River AOC. The St. Louis River AOC has sediments impacted by pollutants, including mercury, dioxins, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons. Each of these pollutants has the potential to have harmful effects on human and wildlife health.

The project area is located in an open reach of the St. Louis River, referred to as Spirit Lake, near the Morgan Park neighborhood of Duluth, Minnesota and adjacent to the former U. S. Steel Duluth Works Steel Mill facility (Figure 1). The project comprises two main areas along the western shore of Spirit Lake: the Wire Mill Delta and the Unnamed Creek Delta.

Some alternatives could be considered undertakings under Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and may affect historic properties. EPA is required to identify, evaluate, and protect historic properties within its jurisdiction and must ensure that the actions it takes do not inadvertently harm or destroy properties deemed historic under the stipulations of the NHPA. The Lake Superior and Mississippi Railroad is within the project area. The purpose of this report is to document and evaluate the historical significance and integrity of a 6-mile segment of the Lake Superior and Mississippi Railroad.

2. FIELD AND RESEARCH METHODS

All work for the survey was conducted in accordance with the Minnesota State Historic Preservation Office's (SHPO) Guidelines for SHPO Architecture/History Projects. In addition, under NHPA guidelines, cultural resources are to be evaluated for significance and potential National Register of Historic Places (NRHP) nomination eligibility using NRHP criteria, as listed in 36 Code of Federal Regulations (CFR) Part 60.4. In order to evaluate eligibility of the Lake Superior and Mississippi Railroad, the following NRHP bulletins and guidelines were referenced:

- How to Apply National Register Criteria for Evaluation (Bulletin 15)
- Guidelines for Completing National Register of Historic Places forms (Bulletin 16A)
- Researching a Historic Property (Bulletin 39).

2.1 BACKGROUND RESEARCH

The principal investigator initiated work on the project by conducting background research into the history and development of the Lake Superior and Mississippi Railroad, utilizing a variety of sources and repositories, including:

- Minnesota SHPO: Inventory and National Register Nomination forms of previously recorded railroads and other historic properties in the vicinity of the project; and the historic context file for state railroads
- Duluth, Minnesota Public Library: Reviewed maps, books and articles
- Lake Superior Railroad Museum archives for schedules and photographs
- Carlton, Minnesota Public Library for books and brochures.

2.2 FIELDWORK

The site visit was conducted in Duluth, Minnesota on 7 and 8 July 2016. Archival research was conducted on 5, 6, and 9 July. Upon completion of the site visit and research, the report and inventory form (Appendix A) were prepared. The site visit included the principal investigator and escort representing U. S. Steel walking the 6 miles of the 1870s track from South 70 Avenue West in West Duluth to Commonwealth Avenue in New Duluth including the section of railroad that traverses the U. S. Steel site. Photographs were taken along the route (see Appendix B).

3. THE LAKE SUPERIOR AND MISSISSIPPI RAILROAD

The following describes the construction and operation of the Lake Superior Railroad. A full historic context for railroads in Minnesota, and from which this evaluation is tiered, can be found in the Railroads in Minnesota, 1862–1956 National Register of Historic Places Multiple Property Documentation Form on file at the Minnesota State Historical Society (Minnesota State Historical Society 2002). The context is not repeated in this report.

Until the late 1800s, the 10,000 lakes and countless numbers of rivers and streams in Minnesota created a vast network of waterways to provide transportation throughout the state. The waterways fell into three drainage areas—the Red River to the north, the Mississippi River, and Lake Superior. Each of these drainages represents a distinct and totally separate water system with no connecting links between them (Luecke 2005). The river route from the Head of Lakes (Lake Superior) south toward the Mississippi River system was difficult, and sometimes impossible to traverse. The arrival of the railroad would end the region’s reliance on waterborne transportation and establish the Head of the Lakes as a transportation gateway to all points in Minnesota (Luecke 2005).

Minnesota’s earliest railroads were incorporated in 1857. Of the possible routes for the first railroads in the region, the concept of linking the territory’s three major watersheds received considerable interest. The link between the Head of the Lakes and the head of navigation of the Mississippi River at St. Paul received considerable backing, but only as a part of a much grander scheme: a rail line from the Head of Lakes via St. Paul to the Missouri River at Omaha. On 23 May 1857, the Nebraska and Lake Superior Railroad Company was incorporated as one of the first original 31 territorial railroads (Luecke 2005, Prosser 1966). Of the 31 railroads chartered in this period, the four land grant roads managed to grade about 180 miles of potential railroad (Luecke 2005).

The Minnesota territorial legislature gave the Nebraska and Lake Superior Railroad Company a grant of swamp lands; however, the Panic of 1857 resulted in no work being completed on Minnesota’s railroad system beyond the initial 180 miles of grading. By 1860, the Nebraska and Lake Superior Railroad silently slipped into receivership and the hopes of early completion of the “Portage Railroad” disappeared (Luecke 2005). By 1861, the exportation of small grains, particularly wheat, was becoming increasingly important to the economy of the state, and the need of central Minnesota for a trade outlet to the East created pressures which led to a legislative act reviving the company under a new name. On 8 March 1861, the Nebraska and Lake Superior was re-organized and emerged as the Lake Superior and Mississippi Railroad Company (LS&M) inhering the swamp land grant (Harnsberger 1960, Luecke 2005, Prosser 1966).

Events once again interfered with the company’s second bid to complete the “Portage Road.” One month after the LS&M was formed, the Civil War began. No progress would be made by the LS&M. In 1863, the legislature extended the time limits governing the construction of the road with the hope that time would allow the LS&M to recover from the effects of the war. (Luecke 2005).

Minnesota had three railroads in operation in 1864. In the spring of that year, the LS&M became Minnesota's fourth railroad by breaking ground in St. Paul in early July and letting contracts for the grading of the first 21 miles of the line (Luecke 2005).

To keep the road construction moving, the Board of Directors voted to assess each stockholder the sum of \$2 per share in June 1865; however, funds quickly ran out and construction was again halted. The LS&M slipped into another period of dormancy. The state of Minnesota tried to push the project in 1865, by authorizing a land grant of seven sections on either side of each completed mile in support of the "Portage Road." Even this land grant of more than 694,000 acres along the proposed route to Duluth, combined with the end of the Civil War, were not enough to result in immediate resumption of construction¹. The project wallowed through 1866 and 1867 without appreciable progress. The deadline for completion was extended a third time. In an attempt to raise additional working capital, the road's Board of Directors attempted another emergency assessment. This proved to be the undoing of the project when many stockholders gave up their shares rather than invest more money (Luecke 2005).

The LS&M president, William L. Banning, scrambled for outside backers to support the construction of the road. Mr. Banning went to Jay Cooke and Company of Philadelphia. Mr. Cooke was one of the leading financiers in the United States at the time (Luecke 2005). In late 1867, Mr. Cooke backed the LS&M. The LS&M railroad would become strategically important to Cooke and the Northern Pacific (Lubetkin 2006).

On 5 May 1868, the first rail was spiked into place on the LS&M, and on 20 June 1868, the LS&M became Minnesota's sixth operating railroad with the arrival of its first locomotive at the St. Paul levee (Luecke 2005). Rail construction progressed northward to about 4 miles south of White Bear Lake during Summer 1868. On 27 July 1868, the railroad was "inspected" by a party of Eastern railroad gentlemen. This excursion was the first movement of passenger cars over the LS&M (Luecke 2005). The completion of the line to White Bear Lake was celebrated on 10 September 1868, with regular passenger service to White Bear Lake beginning on 16 September 1868 on a 6-day-per-week schedule. The train departed St. Paul at 6:45 a.m. and 6:45 p.m. from White Bear Lake. On 9 December, 1868, the LS&M opened regular passenger service to the railhead at the town of Wyoming. Track-laying continued north out of Wyoming on 26 May 1869 (Figure 2). Regular service was extended to Rush City on 26 June 1869. On 20 October, trains began running to within 1 mile of Pine City. It took more than a week for the railhead to reach Pine City due to a sinkhole which developed south of the city (Luecke 2005).

While the construction in St. Paul began in 1864, building from Duluth southward did not begin for another 5 years. In June 1869, grading operations began along the shores of Lake Superior at

¹ By the time the railroad was completed, the land grant made by the federal government and the state of Minnesota, in aid of construction of this road was the largest in quantity and most valuable in kind ever made in aid of any railroad in the U.S. to date. The grant amounted to 17 square miles or sections (10,880 acres) of land for each mile of road, totaling 1,632,000 acres of land (Coffin 1870). Between the value of the land grant received and the bonuses from St. Paul and St. Louis County to be the terminus for the line, the railroad received approximately \$4.8 million in gratuities (Prosser 1966).

Rice's Point near Duluth. The geography of the shoreline was less than ideal for construction of the railroad due to high bluffs. A series of ridges and valleys ran down the slope to the very edge of the water. The route was interspersed with marshy, swampy back waters which would have to be crossed on piles. Much of these back waters were later filled, but in 1869, crossing them meant driving innumerable timber piles to support the railroad (Luecke 2005). The Duluth Bay did offer one advantage: Rice's Point. The low, relatively flat peninsula projected deep into the St. Louis River near its mouth, forming a natural meeting point for the railroads and ships. Since Duluth was also to be its eastern terminal for the Lake Superior to Puget Sound railroad, the importance of the port increased accordingly. It was expected that the new city would not only compete with Chicago for the trade of central and southern Minnesota, but that it would become in time the single great outlet to the east for the Red River Valley and the plains of North Dakota (Harnsberger 1960). The LS&M realized the advantages of the point and based its Duluth operation on the point (Luecke 2005).

On 1 January 1870, the first 77 miles of the LS&M railroad were completed and a passenger and freight train ran from St. Paul to the newly platted town of Hinckley, which is located approximately halfway between Duluth and St. Paul. The train left St. Paul at 7:15 a.m. and arrived at Hinckley at 12:05 p.m., with stops at White Bear, Centreville, Forrest Lake, Wyoming, North Branch, Rush City, and Pine City. The train returned to St. Paul the same day at 6:00 p.m. (Luecke 2005).

As early as 1853, Minnesota legislators created a railroad charter for a line to run from Lake Superior to Puget Sound in Washington State. In 1864 President Lincoln approved an Act of Congress that essentially created the Northern Pacific Railroad (Dierckins and Norton 2012). On 1 January 1870, Jay Cooke and Company agreed to become the financial agent of the Northern Pacific Railroad.

In 1870, the Northern Pacific had made arrangements to use the LS&M mainline from a point near Thomson into Duluth. This rail link would provide the Northern Pacific with a supply line to Duluth and St. Paul for its own construction. The deal resulted in the decision to push construction of the LS&M throughout the winter (Luecke 2005).

As spring came, the LS&M was nearing completion. By 10 March, rails ran to within 10 miles north of Hinckley, or 87 miles north of St. Paul. Seven miles of track were in place on the Duluth division. Crews worked on the trestle along the St. Louis River at Fond du Lac, and at building culverts, retaining walls, and fills. A bridge at the St. Louis River crossing just below Thomson was completed (Luecke 2005). During the first week of April, the railroad reached the Kettle River, 96 miles north of St. Paul. Massive delays came on the Duluth side in late April when the winter frost thawed and poor engineering decisions made over the winter resulted in cuts and fills giving way, leaving tons of earth to be re-excavated (Luecke 2005).

When the LS&M was built in the late 1860s, the engineers chose the most obvious route for the railroad to leave the Duluth Harbor area: the route along the St. Louis River. This choice merely adhered to one of the most basic theories of railroad engineering: the easy grade offered by a water-level route. Countless railroads had made use of this theory prior to the LS&M. The

St. Louis River route not only represented the easiest and most economical grade, but also the only gap in the hills surrounding Duluth that would allow the LS&M to build in the direction of St. Paul. While the line along the St. Louis River was much easier to complete, its physical characteristics required very expensive annual maintenance. The western portion above Fond du Lac was extremely difficult. Five great timber trestles, numerous smaller bridges and culverts, and thousands of feet of shoring and retaining walls were needed to complete this section of road. The steep grade between Fond du Lac and Thomson strained the capacity of the locomotives (Luecke 2005).

The Duluth division reached Fond du Lac on the evening of 22 June. On 1 August 1870, the final spike was driven near the town of Thomson, and the first railroad connecting the Twin Cities to Duluth was completed (Dierckins and Norton 2012; Martin 2010). The work crew had to scramble to meet the deadline, and 4 hours after the laying of the last rail, the first train from St. Paul to Duluth arrived. The first train consisted of a locomotive, baggage car, two passenger coaches, and two freight cars (Dierckins and Norton 2012).

The first regular schedule for the 154-mile portage route went into effect on 17 August 1870. By the end of the year, trains ran between Duluth and St. Paul every day (Dierckins and Norton 2012). The train started from the St. Paul station that day at 7:15 a.m. and arrived in Duluth at 11:30 p.m., making the 154-mile trip in 16 hours and 15 minutes (less than 10 miles per hour) (Carroll and Wisuri 2006).

Within a year, the time from St. Paul to Duluth was reduced to 12 hours, and progress was made as the equipment and the tracks were improved, although it was claimed by some that LS&M meant “long, slow & miserable.” Throughout the 1870s, there was a daily day-time passenger train from St. Paul to Duluth, returning to St. Paul overnight. There was also a separate daily day-time freight train from St. Paul to Duluth, returning to St. Paul overnight (LS&M time schedule 1871, 1874, and 1876).

The LS&M provided wheat growers with a link to a vital grain port. In 1886, Duluth elevators transferred 22 million bushels of grain from railroad to ships on Lake Superior (Schmidt et al. 2013). The LS&M also provide transportation for tourists to destination outside of, but close to, the major cities, including White Bear Lake, Chisago Lakes, Taylor Falls, Center City, Lindstrom, and Forest Lake (Schmidt et al. 2013).

After the LS&M was completed, Jay Cooke began significant construction on the Northern Pacific as men became available for work (Lubetkin 2006). In the economic crash of 1873, the banking firm of Jay Cooke and Company failed, and the economic growth in Duluth ceased. Duluth lost half of its inhabitants between 1873 and 1875 (Schmidt et al. 2013). Duluth did become an important port for the Great Lake’s trade with the completion of the Northern Pacific, the opening of the Red River Valley and the Great Plains to wheat production, and the development of the Minnesota mining industry in the 1880s and 1890s (Harnsberger 1960).

The Northern Pacific broke their lease with the LS&M. The LS&M managed to hang on without Cooke’s money and the lease, but in 1877, the railroad failed. It reorganized as the St. Paul and

Duluth Railroad on 17 July 1877 (Dierckins and Norton 2012, Prosser 1966). In 1886, the St. Paul and Duluth Railroad built a new line from West Duluth to Thomson to reduce the road's grade, remove some turns, and shorten the distance by 2½ miles. The original line continued to provide commuter train serve to Fond du Lac until the 1930s.

The St. Paul & Duluth Railroad was sold to the Northern Pacific Railroad on 15 June 1900, and the Northern Pacific acquired all of the track and facilities and integrating them into their system (Prosser 1966, Carroll and Wisuri 2006). The Northern Pacific was succeeded by Burlington Northern. Because Burlington Northern already had railways in place, much of the original LS&M line was considered redundant. Most of the track was abandoned, and many segments have since been turned into rail trails, including the Willard Munger Trail which was the re-aligned section built by the St. Paul and Duluth (Dierckins and Norton 2012). On 19 September 1977, Burlington Northern donated the 6-mile track to the City of Duluth (LS&M Railroad Company 1983).

Beginning in the 1910s and increasing during the 1920s, the automobile became the preferred mode of travel for Minnesota tourists. As highways improved, automobiles carried increasing numbers of tourists, and train travel decreased (Schmidt et al. 2013).

4. HISTORIC PROPERTY INVENTORY AND EVALUATION

4.1 DESCRIPTION OF THE SIX-MILE SEGMENT OF THE LAKE SUPERIOR & MISSISSIPPI RAILROAD

The original Lake Superior and Mississippi Railroad had its northern terminus in downtown Duluth and its southern terminus in St. Paul. The railroad ran south, southwest out of Duluth following the St. Louis River shoreline until the town of Thomson. From Thomson, the rail headed west of Carton for approximately 2 miles then turned south, southwest and followed what is today the Interstate 35 (I-35) and I-35E corridors into St. Paul. The segment from New Duluth to Thomson was rerouted in the 1880s farther to the north and followed what is now the Willard Munger Trail (Martin 2010).

The segment of the Lake Superior and Mississippi Railroad used by the Lake Superior and Mississippi Railroad Company currently for tourist rides and the subject of this evaluation begins at South 67th Avenue West at the Lake Superior and Mississippi Railroad Company parking lot and ticketing booth in West Duluth, and terminates at Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth. The roadway segment is approximately 6 miles in length and approximately 30 feet (ft) wide.

The location and design of the corridor is influenced by the natural shoreline of the St. Louis River. This section of the St. Louis River provided a relatively flat grade, and a gently meandering corridor. The railroad configuration is a single track on a railroad bed. The railroad roadway consists of ground modification (cut, fill, ditches, drainage features, and grade changes), although the cuts and fills are minimal along this section of rail due to minimal grade changes. The roadway comprises ballast, tracks, ties, and ditches. The ballast is primarily crushed stone. The top of the road bed varies, but averages 16 to 20 ft wide.

The tracks are standard gauge steel rails (photograph no. 2) spaced 4 ft, 8½ inches apart, mounted to wooden ties (photograph no. 4). The ties are imbedded into the ballast, and in some cases covered by the ballast. The rails are secured to the ties with spikes through steel plates (photograph no. 33). There are switch stations at each end of the rail line to re-position the engine (photograph no. 29 and 41). There is also a switch station approximately 300 ft south of Spring Street where another railroad line separates from the main line to the southwest. Materials have been replaced over the years with modern materials; however the overall design and installation techniques are similar to the original design and materials.

The following is a more detailed description from north to south. Photographs are included in Appendix B.

This segment of the Lake Superior and Mississippi railroad begins on the north end at the crossing of the main line with South 67th Avenue West (photograph no. 42). Adjacent to the northwest side of the railroad and just south of South 67th Avenue is the modern Lake Superior and Mississippi Railroad Company parking lot and ticket booth (photograph no. 43). There are

also other modern businesses and residential areas visible on both sides of the railroad in the area.

Approximately 700 ft southwest of the parking lot, the Western Waterfront Trail crosses the tracks, and approximately 200 ft beyond the trail crossing is a modern concrete railroad bridge that spans Kingsbury Creek (photograph no. 44). Approximately 700 ft beyond Kingsbury Creek, the railroad crosses Pulaski Street and begins paralleling Bayhill Drive passing near residential and small commercial and retail businesses. Bayhill Drive continues for about 0.6 mile and ends at a warehouse. The railroad then parallels the Western Waterfront Trail and St. Louis River for another 0.6 mile and crosses Spring Street at the Spirit Lake Marina. Continuing in a southwest direction, the railroad follows the St. Louis River for less than ½ mile (0.47 mile) and crosses Clyde Avenue. This area also contains small commercial businesses, residential areas, and wooded areas with occasional views of the St. Louis River.

Nine hundred feet south of Clyde Avenue, the railroad crosses Stewart Creek with an open concrete culvert with separate track (steel) and pedestrian (timber) crossings (photograph nos. 36 and 39). The railroad curves to the southeast, and approximately 1,000 ft from Stewart Creek is an open wooden culvert to allow water on the west side of the track to drain water through the railroad bed into the St. Louis River. The culvert is spanned by the single track.

The railroad continues to follow the St. Louis River shoreline for approximately 2.3 miles in a more rural setting with no vehicular road crossings. In this section, the railroad passes along the east side of Morgan Park with only a few modern houses visible from the track (photograph nos. 5, 7, 8, and 9). The railroad then crosses the U. S. Steel property. There are six corrugated steel modern pipes that form a culvert at the Unnamed Creek (photograph no. 11). There are views of Spirit Lake to the east and wooded areas to the west.

The railroad then crosses Mud Lake for approximately 0.38 mile (photograph no. 23). This area was originally spanned by a timber pile trestle bridge but has been replaced (date unknown) by infilled railroad roadway. The roadway is approximately 30 ft wide at the top and 60 ft wide on the lake bed. There is a wooden culvert approximately half way across the Mud Lake span (photograph no. 24). The views are of Mud Lake and wooded areas.

From the south end of Mud Lake, in approximately 0.2 mile, the railroad passes under an overhead steel beam Canadian National railroad bridge (Martin 2010) (photograph no. 25) and then, in 250 ft, crosses East McCuen Street (photograph no. 27). The railroad continues for another 0.6 mile and terminates at Commonwealth Avenue adjacent to residential apartments and the River Place campground. There is a 1,000-ft spur track with a switch station to reposition the engine (photograph no. 29). The track beyond this point has been removed (photograph no. 32).

4.2 EVALUATION

4.2.1 National Register of Historic Places Evaluation Criteria

The National Register was established by the NHPA. The National Register is a list of buildings, structures, objects, sites, and districts that have demonstrated significance to U.S. history, architecture, archaeology, engineering, and/or culture. The National Register is maintained by the Secretary of the Interior and is managed by the National Park Service Keeper of the Register. Regulations for listing a property in the National Register were developed by the Department of the Interior and are found in 36 CFR Part 60. The NHPA requires that federal agencies identify historically significant properties that are eligible for listing in the National Register, and manage those properties accordingly by taking into account the effects of undertakings on properties listed in or eligible for listing in the National Register (referred to as historic properties).

In order to be eligible for the National Register, a property must meet certain criteria (36 CFR Part 60.4). The National Park Service published *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* to provide guidance when assessing a property's eligibility for listing in the National Register. Properties eligible for listing are generally more than 50 years of age and meet one or more of the following criteria:

- Criterion A: association with an event(s) that made a significant contribution to the broad pattern of history
- Criterion B: association with a historically significant person
- Criterion C: embodiment of the distinctive characteristics of a period, construction technique, or type; representing the work of a master; possessing high artistic value; or representing a significant and distinguishable entity whose components may lack individual distinction
- Criterion D: having yielded or having the potential to yield information significant to prehistory or history.

NRHP-eligible properties are classified as individual buildings, sites, structures, or objects. A building is a type of construction that is created to provide human shelter and can include houses, barns, hotels, churches, jailhouses, courthouses, etc. A structure is a building whose function is for something other than human shelter. An object is an artistic item that is usually small and simply constructed and moveable. A site is the location of an important event, human occupation or activity, or building or structure (standing, in ruins, or removed) where the location retains historic, cultural, or archaeological value. A railroad grade is considered a structure.

NRHP-eligible properties can also be classified as districts and landscapes. A district is a concentration, linkage, or continuity of sites, buildings, structures, and/or objects united

historically or aesthetically by a plan or physical development. Districts usually comprise several types of resources that are connected and that express a visual sense of a historic setting.

Landscapes can be purposefully designed landscapes that possess significance as a work of art; as a property that was purposefully designed by a master gardener, architect, or amateur based on a recognized design or style; as a property associated with a significant person, trend, or event; or as a property that has a relationship with architectural landscape theory or practice. The National Park Service (NPS) published the *National Register Bulletin 18: How to Evaluate and Nominate Designed Historic Landscapes* (NPS n.d.-a) to provide specific guidance. Landscapes can also be cultural landscapes, which Director's Order 28: *Cultural Resource Management Guideline* defines as:

. . . a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

A final type of historic property is often labeled as a “traditional cultural property,” but it is more correctly labeled as a site of religious or cultural significance. These properties are associated with the cultural activities of a contemporary community are connected to the community's past, and are important to the cultural identity of the community. The National Park Service published *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* (NPS n.d.-b) to provide specific guidance regarding properties of religious or cultural importance.

Integrity is defined by the National Park Service as a property's “ability to convey its significance.” In order to be eligible for the National Register, properties should retain most of the seven aspects of integrity. Those aspects are:

1. Location—the original location
2. Design—the building layout and use of space, plan, form, and style
3. Setting—the environment of the resource
4. Materials—the construction and finishing materials used
5. Workmanship—the detail elements of craftsmen
6. Feeling—the sense of a particular time
7. Association—the link to an event, person, or cultural resource

When assessing integrity, the following actions should be taken: (1) determine which aspects of integrity are most important to the property using the historic context(s); (2) determine what characteristics the property must have to represent its significance; and (3) determine if those characteristics currently convey that significance, which may require a comparison to similar properties to make a determination. Properties are sometimes modified to meet changing requirements and equipment needs. The modifications often extend the useful life of the

property, but can compromise its integrity to such a degree that it does not retain a sufficient level to be eligible for listing in the National Register. Within a district, the majority of the properties from the district's period of significance must have integrity, including integrity of the plan or arrangement of properties within the district.

In most circumstances, cemeteries, gravesites, birthplaces, properties owned by religious institutions or used for religious purposes, commemorative properties, reconstructed properties, and properties less than 50 years of age are not eligible for listing in the National Register. However, such properties may be eligible as elements of a historic district, or if at least one of the following list of criterion considerations is met:

- A. Religious property that is important from an architectural, artistic, or historical perspective
- B. Relocated building or structure that retains architectural value or which is the sole surviving property that has importance associated with a historically significant person or event
- C. Birthplace or grave of a historically significant individual if there are no other extant properties associated with that person
- D. Cemetery that obtains significance from the graves of people of unmatched significance, from its age, from distinguishing design features, or from its association with a historically significant event
- E. Reconstructed building or structure when it is in an appropriate environment and is part of a restorative master plan when there are no other structures or buildings with the same association(s) surviving
- F. Commemorative property if it has a design, tradition, or symbolic value of exceptional significance
- G. Property that is less than 50 years old that is of exceptional significance.

In order to evaluate the historic significance of a property, the historic context of the property must be established. The historic context is the pattern or trend of history that gives the property its meaning and importance and should focus on the theme, geographic limits, and period of time from which the property is being evaluated. A context places the property in a local, regional, or national pattern of history and provides a tool for comparing the history of the property to the history of the surrounding area. A historic context's theme should establish the area(s) of significance that the property represents and should describe how the property demonstrates that area(s) of significance. A list of often used areas of significance include archaeology, agriculture, architecture, art, business, communications, community planning and development, conservation, economics, education, engineering, entertainment, ethnic heritage, exploration, health, industry, invention, landscape architecture, law, literature, maritime history, military, performing arts, philosophy, politics, religion, science, social history, and transportation.

A historic context also establishes a property's association with an event, person, architectural or engineering value, or potential to contain information. The physical features of a historic property that represent the area of significance and historic context should be documented as well. The historic context is the key to judging a property's significance. A historic property may be eligible for the National Register under one or all criteria, it may have a broad range of dates or a specific date for its period of significance, and its level of significance can vary depending on which criterion and which period of significance is being defined. For example, a historic district that later became the template for a master plan used elsewhere may be eligible for the National Register on a national level under criteria A and C. If a prominent local business person was associated with that same district for a short period of time, but left an undeniably notable "stamp" on a portion of the facilities that comprise the historic district, those facilities also may be eligible under criterion B and may have a different period and/or level of significance, depending on the historic context of that particular individual.

A property's level of significance pertains to the level at which the property is important, not the location where the property is found. A local level of significance means the particular property has importance to a town, city, county, or some portion thereof, even if the property type can be found in a larger geographic area. A property is of regional or state significance if it demonstrates an aspect of the history that is of significance to the state as a whole. For example, a property that represents an impact to a state's economy or cultural image may be eligible on the state or regional level. A property is of national significance if it represents an aspect of U.S. history important to the nation.

4.2.2 Description of Historic Property

The historic property is a railroad corridor historic district and comprises the segment of the LS&M used by Lake Superior and Mississippi Railroad Company beginning at South 67th Avenue West at the Lake Superior and Mississippi Railroad Company parking lot and ticketing booth in West Duluth, and terminating at Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth.

The railroad corridor historic district is a 6- mile linear resource and averages 30 ft wide. The contributing elements include the roadbed, ballast, track and ties, ditches, cut and fills, spur tracks, switching equipment, and culverts and bridges locations.

4.2.3 Statement of Significance

Railroad corridor historic districts are associated with the National Register areas of significance for transportation and engineering. The significance of this railroad corridor within those areas of significance are linked to a number of historic contexts described in the Railroads in Minnesota, 1862–1956 National Register of Historic Places Multiple Property Documentation Form. The applicable historic contexts include: Railroad Development in Minnesota, 1862–1956; Railroads in Agricultural Development, 1870–1940; Urban Centers, 1870–1940; and Minnesota Tourism and Recreation in the Lakes Region, 1870–1945.

During the nineteenth and early twentieth centuries, railroads provided important transportation connections that contributed to settlement, agriculture, commerce, industry, community development, and tourism. The network of railroad corridors established in Minnesota between 1862 and the 1890s connected resource procurement areas, smaller cities, urban centers, and the state's primary commercial and industrial centers. Specifically for this corridor, the LS&M Railroad was the first railroad to connect Duluth and St. Paul. In Minnesota, railroads were the dominant form of transportation and for many people were the only practical means of long-distance travel. The economic influence of railroads peaked in the United States and Minnesota during the early decades of the twentieth century. By 1920, the railroads directly employed two million people nationwide, carried the majority of the mail, hauled 77 percent of all freight, and transported 98 percent of the traveling public (Schmidt et al. 2013).

This railroad corridor hauled agriculture and other products and materials to Duluth and St. Paul. From the port in Duluth on Lake Superior and the port in St. Paul on the Mississippi River, product could be transported to valuable markets in the eastern United States. The LS&M railroad was critical to the economic growth of Duluth, and the establishment of other towns along the route. The LS&M railroad also contributed to the growth of the tourism industries at destinations along the railroad route from St. Paul to Duluth.

4.2.4 National Register of Historic Places Eligibility

The Lake Superior and Mississippi Railroad Duluth Minnesota Railroad Corridor historic district is eligible for listing in the NRHP under Criteria A: association with an event(s) that made a significant contribution to the broad pattern of history. The railroad corridor historic district is a 6-mile section of the former 154-mile Lake Superior and Mississippi Railroad that was the first railroad to connect the Duluth port on Lake Superior to the Mississippi River in St. Paul. The railroad contributed to the growth of Duluth and other communities along the route, and provided a vital economic driver and transportation system for the state of Minnesota. This segment of the railroad has been severed from the original 154-mile line, and therefore has local significance only.

4.2.5 Integrity

To be eligible for the National Register, a railroad corridor, at a minimum, must retain integrity of location, design, and materials (see Section 4.2.1). The Lake Superior and Mississippi Railroad Duluth corridor historic district retains integrity of location, design, materials, setting, feeling and association.

Location is the place where the elements of a railroad corridor historic district were constructed and operated, and is the most important aspect of integrity for a railroad corridor (Schmidt et al. 2013). The horizontal alignment (both the general route and degree of the curves) and the vertical alignment (degree of gradient) affect the markets served, distance traveled, motive power required, and speeds attainable (Schmidt et al. 2013).

This railroad corridor historic district conforms to the original horizontal and vertical alignment present during the period of significance. This section of the LS&M railroad has not changed significantly since original construction.

Design is the combination of planned, developed, and constructed elements within a railroad corridor historic district that created its form, plan, and structure. Historically, much of the effort related to the design of railroad corridors was focused on the alignment of the railroad roadway. Beyond the alignment, entire railroad corridors were rarely designed and built in a single episode, and segments of corridor were reconstructed as financial conditions allowed and as needed based on wear and tear and operating requirements. In Minnesota, segments of railroad corridors and elements within them followed standardized designs and well-established technologies, although elements often required location-specific design modification. In order to retain integrity of design, the historic district must retain integrity of location. In addition, the elements of the railroad roadway—railroad bed, fills or cuts, and ditches—should retain sufficient visual presence (Schmidt et al. 2013).

This segment of the LS&M Railroad is in its original location. The shore line of the St. Louis River dictates the placement of the alignment, and the swamp land required the installation of culvert and bridges. Cut and fills are minimal on this level section of alignment. The crossing of Mud Lake was originally a timber trestle. It is not known when it was filled in and made a solid road bed; however, the alignment has not changed and the infill visually conveys the linear and man-made design.

A railroad corridor must retain some of the physical materials from its period of significance. The railroad corridor comprises railroad bed, ballast, tracks, and ties of standard design and materials. Ties, rails, spikes, and culvert pipes have been replaced over the years, during and after the period of significance. However, the track does include historic materials and remains historic in overall appearance.

The setting of a railroad corridor historic district includes properties adjacent to the right-of-way and may include a broader landscape through which it passes (Schmidt et al. 2013). The overall setting of this segment of the Lake Superior & Mississippi Railroad is intact. There is modern development primarily on the two ends of the railroad corridor; however, these areas would have been developed by the latter part of the period of significance for the resource. Views of the St. Louis River, Spirit Island, swamps, and smaller lakes are dominant in the central portion of the railroad. Earlier views of the U. S. Steel complex (now demolished) and Morgan Park are now obscured by dense forest.

Feeling is conveyed by a railroad corridor historic district's ability to illustrate its historic function and feel from its period of significance (Schmidt et al. 2013). The liner roadway, road bed, tracks, vehicular road crossings, bridges, overhead bridge, switch equipment, and spur tracks all convey the feeling of traveling on a late nineteenth/early twentieth century railroad.

A railroad corridor historic district retains its integrity of association if it retains integrity of location, design, and materials (Schmidt et al. 2013).

Workmanship is not a factor in evaluating integrity for a railroad corridor historic district due to the utilitarian nature and standard design of the resource (Schmidt et al. 2013)

4.2.6 Period of Significance

The period of significance for this railroad corridor historic district begins in 1870 with the completion of its construction until 1956, the ending date for the Railroads in Minnesota, 1862–1956, National Register of Historic Place Multiple Property documentation form.

4.2.7 Boundary

The boundary is 15 ft to either side of the center line of the track and 6 miles in length from South 67th Avenue West in West Duluth to Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth. The district comprises approximately 22 acres (Figure 3).

5. CONCLUSION

The Lake Superior & Mississippi Railroad Duluth Minnesota Railroad Corridor historic district is eligible for listing in the NRHP under Criterion A. It has local significance. It was the first railroad to connect the Duluth port on Lake Superior to the Mississippi River in St. Paul and contributed to the economic growth of Duluth and tourism in the state of Minnesota.

The railroad corridor historic district is a 6-mile linear resource and averages 30 ft wide. The contributing elements include the roadbed, ballast, track and ties, ditches, cut and fills, spur tracks, switching equipment, and culverts and bridges locations.

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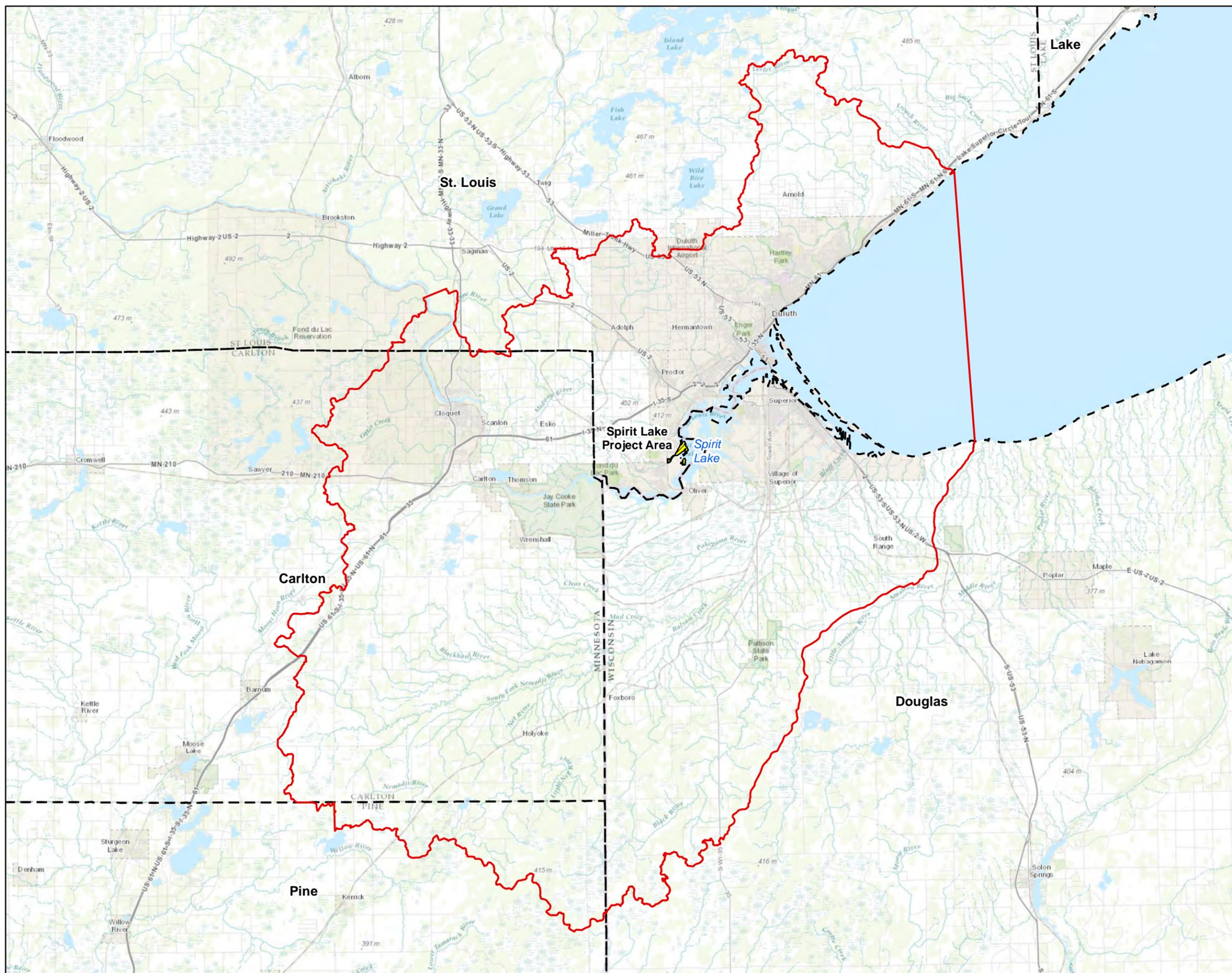
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Figures



Legend

-  Action Area
-  County Line
-  St. Louis River AOC

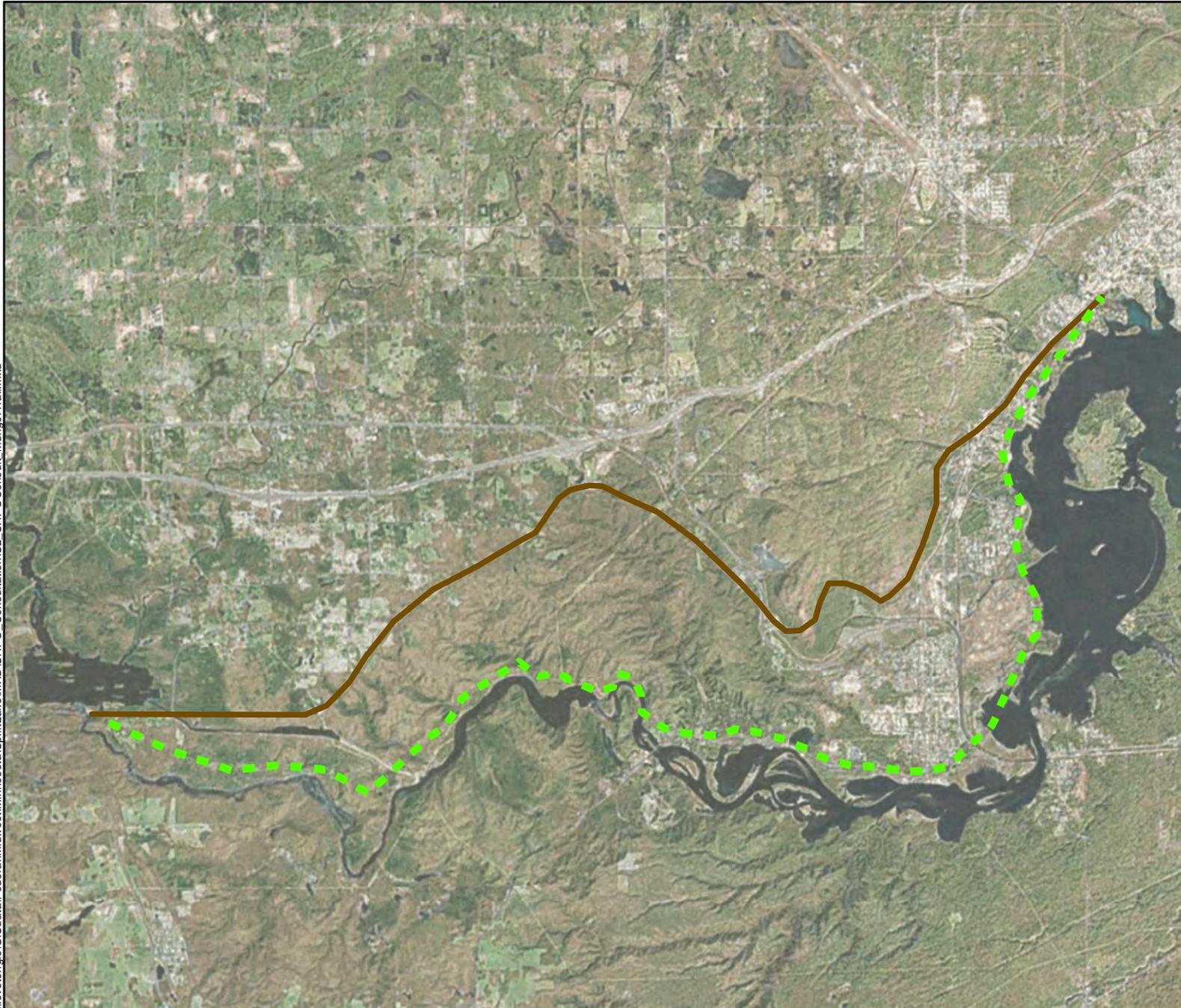


Map Date: 5/1/2015
 Base Map: ESRI 2011
 Other Data: EPA 2014

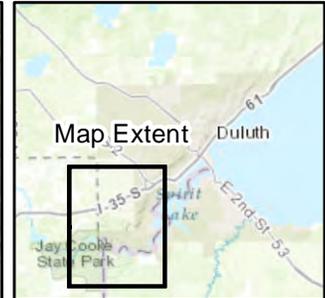


Figure 1
 General Location Map
 Spirit Lake
 Duluth, Minnesota

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VICINITY MAP



Legend

- 1886 Railroad Re-alignment
- - - Original Railroad Alignment

Map Date: 8/8/2016
Source: Martin, 2010

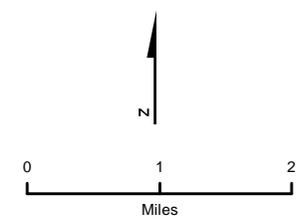
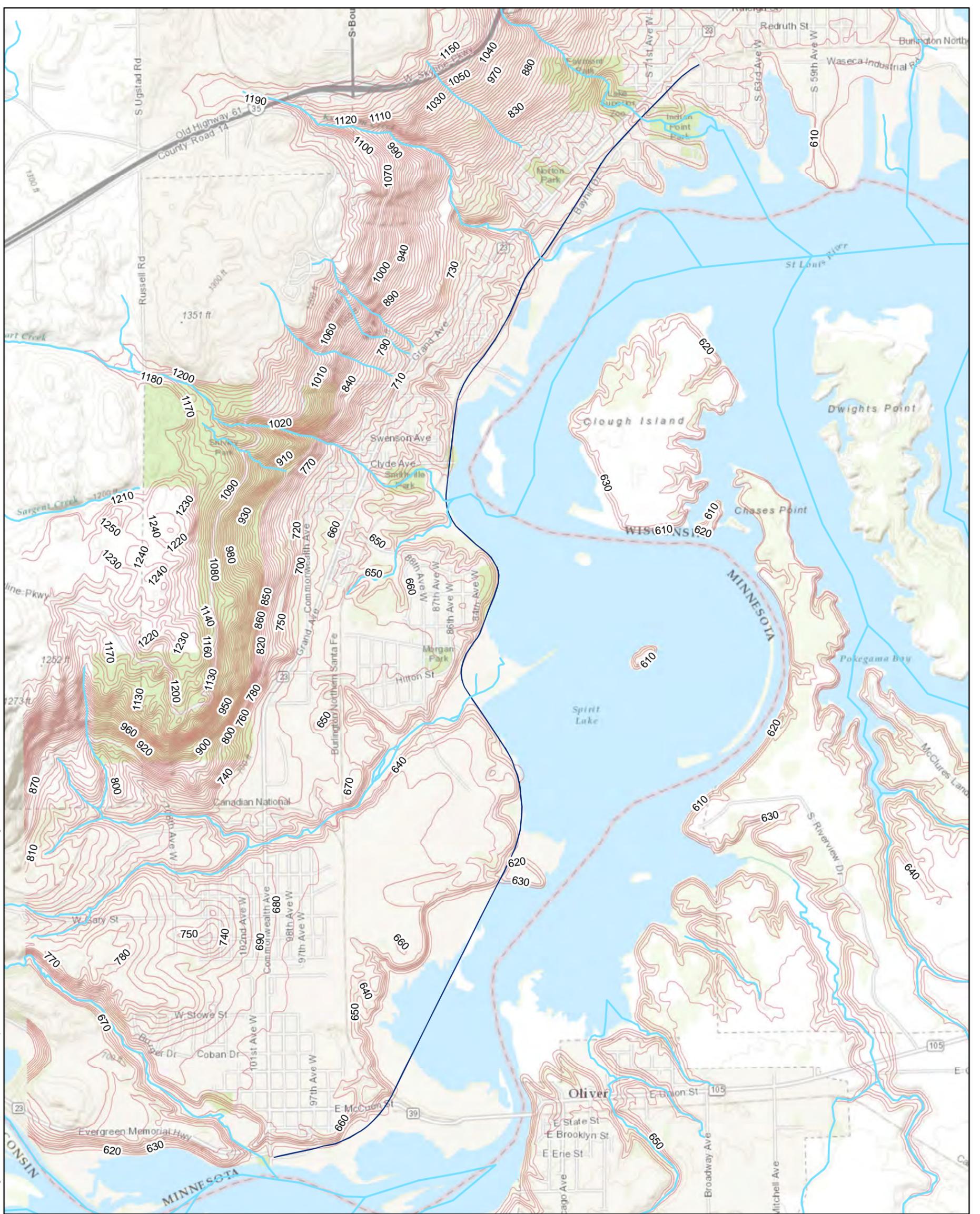
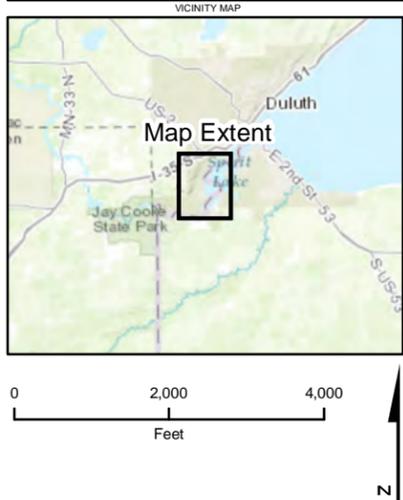


Figure 2
Lake Superior and Mississippi Railroad Alignments 1870 and 1886
Spirit Lake
Duluth, Minnesota



\\ovetongis\GIS\Federal\Midwest\Minnesota\SpiritLake\MXD\SHPO_Consultation\SL_SHPOConsult_Figure2_Railroad.mxd



- Legend**
- Elevation Contours (10 ft)
 - River
 - Railroad

Figure 3
 Railroad
 SHPO Consultation
 Spirit Lake
 Duluth, Minnesota

Map Date: 7/28/2016
 Source: ESRI, 2015



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Appendix A

Site Form (Builder) and USGS Topo map

MINNESOTA STATE ARCHITECTURE-HISTORY INVENTORY FORMS

Property Name: Lake Superior & Mississippi Railroad Duluth, St. Louis County, Minnesota

Address: N/A

County: St. Louis County

City/Township: West Duluth, New Duluth, Duluth

Inventory Number: Requested 5 July 2016 from SHPO, not yet received

UTM (include datum – NAD 27 or NAD 83):

NAD 1983 StatePlane Minnesota North FIPS 2201 Feet

- X: 2849109.064555
- Y: 397424.601362

Township/Range/Section, Quarter Sections: Sections 34 and 35, T49N, R15W, and Sections 2 and 3, T48N, R15W

USGS Quad: West Duluth

Survey Name: Evaluation and Determination of Eligibility for the Lake Superior & Mississippi Railroad in Duluth, St. Louis County, Minnesota

Form Prepared By: Jayne Aaron, Architectural Historian, EA Engineering, Science, and Technology, Inc. PBC

Date Surveyed: 7 July 2016

Description: The original Lake Superior & Mississippi Railroad had its northern terminus in downtown Duluth and southern terminus in St. Paul. The railroad ran south, southwest out of Duluth following the St. Louis River shoreline until the town of Thomson. From Thomson, the rail headed west of Carton for approximately 2 miles then turned south, southwest and followed what is today the Interstate 35 (I-35) and I-35E corridors into St. Paul. The segment from New Duluth to Thomson was rerouted in the 1880s further to the north and followed what is now the Munger Trail (Martin 2010).

The segment of the Lake Superior & Mississippi Railroad used by the Lake Superior and Mississippi Railroad Company (LS&MRC) and the subject of this evaluation begins at South 67th Avenue West at the LS&MRC parking lot and ticketing booth in West Duluth, and terminates at Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth. The segment is approximately 6 miles in length and 30 feet (ft) wide.

The location and design of the corridor is influenced by the natural shoreline of the St. Louis River. This section of the St. Louis River provided a relatively flat grade, and a gently meandering corridor. The railroad configuration is a single track on a railroad bed. The railroad

roadway consists of ground modification (cut, fill, ditches, drainage features, and grade changes), although the cuts and fills are minimal along this section of rail due to minimal grade changes. The roadway comprises ballast, tracks, ties, and ditches. The ballast is primarily crushed stone. The top of the road bed varies, but averages 16 to 20 ft wide.

The tracks are standard gauge steel rails spaced 4 ft, 8½ inches apart, mounted to wooden ties. The ties are imbedded into the ballast, and in some cases covered by the ballast. The rails are secured to the ties with spikes through steel plates. There are switch stations at each end of the rail line to re-position the engine, and approximately 300 ft of Spring Street where another railroad line separates to the south west.

The following is a more detailed description from north to south.

This segment of the Lake Superior and Mississippi railroad begins on the north end at the crossing of the main line with South 67th Avenue West. Adjacent to the northwest side of the railroad and just south of South 67th Avenue is the modern LS&MRC parking lot and ticket booth. There are also other modern businesses and residential areas visible on both sides of the railroad in the area.

Approximately, 700 ft southwest of the parking lot, the Western Waterfront Trail crosses the tracks, and approximately 200 ft beyond the trail crossing is a modern concrete bridge that spans Kingsbury Creek. Approximately 700 ft beyond Kingsbury Creek, the railroad crosses Pulaski Street and begins paralleling Bayhill Drive passing near residential and small commercial and retail businesses. Bayhill Drive continues for about 0.6 mile and ends at a warehouse. The railroad then parallels the Western Waterfront Trail and St. Louis River for another 0.6 mile and crosses Spring Street at the Spirit Lake Marina. Continuing in a southwest direction, the railroad follows the St. Louis River for less than ½ mile (0.47 mile) and crosses Clyde Avenue. This area also contains small commercial businesses, residential areas, and wooded areas with occasional views of the St. Louis River.

Nine hundred feet south of Clyde Avenue, the railroad crosses Stewart Creek with an open concrete culvert with separate track (steel) and pedestrian (timber) crossings. The railroad curves to the southeast, and approximately 1,000 ft from Stewart Creek is an open wooden culvert to allow water on the west side of the track to drain through the railroad bed into the St. Louis River. The culvert is spanned by the single track.

The railroad continues to follow the St. Louis River shoreline for approximately 2.3 miles in a more rural setting with no vehicular road crossings. In this section, the railroad passes along the east side of Morgan Park with only a few houses visible from the track. The railroad then crosses the U. S. Steel property. There are six corrugated steel modern pipes that form a culvert at the UnnamedCreek. There are views of Spirit Lake to the east and wooded areas to the west.

The railroad then crosses Mud Lake for approximately 0.38 mile. This area was originally spanned by a trestle bridge but has been replaced (date unknown) by infilled railroad roadway. The roadway is approximately 30 ft wide at the top and 60 ft wide on the lake bed. There is a

wooden culvert approximately half way across the Mud Lake span. The views are of Mud Lake and wooded areas.

From the south end of Mud Lake, in approximately 0.2 mile, the railroad passes under an overhead steel beam Canadian National railroad bridge (Martin 2010) and then, in 250 ft, crosses E. McCuen Street. The railroad continues for another 0.6 mile and terminates at Commonwealth Avenue adjacent to residential apartments and the River Place campground. There is a 1,000-ft spur track with a switch station to reposition the engine. The track beyond this point has been removed.

Resource Date: 1870

Style: N/A

Architect/Builder/Engineer (when known): Lake Superior & Mississippi Railroad Company; modified by the St. Paul Duluth Railroad Company

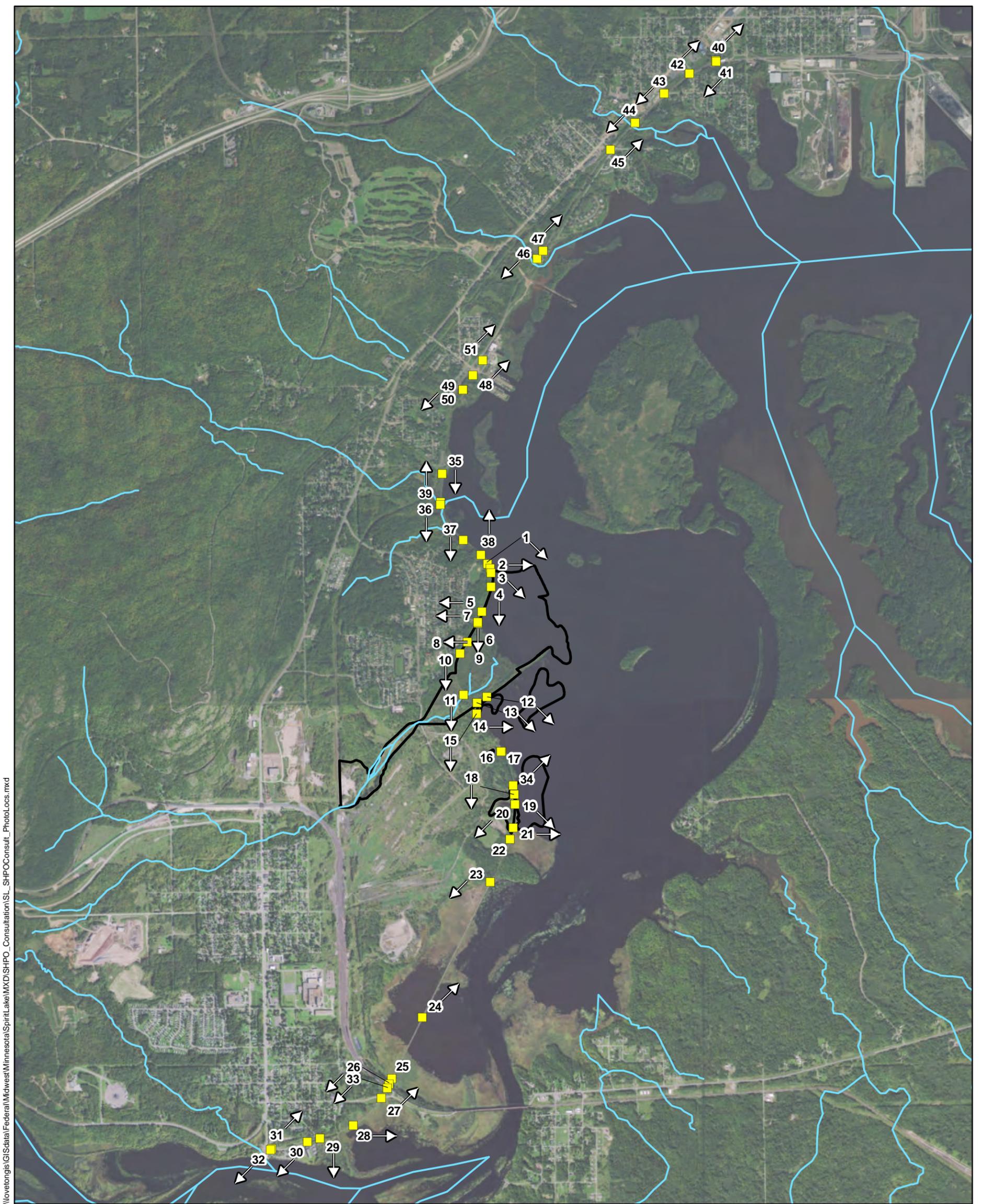
Consultant's Recommendation of National Register Eligibility: The Lake Superior & Mississippi Railroad Duluth Minnesota railroad corridor historic district is eligible for listing in the National Register of Historic Places under Criterion A: association with an event(s) that made a significant contribution to the broad pattern of history. The railroad corridor historic district is a 6-mile section of the former 154-mile Lake Superior & Mississippi Railroad that was the first railroad to connect the Duluth port on Lake Superior to the Mississippi River in St. Paul. The railroad contributed to the growth of Duluth and other communities along the route, and provided a vital economic driver and transportation system for the state of Minnesota. This segment of the railroad has been severed from the original 154-mile line, and therefore has local significance.

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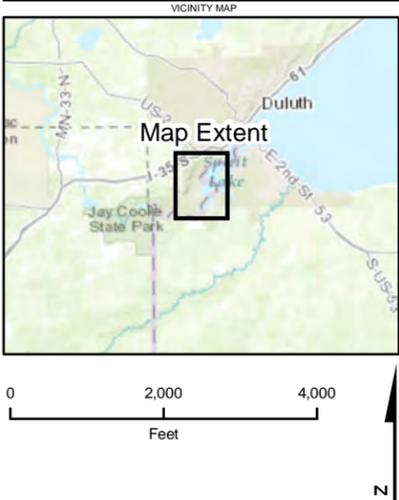
Appendix B

Photo Log

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- Legend**
- Photo Location
 - Photo Facing Direction
 - River
 - Project Boundary

Figure B-1
 Photo Locations
 SHPO Consultation
 Spirit Lake
 Duluth, Minnesota

Map Date: 9/13/2016
 Source: ESRI, 2015



Photo No.	Photo	Description
1.		Spirit Island from tracks, looking southeast
2.		Track detail

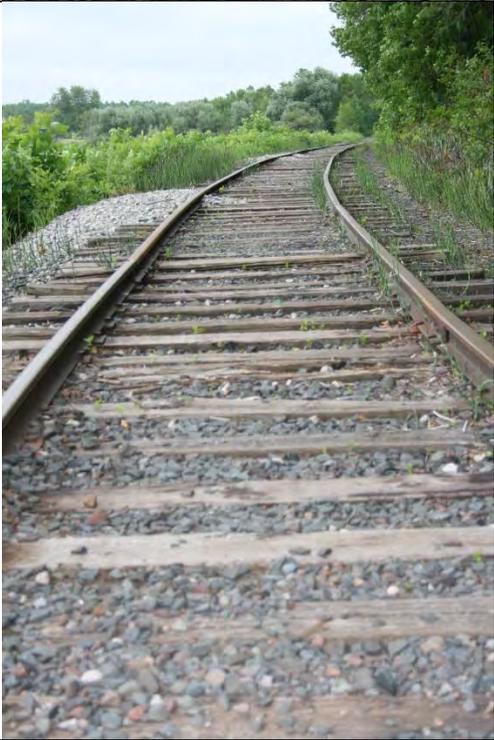
Photo No.	Photo	Description
3.		Spirit Island from tracks looking southeast
4.		Railroad looking south

Photo No.	Photo	Description
5.		House on hill, Morgan Park, looking west
6.		Railroad looking south

Photo No.	Photo	Description
7.		House on hill, Morgan Park, looking west
8.		Modern house with views of St. Louis River, Morgan Park looking west

Photo No.	Photo	Description
9.		Modern house with views of St. Louis River, Morgan Park looking west
10.		Railroad looking south

Photo No.	Photo	Description
11.		Railroad and new culvert at Unnamed Creek, looking south
12.		Across Spirit Lake toward cattails, looking southeast

Photo No.	Photo	Description
13.	 A photograph showing the eastern shoreline of the St. Louis River. The river occupies the lower half of the frame, with a dense forest of green trees lining the bank on the right. The sky is overcast and grey.	Eastern shoreline of St. Louis River looking southeast
14.	 A wide-angle photograph of Spirit Lake and an island in the distance. The water is dark and calm. The island is a small, forested landmass in the center. The sky is overcast with some light clouds. Some green foliage is visible in the bottom foreground.	Spirit Lake and Island looking east

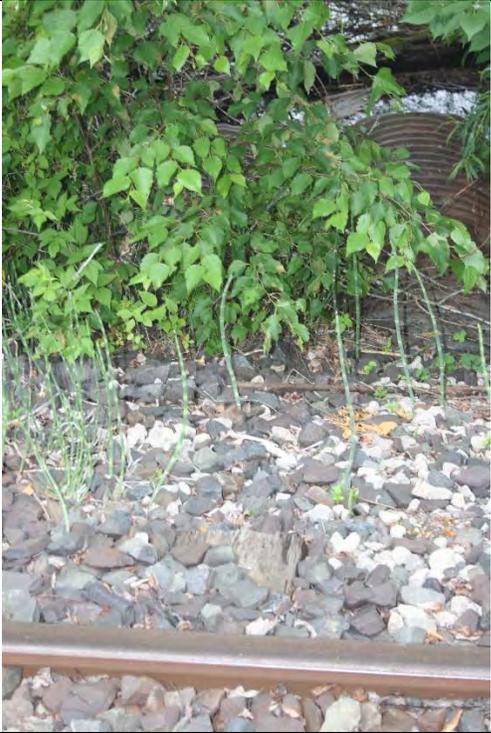
Photo No.	Photo	Description
15.		Railroad, Spirit lake to left, looking south
16.		Culvert pipe

Photo No.	Photo	Description
17.		culvert
18.		Railroad, St. Louis River to left, looking south

Photo No.	Photo	Description
19.		Wire Mill Pond channel and bridge, looking southeast
20.		Wire Mill Pond channel and bridge, looking southwest

Photo No.	Photo	Description
21.		Cattails looking east
22.		Track detail

Photo No.	Photo	Description
23.		<p>Infilled railroad railway through Mud Lake (the Canadian National railroad bridge in the background) looking southwest</p>
24.		<p>Mud Lake channel and bridge, looking northeast</p>

Photo No.	Photo	Description
25.		Canadian National railroad bridge looking southwest
26.		Beneath Canadian National railroad bridge looking southwest

Photo No.	Photo	Description
27.	 A photograph showing a railroad crossing an asphalt road. The tracks run from the foreground towards the background, crossing the road. In the distance, a red freight train is visible on the tracks. The area is surrounded by green grass and trees under a cloudy sky. A white X-shaped crossing sign is visible on the right side of the road.	Railroad crossing East McCuen Street, looking northeast
28.	 A photograph of a concrete culvert structure. The culvert is partially obscured by tall green grass and weeds. A single railroad track runs horizontally across the middle of the frame, passing over the culvert. The ground is covered in gravel and dirt.	Culvert looking east

Photo No.	Photo	Description
29.		Rail spur and switch near end of line in New Duluth, looking south
30.		Rail spur detail near end of line in New Duluth, looking south

Photo No.	Photo	Description
31.		New Duluth, south end of Line, looking northeast
32.		New Duluth, south end of Line, at Commonwealth Avenue at the Boy Scout Landing parking lot in New Duluth, looking southwest

Photo No.	Photo	Description
33.		Taconite pellets under Canadian National bridge that fell from overhead rail cars.
34.		Railroad with crane car north of cattails, looking northeast

Photo No.	Photo	Description
35.		Munger Landing at Clyde Avenue, looking south
36.		Channel and bridge Stewart Creek, looking south

Photo No.	Photo	Description
37.		Channel and bridge looking south
38.		Railroad looking north

Photo No.	Photo	Description
39.		Channel, bridge, and footbridge looking north
40.		Modern storage structure on spur track north of north terminus, looking northeast

Photo No.	Photo	Description
41.		Looking southwest from modern storage building
42.		South 67 th Avenue West railroad crossing, north terminus, looking northeast

Photo No.	Photo	Description
43.		<p>North terminus at South 67th Avenue West, LS&M railroad parking lot and ticket booth on right, looking southwest</p>
44.		<p>Modern trestle bridge spanning Kingsbury Creek near Duluth Zoo, looking southwest</p>

Photo No.	Photo	Description
45.	 A photograph showing a railroad crossing at Polaski, looking northeast. The tracks are laid on concrete slabs over a gravel bed, crossing a paved road. There are trees and a cloudy sky in the background.	Railroad crossing at Polaski, looking northeast
46.	 A photograph showing a modern trestle bridge near a pump station, looking southwest. The tracks are supported by a concrete trestle structure, surrounded by dense green trees and vegetation.	Modern trestle bridge near pump station, looking southwest

Photo No.	Photo	Description
47.		Straight long section of railroad, looking northeast
48.		Spring Street railroad crossing, looking northeast

Photo No.	Photo	Description
49.		Spring Street, railcars along tracks, looking southwest
50.		Rail cars along track at Sprint Street, looking southwest

Photo No.	Photo	Description
51.		Spring Street looking northeast



**Fond du Lac Band
of Lake Superior Chippewa**
TRIBAL HISTORIC PRESERVATION OFFICE
1720 Big Lake Road, Cloquet, MN 55720
Phone 218-878-7129 E-Mail jillhoppe@fdlrez.com

May 25, 2017

Tinka G. Hyde
Director, Great Lakes National Program Office
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL. 60604-3590

RE: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Tinka,

Thank-you for the opportunity to comment on the above-referenced project. Information received on April 25, 2017 has been reviewed pursuant to the responsibilities given the Fond du Lac Tribal Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations 36 CFR 800. Our office has completed review of your letter dated April 25, 2017, the Area of Direct and Indirect Effect PDF, and [direct_effect_20161230](#), [direct_effect_conditional](#), and [indirect_effect_area_20161230](#) shapefiles you provided.

Based upon our review of this information, we concur with your agency's determination of the proposed Area of Potential Effect (APE). The APE is defined as the geographic area where the proposed undertaking may cause changes to the character or use of cultural resources. The direct component of the APE includes the footprint of the proposed remedy for the Project including temporary access roads and equipment laydown areas; the indirect component of the APE includes adverse effects to the Spirit Island viewshed where the permanent confined disposal facilities will remain highly visible from Spirit Island, as well as all of Fond du Lac land holdings, less than ½ mile away, which is intrusive on the practices that help make Spirit Island significant.

As we have noted in our previous comments and correspondence, Fond du Lac has documented the significance and eligibility of Spirit Island, acquired by Fond du Lac in 2011, for inclusion in the National Register of Historic Places as a Traditional Cultural Property (TCP) under Criterion A (association with events that have made a significant contribution to broad patterns of history) at the state (regional) level. Fond du Lac has shared the religious, historical, and cultural significance of Spirit Island as the "sixth stopping place" as told in the Ojibwe migration story, and the place where the Ojibwe first encountered the prophesied 'food that grows on the water', or manoomin (wild rice). Spirit Island was and still is today a place where traditional religious practitioners go for ceremonial purposes—the

integral relationship among Ojibwe culture, history, tradition and Spirit Island is widely recognized by spiritual healers and practitioners, including the Midewiwin or “Grand Medicine Society”.

Part of the significance of Spirit Island in the eyes of traditional users is related to its scenic qualities and extensive views of the natural landscape—the Spirit Island viewshed is crucial to religious practitioners and for contemplative purposes.

For culturally significant sacred historic properties such as Spirit Island, the best mitigation lies in designing projects to avoid adverse effects. An adverse effect occurs when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the property’s integrity (see 36 CFR §800.5(a)(1)). The regulations include as adverse effects “introduction of visual, audible, or atmospheric elements that are out of the character with the property or alter its setting” (36 CFR 800.9 (b) (3)). The in-water permanent facilities introduce visual elements that are out of character with Spirit Island’s setting. Like any other type of historic property, a property that once had traditional cultural significance through physical alteration of its setting may lose its significance if certain aspects are substantially altered.

If adverse effects to Spirit Island viewshed cannot be avoided, it will be necessary to explore ways to minimize or mitigate the adverse effects. Often this process may lead to the execution of a Memorandum of Agreement or other formal agreement between the federal agency and tribes.

Please feel free to contact me at (218) 878-7129 or jillhoppe@fdlrez.com if you have any questions or concerns regarding our comments. Fond du Lac appreciates the opportunity to provide background and perspective to the proposed APE determination and we look forward to continued consultation with your office on this Project.

Sincerely,

Jill Hoppe

Jill Hoppe, Tribal Historic Preservation Officer
Fond du Lac Band of Lake Superior Chippewa



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Jill Hoppe
Tribal Historic Preservation Officer
Fond du Lac Band of Lake Superior Chippewa
1720 Big Lake Road
Cloquet, MN 55720

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Hoppe,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

The direct component of the APE was developed based on the footprint of the proposed remedy for the Project as well as the area that may potentially be used by the construction contractor for temporary access roads and equipment laydown areas. The indirect component of the APE was initially based on a viewshed model to identify areas of historic properties where the viewshed may be affected by permanent facilities/disturbance in the Project Area. The indirect component was then refined during a meeting on December 21, 2016, where several Tribal Historic Preservation Officers (THPOs) provided input.

U.S. EPA is offering formal consultation for the proposed APE. If no comments are received within 30 days of the date of this letter, then we will assume your office has no comments. My staff and I will be available by conference line (phone number: (866) 299-3188; conference code: 3123 537 948) on Wednesday, May 10, 2017 from 3:00PM to 4:00PM Central Time to receive your input and discuss any questions or concerns you may have regarding the proposed APE determination.

Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Kevin DuPuis, Chairman
Wayne Dupuis, Environmental Program Manager

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 23 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Bill Latady
Tribal Historic Preservation Officer
Bois Forte Band of Chippewa
5344 Lakeshore Drive
Nett Lake, MN 55772

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Latady,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Catherine Chavers, Chairwoman
Gabrielle Holman, Environmental Services Manager

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
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60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Gary Loonsfoot
Tribal Historic Preservation Officer
Keweenaw Bay Indian Community
16429 Beartown Road
Baraga, MI 49008

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Loonsfoot,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Warren Swartz, President
Char Spruce, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
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60604-3590

REPLY TO THE ATTENTION OF Tinka Hyde

Chris McGeshick
Chairman
Sokaogon Chippewa Community
3051 Sand Lake Road
Crandon, WI 54520

APR 25 2017

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. McGeshick,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Tina Van Zile, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

REPLY TO THE ATTENTION OF Tinka Hyde

Natalie Weyaus
Tribal Historic Preservation Officer
Mille Lacs Band of Ojibwe
43408 Oodena Drive
Onamia, MN 56359

MAY 23 2017

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Weyaus,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Melanie Benjamin, Chief Executive Officer
Perry Bunting, Environmental Program Manager

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
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60604-3590

REPLY TO THE ATTENTION OF Tinka Hyde

Melinda Young
Tribal Historic Preservation Officer
Lac du Flambeau Band of Lake Superior Chippewa
P.O. Box 67
Lac du Flambeau, WI 54538

APR 26 2017

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Young,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Joseph Wildcat Sr., President
Dee Allen, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
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BOULEVARD CHICAGO, IL
60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka G. Hyde

Amy Burnette
Tribal Historic Preservation Officer
Leech Lake Band of Ojibwe
190 Sailstar Drive NW
Cass Lake, MN 56633

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Burnette,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Faron Jackson Sr., Chairman
Levi Brown, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
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60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Mary Ann Gagnon
Tribal Historic Preservation Officer
Grand Portage Band of Lake Superior Chippewa
P.O. Box 428
Grand Portage, MN 55605

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Gagnon,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Norman DesChampe, Chairman
Seth Moore, Environmental Department Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
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77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 26 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Alvin Windy Boy
Tribal Historic Preservation Officer
Chippewa Cree Tribe of the Rocky Boy's Reservation
P.O. Box 544
Box Elder, MT 59521

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Boy,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Harlan Baker, Chairman
Johnathan Eagleman, Water Resource Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 26 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Bruce Nadeau
Tribal Historic Preservation Officer
Turtle Mountain Band of Chippewa
P.O. Box 900
Belcourt, ND 58316

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Nadeau,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Wayne L. Keplin, Chairman
Cora Champagne, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Jerry Smith
Tribal Historic Preservation Officer
Lac Courte Oreilles Band of Lake Superior Chippewa
13394 West Trepania Road
Hayward, WI 54843

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Smith,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Michael Isham, Chairman
Daniel Tyrolt, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
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60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Edith Leoso
Tribal Historic Preservation Officer
Bad River Band of Lake Superior Chippewa
P.O. Box 39
Odanah, WI 54861

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Leoso,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Robert Blanchard, Chairman
Naomi Tillison, Natural Resources Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
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77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Larry Balber
Tribal Historic Preservation Officer
Red Cliff Band of Lake Superior Chippewa
88385 Pike Road, Highway 13
Bayfield, WI 54814

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Balber,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

A handwritten signature in cursive script that reads "Tinka G. Hyde".

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Bryan Bainbridge, Chairman
Melonee Montano, Environmental Director

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
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77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 25 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Cayla Olson
Tribal Historic Preservation Officer
White Earth Nation
P.O. Box 418
White Earth, MN 56591

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Olson,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Terrence Tibbetts, Chairman
Monica Hedstrom, Manager, Environmental Affairs

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
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77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 26 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Kade Ferris
Tribal Historic Preservation Officer
Red Lake Band of Chippewa
P.O. Box 550
Red Lake, MN 56671

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Mr. Ferris,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

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U.S. EPA is offering formal consultation for the proposed APE. If no comments are received within 30 days of the date of this letter, then we will assume your office has no comments. My staff and I will be available by conference line (phone number: (866) 299-3188; conference code: 3123 537 948) on Wednesday, May 10, 2017, from 3:00PM to 4:00PM Central Time to receive your input and discuss any questions or concerns you may have regarding the proposed APE determination.

Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

Cc: Darrell Seki, Chairman
Cody Charwood, Director, Environmental Programs

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION 5
77 WEST JACKSON
BOULEVARD CHICAGO, IL
60604-3590

APR 26 2017

REPLY TO THE ATTENTION OF Tinka Hyde

Giiwegiizhigookway Martin
Tribal Historic Preservation Officer
Lac Vieux Desert Band of Lake Superior Chippewa
P.O. Box 249
Watersmeet, MI 49969

Re: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Area of Potential Effect under Section 106 of the National Historic Preservation Act

Dear Ms. Martin,

The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) is providing additional information of the proposed sediment remediation and habitat restoration project at Spirit Lake. As part of the continued Section 106 consultation under the National Historic Preservation Act, U.S. EPA has prepared a proposed Area of Potential Effect (APE) for the project (Figure 1).

The direct component of the APE was developed based on the footprint of the proposed remedy for the Project as well as the area that may potentially be used by the construction contractor for temporary access roads and equipment laydown areas. The indirect component of the APE was initially based on a viewshed model to identify areas of historic properties where the viewshed may be affected by permanent facilities/disturbance in the Project Area. The indirect component was then refined during a meeting on December 21, 2016, where several Tribal Historic Preservation Officers (THPOs) provided input.

U.S. EPA is offering formal consultation for the proposed APE. If no comments are received within 30 days of the date of this letter, then we will assume your office has no comments. My staff and I will be available by conference line (phone number: (866) 299-3188; conference code: 3123 537 948) on Wednesday, May 10, 2017, from 3:00PM to 4:00PM Central Time to receive your input and discuss any questions or concerns you may have regarding the proposed APE determination.

Please direct any questions regarding this letter to Mr. Bill Murray (312) 353-6324 or Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313) 226-3510.

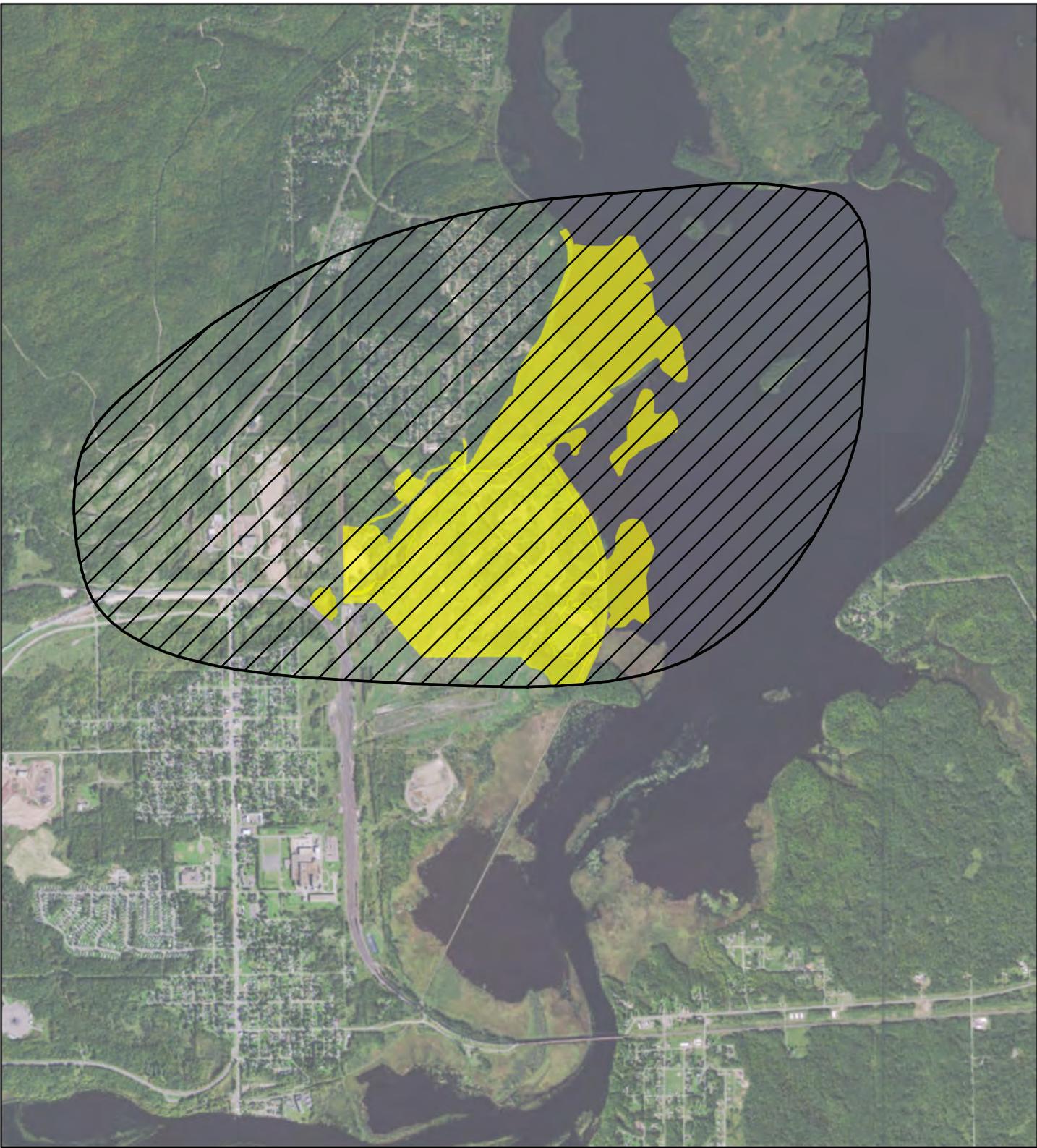
Sincerely,

Tinka G. Hyde, Director
Great Lakes National Program Office

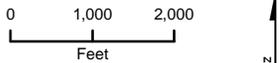
Cc: James Williams Jr., Chairperson
Beth Spedowski, Planning and Environmental

Enclosure

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Legend
■ Area of Direct Effect
▨ Area of Indirect Effect



Area of Direct Effect and
Area of Indirect Effect
Spirit Lake Sediment Site
Former U.S. Steel Duluth Works
St. Louis River, Duluth, Minnesota

Data Sources:
ESRI ArcGIS Map Service, 2015

Map Date: 1/20/2017



From: [Murray, William J](#)
To: [McCormick, Kaitlin](#); [Pacelli, Courtney](#)
Subject: FW: Spirit Lake Sediment Remediation Project
Date: Tuesday, September 05, 2017 3:13:02 PM

From: Murray, William J
Sent: Tuesday, September 05, 2017 12:56 PM
To: 'amy.burnette@llobjibwe.org' <amy.burnette@llobjibwe.org>; 'amsoltis@glifwc.org' <amsoltis@glifwc.org>; 'blatady@boiseforte-nsn.gov' <blatady@boiseforte-nsn.gov>; 'brucefnadeau@gmail.com' <brucefnadeau@gmail.com>; 'carri.jones@llbo.org' <carri.jones@llbo.org>; 'cayla.olson@whiteearth-nsn.gov' <cayla.olson@whiteearth-nsn.gov>; 'Chad.weiss@millelacsband.com' <Chad.weiss@millelacsband.com>; cspruce.kbic-nsn.gov <cspruce@kbic-nsn.gov>; 'dseki@redlakenation.org' <dseki@redlakenation.org>; 'Darren Vogt' <DVogt@1854treatyauthority.org>; 'Dee.allen@ldftribe.com'; 'thpo@badriver-nsn.gov' <thpo@badriver-nsn.gov>; 'echapman@ldftribe.com' <echapman@ldftribe.com>; 'ermav@arvig.net' <ermav@arvig.net>; 'gmartin@lvdtribal.com' <gmartin@lvdtribal.com>; 'bst.germaine@ldftribe.com' <bst.germaine@ldftribe.com>; 'jim.williams@lvdtribal.com' <jim.williams@lvdtribal.com>; 'jsavage730@aol.com' <jsavage730@aol.com>; 'jerry.smith@lco-nsn.gov' <jerry.smith@lco-nsn.gov>; 'JillHoppe@fdlrez.com' <JillHoppe@fdlrez.com>
Cc: Sarah Beimers <sarah.beimers@mnhs.org>
Subject: Spirit Lake Sediment Remediation Project

The United States Environmental Protection Agency (USEPA) Great Lakes National Program Office (GLNPO) is providing additional information regarding the proposed sediment remediation and habitat restoration project at Spirit Lake. USEPA has prepared a Phase 1 Archeological Report, an Architectural Reconnaissance Report, and an Evaluation of Determination and Eligibility for Listing of the Lake Superior and Mississippi Railroad. These documents were submitted to the Minnesota State Historic Preservation Office (SHPO) on August 11th as part of the Section 106 consultation process of the National Historic Preservation Act. Continuance of the Section 106 process requires SHPO concurrence with the findings of the reports; if no response is received, USEPA will assume that SHPO concurs with the findings. USEPA is providing these reports to tribal parties for consultation purposes; the reports can be accessed by the FTP link below (a CD containing the reports can be provided upon request). The next step in the Section 106 process is to determine if implementation of the project will result in any adverse impacts on cultural or historic resources. USEPA will continue consultation with tribal parties throughout the remedial design at Spirit Lake.

FTP Link<<ftp://eaftp.eaest.com/6256131%20-%20Spirit%20Lake%20File%20Transfer/Spirit%20Lake%20Cultural%20Reports/Phase%20I%20Reports/>>
Username: GLAESftp
Password: chuq2jaH

Should you have any questions, please do not hesitate to contact me at (313) 353-6324.

Thanks

Bill Murray
U.S. EPA
Great Lakes National Program Office

From: Nancy Schuldt [<mailto:NancySchuldt@FDLREZ.COM>]
Sent: Monday, September 11, 2017 11:04 AM
To: Murray, William J <Murray.Williamj@epa.gov>
Cc: Jill Hoppe <JillHoppe@FDLREZ.COM>; waynedupuis.fdlrez.com <waynedupuis@fdlrez.com>
Subject: FW: Spirit Lake Sediment Remediation Project

Bill: Darren Vogt from the 1854 Treaty Authority forwarded this message to me. Jill Hoppe, our THPO, was out of the office all last week coordinating historic/archaeological surveys for the proposed Enbridge Line 3 Replacement project, and had not been able to respond to or forward me the message. Please include me and Wayne Dupuis, our Environmental Program Manager, on all correspondence regarding the Section 106 consultation process for the US Steel site. We are all working in our various capacities to support Fond du Lac's participation in the Section 106 process as this is such a significant site and action for the Band.

Also, we are not able to access the files on the ftp site; could you please send the information on CD?

Thank you very much,

*Nancy Schuldt
Water Projects Coordinator
Fond du Lac Environmental Program
1720 Big Lake Road
Cloquet, MN 55720
218.878.7110*

From: Darren Vogt [<mailto:Dvogt@1854treatyauthority.org>]
Sent: Monday, September 11, 2017 9:10 AM
To: Nancy Schuldt
Subject: FW: Spirit Lake Sediment Remediation Project

Maybe this made its way to you, but didn't see your name on the list.

DV

From: Murray, William J [<mailto:Murray.Williamj@epa.gov>]
Sent: Tuesday, September 05, 2017 12:56 PM
To: amy.burnette@llobjibwe.org; amsoltis@glifwc.org; blatady@boiseforte-nsn.gov; brucefnadeau@gmail.com; carri.jones@llobo.org; cayla.olson@whiteearth-nsn.gov; Chad.weiss@millelacsband.com; cspruce.kbic-nsn.gov <cspruce@kbic-nsn.gov>; dseki@redlakenation.org; Darren Vogt <Dvogt@1854treatyauthority.org>; Dee.allen@ldftribe.com; thpo@badriver-nsn.gov; echapman@ldftribe.com; ermav@arvig.net; gmartin@lvdtribal.com; bst.germaine@ldftribe.com; jim.williams@lvdtribal.com; jsavage730@aol.com; jerry.smith@lco-nsn.gov; JillHoppe@fdlrez.com
Cc: Sarah Beimers <sarah.beimers@mnhs.org>
Subject: Spirit Lake Sediment Remediation Project

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FTP Link <<ftp://eaftp.eaest.com/6256131%20-%20Spirit%20Lake%20File%20Transfer/Spirit%20Lake%20Cultural%20Reports/Phase%20I%20Reports/>>

Username: GLAESftp

Password: chuq2jaH

Should you have any questions, please do not hesitate to contact me at (313) 353-6324.

Thanks

Bill Murray

U.S. EPA

Great Lakes National Program Office

Simulated Views of
Spirit Lake
Sediment Remediation Project
from Spirit Island

Elizabeth Price

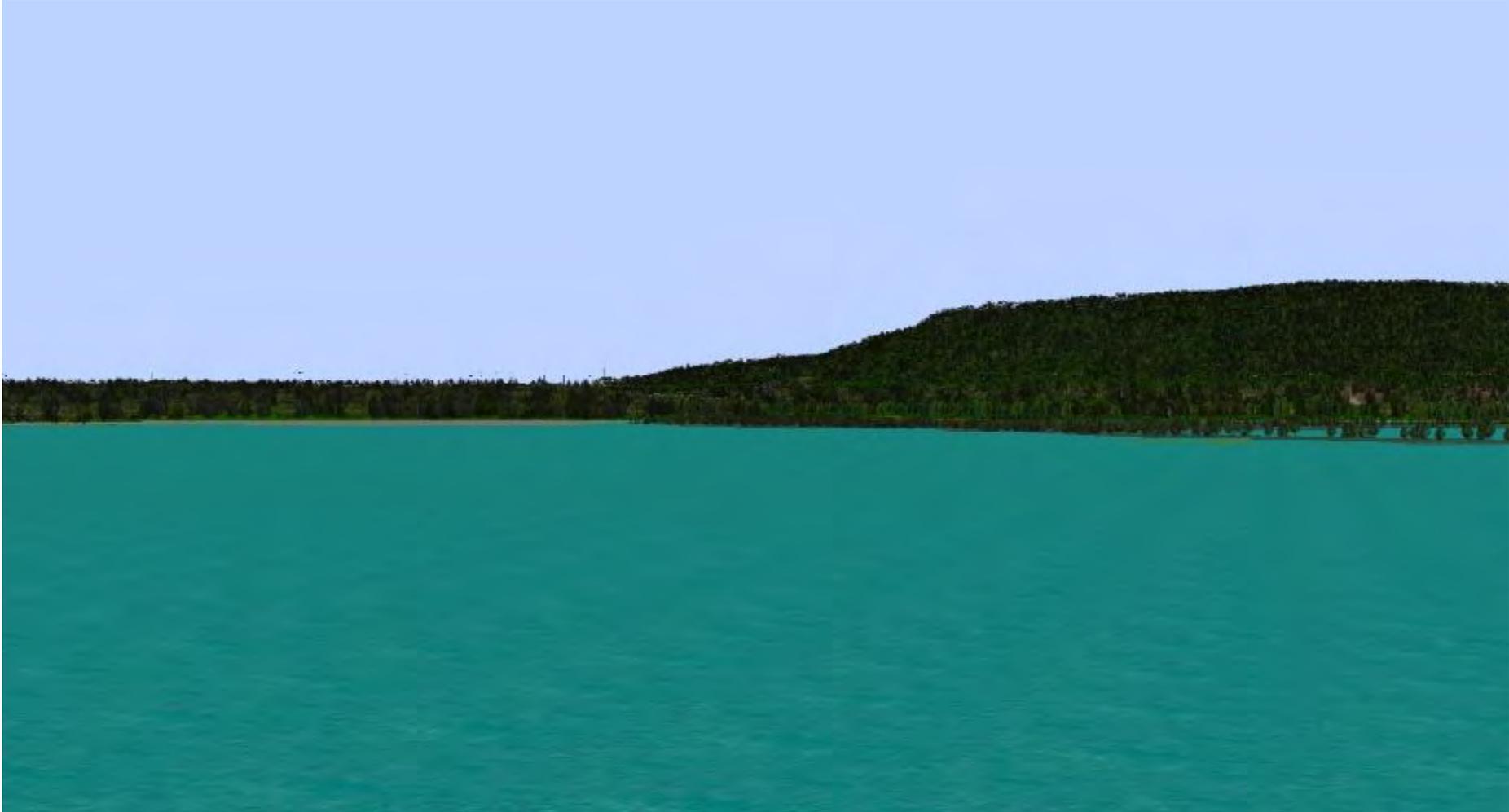
Crucial Economics Group, LLC

January 10, 2017

View from Spirit Island to Confined Disposal Facilities Area: Overview Map



View from Spirit Island to Confined Disposal Facilities Area: Without Project



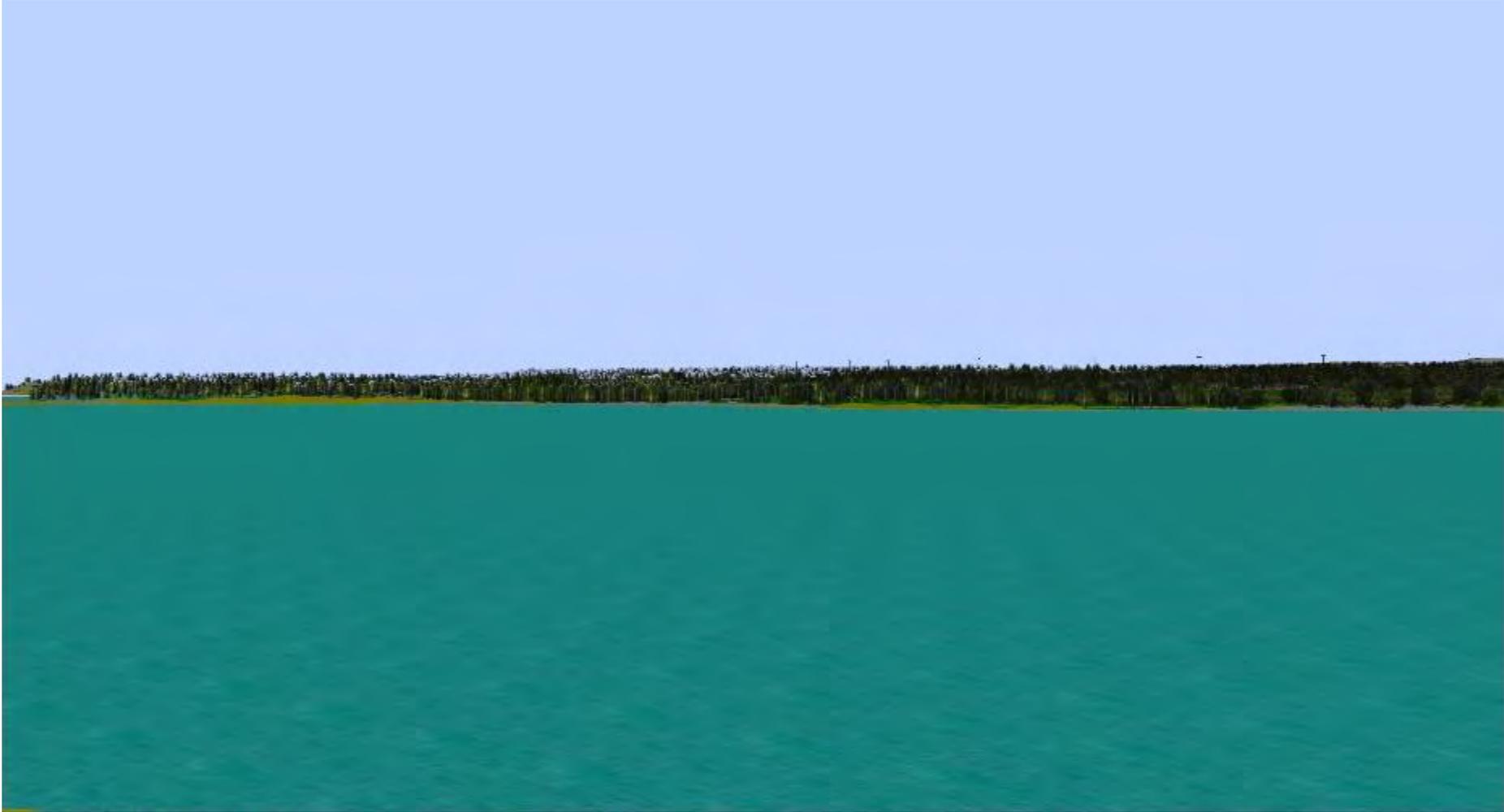
View from Spirit Island to Confined Disposal Facilities Area: With Project



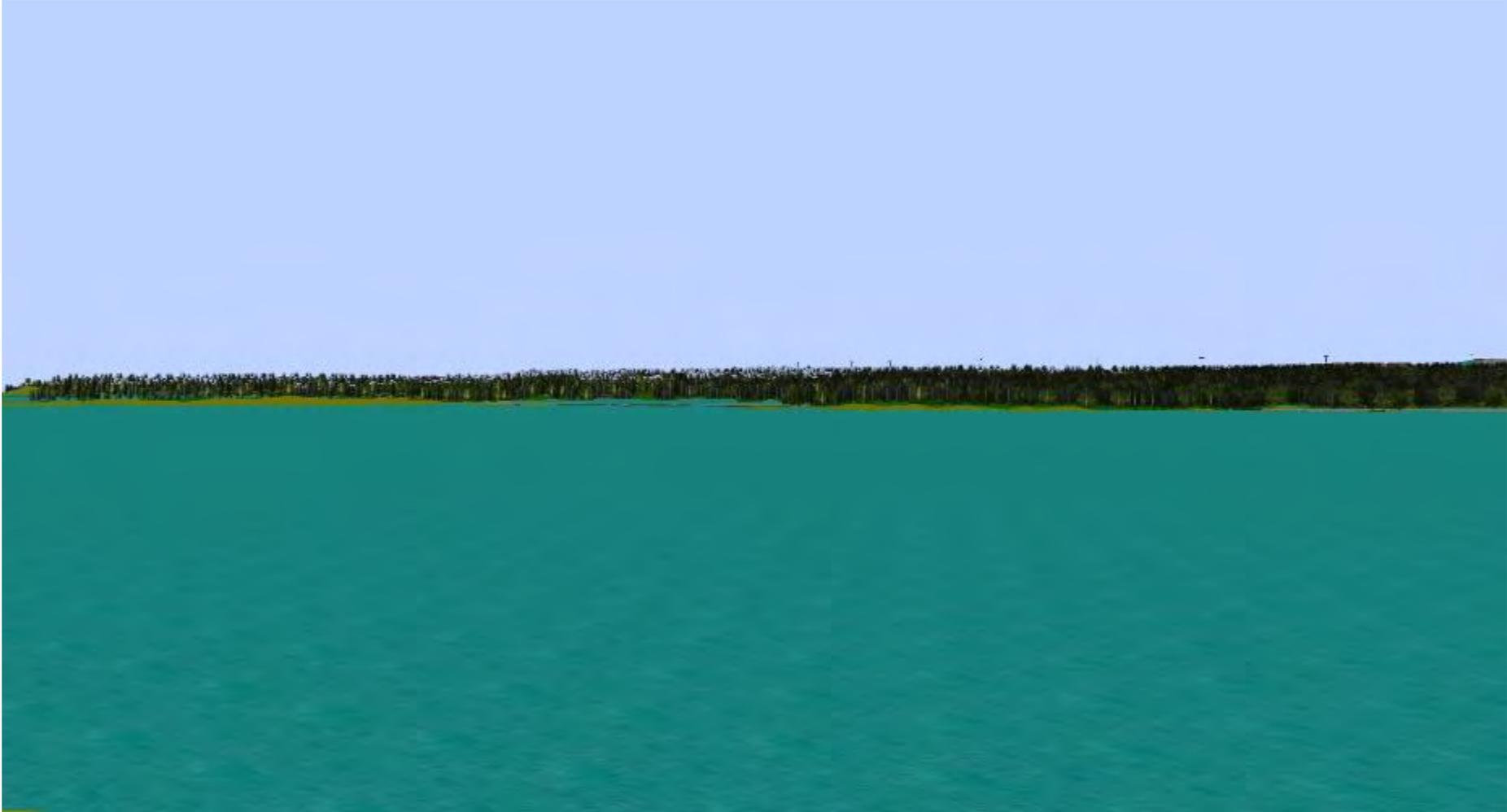
View from Spirit Island to Wire Mill Area: Overview Map



View from Spirit Island to Wire Mill Area: Without Project



View from Spirit Island to Wire Mill Area: With Project





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

20 Jan 2017

Minnesota State Historic Preservation Office
Barbara Mitchell Howard, Deputy State Historic Preservation Officer
345 Kellogg Blvd West
St. Paul, MN 55102-1906

Dear Ms. Howard,

The United States Environmental Protection Agency, Great Lakes National Program Office (EPA) is providing additional information regarding the proposed sediment remediation and habitat restoration project at Spirit Lake (SHPO Number 2015-2457). In order to further refine the design alternatives currently under consideration, the collection of soil and sediment cores and clearing of temporary access roads is necessary. The purpose of this letter is to notify your office of the EPA's effects determination under Section 106 of the National Historic Preservation Act.

The EPA is proposing to excavate a total of 81 holes that will be up to 10 inches in diameter in order to obtain the soil and sediment samples necessary to refine the alternatives being considered for the project. Additionally, temporary access routes will be cleared to allow for access of drilling equipment. These temporary access routes will be 10 feet wide and approximately 9,000 linear feet (5,330 feet of previously used access routes and 3,670 feet of new access routes) and will be cleared using mechanical equipment that may result in earth disturbance. No grading is proposed along the temporary access routes.

As there will only be minimal temporary visual impacts by the proposed actions, the Area of Potential Effect (APE) was limited to areas that will be physically impacted (Attachment 1). A geomorphological investigation was previously conducted in the area to determine where intact archeological resources may be encountered (see attached *Desktop Geomorphological and Landuse Study for the Spirit Lake Project, St. Louis Count, Minnesota*, Schmidt et al, 2016). Using the results of this investigation, the EPA has determined that the majority of the temporary access road construction and the majority of the core sample drilling will take place in areas with a low potential to contain intact archeological resources. The rest of the core sample drilling will take place in areas of moderate potential or in areas that were not part of the geomorphological study area. Given the small amount of area that will be physically impacted by the drilling (28 holes up to 10 inches in

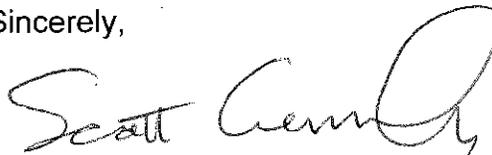
diameter), it is unlikely that any archeological resources will be encountered in these areas.

In the unlikely event that any archeological material is discovered during the proposed work, all work in that area will be halted, the local federally recognized tribes and your office will be notified, and the EPA will begin consultation to determine the appropriate next steps regarding that material.

The EPA has identified three properties that are eligible for the National Register of Historic Places (NRHP) near the project area, Morgan Park (SL-DUL-0705), Lake Superior and Mississippi Railroad in Duluth (LSMRR), and Spirit Island (21GL1203). While the temporary access roads and core sample locations will be near the LSMRR they will not impact the actual property. Crossing the LSMRR will take place at existing crossings and the rails will be protected so no physical impacts occurs to the rails themselves. Implementing the proposed actions will not impact these eligible properties (Attachment 1).

Given the information above, the EPA has determined that there is "no potential to cause effect" by implementing the proposed project of collecting soil and sediment cores and creating temporary access routes. Any questions regarding this letter can be directed to Mr. Curtis Sedlacek, United States Army Corps of Engineers Detroit District Archeologist, (313-226-3510), or Mr. Scott Cieniawski (312-353-9184).

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Cieniawski". The signature is fluid and cursive, with a large loop at the end.

Scott Cieniawski
Project Manager

Attachment

STATE HISTORIC PRESERVATION OFFICE

June 16, 2017

Bill Murray
United States Environmental Protection Agency, Region 5
Great Lakes National Program Office
77 West Jackson Blvd.
Chicago, IL 60604-3590

RE: Spirit Lake Sediment Remediation Project
Duluth, Saint Louis County
SHPO Number: 2015-2457

Dear Mr. Murray,

Thank you for continuing consultation on the above project. Information received in our office on 16 May 2017 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

We have completed our review of your letter dated 11 May 2015, a submittal which included a map entitled *Area of Direct Effect and Area of Indirect Effect, Spirit Lake Sediment Site, Former U.S. Steel Duluth Works, St. Louis River, Duluth, Minnesota* (EA Engineering, 20 January 2017). We appreciated the opportunity to participate in your agency's consultation meeting in Duluth on 21 December 2016.

Although not clearly stated in your recent letter, it is our understanding, based upon discussions at, and review of the meeting notes from the December consultation meeting, that your agency's proposed area of potential effect (APE) is reflective of the preferred Project alternative, Alternative 8B, for the proposed Spirit Lake Sediment Remediation Project (Project). Because several months have gone by since our last correspondence on this Project and the December 2016 consultation meeting, we recommend, in future correspondence, that your agency continue to provide the most up-to-date Project summary as confirmation that we are actually reviewing and making comments and recommendations on the same Project.

As you are aware, on 21 January 2016 we provided written comments to your agency following our review of the preliminary APE for direct effects which had been sent to our office for the Project's proposed Alternative 8B. It was our understanding at that time, as directed by your agency, that a definition of the federal undertaking would not be provided to our office until the two (2) remaining alternatives which were being proposed had gone through additional public review. As clearly stated in our letter, pending clarification from your agency regarding formal establishment of the undertaking subject to Section 106 review, we provided comment on the preliminary APE for direct effects for Alternative 8B. Again, based upon our own notes and the meeting notes from the December 2016 consultation meeting, it is our understanding that your agency is moving forward with Alternative 8B although we have no formal written confirmation of this. Please provide confirmation as it pertains to your agency's definition of the federal undertaking for this Section 106 review.

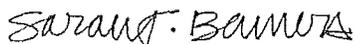
The proposed APE, as defined and documented with your May 11th submittal, which is, for what we can only assume at this time, Alternative 8B, and Alternative 8B is consistent with descriptions of this alternative previously submitted to our office in December 2015, appears to be generally appropriate to take into account the potential direct effects and potential indirect *visual* effects caused by this alternative.

Although potential visual effects are a critical aspect of APE determination and potential effect consideration during the Section 106 consultation process, it is equally important for the federal agency, our office, and consulting parties, to consider other potential direct or indirect effects that may cause alterations in the character and/or use of a historic property, if any such properties exist. Therefore, while direct effects typically include any potential direct alteration, demolition, or partial destruction of a historic property, a historic property's setting, feeling, and association may also be indirectly affected by a federal undertaking as the undertaking may change the character of a property's use or change the physical features within the property's setting that contribute to its historical significance. A federal undertaking resulting in change in access or use of a historic property, either directly or indirectly, also needs to be a consideration when determining an APE.

To reiterate, we do believe that the currently defined proposed APE for direct and indirect effects is generally appropriate to take into account the potential direct and indirect effects of the proposed Project, a Project which was defined as Alternative 8B at the time of our last formal correspondence in January 2016. We would appreciate formal written clarification from your agency as it pertains to the definition of the undertaking subject to Section 106 review. Following clarification of the federal undertaking, we would appreciate written clarification that the currently proposed and reviewed APE has taken into consideration all potential indirect effects, as suggested in 36 CFR 800 and summarized above, and all potential direct effects, besides those caused by the "footprint of the proposed remedy for the Project" and potential construction areas as described in your May 11th letter.

We look forward to continuing consultation with your agency on this important Project. Please feel free to contact me at 651-259-3456 or sarah.beimers@mnhs.org if you have any questions regarding our comment letter.

Sincerely,



Sarah J. Beimers, Manager
Government Programs and Compliance

cc: Cutis Sedlacek, U.S. Army Corps of Engineers, Detroit District
Lynne Harrington Hall, Lake Superior and Mississippi Railroad
Jill Hoppe, Tribal Historic Preservation Officer, Fond du Lac Band of Lake Superior Chippewa

**Table 1. SHPO Comment Response Table – Comments Dated September 22, 2017
Spirit Lake Sediment Remediation Project**

Comment Number	Comment Regarding	Comment	Response
1	APE	“...we have not yet received written clarification from your agency that the currently proposed APE has taken into consideration all potential direct and indirect effects.”	The EPA has taken into consideration all potential direct and indirect effects when developing the proposed APE.
2	APE	“We again request that your agency provide narrative response to comments and recommendations we have expressed in previous correspondence as well as this letter as it pertains to clarification on your agencies APE determination for the proposed undertaking.”	<p>This comment response table provides a response to comments received in the letter dated September 22, 2017.</p> <p>EPA responded to the SHPO’s letter dated June 16, 2017, regarding the proposed APE in a letter dated July 7, 2017. The two comments in that letter were regarding the selected project alternative and the incorporation of indirect effects beyond visual into the analysis of project impacts. Per EPA’s letter dated July 7, 2017, Alternative 8B is the selected alternative for implementation and design is moving forward on this Alternative. EPA recognizes that there are potential indirect effects beyond visual impacts and those other indirect effect areas are within the identified APE.</p>
3	Phase I Archaeological Report	“Because the identification of efforts are incomplete as it pertains to the undisturbed area within the APE and we have not received information and documentation from your agency as it pertains to the potential for direct effects in this undisturbed area, we will consider this information in partial fulfillment of the requirements that your agency has to identify historic properties of archaeological significance within the proposed undertaking’s APE.”	An archeological survey of this area was completed and the data report is provided as Attachment A. EPA agrees with the conclusions of this report and no archaeologically significant resources are expected in this area.

Comment Number	Comment Regarding	Comment	Response
4	RR Report	<p>“Because the report does not present a convincing argument regarding the railroad’s period of significance, which recommends ending it at 1956 when the <i>Railroads in Minnesota</i> MHPR ends, we recommend the NRHP Period of Significance for this line to be beginning in 1870 when the line was constructed and likely ending either sometime in the 1940s or early 1950s when passenger service ended in Fond du Lac and the remaining railroad infrastructure was removed, or earlier as freight had ceased using this line and the segment between Fond du Lac and Thomson had been removed by 1897 had freight traffic had been removed by 1897 and freight traffic had been rerouted to the St. Paul & Duluth/Northern Pacific “Skally Line” Additional archival research will need to be undertaken in order to determine an appropriate end date for the Period of Significance.”</p>	<p>This report has been revised to update the period of significance. The revised report is provided as Attachment B.</p>

Comment Number	Comment Regarding	Comment	Response
5	RR Report	<p>“The evaluation report for the Lake Superior & Mississippi Railroad Corridor Historic District: West Duluth Segment did not include an inventory form for our records. Your agency will need to prepare and submit to our office a Minnesota Multiple Property Inventory Form for the Lake Superior & Mississippi Railroad Corridor Historic District: West Duluth Segment and this inventory form will need to incorporate recommendations we have made in this letter regarding Period of Significance, an appropriate map of the historic property, and other required fields. Please follow the guidelines for linear resources which are included in our newly issued <i>Historic and Architectural Survey Manual</i>. Both the manual and the inventory form can be found on our website at: www.mnhs.org/shpo/survey/.</p>	<p>An updated inventory form has been prepared and is provided as part of Attachment B.</p>

Comment Number	Comment Regarding	Comment	Response
6	Architectural Reconnaissance Survey	<p>“...the report contradicts itself in Chapter V (page 26) Potential Effects, as it is stated that “archival research, architectural reconnaissance survey, and data analysis identified four properties over 50 years of age within the direct and indirect APE for the proposed remediation project.” This is not an accurate statement it is clear that the survey only covered areas within the area of potential direct effects within the “visibility area” of the larger APE.”</p>	<p>The project initiation phase of the Section 106 process (36 CFR 800.3) included an analysis of the undertaking for the potential to cause effects to historic properties, if present. Two categories of effects were anticipated: direct and indirect effects. Under the latter, changes that could alter the character of setting contributing to a property’s historical significance, and the introduction of elements that could diminish the integrity of a property’s important historic features were anticipated. The area associated with each category of potential effect was considered in accordance with 36 CFR 800.16 (d).</p> <p>Indirect effects considered in this analysis included noise, lighting, odor, and project visibility. The completed project will not result in changes to existing noise levels, lighting, or odors. The Project has no potential to cause effects to historic properties associated with these categories of indirect effects.</p> <p>The completed project will be visible from a sub-area of the APE, as defined by computer modeling of project data with LIDAR data to identify areas within the APE with visibility to the completed Project. A comprehensive reconnaissance survey of the area was completed for the portion of the APE where the Project may cause alterations to the visual character of historic properties, if present. Historic properties were identified through architectural reconnaissance survey of the area of visibility in accordance with the Secretary of the Interior’s <i>Standards for Identification</i> and MN SHPO reporting guidelines.</p> <p>The Architectural Reconnaissance Survey report has been revised (Attachment C). The language in the report was clarified to succinctly state that the surveyed area was the visibility area within the APE, and the report included an evaluation of visual effects.</p>

7	Architectural Reconnaissance Survey	<p>“...we believe that the reconnaissance survey efforts for architectural and historic properties is incomplete. While the report includes information regarding other properties, some of which have been determined eligible through previous review, as being in the APE for the proposed undertaking (Figure 3.3) and some even appear to be partially within the “visibility area.” They are not mentioned in the survey results or the potential effects narrative. According to our records, these properties which are located within the larger APE include:</p> <ul style="list-style-type: none"> • Morgan Park Residential Historic District – determined eligible for listing in the NRHP through previous review; • Bridge L6119 (SL-DUL-2447) – determined to be not individually eligible for listing in the NRHP; • Bridge L6008 (SL-DUL-2433) – determined to be not individually eligible for listing in the NRHP; • Bridge 7622 (SL-DUL-2652) – determined to be not individually eligible for listing in the NRHP through previous review; • Northern Pacific Railroad Historic District: Duluth Short Line Segment (xx-RRD-025) – currently known as the DWP Short Line Trail, a historic property determined to be eligible for listing in the NHRP through previous review; • St. Paul & Duluth Railroad/Northern Pacific “Skally Line” Railroad Corridor Historic District (XX-RRD-036) – currently Willard Munger State Train, a historic property determined to be eligible for listing in the NRHP through previous review; and 	<p>Additional research was conducted at MNSHPO in St. Paul, MN on January 11-12, 2018. The inventory and survey forms of the properties mentioned by the MNSHPO were scanned and information regarding these resources was incorporated into the Report in chapters three through five (Attachment C).</p>
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Comment Number	Comment Regarding	Comment	Response
		<ul style="list-style-type: none"> <li>Skyline Parkway: Bardon’s Peak Segment (SL-DUL-2312), Bardon’s Peak East Overlook (SL-DUL-2316), and Bardon’s Peak West Overlook (SL-DUL-2317) – determined to be eligible for listing the NRHP through previous review.” 	
8	Architectural Reconnaissance Survey	<p>“Please provide clarification from your agency as it pertains to architectural and historic property identification efforts for areas within the larger APE which were not surveyed as part of this reconnaissance. Along with consideration of the properties listed above which have been recorded in our statewide inventory, including the NRHP-eligible historic properties which may require reevaluation pursuant to 36 CFR 800.4(c)(1), any reconnaissance survey in this area will need to include any properties of this type which are less than 45 years old.”</p>	See the response to Comment 6.

Comment Number	Comment Regarding	Comment	Response
9	Architectural Reconnaissance Survey	<p>“As an example, there may be a need to reevaluate the previously identified boundaries for the Morgan Park Historic District in order to confirm that the boundary is still valid. For instance, we do not believe that the previous evaluation considered a remnant of the USS Duluth Works plant access road from the neighborhood was located in the area where the three (3) surveyed residential properties are located. This road is identified today as Falcon Street.”</p>	<p>While Falcon Street may have originated as being an access road to the USS Duluth Works plant, there were several points of access to the USS Duluth Works plant and the portion of Falcon Street that leads to the USS Duluth Works Plant is not unique in and of itself. Any historical significance would be due to association to the USS Duluth Works and as that property is no longer extant, the EPA has determined that that this portion Falcon Street to not be eligible for the National Register of Historic Places on its own or as part of the Morgan Park Historic District. The three houses on the portion of Falcon Street that is not within the proposed Morgan Park Historic District have been determined as not being eligible for the National Register of Historic Places and not eligible for being contributing resources of or for inclusion within the District. Given this information, the EPA considers the previously identified boundaries for the Morgan Park Historic District as still being accurate.</p>
10	Architectural Reconnaissance Survey	<p>“While we did receive unbound, individual architecture-history inventory forms for the three (3) residential properties listed above, these inventory forms need to be corrected before we can accept them into our files. The inventory forms need location maps for each of the three (3) properties and these location maps should be to a higher scale and level of detail than the map presented on Figure 4.1 of the report. Please update these inventory forms accordingly and submit to our office for acceptance into our statewide inventory records.”</p>	<p>Inventory forms were revised to include locational maps of adjusted scale and higher level of detail than those submitted with the draft report. Revised forms are included in the final technical report (Attachment C).</p>

Comment Number	Comment Regarding	Comment	Response
11	Architectural Reconnaissance Survey	“Also, please delete the statement “may be contributing to potential historic district”, whether an expanded Morgan Park Residential Historic District or other unnamed historic district, has not been presented or evaluated at this time, and these properties are located outside the currently delineated Morgan Park Residential Historic District.”	Phrase, “may be contributing to a potential historic district” will be deleted throughout per MN SHPO comment.
12	Other Consulting Parties Comments	“Please provide a summary of any comments and/or recommendations that your agency may have received from consulting parties, including Native American tribes, as it pertains to identification efforts presented to our office thus far, or any other consultation that has been completed which has resulted in identification of historic properties eligible for listing in the NRHP for which our office has not yet been presented documentation and had the opportunity to review.”	Attachment D provides copies of additional correspondence from the Native American tribes received that have not been previously provided to the SHPO.

m DEPARTMENT OF
ADMINISTRATION
STATE HISTORIC PRESERVATION OFFICE

July 2, 2018

William Murray
United States Environmental Protection Agency, Region 5
Great Lakes National Program Office
77 West Jackson Blvd.
Chicago, IL 60604-3590

RE: Spirit Lake Sediment Remediation Project
Duluth, Saint Louis County
SHPO Number: 2015-2457

Dear Mr. Murray,

Thank you for continuing consultation on the above project. Information received in our office on May 23 and June 25, 2018 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966, as amended, (NHPA) and implementing federal regulations at 36 CFR Part 800.

We have completed our review of your letter dated May 18, 2018, a submittal which included the following attachments:

- Attachment A: *Evaluation and Determination of Eligibility for Listing of the Lake Superior and Mississippi Railroad in Duluth, St. Louis County, Minnesota on the National Register of Historic Places* (EA Engineering, Science, and Technology, Inc., PBC, September 2017 FINAL REPORT) and one (1) unbound, individual architecture-history property inventory form;
- Attachment B: *Phase I Archaeological Survey of a 9.42 Acre Portion of the Spirit Lake Sediment Remediation Project, City of Duluth, St. Louis County, Minnesota* (EA Engineering, Science, and Technology, Inc., PBC, December 11, 2017 FINAL REPORT);
- Attachment C: *Architectural Reconnaissance Survey for the Spirit Lake Remediation Project in Duluth, St. Louis County, Minnesota* (EA Engineering, Science, and Technology, Inc., PBC, January 31, 2018 FINAL REPORT) and three (3) unbound, individual architecture-history property forms for surveyed properties on Hilton Street and 86th Avenue West; and
- Attachment D: Copies of tribal consultation letters.

Thank you for forwarding "Table 1" to our office via e-mail on June 25th. This table was referenced in your May 18th letter, but was not included in the transmittal materials. We have now had an opportunity to review the responses provided in Table 1, which have also been considered in this current review. Your recent submittal includes a formal Section 106 finding of "adverse effect" along with the requisite documentation pursuant to 36 CFR 800.11(e). Our comments and recommendations are provided below.

Clarification Regarding Undertaking and APE

As clarified in your agency's letter dated July 7, 2017, it is our understanding that remediation Alternative 8B constitutes the undertaking subject to review and consultation under Section 106 of the NHPA. Our current understanding of this undertaking is based upon the description provided in the narrative on pages 1-2 of the architectural survey and pages 5-9 (including the project maps) in the most recent archaeological survey (12/2017).

Thank you for the information provided in Table 1 as it pertains to earlier concerns our office has expressed regarding your agency's definition of the area of potential effect, in particular clarification regarding the APE for indirect effects and potential visual effects. Our office's current understanding of your agency's definition and documentation of the APE can be summarized as such:

- APE for direct effects – area of proposed ground disturbance associated with the undertaking, documented as “Direct APE” in the most recent archaeological survey report, and “Area of Direct Effect” in the final architectural reconnaissance survey report.
- APE for indirect effects – area taking into consideration all potential indirect effects including, but not limited to, visual effects, documented as “Indirect APE/Study Area” in most recent archaeological survey report, and “Area of Indirect Effect” in the final architectural reconnaissance survey report.
 - This APE has a sub-area delineated based upon visibility modeling in order to further define the area from which the proposed undertaking may actually be seen. This sub-area, identified as “Visibility Area” is illustrated on Figure 4.1 of the final architectural reconnaissance survey report.

We agree that this APE determination is generally appropriate to take into account the potential direct and indirect effects of the proposed undertaking as we currently understand it. As the undertaking’s scope of work is further defined, or if it is significantly altered from the current scope, additional consultation with our office may be necessary in order to revise the current APE.

Identification of Historic Properties

Although your May 18th letter does not specifically address the findings of the recently submitted archaeological survey report, based upon our review of this survey report, which surveyed additional areas within the APE for direct effects, and in consideration of our review of earlier surveys, we agree with the report’s conclusions that site **21SL1249 is not eligible** for listing in the National Register of Historic Places (NRHP).

We appreciate the clarification provided in Table 1 in response to questions and concerns expressed in our September 22nd letter pertaining to your agency’s efforts to identify historic properties within the APE based upon the nature and scope of the proposed undertaking. The clarification provided to our office is sufficient in this regard.

Your May 18th letter identifies the following historic properties as located within the APE for the proposed undertaking:

- **Morgan Park Residential Historic District** – previously determined eligible for listing in the NRHP and, as indicated on Table 1, your agency has determined that the currently defined historic district boundaries are valid.
- **Lake Superior and Mississippi Railroad Corridor Historic District: West Duluth Segment** – our office agreed with the previous determination made by your agency that this property is eligible for listing in the NRHP based upon the evaluation provided in the September 2017 report. Although the recently submitted revised version has responded to some of the recommendations provided in our September 22nd letter, the property inventory form does not provide information requested in this letter and therefore does not meet our guidelines. Regardless, we will incorporate this incomplete form into our statewide records as-is.
- **Spirit Island** – our office agrees with the determination as made by your agency in consultation with the Fond du Lac Band of Lake Superior Chippewa that **Spirit Island is eligible** for listing in the NRHP under Criterion A, as described in the Fond du Lac Tribal Historic Preservation Officer’s (THPO) May 25, 2017 letter included as Attachment D in the recent submittal. In our September 22nd letter, we requested information and documentation from your agency in support of any efforts your agency has completed in regards to “identification of historic properties eligible for listing in the NRHP for which our office has not yet been presented documentation” and thus have not had an opportunity to review as part of this current Section 106 consultation. While we are able to provide concurrence with the NRHP-eligibility of this historic property at this time based upon information provided in Fond du Lac’s letter, moving forward it will be important for your agency, in consultation with the band, to provide our office an appropriate level of documentation of this historic property especially as it pertains to the identification of character-defining features, including viewshed, as described in the THPO’s May 25th letter, as well as an associated boundary description for the historic property.

Although your May 18th letter identifies the following historic properties as “outside the APE” we would like to clarify that, based upon your agency’s own APE maps and as described on pages 25-26 of the final architectural survey report, these historic properties are located within the APE for indirect effects:

- **Northern Pacific Railroad Historic District: Duluth Short Line Segment**
- **St. Paul & Duluth Railroad/Northern Pacific "Skally Line" Railroad Corridor Historic District**
- **Skyline Parkway: Bardon's Peak Segment**

Determination of Effect

Although your agency determined that the proposed undertaking will have "no effect" on the Skyline Parkway: Bardon's Peak Segment, we disagree with this determination as it appears as though you have not considered the significance of this historic property's view of Spirit Lake in its effect analysis. It is clearly located within the "visibility area" of the indirect APE as defined in your studies. The view is a character-defining feature of this historic property and a critical aspect of its historic integrity. Based upon the description of the undertaking's proposed physical impacts on the landscape, it appears as though "no adverse effect" may be a more appropriate effect determination for this historic property. We would appreciate clarification from your agency regarding this and if your agency agrees then we will proceed with consultation. If your agency disagrees with our "no adverse effect" finding, then you will need to resolve this disagreement in accordance with 36 CFR 800.5(c)(2)(i).

Based upon information provided to our office at this time, we concur with your agency's determination that the undertaking, as currently proposed:

- Will result in **no effect** to the Northern Pacific Railroad Historic District: Duluth Short Line Segment and St. Paul & Duluth Railroad/Northern Pacific "Skally Line" Railroad Corridor Historic District;
- Will result in **no adverse effect** to the Morgan Park Residential Historic District; and
- Will result in an **adverse effect** to both the Lake Superior and Mississippi Railroad Corridor Historic District: West Duluth Segment and Spirit Island.

Because your agency has made an "adverse effect" determination for the proposed undertaking and our office has, by this letter, provided concurrence with this determination, pursuant to 36 CFR 800.6, your agency now has a responsibility to notify the Advisory Council on Historic Preservation of this finding and invite their participation in the consultation. Also, in accordance with 36 CFR 800.6(a), following a determination of "adverse effect" the federal agency is directed to continue consultation with our office and other consulting parties to develop and evaluate alternatives or modifications to the undertaking in an effort to avoid, minimize or mitigate adverse effects to historic properties.

Your May 18th letter indicates that your agency will move directly into drafting an agreement document with provisions for mitigation of adverse effects. We do not recommend drafting an agreement document as a next step as we have found it more beneficial to follow an adverse effect determination with a consultation meeting in order to provide an opportunity for all parties to fully engage in a dialogue aimed at resolution of adverse effect through consideration of avoidance and minimization measures, as well as mitigation considerations. Therefore, we recommend that additional, in-person consultation be arranged prior to your agency drafting any agreement document. This consultation to resolve adverse effects is imperative due to the fact that the Fond du Lac Band has identified Spirit Lake as a historic property of religious and cultural significance and our office, along with your agency, both signatories to any future agreement, will need to gain a better understanding of the band's historic property identification efforts and concerns regarding the undertaking's effects on this historic property.

Also, the non-profit Lake Superior and Mississippi Railroad, the operators of an excursion line that runs on the historic railroad property adversely affected by the proposed undertaking, and the City of Duluth, as owner of the historic railroad line, are both consulting parties in this review. Although our office has had contact from these consulting parties at various times over the past several months, we have no understanding of your agency's consideration of each party's perspective regarding the "adverse effect" determination or ideas pertaining to resolution of the adverse effect.

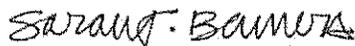
Consulting Party and Public Participation

As indicated above, please provide updated information regarding consulting parties who are currently participating in this review and your agency's efforts to identify other individuals or organizations as consulting parties at this time, if any, as we move into resolution of adverse effects.

As required under 36 CFR 800.6(a)(4), your agency has a responsibility to notify the public of this adverse effect determination, along with an appropriate level of historic property documentation, in order to provide an opportunity for members of the public to express their views in resolving adverse effects. Please provide our office with an update on your agency's efforts in this regard.

We look forward to continuing consultation with your agency and other consulting parties on this important project. Please feel free to contact me at (651) 201-3290 or sarah.beimers@state.mn.us if you have any questions regarding this comment letter.

Sincerely,



Sarah J. Beimers
Environmental Review Program Manager

cc via email:

Cutis Sedlacek, U.S. Army Corps of Engineers, Detroit District
Jim Filby Williams, City of Duluth
Lynne Harrington Hall, Lake Superior and Mississippi Railroad
Jill Hoppe, Tribal Historic Preservation Officer, Fond du Lac Band of Lake Superior Chippewa



Fond du Lac Band of Lake Superior Chippewa

TRIBAL HISTORIC PRESERVATION OFFICE

1720 Big Lake Road, Cloquet, MN 55720

Phone 218-878-7129 E-Mail jillhoppe@fdlrez.com

June 29, 2018

Mr. William Murray
Project Manager, Great Lakes National Program Office
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL. 60604-3590

RE: Spirit Lake Sediment Remediation Project, Saint Louis County, Minnesota – Comment Responses and Determination of Effect

Dear Mr. Murray,

Thank-you for continuing consultation on the Spirit Lake Sediment Remediation Project. We have reviewed the information received by our office on May 22, 2018 pursuant to the responsibilities given the Fond du Lac Tribal Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800. The information we reviewed included your letter dated May 22, 2018 – Comment Responses and Determination of Effect, along with Attachments A through C, and Table 1 (emailed 6/25/18).

Based upon our review of this information, we concur with your agency's determination of the "adverse effect" to Spirit Island, eligible for the National Register of Historic Places (NRHP), within the proposed project's Area of Potential Effect (APE). The proposed project will include the construction of two (2) confined disposal facilities (CDFs) near the shore of Spirit Lake. The proximity of the CDFs to the shoreline will cause a permanent negative visual impact from Spirit Island as well as all of Fond du Lac land holdings, less than ½ mile away, which is intrusive to the practices that help make Spirit Island significant.

As we have noted in our previous comments and correspondence, Fond du Lac has documented the significance and eligibility of Spirit Island, acquired by Fond du Lac in 2011, for inclusion in the National Register of Historic Places as a Traditional Cultural Property (TCP) under Criterion A (association with events that have made a significant contribution to broad patterns of history) at the state (regional) level.

Spirit Island was and still is today a place where traditional religious practitioners go for ceremonial purposes and the viewshed is vital to the setting and meaning of Spirit Island. As we have stated in previous correspondence, part of the significance of Spirit Island in the eyes of traditional users is related to its scenic qualities and extensive views of the natural landscape—the Spirit Island viewshed is

vital to religious practitioners and for contemplative purposes. The viewshed from Spirit Island is an important part of what makes Spirit Island significant and is as much a part of the experience as the natural setting and rich historic context.

As we have also communicated to EPA/GLNPO, the MPCA site team, and the State Historic Preservation Office during the course of the feasibility study and alternatives analysis, the cultural significance of Spirit Island and the adverse impacts of the selected remedial action go beyond simply visual or aesthetic effects. For example, in response to MPCA's request for potential tribal ARARs (Applicable or Relevant and Appropriate Requirements) or TBCs (To Be Considered) before the selection of a remedy at the site, we submitted the following:

In our initial discussions with the MPCA and EPA site teams, we have shared the historical significance of Spirit Island as the "sixth stopping place" as told in the Ojibwe migration story, and the place where the Ojibwe first encountered the prophesied 'food that grows on the water', or manoomin (wild rice). What has not been as explicitly communicated is the more sensitive spiritual or religious significance of this place to historic and current spiritual healers and practitioners, including the Midewiwin or "Grand Medicine Society". Midewiwin represents a religious tradition that incorporates ancient teachings into a more modern context, but because of the need to protect the rites, rituals and ceremonies that honor this ancient wisdom and sacred teachings, it is not appropriate to share more specific information about how current tribal religious practices occur at Spirit Island. **It is important, however, to understand that the core tenets of this tradition include healing and the restoration of balance.** European contact and American settlement displaced the indigenous Ojibwe culture, in turn eroding and destabilizing the social and psychological well-being that flow from traditional cultural practices. **Restoring cultural traditions, and by extension harmony with the natural world (well-being, balance, interdependence, and right relations) entails prayer and ceremony in a place that is not physically or perceptually despoiled.**

In addition to clarifying the historic and cultural significance of Spirit Island, and the statutory basis for tribal consultation in this action, it is important to clearly articulate the importance of water to the Ojibwe people. **Nibi (water) is the lifeblood of Mother Earth, coursing through streams and rivers like blood through vessels; for earth to be strong and healthy, capable of sustaining life for generations to come, it must be kept clean. Nibi is sacred and it is our responsibility to keep it pure;** it is our source of life and the lives of all plants and animals that share the earth.¹

Additionally, in previous consultation with EPA/GLNPO, the Band clearly articulated our position that the presence of this mass of contamination in the waters of Spirit Lake and the St. Louis River is an abomination. To be specific, it is the permanent encapsulation of contaminated sediments on the man-made delta within Spirit Lake, from the Band's perspective, that represents a continuing desecration of our sacred waters. We were appreciative of the agencies' consideration of a remedial alternative that removed that substantial mass of contaminants from the water, allowing it to heal and for balance to be restored. We believed that alternative would have the least impact to the integrity of Spirit Island, and would least diminish tribal members' experiences engaging in traditional practices. But we were truly

¹ Fond du Lac response to MPCA request for information on ARARs/TBCs for the US Steel Site, June 18, 2015 (emphasis added)

disheartened by the subsequent selection of a remedial alternative that weighted other parties' concerns as more compelling. It is only through continued consultation that we can collectively identify specific and appropriate mitigation for the adverse effects of the chosen remedy.

We have previously stated that for culturally significant sacred historic properties such as Spirit Island, the best mitigation lies in designing projects to avoid adverse effects. If adverse effects to Spirit Island cannot be avoided, it will be necessary to explore ways to mitigate adverse effects. A key aspect of Section 106 consultation is the requirement that stakeholders affected by agency decisions should be included in the agency decision making process.

We look forward to continued Section 106 consultation to discuss a Memorandum of Agreement (MOA), and to identify appropriate mitigation for the adverse effects the proposed project will have to Spirit Island and tribal cultural practices now and for future generations.

Sincerely,

Jill Hoppe

Jill Hoppe, Tribal Historic Preservation Officer
Fond du Lac Band of Lake Superior Chippewa



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

20 February 2019

MEMORANDUM

TO: Sarah Beimers, Environmental Review Program Manager, Minnesota State Historic Preservation Office

FROM: William Murray, U.S. Environmental Protection Agency

SUBJECT: Analysis of Design Impacts to the Lake Superior and Mississippi Railroad from the Spirit Lake Sediment Remediation Project

The purpose of this memorandum is to provide Minnesota SHPO with a review of the design approach for the areas of the Lake Superior and Mississippi Railroad (LSMRR) that will be directly impacted by the Spirit Lake sediment remediation project. A six-mile segment of the LSMRR falls within the project boundary. Following evaluation, this segment was determined to be eligible for listing on the National Register of Historic Places as a railroad corridor historic district.

Specifically, this memorandum will:

- 1) Provide a description of the current railroad structure at each impact area and the design approach at that area;
- 2) Define the components of the structure at each impact area that contribute to the overall historic district (character defining components);
- 3) Summarize the existing and proposed replacement materials at each impact area, and how the proposed new materials are compatible with the character of the historic district; and
- 4) Summarize the project design approach to avoid or minimize adverse effects to the LSMRR.

The evaluation presented in this memorandum is intended to support the finding that the new crossing structures proposed have been designed in accordance with the Secretary of the Interior's Standards for Rehabilitation, standards 9 and 10, which state:

Standard No. 9- *New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*

Standard No. 10- *New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

Section 1 of this memorandum presents the description of each adverse effect and the design approach at the location. Section 2 describes how the design approach at each location meets the requirements set forth by the standards listed above.



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1. Railroad Adverse Effects

The LSMRR is a historic railroad owned by the City of Duluth that is eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, Section 106. The intent of the project design is to minimize adverse effects to the LSMRR and provide for site restoration to address adverse effects where possible. For the remedy to be successful and achieve the USEPA's remedial action objectives, some impact to the railroad is unavoidable. Remedial actions performed as part of the project will include sediment/soil removal, sediment/soil capping, construction of 3 confined disposal facilities (CDF), and monitored and enhanced natural recovery (Figure 1).

Remedial activities will intersect the railroad at nine locations within the project footprint. Construction will produce both temporary and permanent adverse effects; it is estimated that there will be approximately 355 feet of railroad temporarily impacted and 185 feet of railroad permanently impacted. These locations and a photo of the structure at each is shown in Figures 2 and 3. A description of the design approach and existing and proposed structure components for each of the adverse effects is presented below.

Area 1

Area 1 is at the northernmost point of the project footprint (Figure 2). The impact at this location will be temporary; this area of the railroad segment will be temporarily closed during remedy construction.

Existing rail components: Open rail line.

Design approach: Installation of standard chain link fence across the track. No components of the track or ties will be impacted.

Area 2

Area 2 is located north of Unnamed Creek (Figure 2). The impact at this location will be temporary; a truck crossing will be built to allow for movement of materials dredged from the estuary to the CDFs.

Existing rail components: Open rail line.

Design approach: A 20-foot truck crossing is planned north of Unnamed Creek during construction to transport dredged material from one side of the railroad tracks to the other without damaging the existing tracks. The crossing will be designed to 20 feet to allow for the possibility of two-way vehicle traffic. The track will be left in-place and construction will involve an at-grade crossing structure over the track. Geotextile fabric will be placed on top of the existing track to provide separation and prevent material and overspill from the crossing contaminating the original track bed. Timber planking/mats will be placed over the geotextile fabric, between and outside of the rails, to spread the loads from trucks and other construction equipment and raise the surface of the crossing above the rail. Finally, grading will be completed on both sides of the rail tracks to minimize jostling of material crossing the tracks. Restoration will include removing the geotextile and timber planking/mats, and mats and replacing the ballast with similar material as needed. A construction monitoring and post-construction monitoring survey will include rail and ties to confirm no changes during construction, a post-construction to confirm no changes will also be completed. The crossing location is shown in Attachment A, Drawing CA-101.



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Area 3

Area 3 is located at a section of rail line at the rail curve in Unnamed Creek (Figure 2). Both a temporary and a permanent impact will occur at this location. A temporary diversion of water is under consideration in Unnamed Creek. A permanent new bridge will be constructed to allow for stream flow from Unnamed Creek to be rerouted to pass below the railroad. The area where the current bridge is located has been damaged by flooding as recently as 2012.

Existing rail components: Open rail line.

Design approach: The temporary diversion of water (if necessary) will involve excavation through the railroad embankment to allow Unnamed Creek to divert and discharge to Spirit Lake. If required, this excavation will be similar to temporary crossing impacts regarding removal of railroad rails, ties, and ballast, reconstruction of embankment following temporary diversion activities during remediation, and reuse of existing components to extent practical. The bridge design is shown in Attachment A, Drawing CU-102 and CU-302.

The newly constructed permanent bridge will impact 90 total feet of railroad; the bridge will span 50 feet and require 40 feet of total excavation to construct the bridge foundations. The bridge will be composed of precast concrete and prestressed, with a 3-span concrete ballast deck bridge. A trapezoidal opening for hydraulic capacity will be installed and bridge component elevations will transition to existing rail and tie elevation, with only minor adjustments. The top of bridge elevation will be 606.3 feet and the bridge deck will be 2.5 ft thick with a bottom of bridge elevation of 603.8 ft. The channel dimensions under the bridge include a top channel width of 40 ft, a bottom channel width of 26.2 ft, and side slopes at a 3:1 grade. The bridge design will reduce flooding impact to the railroad since the channel under the bridge will be able to convey the 100-year storm event without overtopping the railroad, though this flow will submerge the bottom of the bridge deck. Since the bridge has been designed to convey all upstream flow from Unnamed Creek, existing culverts under the railroad at the original crossing will be abandoned and filled with flowable fill (as described for Area 5, below). A construction monitoring survey will include evaluation of the rail and ties to confirm no changes are occurring during construction of the track; a post-construction survey to confirm no changes have occurred once will also be performed.

Area 4

Area 4 is located on both the north and south sides of the newly constructed bridge in Unnamed Creek (Figure 2). The impact at this location will be temporary; the rail line on either side of the new bridge will be adjusted to meet the bridge elevation. A detailed photograph showing the existing rail line at the location of Area 4 was not available; however, based upon visual observations from site reconnaissance performed in 2016, the condition and components of the track in Area 4 is comparable to that of the track shown in the photograph for Area 3.

Existing rail components: open rail line.

Design approach: The rail on the north and south sides of the new bridge at Unnamed Creek will be tapered to meet the new bridge elevation; approximately 260 feet of rail will be impacted. The rail steel alignment may be adjusted to meet design standards for maintaining curvature, grades, and related tolerances for rail steel to connect to new rail segments for bridges. Adjustments on the order of tenths of inches are expected and in general this is not considered an impact to the railroad historical integrity, as rail is reused, and only slight adjustments will be made.



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Area 5

Area 5 is in Unnamed Creek near the boundary of the estuary confined disposal facility (CDF) (Figure 2). The impact at this location will be temporary; five culverts that were originally installed to replace a 2-span timber bridge that was damaged by flooding in 2012 are in poor condition will be abandoned.

Existing rail components: Five 42 to 48-inch corrugated metal pipes.

Design approach: The Unnamed Creek channel alignment will be moved as part of the design and several storm water culverts under the railroad will be abandoned with flowable fill as the channel alignment shifts north. A construction monitoring and post-construction monitoring survey will include a survey of the rail and ties to confirm that no changes are expected to occur/occurred during construction. Work to abandon the culverts will not remove the existing rail embankment and/or tracks. The location of the culvert abandonment is show in Attachment A, Drawing CA-102.

Area 6

Area 6 is located near the access to the spit of land in Unnamed Creek (Figure 2). Both a temporary and a permanent impact will occur at this location. A temporary truck crossing will be built to allow for movement of materials dredged from the estuary to the CDFs and the rest of the site. Once the remedy is complete, the temporary road will be converted into a permanent maintenance road to access the Delta CDF.

Existing rail components: open rail line.

Design approach: A 20-foot truck crossing is planned at the spit of land in Unnamed Creek during construction to transport soil and equipment between the Shallow Sheltered Bay, the Delta CDF, and rest of the site. The crossing will be designed to 20 feet to allow for the possibility of two-way vehicle traffic and will allow the transport of material without damaging the existing track. The track will be left in-place and construction will involve an at-grade crossing structure over the track. Once the remedy is complete, the at-grade crossing will be left in place to become a permanent maintenance road for access to the Delta CDF. Concrete pads will be placed between the tracks to protect the rail line from repeated crossing by a standard utility truck that would access the Delta CDF to perform routine long-term monitoring and maintenance activities. The crossing location is show in Attachment A, Drawing CA-101.

Area 7

Area 7 is located just north of the current opening to Wire Mill Pond (Figure 3). The impact at this location is temporary; a truck crossing will be built to allow for movement of materials dredged from the estuary to the CDFs and the rest of the site.

Existing rail components: open rail line.

Design approach: A 20-foot truck crossing is planned at Wire Mill Pond to allow dredged material to be transport to the CDFs. The crossing will be designed to 20 feet to allow for the possibility of two-way vehicle traffic and will allow the transport of material without damaging the existing track. The track will be left in-place and construction will involve an at-grade crossing structure over the track. The crossing materials, construction process, and restoration of the rail post construction will be as described for the temporary truck crossings in Areas 2 and 6. The crossing location is show in Attachment A, Drawing CA-101.



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Area 8

Area 8 is at the entrance to Wire Mill Pond (Figure 3). The impact at this location is permanent; a new bridge will be installed to improve connectivity between Wire Mill Pond and the estuary.

Existing rail components: The Wire Mill Pond outlet structure with retaining wall abutments; the bridge was rebuilt in 1945, with modifications in the late 1990's.

Design approach: The existing timber bridge and culvert will be removed, and the channel will be widened to allow greater circulation of water in and out of Wire Mill Pond. The new precast concrete, prestressed, 3-span concrete ballast deck bridge will have a total length of approximately 55 ft and will be installed to allow the train to cross the new, wider channel. The new bridge will require 40 feet of total excavation to construct the foundations. Bridge component elevations will transition to existing rail and tie elevation, with only minor adjustments. The new railroad bridge will have a top of rail ties elevation of 606.7 ft and a thickness of 2.5 feet. The bottom of the bridge will be at an elevation of 604.2 ft. The channel below the bridge will have a top width of 46 ft, a bottom width of 26.8 ft, an invert elevation of 599.5 ft, and side slopes at a 3:1 grade. A construction monitoring survey will include evaluation of the rail and ties to confirm no changes are occurring during construction of the track; a post-construction survey to confirm no changes have occurred once will also be performed. The bridge design is shown in Attachment A, Drawing CA-102 and CR-105.

Area 9

Area 9 is located at the southernmost extent of the project boundary (Figure 3). The impact at this location will be temporary; this area of the railroad segment will be temporarily closed during remedy construction.

Existing rail components: Open rail line.

Design approach: Installation of standard chain link fence across the track. No components of the track or ties will be impacted.

2. Consideration of the Secretary of the Interior's Standards for Rehabilitation

The Secretary of Interior's standards defines the act of rehabilitation as the process by which a compatible use for a historic property is made possible through repair, alterations, and additions while preserving those portions of features which convey its historical, cultural or architectural values. Of the ten Standards for Rehabilitation, standards 9 and 10 are most applicable to the project adverse effects on the LSMRR, as they pertain to new additions, alterations and construction being compatible with and differentiated from historic materials, and new components being added in such a way that the integrity of the historic property is unimpaired.

Each of the permanent adverse effects to the LSMRR from the project have been evaluated for adherence to these standards. The temporary adverse effects described above were not evaluated, as these will only occur during the construction period; once construction is complete, any new elements added to or near the track will be removed and the area restored to original condition, with no permanent landscape changes and no impact to the historical integrity of the railroad.

The discussion below (and summary in Table 1) presents the elements of permanent impact to the LSMRR that contribute to historic character, the elements that do not contribute to historic character, and



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REGION 5
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how the design at each location meets the following guidelines for rehabilitation set forth in the Secretary's recommendations which are applicable to this project:

- *Identify, retain, and preserve historic materials and features-* Identification of the features and materials that are important in defining the property's historic character and which must be retained to preserve that character.
- *Protect and maintain historic materials and features-* Protection of the features involves the least degree of intervention possible and includes maintenance of the materials and ensuring property is protected during work.
- *Repair historic materials and features-* Repairing includes the limited replacement of in kind or with a compatible suitable material of deteriorating or missing components.
- *Replace deteriorated historic materials and features-* Replacement of an entire character-defining feature with new material; feature should be replaced to match the historic feature based on physical documentation of its form and detailing.

The following guidance provided in the rehabilitation standards is not discussed for the adverse effects to the LSMRR, as these items are not applicable to the project:

- *Design for the replacement of missing historic features-* Replacement of a missing feature (when information about the feature is inadequate to permit reconstruction) by designing a new feature that is compatible with the overall historic character of the property.
 - It is anticipated that adequate information on contributing components of the LSMRR is available such that reconstruction of features with in kind material would be possible.
- *Alterations-* Includes changes to the feature site or setting, such as removal of portions of the property that are intrusive, to ensure its continued use.
 - It is not anticipated that any areas of the property will be removed entirely without any repair or replacement of contributing historical features.
- *Accessibility and Life Safety-* Rehabilitation work that involves accessibility or life safety requirements must be assessed for impact on the historic property.
 - The project does not involve work specific to rehabilitation of accessibility or life safety features on the property.
- *Resilience to Natural Hazards-* If the historic property has existing characteristics that help to address or minimize adverse effects from natural hazards, these must be considered during rehabilitation work such that there is minimal effect on the historic character of the property.
 - The LSMRR does not currently have existing characteristics that specifically address or minimize adverse effects from natural hazards; therefore, impacts to the LSMRR as defined in this memorandum will not negatively affect the railroad resilience.
- *Sustainability-* The historic property's existing energy efficient features should be retained and/or repaired during the rehabilitation work.
 - The LSMRR does not contain any energy efficient features.
- *New Exterior Additions and Related New Construction-* Applicable if the historic property is being expanded by an attached exterior addition.
 - The project will not involve any additions to the LSMRR.

New Bridges at Unnamed Creek and at Wire Mill Pond Outlet

Existing rail components where the new bridge is to be constructed at Unnamed Creek (Figure 2, Area 3) that contribute to historical character and integrity include 90 total feet of railroad segment, and associated rails, ties, ballast, and embankment materials. Components that do not contribute to historical



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REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

integrity include all embankment materials below ballast; these materials are considered replaceable with general fill or other geotechnically suitable material.

Existing rail components where the bridge is to be constructed at Wire Mill Pond Outlet (Figure 3, Area 8) that contribute to historical character and integrity include 95 feet of railroad segment and wooden bridge structure, and associated rails and ties. Components that do not contribute to historical integrity include the retaining wall abutments.

The design of these bridges will meet the guidelines for rehabilitation (Table 1):

- *Identify, retain, and preserve historic materials and features-* The project team has identified which components of the rail at these locations are contributing and non-contributing (Table 1).
- *Protect and maintain historic materials and features-* Existing historic materials at these locations will be reused to the maximum extent practicable while still achieving the goals of the overall project design, and to the extent the materials are structurally sufficient. All best management practices to maintain the structural sufficiency of existing materials during removal, handling and reconstruction will be implemented. To be reused, the existing materials must achieve design standards and design criteria involving maintenance and longevity considerations for new railroad materials.
- *Repair historic materials and features/ Replace deteriorated historic materials and features -* Work may include repair or limited replacement of contributing components with in kind or with a compatible suitable material. Both bridges will be designed with colorized concrete for bents, abutments and spans and other features to match the look of timber for historical aesthetics.

At-grade Crossing for Permanent Road in Unnamed Creek

Existing rail components where the permanent maintenance road will be constructed near the spit of land in Unnamed Creek (Figure 2, Area 6) that contribute to historical character and integrity include open rail line and associated ties and ballast. Components that do not contribute to historical integrity will include concrete or equivalent material to support vehicle loading (feature added during construction).

The design of the permanent maintenance road will meet the guidelines for rehabilitation (Table 1):

- *Identify, retain, and preserve historic materials and features-* The project team has identified which components of the rail at this location are contributing and non-contributing (Table 1).
- *Protect and maintain historic materials and features-* Only minor changes to historic features involving replacement of ballast with concrete slightly higher in elevation to protect rails are anticipated. All best management practices to maintain the structural sufficiency of existing materials during removal, handling and reconstruction will be implemented.
- *Repair historic materials and features/ Replace deteriorated historic materials and features -* Existing historically significant materials removed for construction of the crossing (rail, ties, ballast) will be reused to extent practical as described above for bridge construction. The added concrete or equivalent material to support vehicle loading is not contributing to historical integrity, but as a new component will be designed to have some visual appeal to subdue the change, such as colorized concrete to match the timber aesthetic of the remaining historic contributing rail ties. Over time, many rail ties have been replaced with modern appearing ties throughout the property.

Culvert Abandonment

There are no existing rail components that will be impacted at this location in Unnamed Creek (Figure 1, Area 3). Components that do not contribute to historical character and integrity include five 42 to 48-inch



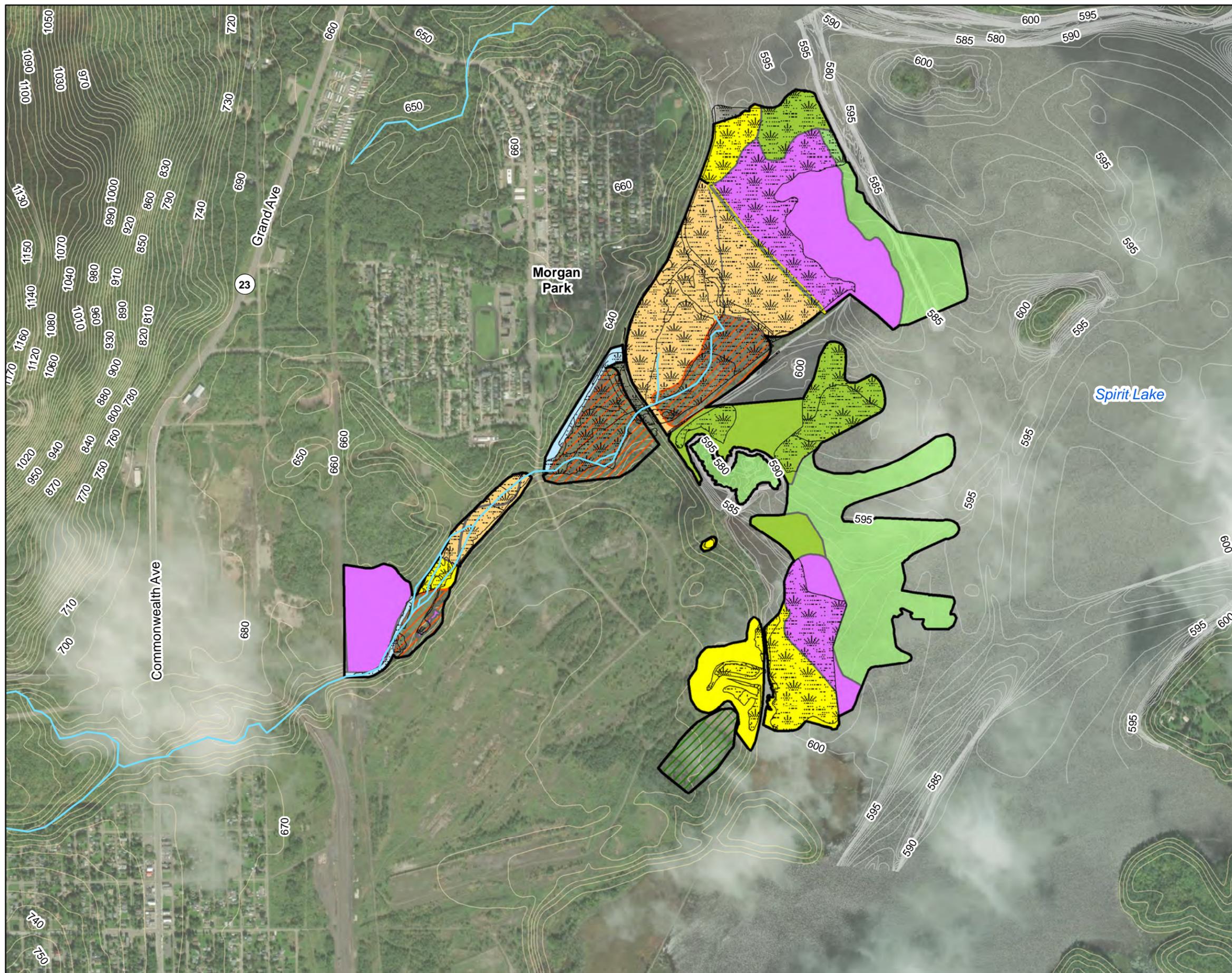
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corrugated metal pipes. Although culvert abandonment is a permanent impact along the LSMRR, the work to abandon these culverts and fill with flowable material will not remove or negatively impact existing rail embankment or tracks (Table 1).

Avoidance and Minimization Efforts in All Impact Areas

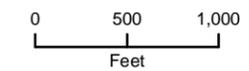
Throughout the design construction, all practicable efforts to avoid or minimize adverse effects to historical features of the LSMRR will be implemented. Where permanent adverse effects are likely to occur, the following measures will be taken, as practicable:

- Avoidance in the design: where possible, adverse effects to the historical features of the LSMRR will be avoided. Note that to achieve project goals, impacts may not be avoidable, but all efforts will be taken to minimize the severity of the impact.
- Recordation consistent with documenting resources prior to adverse effect will be performed: this will enable minimization of impacts as well as support the best repair/replacement efforts, if necessary.
- Material reuse: original historical components will be reused to the maximum extent possible and new bridge components will be constructed to be compatible with the historical integrity of the property.
- Compatible new materials: for the bridge at Unnamed Creek and at Wire Mill Pond, all efforts will be made to construct the piling configuration such that it is slightly recessed, an select pilings of an appropriate type and size to give the impression of timber piles that are compatible with the historical character.
- Inclusion of signage: at some adverse effect locations (in coordination with City of Duluth planned public trail), signage may be displayed to present historical information about the LSMRR.
- Monitoring and surveys: construction surveys will be performed that document the pre-construction condition and post-construction condition of all impacted areas.



- Legend**
- Elevation Contours (10 ft)
 - Bathymetry Contours (1 ft)
 - Shoal Feature
 - Project Boundary
 - Borrow
 - CDF
 - Drainage Feature
 - Remove
 - Remove to Set Elevation and Remedial Cap
 - ENR Thin Cover
 - Remedial Cap
 - Monitored Natural Recovery (MNR) Area

- Hydrology**
- Creek
 - Wetland



Map Date: 7/13/2018
 Base Map: ESRI 2011
 Rivers: USGS NHD 2013
 Wetlands: Barr 2014, U.S. Steel 2014
 Topography: USGS 2014
 Bathymetry: Barr 2014



Figure 1
 Spirit Lake Design Summary
 Spirit Lake
 Duluth, Minnesota

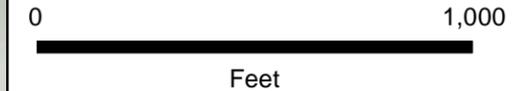


Legend

- Railroad
- Project Boundary
- Permanent and Temporary Impacts

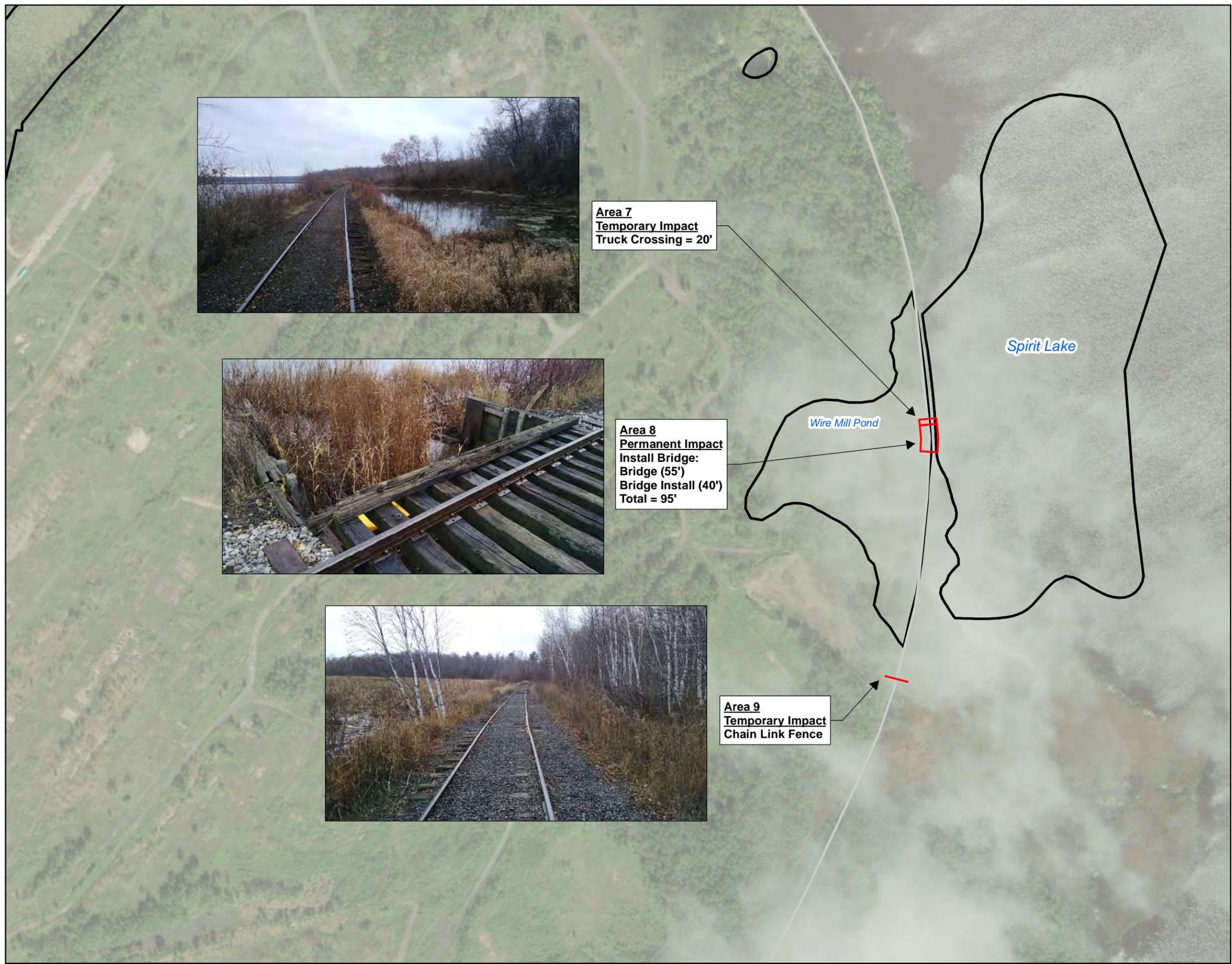
Note:
Any impacted railroad will be restored to previous condition. The railroad ties and rail steel will be reused whenever possible.

For impact Area 3, no photo showing the railroad in the exact location was available. Photo presented shows the track just north of the impact area. The railroad at the impact area is in similar condition to the track shown in the photo.



Map Date: 2/7/2019
Base Map: ESRI 2016

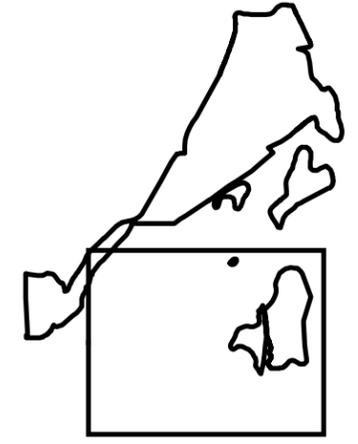
Figure 2
Permanent and Temporary
Railroad Impacts- North
Spirit Lake
Duluth, Minnesota



Area 7
Temporary Impact
 Truck Crossing = 20'

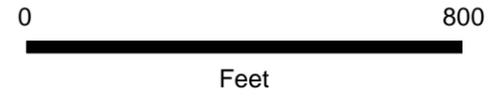
Area 8
Permanent Impact
 Install Bridge:
 Bridge (55')
 Bridge Install (40')
 Total = 95'

Area 9
Temporary Impact
 Chain Link Fence



- Legend**
- Railroad
 - ▭ Project Boundary
 - ▭ Permanent and Temporary Impacts

Note:
 Any impacted railroad will be restored to previous condition. The railroad ties and rail steel will be reused whenever possible.



Map Date: 2/7/2019
 Base Map: ESRI 2016

Figure 3
 Permanent and Temporary
 Railroad Impacts- **South**
 Spirit Lake
 Duluth, Minnesota

April 3, 2019

William Murray
United States Environmental Protection Agency, Region 5
Great Lakes National Program Office
77 West Jackson Blvd.
Chicago, IL 60604-3590

RE: Spirit Lake Sediment Remediation Project
Duluth, Saint Louis County
SHPO Number: 2015-2457

Dear Mr. Murray,

Thank you for continuing consultation on the above project. Information received in our office on February 26, 2019 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 as amended (NHPA) and implementing federal regulations at 36 CFR Part 800.

We have completed our review of your letter dated February 22, 2019, a submittal which included the memorandum report entitled "Analysis of Design Impacts to the Lake Superior and Mississippi Railroad from the Spirit Lake Sediment Remediation Project."

We last wrote to your agency on July 2, 2018 at which time we provided concurrence with your agency's determination that the proposed undertaking will result in adverse effects to the **Lake Superior and Mississippi Railroad Corridor Historic District: West Duluth Segment** (LSMRR Historic District) and **Spirit Island**, both of which are historic properties determined to be eligible for listing in the National Register of Historic Places (NRHP). Following a recommendation made by our office in the July 2nd correspondence, your agency organized and hosted Section 106 consultation meetings in Duluth which were held on September 19 and November 13-14, 2018. The focus of the November 14th meeting was for your agency to consult further with our office and consulting parties, including the City of Duluth and the Lake Superior and Mississippi Railroad, regarding resolution of the adverse effect to the LSMRR Historic District specifically. We found these consultation meetings to be extremely beneficial and look forward to reviewing a draft Memorandum of Agreement (MOA) when it becomes available.

As indicated in your February 22nd letter, one of the topics of discussion at the November 14th meeting had to do with efforts your agency will make to minimize the adverse effect to the LSMRR Historic District through appropriate design of replacement bridges and other physical impacts, both temporary and permanent, caused by the undertaking. As defined during the November 14th consultation meeting, we define appropriate design to minimize adverse effects as that which conforms to the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (Standards), specifically the *Rehabilitation* treatment Standards No. 9 and No. 10.

We find that the analysis and documentation presented in the memorandum report extremely well organized, well documented, and thorough. At this stage in design development, which appears to not be at the stage of presenting elevation drawings of proposed replacement bridge structures specifically, we agree that the

proposed narrative and drawings support your agency's finding that this work has generally been designed in accordance with the Standards and adverse effects will be minimized through appropriate design. We provide the following comments and recommendations specific to the February 22nd submittal:

- Under the section of the memorandum report entitled "Railroad Adverse Effects":
 - Area 1 – This section indicates that a standard chain link fence will be installed during the remedy construction. We assume that this will be removed once the construction is complete. Please state this clearly.
 - Area 2 – We agree that the approach described in the document is in conformance with the Standards.
 - Area 3 – The narrative description and plan drawings present an appropriate resolution to minimize the adverse effect. In order to fully evaluate conformance with the Standards, we request the opportunity to review elevation and drawings of the proposed new 3-span concrete ballast deck bridge including railings, abutments, and retaining/wing walls, if any.
 - Area 4 – The proposed adjustment to the rail line's elevation at the north and south ends of the Area 3/bridge replacement in order to meet the elevation of the new bridge crossing are described as *temporary* impacts in the report. It is our opinion that these are *permanent* impacts to the historic property, but the narrative description indicates that they will be treated appropriately per the Standards.
 - Area 5 – The proposed removal of five (5) pipe culverts at this location is described as a *temporary* impact in the report. It is our opinion that this work is a *permanent* impact, but the narrative description and project plans indicate that the remedy treatment will result in conformance with the Standards.
 - Area 6 – The report describes both the temporary truck crossing during remedy construction and how this crossing will be converted to a permanent access road for post-construction monitoring. We agree that the narrative description and project plans indicate the design of the work is in conformance with the Standards.
 - Area 7 - The report describes the temporary truck crossing installed during remedy construction. We agree that the narrative description and the project plans indicate the design of the work is in conformance with the Standards.
 - Area 8 – The report describes the proposed construction of a new bridge crossing at Wire Mill Pond. While we agree that the narrative description and project plan views indicate the design is appropriate, as with Area 3 (above), in order to fully evaluate conformance with the Standards, we request the opportunity to review elevation drawings of the proposed new 3-span concrete ballast deck bridge including railings, abutments, and retaining/wing walls, if any.
 - Area 9 – As with Area 1 (above) we understand that the impact will be a temporary closure of part of the rail line during construction. Please clarify that the standard chain link fence will be removed following remedy construction.
- Under "Avoidance and Minimization Efforts in All Impact Areas";
 - Edit the first bullet point sentence to read: "Avoidance in the design: where possible *additional* adverse effects to the historical features of the LSMRR will be avoided."
 - Under the second bullet point, it is suggested that the historic property will be recorded "consistent with documenting resources prior to adverse effects." Does this suggest that the LSMRR Historic District will be subject to archival documentation standards consistent with the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), or our equivalent state documentation policy the Minnesota Historic Property Record (MHPR)? If so,

- then we agree with the provision but this will need to be further discussed as part of the consultation process for the MOA.
- Other provisions listed in this section - including suggestions for interpretive signage, construction monitoring, and pre-construction surveys – will also likely be included as terms of the MOA.

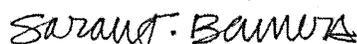
We request that your agency consider the above comments as consultation to resolve adverse effects through development and implementation of an MOA moves forward as aspects of this minimization effort will likely be addressed as a stipulation in that document.

Consulting Party Participation

Since both the City of Duluth, owner of the LSMRR Historic District rail line, and the Lake Superior & Mississippi Railroad, operator of the historic excursion passenger railroad on this line, are both participating in consultation to resolve adverse effects to the historic property and have a vested interest in the continued preservation and usability of this rail corridor both during and following remedy construction, if your agency has not done so concurrent with our review, we highly recommend that you provide these parties with the opportunity to review and comment on the analysis of design impacts memorandum report. Along with your agency's effort to minimize adverse effects to the physical line through appropriate compatible new construction/alterations, how these design iterations may or may not affect the continued use and viability as a preserved, operating historic rail line, something that our office may not be fully aware of, must also be considered in terms of minimizing adverse effects.

We look forward to continuing consultation with your agency and other consulting parties regarding the proposed undertaking. Please feel free to contact me at (651) 201-3290 or sarah.beimers@state.mn.us if you have any questions regarding this comment letter.

Sincerely,



Sarah J. Beimers
Environmental Review Program Manager

cc via email:

Cutis Sedlacek, U.S. Army Corps of Engineers, Detroit District
Jim Filby Williams, City of Duluth
Lynne Harrington Hall, Lake Superior and Mississippi Railroad
Jill Hoppe, Tribal Historic Preservation Officer, Fond du Lac Band of Lake Superior Chippewa