CITY OF DULUTH, MINNESOTA

FINDINGS OF FACT AND RECORD OF DECISION

Date: Tuesday, November 10, 2026

RE: Determination on the Need for an Environmental Impact Statement

Project: Tallas Bay Mitigation Project

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1 Introduction

The United States Environmental Protection Agency (EPA) has proposed the Tallas Bay Mitigation Project (project) within Tallas Bay, a shallow bay and wetland complex located along the St. Louis River estuary in the City of Duluth, St. Louis County, Minnesota. The purpose of the project is to compensate for habitat eliminated by other nearby EPA work through the restoration and enhancement of fish habitat, wetland function, habitat connectivity, and recreational and aesthetic resources within Tallas Bay. The United States Army Corps of Engineers (USACE) prepared the design. The Minnesota Department of Natural Resources (DNR) participated as a resource agency, advising on habitat objectives and desired restoration outcomes that informed the dredging design prepared by USACE.

Preparation of an Environmental Assessment Worksheet (EAW) was required pursuant to Minnesota Rules, part 4410.4300, subpart 27(A), Wetlands and Public Waters.

The EAW was published on September 22, 2026, and made available electronically and in person. The EAW was published on the City of Duluth's website at: https://duluthmn.gov/media/bnrpmgry/environmental-assessment-worksheet-tallas-bay-mitigation-project_signed.pdf and emailed to agencies on the Environmental Quality Board (EQB) distribution list. A printed copy of the document was available for viewing at Duluth City Hall. Notice of availability was distributed via the EQB Monitor and the Duluth News Tribune newspaper.

Comments were accepted through October 22, 2026. The City of Duluth allowed for in-person public comments regarding the EAW at its October 15, 2026, Planning Commission meeting. No comments were made during the meeting.

2 Documents Reviewed, Comments Received, and Responses to Comments

The City of Duluth reviewed the following documents:

1. Tallas Bay Mitigation Project EAW, including:
    a. Tallas Bay Mitigation Project EAW, August 2026
    b. Revised Tallas Bay Mitigation Project EAW, October 2026 (Attachment 1)
2. Technical appendices to the EAW, including:

   a. Appendix A – 95% Design

   b. Appendix B – 65% Design Documentation Report

   c. Appendix C – Protected Species Documentation

   d. Appendix D – Greenhouse Gas Calculations

3. Public comments received during the comment period

4. Responses to public comments

Two written comments were received during the 30-day comment period Attachment 2). One comment was from the public, received from David Schimpf on September 25, 2026. Dr. Schimpf's comments were regarding EAW completeness, the offloading and dewatering site, invasive species, habitat restoration scope, the pipeline corridor, recreation, and geology. The second comment was received from an agency, the Minnesota State Historic Preservation Office (SHPO), on September 29, 2026. SHPO's comment was regarding Section 106 consultation status.

Table 1 provides EAW comments and responses to each. Several comments resulted in revisions or clarifications in the Revised EAW (Attachment 1). The City of Duluth incorporates the comment-response table into these findings by reference.

Table 1 Response to Comments

Comment Number	Commenter	EAW Section(s)	Comment	Response
1.A	Dr. Schimpf	All	The EAW for this proposed project should be considered incomplete because the on-land site at which dredged material would be offloaded and dewatered is not designated. Although it is stated that this would be an approved site, which one gets used may affect some of the precautions to be taken. Therefore, I think that the on-land location should be considered part of the project site. If the on-land location were directly onshore from the dredging site, I expect that it would be included as part of the project site.	The EAW and supporting documentation contain sufficient information to evaluate the potential environmental effects of the proposed project and determine whether the project has the potential for significant environmental effects. Although a final contractor-selected offloading and dewatering site had not been identified at the time of EAW preparation, the EAW evaluated the anticipated dredged material handling process and established reasonable assumptions regarding the characteristics of any selected offloading and dewatering site. Specifically, the EAW assumed that the offloading and dewatering site would be located adjacent to the shoreline, would not contain wetlands, would likely consist of previously disturbed or impervious surfaces, and would not require grading or subsurface disturbance. The EAW evaluated the reasonably foreseeable environmental effects associated with offloading, dewatering, transportation, staging, placement, and disposal activities based on those assumptions and identified applicable permits, environmental protections, and mitigation measures that would apply to the final contractor-selected location. The administrative record reflects that the contractor may ultimately select an alternative approved location subject to applicable permits, approvals, and property agreements. Accordingly, the City of Duluth does not rely upon any specific property in making this determination. Rather, the City of Duluth finds that the EAW adequately evaluated the environmental effects associated with the offloading and dewatering process based on the operational requirements, site-selection constraints, environmental assumptions, and regulatory controls described in the EAW and project specifications. Because the reasonably anticipated environmental effects of these activities can be identified, analyzed, and controlled through the permitting and approval processes described in the EAW, the City of Duluth finds that the absence of a final contractor-selected offloading and dewatering site does not prevent meaningful evaluation of environmental effects and does not render the EAW incomplete or inadequate for purposes of making an EIS Need Decision.

Comment Number	Commenter	EAW Section(s)	Comment	Response
1.B	Dr. Schimpf	6, 9, and 14	Hallett Dock is cited on EAW print page 5 as one possible location for these steps in the process. There are multiple locations known as Hallett Dock.	The reference to Hallett Dock on page 5 was included as a conceptual offloading and dewatering site to serve as an example of the type of facility that would meet the assumptions evaluated in the EAW. The engineering documents attached to the EAW as Appendix B include a conceptual offloading and dewatering site identified as Hallett Dock 7, located at approximately 46.7206444, -92.1609222, and depict a conceptual workspace area at that facility. The location was provided in the 95 percent design and 65 percent design documents as a representative offloading and dewatering site location because it has been used for similar dredging projects and provided an example of the type of facility that could be used for offloading and dewatering operations. The reference to Hallett Dock in the EAW should therefore be understood as referring to the conceptual site illustrated in Appendix A and Appendix B at Hallett Dock 7.
1.C	Dr. Schimpf	14	The invasive plant species diffuse knapweed, *Centaurea diffusa*, has been documented at the Hallett Dock that is shown in EAW Appendix A sheet RR102, and probably nowhere else in Minnesota or western Wisconsin. This species is designated Prohibited - Eradicate, the most restrictive status, by the State of Minnesota. Trucks hauling dewatered sediments from Hallett Dock to U. S. Steel or Vonco could inadvertently move seeds of diffuse knapweed to the placement or disposal destination or drop them along the truck route. Diffuse knapweed was found at Hallett Dock in pale gray limestone railroad ballast, stone that likely was shipped from Rogers City, Michigan. Even if that species were eradicated from its original site at Hallett, it could reinfest it via seedy limestone that may be already in the port or arrives before the proposed project would use Hallett.	This comment has been noted. Section 14.c of the EAW has been revised to acknowledge that invasive species may be present not only within and near the project area, but also at a potential offloading and dewatering site. As noted in the revised invasive-species discussion, invasive species have the potential to occur at an offloading and dewatering site, and records of invasive species have been documented at the conceptual offloading and dewatering site shown in Appendix A and Appendix B. Section 14.d of the EAW addresses measures to minimize the potential of invasive species spreading.

Comment Number	Commenter	EAW Section(s)	Comment	Response
1.D	Dr. Schimpf	6 and 14	On EAW p. 5 it states that there will be no plantings, because that is beyond the scope of the proposed project. Why is that the limit of the scope? Presumably, the former aquatic habitats that are being compensated for, which were eliminated by earlier remediations elsewhere, had aquatic vegetation originally, so to restore Tallas Bay to original depths but leave it unvegetated would not seem to qualify as ecological restoration. A listed priority is to promote diverse aquatic native vegetation (e.g., EAW Appendix B page 1). If agency rules prevent adding this modest component to this proposed project, will there be a separate subsequent project at Tallas to promote desirable aquatic vegetation there? The Hearding map (EAW Appendix B Figure 1) does not show aquatic vegetational composition in the mid-1800s, but surely wetland biologists could provide educated guesses about that. Intentional planting would not automatically prevent invasion by narrowleaf cattail or hybrid cattail but should nonetheless create benefits.	Appendix B states that, "This design does not include placement of bio-medium or any other new material, or plantings. EPA and State of Minnesota stakeholders have stated clearly that this type of work is not in scope for this project. The work is strictly limited to dredging. Based on the results of the sediment sampling study, this scope limitation is appropriate to achieve the project's objectives." A specific rationale for excluding planting activities beyond these statements was not provided. The EAW states in Section 6 that no future stages are proposed or anticipated at this time. Accordingly, no separate planting project or future project phase is currently proposed or reflected in the EAW. Project impacts are reviewed by the RGU for compliance with environmental review standards. The EAW process does not involve alternatives analysis, and the proposer is responsible for establishing project parameters. Further mitigation may occur via future permit requirements, design changes, or additional requests for mitigation.
1.E	Dr. Schimpf	6 and 12	On EAW p. 6, how will leaving the corridor for the buried Spirit Mountain pipeline undredged affect the hydraulic connectivity in Tallas Bay, or how may it affect future sedimentation dynamics? Will the pipeline berm be at risk from recreational watercraft dragging anchors on it? Appendix B states on its page 1 that the pipeline is a constraint on achieving the proposed project's restoration goals. The EAW does not even specify the depth of the pipeline corridor; one must read the appendices to find those details. The EAW should be rewritten to put this fundamental information in the main body of the document.	The project description, Section 6, has been revised to include the top-of-pipe elevation of the Spirit Mountain pipeline and clarify the associated dredging restrictions. The water resources section, Section 12.iv.b has also been revised to acknowledge that avoiding dredging within the pipeline corridor will result in an undredged berm feature remaining in place, and that depending on future water levels and recreational use patterns, the berm could potentially be contacted by anchors or other recreational boating equipment. Potential changes in local flow patterns, sediment redistribution, and hydrologic connectivity are discussed in Section 12.iv.b.
1.F	Dr. Schimpf	10	On EAW p. 15, the RiverWest development is west, not east, of the proposed project. It is not really "along" the St. Louis River waterfront; it would be better to state how far it is from the water's edge. The Western Waterfront Trail is mentioned, but not its new preferred names.	Section 10 of the EAW has been revised to correct the sentence noting the RiverWest development is west of the project area. References in the EAW to the Western Waterfront Trail have been updated to Waabizheshikana: The Marten Trail.

Comment Number	Commenter	EAW Section(s)	Comment	Response
1.G	Dr. Schimpf	12	On EAW p. 20, it says that Duluth bedrock is sandstone, siltstone, and conglomerate, a complete contradiction to the assertion on p. 18 that it is troctolite and gabbro.	Section 12.a.ii of the EAW was revised to state that bedrock geology in the project area consists of layered troctolite and gabbro of the Troctolitic Series of the Duluth Complex.
1.H	Dr. Schimpf	12 and 16	On EAW p. 26, it states that existing recreational watercraft use is expected to continue after project completion. The document does not mention that the St. Louis River Estuary National Water Trail passes through Tallas Bay (https://stlouisriver.org/national-water-trail-map). That designation was not in place during the previous round of dredging of Tallas Bay. Presumably, recreational usage has increased because of this higher profile, although conclusive evidence of that may be hard to come by. How would watercraft users be notified of the blockage of the map route, and detoured, while dredging takes place?	Section 12.a.i of the EAW was revised to acknowledge the St. Louis River Estuary National Water Trail and note that the mapped water trail route includes navigation options on both sides of Tallas Island. Section 12.iv.b was revised to describe temporary navigation controls associated with active construction activities, including the use of lights, signals, and buoys, which would notify recreational users of construction activities occurring within Tallas Bay.
1.I	Dr. Schimpf	6, 13, and 14	On EAW p. 33, the invasive plant species purple loosestrife and wild parsnip (both of which are designated as Prohibited - Control in Minnesota), and garlic mustard and common buckthorn (both of which are designated as Restricted in Minnesota) are noted as being in the general area but not documented in the project area. Although those plants may not be growing in Tallas Bay itself, there could be germinable seeds of these species, as well as germinable seeds or viable propagating parts of other invasive species, in the sediments of Tallas Bay, which could be dispersed to new locations by transport of those sediments. It is nearly certain that there will be germinable seeds of purple loosestrife in the large volume of material to be dredged, based on the findings in: Johnson, C. C. 2003. Predicting the early vegetation of a wetland created from dredged sediments in Duluth-Superior harbor, Minnesota-Wisconsin, USA. Thesis, University of Minnesota.	Comment noted; the potential for germinable seeds or viable propagating parts of other invasive species within dredged sediments is acknowledged. The project specifications require dredged materials to be transported in leak-tight vehicles equipped with spill- and splash-prevention measures. The specifications also require cleanup of dredged material that may be spilled during loading, unloading, or transport activities and require material deposited around vehicles during transfer operations to be removed prior to vehicles leaving the site. These measures are intended to minimize the potential for dredged materials (and potential seeds) to be unintentionally dispersed during transport to an approved placement or disposal facility.

Comment Number	Commenter	EAW Section(s)	Comment	Response
2.A	Lucy Harrington (SHPO)	15 and 16	Our office received a Minnesota state level Environmental Assessment Worksheet (EAW) for the proposed Tallas Bay Mitigation project, which appears to be an EPA proposed project. The EAW (available online here: duluthmn.gov/media/z42jkefh/environmental-assessment-worksheet-tallas-bay-mitigation-project.pdf) states that the EPA is consulting with our office (MN SHPO) under Section 106 of the NHPA and its implementing regulations. I am not aware of consultation with our office regarding the Tallas Bay Mitigation project. We last provided comments to the EPA regarding the Tallas Bay Sediment Sampling Event (SHPO # 2023-0860). In the EPA's letter to our office regarding that project, you stated that consultation regarding the Mitigation project would occur in the future. Can you please clarify?	Consultation with the Minnesota State Historic Preservation Office (SHPO) regarding the Tallas Bay Mitigation project is the responsibility of the U.S. Environmental Protection Agency (EPA) as the lead federal agency for Section 106 compliance. It was our understanding at the time the EAW was prepared that EPA had initiated SHPO consultation for the proposed undertaking. Following receipt of this comment, EPA was notified that SHPO was not aware of consultation regarding the Tallas Bay Mitigation project. The USACE responded providing documentation that the request for project review was submitted to SHPO on October 22, 2026, to initiate Section 106 consultation. The project reference number provided on the form was 2022-0037.

3 Findings of Fact

Pursuant to Minnesota Rules, part 4410.1700, subpart 4, the City of Duluth has prepared the following findings of fact to support its decision regarding the need for an Environmental Impact Statement (EIS) for the Tallas Bay Mitigation Project. These findings are based on information contained in the EAW, supporting technical documentation, and substantive comments received during the EAW review process.

1. The City of Duluth served as the Responsible Governmental Unit (RGU) for environmental review of the project. An EAW was prepared and distributed for public review and comment.

2. The project consists of mechanical dredging of accumulated sediments from approximately 3.03 acres of shallow-water and wetland habitat within Tallas Bay. The project would dredge up to approximately 12,000 cubic yards of sediment, with an estimated removal quantity of approximately 9,400 cubic yards, to increase depth diversity, improve habitat conditions for fish and wildlife, enhance wetland connectivity, and improve connectivity between Tallas Bay and Knowlton Creek.

3. The project is intended to compensate for habitat eliminated through other nearby EPA work and to improve ecological conditions within Tallas Bay through restoration of fish habitat, wetland connectivity, and aquatic habitat diversity. The project supports habitat restoration goals within the St. Louis River Area of Concern and addresses sediment accumulation that has reduced habitat function within Tallas Bay.

4. Temporary construction related effects may include turbidity, sediment disturbance, temporary disruption of aquatic habitat, and temporary impacts on wetland vegetation. BMPs, permit conditions, monitoring requirements, and construction controls will be implemented to minimize these effects.

5. The City of Duluth finds that temporary water quality impacts can be effectively managed through permit conditions and construction controls.

6. Dredged material will be transported to an offloading and dewatering site (to be determined by the contractor) where water will be separated from sediment, treated, monitored, and discharged under applicable permit requirements. Dewatering water will be managed through controlled systems and subject to monitoring and permit requirements intended to minimize turbidity, suspended solids, and other water quality impacts.

7. Although a final contractor-selected offloading and dewatering site had not been identified at the time of EAW preparation, the EAW evaluated the anticipated dredged material handling process and established reasonable assumptions regarding the characteristics of any selected offloading and dewatering site.

8. The project occurs within an ecologically significant portion of the St. Louis River estuary, including an Important Bird Area, a Minnesota Biological Survey Site of Biodiversity Significance, and an Outstanding Lake of Biological Significance. Temporary construction impacts may occur due to dredging, noise, human activity, and temporary habitat disturbance. More mobile species are expected to relocate during active construction. Long-term effects are expected to include improved aquatic habitat diversity, improved connectivity, enhanced habitat function, and improved resiliency of aquatic resources.

9. Potential invasive species impacts will be minimized through equipment cleaning requirements, invasive species prevention measures, leak-tight transportation requirements, spill prevention measures, and cleanup requirements.

10. The EPA is the lead federal agency responsible for Section 106 compliance. Tribal consultation and cultural-resource coordination are ongoing. The EAW identifies no documented archaeological sites, historic cemeteries, or historic architectural resources within the project area. The Fond du Lac Band identified the potential for previously undocumented cultural materials within submerged sediments. The project includes procedures for continued consultation, coordination, and treatment of inadvertent discoveries. In consultation with Tribal Nations, EPA has discussed opportunities for Tribal participation during construction activities, including potential monitoring of dredging and material handling activities. Consistent with applicable agency procedures and available funding, Tribal representatives would be permitted access to monitoring locations during construction. Any monitoring activities would be coordinated among the EPA, participating Tribal Nations, and the construction team, as appropriate. The City finds that potential impacts to historic and cultural resources can be adequately addressed through ongoing Section 106 consultation, applicable cultural resource protection procedures, and ongoing tribal consultation with the Fond du Lac Band.

11. No permanent infrastructure is proposed as part of the project.

12. Construction is anticipated to occur during 2027.

13. The City of Duluth finds that the EAW and supporting documentation contain sufficient information to evaluate the potential environmental effects of the project and determine whether the project has the potential for significant environmental effects.

4 Evaluation Under Minnesota Rules, part 4410.1700

In deciding whether a project has the potential for significant environmental effects and whether an EIS is needed, the RGU (City of Duluth) must compare the impacts that may be reasonably expected to occur from the project with the four criteria identified in Minnesota Rules, part 4410.1700, subpart 7, items A through D, Criteria. The four criteria are individually assessed below.

A. Type, extent, and reversibility of environmental impacts.

The City of Duluth finds that the project's potential adverse environmental effects are primarily temporary and construction related. These effects include disturbance of aquatic habitat and wetland vegetation; temporary increases in turbidity and suspended sediment; temporary displacement of fish and wildlife; and effects associated with dredging, dewatering, sediment handling, transportation, equipment operation, and recreation. These effects would be limited in duration and geographic extent. Long-term effects are expected to be beneficial and include increased depth diversity, improved aquatic habitat, enhanced wetland, and hydrologic connectivity, and improved ecological function.

B. Cumulative potential effects. The RGU shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project.

The City of Duluth finds that adverse cumulative environmental effects are not expected to be significant when the project is considered together with other potential contributors to cumulative effects. Temporary construction impacts would be localized and subject to mitigation measures and permit requirements. The project is expected to contribute positively to broader restoration efforts occurring within the St. Louis River Area of Concern and is expected to have beneficial cumulative ecological effects.

C. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project.

The project is subject to numerous federal, state, and local permits and approvals as summarized in Table 2. Through these regulatory programs, the applicable agencies may impose specific requirements addressing dredging, turbidity, dewatering discharges, stormwater management, erosion and sediment control, dredged-material management, wetland and public water effects, protected species, cultural resources, transportation, and haul routes. The City of Duluth finds that these regulatory requirements, together with the project specifications and mitigation measures identified in the EAW, can reasonably be expected to avoid, minimize, or control the identified environmental effects.

Table 2 Required Permits and Approvals

Unit of Government	Type of Application
DNR	Public Waters Work Permit
DNR	Water Appropriations Permit - Temporary
DNR	Natural Heritage Information System Review
MPCA	Management of Dredged Material Permit
MPCA	NPDES/SDS Construction Stormwater General Permit
MPCA	CWA Section 401 Certification
MPCA	Solid Waste
USACE	CWA Section 10/404 Permit – anticipated Nationwide Permit 27
EPA (lead federal agency)	Section 106 Consultation – National Historic Preservation Act
USACE	Section 10 Permit – Rivers and Harbors Act
City of Duluth (LGU)	Wetland Conservation Act
MN SHPO	Section 106 Consultation – National Historic Preservation Act
City of Duluth	Fill and Grade
City of Duluth	Erosion and Sediment Control Permit
City of Duluth	Shoreland Permit
City of Duluth	Transportation Permit
City of Duluth	Contractor’s Haul Route Permit

Unit of Government	Type of Application
City of Duluth, DNR, Federal Emergency Management Agency (FEMA)	No Rise Certification and/or LOMR
U.S. Fish and Wildlife Service (USFWS)	Federal Threatened/Endangered Species Review

D. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

The City of Duluth finds that environmental effects associated with the project can reasonably be anticipated and evaluated based on the information contained in the EAW, supporting technical documents, permitting requirements, and project specifications. Environmental effects can be effectively controlled through BMPs, permit conditions, monitoring requirements, and construction specifications.

5 EIS Need Decision

The City of Duluth, as the RGU for this environmental review, makes the following conclusions:

1. The Environmental Assessment Worksheet, the Findings of Fact and Record of Decision, and related documentation for the Tallas Bay Mitigation Project were prepared in compliance with the procedures of the Minnesota Environmental Policy Act and Minnesota Rules, parts 4410.1000 to 4410.1700.

2. The record demonstrates that, based on a comparison of the impacts that are reasonably expected to occur from the project with the criteria established in Minnesota Rules, part 4410.1700, implementation of the project does not have the potential for significant environmental effects. Therefore, the City of Duluth makes a Negative Declaration and does not require the preparation of an Environmental Impact Statement (EIS) for the project.

Recommended Motion: Motion to adopt the Findings of Fact and Record of Decision regarding the Environmental Assessment Worksheet for the Tallas Bay Mitigation Project, determining that the project does not have the potential for significant environmental effects; a Negative Declaration on the need for an Environmental Impact Statement; and adopting and incorporating the entirety of the Revised Environmental Assessment Worksheet, supporting technical documentation, public comments, responses to comments, and these Findings of Fact as the record supporting the determination.

Attachment 1

Revised EAW

Environmental Assessment Worksheet

Tallas Bay Mitigation Project

Prepared for
City of Duluth

Prepared by
Barr Engineering Co.

Revised October 2026

325 South Lake Avenue, Suite 700
Duluth, MN 55802
218.529.8200

barr.com



Environmental Assessment Worksheet

Revised October 2026

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Appendices

Appendix A 95% Design
Appendix B 65% DDR
Appendix C Protected Species Documentation
Appendix D GHG Calculations

Environmental Assessment Worksheet

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1 Project Title

Tallas Bay Mitigation Project

2 Proposer

U.S. Environmental Protection Agency (EPA)

Contact person:	Kali Denis
Title:	Project Manager
Address:	77 W. Jackson Blvd. (G-90)
City, State, ZIP:	Chicago, IL, 60604
Phone:	(312) 353-2000
Fax:	(312) 353-1120
Email:	denis.kali@epa.gov

3 RGU

Contact person: Jason Mozol
Title: Senior Planner for the City of Duluth
Address: City Hall Room 160, 411 West First Street
City, State, ZIP: Duluth, MN 55802
Phone: 218-730-5331
Fax:
Email: jmozol@duluthmn.gov

4 Reason for EAW Preparation

(check one)

Required:	Discretionary:
☐ EIS Scoping	☐ Citizen petition
☒ Mandatory EAW	☐ RGU discretion
	☐ Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

Minnesota Rules, part 4410.4300 subpart 27, item A: Wetlands and Public Waters.

5 Project Location

- County: St. Louis County
- City/Township: City of Duluth
- PLS Location (¼, ¼, Section, Township, Range): SWNE, NWSE, and SWNW quarters, Section 24, Township 49N, Range 15W
- Watershed (81 major watershed scale): Spirit Lake – Saint Louis River Watershed, HUC ID: 040102011603
- GPS Coordinates: 92.1988292°W 46.7126399°N
- Tax Parcel Number: Not applicable. The dredging area is located within a public waterbody and is not situated on a taxable land parcel; therefore, no tax parcel identification number is associated with the Project location.

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project;

Map 1, Project Location

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

Map 2, USGS Topographic Map

- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

Map 3 Project Overview, Appendix A and Appendix B

- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).

Data sources are included in the References section.

6 Project Description

a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The U.S. Environmental Protection Agency proposes the Tallas Bay Mitigation Project in Duluth, Minnesota. The project would mechanically dredge shallow areas of Tallas Bay between Knowlton Creek and Tallas Island to remove excess sediment, increase depth diversity and wetland connectivity, improve fish and coastal wetland habitat, and facilitate recreational access.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities

The Tallas Bay Mitigation Project (project) is a proposed habitat mitigation and restoration dredging project in Tallas Bay, a shallow, hydraulically connected bay/backwater on the northwest bank of the St. Louis River in Duluth. The project focuses on a dredging area in the shallow bay and wetland complex between the outlet of Knowlton Creek and Tallas Island (project area) (Map 1 and Map 2). Project design is reflected in Appendix A. The United States Environmental Protection Agency (EPA) is proposing the Project as compensation for comparable habitat eliminated through other nearby EPA work, and the United States Army Corps of Engineers (USACE) prepared the design. The Minnesota Department of Natural Resources (DNR) participated as a resource agency, advising on habitat objectives and desired restoration outcomes that informed the dredging design prepared by USACE.

The design objectives identified by the DNR include restoring the wetland complex toward pre-flood conditions by physically manipulating Tallas Bay through the removal of accumulated sediment to create deeper pools, improve bathymetry for fish and wildlife habitat, enhance coastal wetland habitat, support St. Louis River Area of Concern habitat beneficial-use objectives, improve connectivity to Knowlton Creek for stream-spawning fish, and improve human health/recreation/aesthetics. These objectives reflect both ecological restoration and public resource goals, including improved resiliency and functional connectivity in a shallow bay/backwater system that has been affected by sedimentation and past watershed disturbance.

The design is limited to mechanical dredging of accumulated sediment down to the native soil layer; there would be no bio-medium placement, new material placement, or plantings. Dredging would remove excess sedimentation, including ongoing sediment delivery associated with Knowlton Creek and additional coarse and other material mobilized and deposited during the 2012 Duluth flood event.

The EPA would selectively dredge up to 12,000 cubic yards of sediment within Tallas Bay, corresponding to a depth range of approximately 4 to 7 feet. The estimated removal quantity of approximately 9,400 cubic yards was calculated by using existing bathymetric conditions from the USACE-conducted hydrographic and topographic survey completed in October 2022 and the post-dredge bottom elevations from the 2010–2013 dredging project. Together they define the accumulation of sediment within the proposed dredging footprint. The dredging quantity influences project magnitude, sediment disposal needs, dewatering requirements, truck traffic, and construction duration. The dredge areas are illustrated in Map 3.

Dredging would be conducted using mechanical dredging equipment (e.g., excavator or clamshell bucket) that would operate from floating platforms within Tallas Bay. The equipment and floating platforms would be lifted into the water from another location (e.g., Fraiser shipyard) and then tugged by boat to the project location.

Dredged material would be loaded directly into barges, with no side casting of materials, and then transported by water to an offloading and dewatering site selected by the contractor. The offloading and dewatering site would be located adjacent to the shoreline, would not contain wetlands, would likely be

impervious, and would not require grading or subsurface disturbance (e.g., Hallet Dock, which has been used for similar projects).

Prior sediment sampling confirmed that dewatering would be required at the offloading and dewatering site before the dredged material could be transported by truck, based on the material's soil composition. Dewatering would occur in accordance with applicable permits and would involve filtering the water of suspended sediments before discharging it back to the St. Louis River estuary.

As needed, additives may be incorporated during dewatering to improve sediment stabilization and separate solids from water. The type and quantity of additives would depend on disposal requirements and the characteristics of the dredged material. After dewatering, the solids would be transported by truck to an approved off-site placement or disposal facility that is suitable for the dredged material composition. The final off-site placement or disposal locations would be determined through the construction contract. USACE has identified Vonco Landfill as a potential disposal site and U.S. Steel as a potential placement site; however, other approved sites may also be used.

Up to two and a half acres may be required for a staging area. The final staging area will be selected by the contractor and would likely be near or adjacent to either the offloading and dewatering site or the placement site. This area would also be in an upland area without wetlands, would likely be impervious, and would not require grading or subsurface disturbance. Refueling may occur within the staging area.

The Project would be implemented with construction controls and layout restrictions to protect existing utilities and maintain required setback distances during dredging operations. Dredging would be restricted near the existing Spirit Mountain water intake pipeline, which includes a 36-inch HDPE pipe and a 4-inch pipeline within a 100-foot-wide easement (Map 3). Issued-for-Construction drawings show the pipeline installed with the top-of-pipe elevation ranging from 595.0 to 594.0 (Appendix B). Dredging would be prohibited within 25 feet of utility crossings.

The Project does not include major new permanent infrastructure, but it would require temporary construction-related infrastructure for dredged material handling, transfer, dewatering, hauling, and disposal or placement at an approved offsite facility. No significant demolition, removal, or remodeling of existing structures has been identified beyond sediment removal and temporary use of transfer/dewatering areas. It is anticipated that construction would begin on July 1, 2027. Dredging activities are anticipated to occur from approximately July 15 to September 7, 2027. The overall project, including restoration, would be completed within approximately three months of starting.

d. Project magnitude:

Table 6-1 Project Magnitude Summary

Description	Number
Total Project Acreage	3.025 acres [1]
Linear project length	Not applicable
Number and type of residential units	Not applicable
Residential building area (in square feet)	Not applicable
Commercial building area (in square feet)	Not applicable
Industrial building area (in square feet)	Not applicable
Institutional building area (in square feet)	Not applicable
Other uses – specify (in square feet)	Not applicable
Structure height(s)	Not applicable

[1] This total acreage includes only the dredging area. It does not include the offloading and dewatering site, the placement or disposal site, or the staging area. As described above, the final selection of these areas will be determined by the contractor and impacts to the area are expected to be negligible as the areas will likely be impervious.

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

The purpose of the project is to compensate for habitat eliminated by other nearby EPA work by enhancing fish habitat and wetland function in Tallas Bay. The design is intended to remove excess sedimentation, increase depth diversity, restore/improve wetland connectivity, restore deeper off-channel habitat, improve connectivity to Knowlton Creek for stream-spawning fishes, and support recreation and aesthetics. The need for the Project is tied both to mitigation for previously eliminated habitat and to broader public ecological resource objectives in the St. Louis River estuary.

Beneficiaries include aquatic habitat and wetland resources in the St. Louis River estuary, fish and wildlife using Tallas Bay and Knowlton Creek, recreational users, and the broader public interest in St. Louis River Area of Concern habitat restoration, as well as public agencies responsible for habitat mitigation and restoration and the public that benefits from improved ecological condition, fish and wildlife habitat, and aesthetic and recreational values in the Tallas Bay area.

f. Are future stages of this development including development on any other property planned or likely to happen? ☐ Yes ☒ No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

No future stages are proposed or anticipated at this time.

g. Is this project a subsequent stage of an earlier project? ☐ Yes ☒ No
If yes, briefly describe the past development, timeline and any past environmental review.

The Project is related to prior dredging in Tallas Bay conducted from 2010 to 2013 and to the Knowlton Creek Watershed Restoration Project completed in 2017 in that it addresses similar sedimentation processes and builds upon prior restoration outcomes. However, the proposed Project is not a formal subsequent stage of those efforts. The earlier dredging established a post-dredge bathymetric condition that is used as a reference for estimating sediment accumulation, and the Knowlton Creek project focused on upstream watershed restoration, whereas the current Project is a separately proposed habitat

mitigation dredging effort with a distinct purpose, scope, and regulatory context. Accordingly, the Project is best characterized as a new, independent action rather than a continuation of an uninterrupted earlier construction phase.

7 Climate Adaptation and Resilience

a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

To understand how climate change is anticipated to affect the project area, historical and projected climate data, along with climate hazard projections, were considered.

The Minnesota Department of Natural Resources (DNR) Minnesota Climate Explorer tool provides a summary of historical climate data for various regions across Minnesota (reference (1)). Barr analyzed the data for St. Louis County provided in the tool.

Figure 7-1 summarizes the mean, maximum, and minimum average daily temperature from 1895 to 2025 for St. Louis County. It also shows the temperature trends per decade from 1895 to 2025 and from 1980 to 2025 to represent the full record of data and more recent data since 1980, respectively (reference (1)). Table 7-1 summarizes the trends for mean, maximum, and minimum average daily temperatures. In each temperature statistic, St. Louis County exhibits an increase in daily temperature from 1895 to 2025. Of the three temperature statistics, the annual average minimum daily temperature has increased at the fastest rate in the full record from 1895 to 2025 and from 1980 to 2025.

Figure 7-1 Historical Annual Mean, Maximum, and Minimum Daily Air Temperature (°F) for St. Louis County from 1895 to 2025 and 1980 to 2025

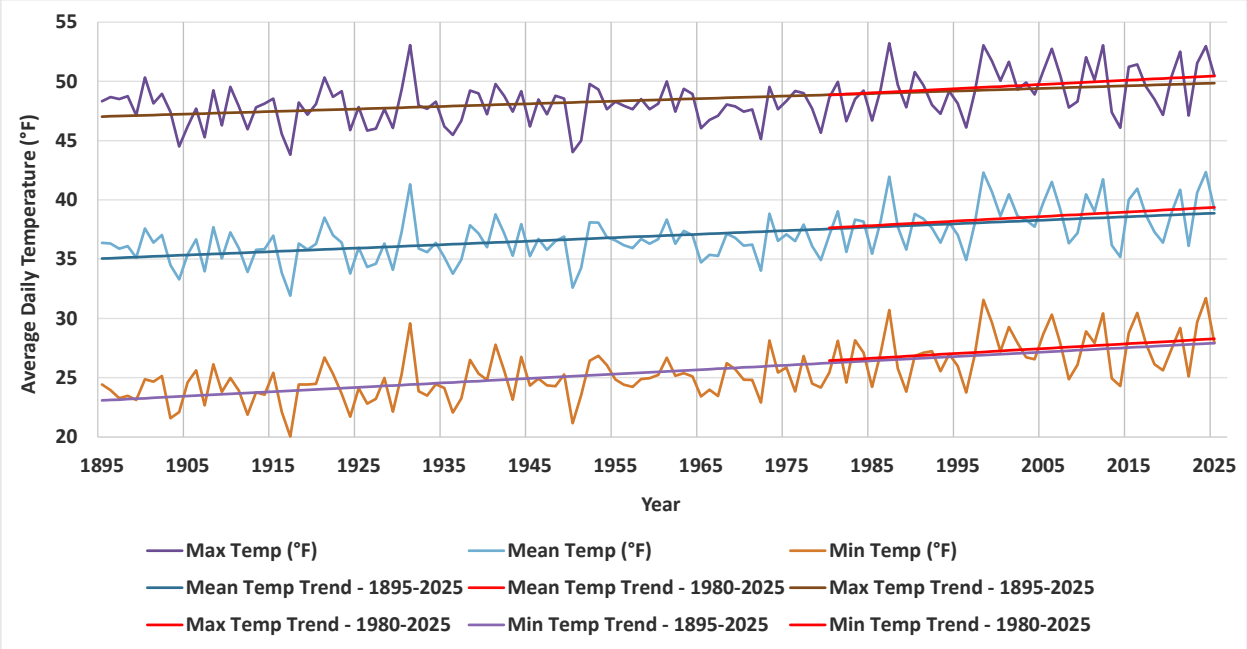


Table 7-1 Historical Annual Mean, Maximum, and Minimum Daily Air Temperature Trends (°F/decade) for St. Louis County from 1895 to 2025 and 1980-2025

Temperature Statistic	Years	Trend (°F/decade)
Minimum Average Daily	1895-2025	0.37
Minimum Average Daily	1980-2025	0.41
Mean Average Daily	1895-2025	0.29
Mean Average Daily	1980-2025	0.38
Maximum Average Daily	1895-2025	0.22
Maximum Average Daily	1980-2025	0.36

Figure 7-2 summarizes the total annual precipitation in St. Louis County from 1895 to 2025. Total annual precipitation has increased from 1895 to 2025 by an average rate of 0.19 inches/decade. Precipitation has increased by an average rate of 0.03 inches/decade from 1980 to 2025.

Figure 7-2 Historical Total Annual Precipitation (inches) for St. Louis County from 1895 to 2025 and 1980 to 2025

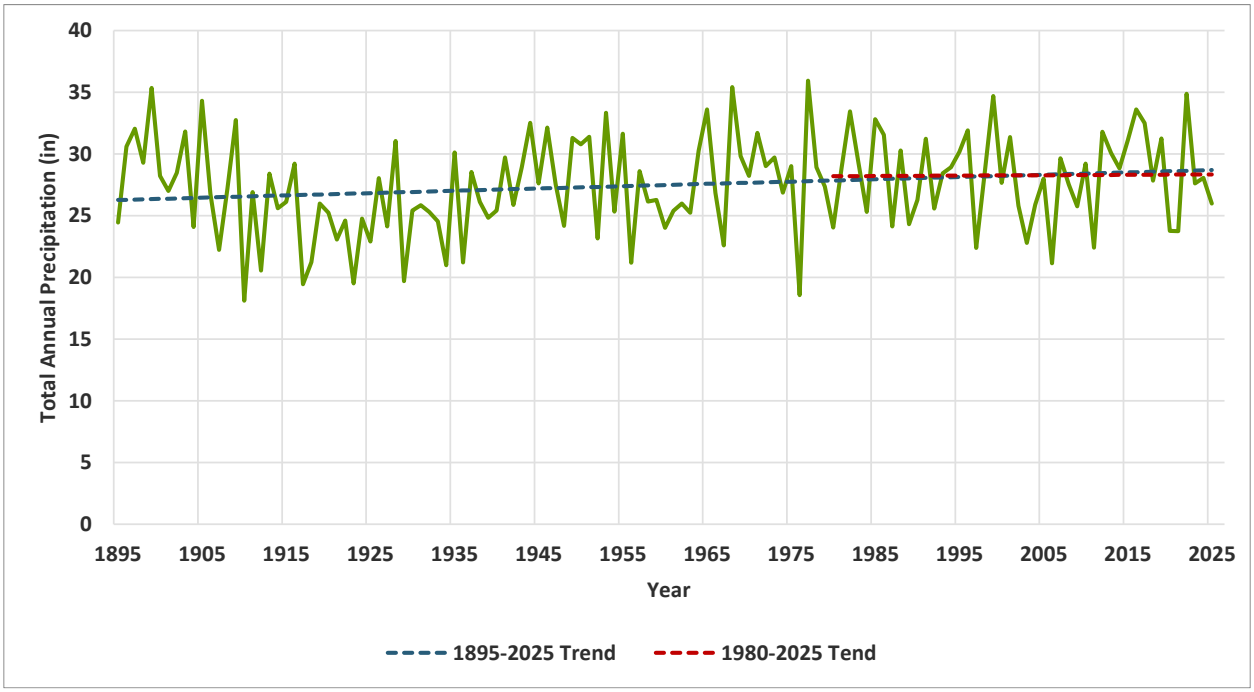
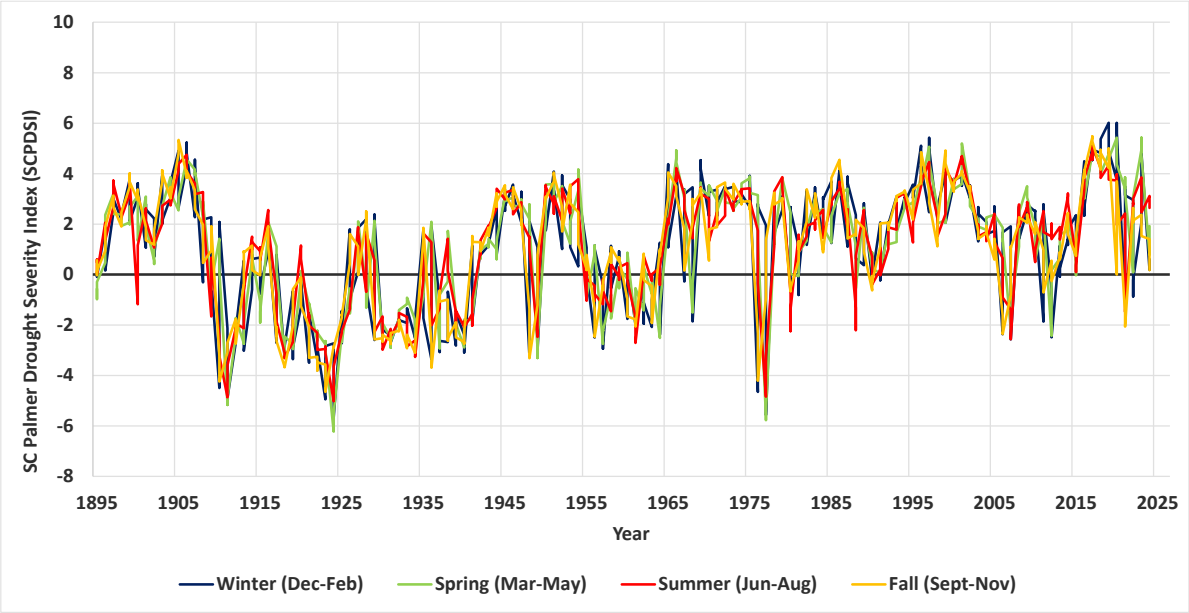


Figure 7-3 summarizes the seasonal drought severity for St. Louis County from 1895 to 2024 using the Self-Calibrated Palmer Drought Severity Index (scPDSI). The scPDSI is a meteorological drought index that measures the departure of moisture. Negative scPDSI values indicate drought conditions, positive values indicate wet conditions, and values near zero indicate normal conditions (reference (2)). St. Louis County experienced frequent drought episodes from 1910 to 1940 and in the late 1970s. From 1990 to 2024, seasonal wet conditions have generally been more frequent than drought conditions.

Figure 7-3 Historical Drought Severity for St. Louis County from 1895 to 2024



Climate projections are based on the Minnesota dynamically downscaled climate model, developed by the University of Minnesota, and are summarized in three scenarios: Shared Socioeconomic Pathway (SSP) 245, SSP370, and SSP585. SSP is a measure adopted by the Intergovernmental Panel on Climate Change to represent various greenhouse gas (GHG) concentration pathways as well as social and economic decisions (reference (3)).

SSP245 represents a “Middle of the Road” scenario where economic, social, and technological trends follow historical patterns, population growth is moderate, and inequality persists. Additionally, SSP245 includes an intermediate emissions scenario, where a net radiative forcing of 4.5 watts per meter squared (W/m^2) is received by Earth due to the GHG effect, and emissions begin to decrease around 2040 (reference (3)).

SSP370 represents a “Regional Rivalry” scenario in which nations focus on regional issues instead of cross-collaboration and development. SSP370 also includes a high emissions scenario, where a net radiative forcing of 7.0 W/m^2 is received by Earth (reference (3)).

SSP585 represents a “Fossil-fueled Development” scenario, where development in competitive markets increases, driven by rising global consumption of fossil fuels. SSP585 also includes a very high emissions scenario, where a net radiative forcing of 8.5 W/m^2 is received by Earth, and no emissions are reduced through 2100 (reference (3)).

Three time periods are considered for each scenario: 2040-2059 (mid-century), 2060-2079 (late-century), and 2080-2099 (end-of-century). These timeframes are standard multi-decade averaging periods.

Table 7-2 summarizes the modeled historical and projected temperature values for the project. In each temperature scenario, the project area exhibits an increase in average daily temperature relative to the historical temperature. The minimum daily temperature shows the largest modeled increase of the three temperature statistics for all scenarios.

Table 7-2 Modeled Historical and Projected Daily Temperature Trends for the Project

Scenario	Time Period	Average Daily Temperature (°F) – Ensemble Mean[1]	Minimum Daily Temperature (°F) – Ensemble Mean[1]	Maximum Daily Temperature (°F) – Ensemble Mean[1]
Historical	1995-2014	40.8	34.0	50.1
SSP245	2040-2059	44.5 (3.7)	37.9 (3.9)	53.5 (3.4)
SSP245	2060-2079	45.9 (5.1)	39.4 (5.4)	54.9 (4.8)
SSP245	2080-2099	47.4 (6.6)	40.8 (6.9)	56.4 (6.3)
SSP370	2040-2059	45.1 (4.4)	38.4 (4.5)	54.4 (4.3)
SSP370	2060-2079	47.5 (6.7)	40.8 (6.9)	56.6 (6.5)
SSP370	2080-2099	49.5 (8.7)	43.0 (9.1)	58.4 (8.3)
SSP585	2040-2059	45.2 (4.4)	38.6 (4.6)	54.3 (4.2)
SSP585	2060-2079	48.0 (7.2)	41.5 (7.6)	56.9 (6.8)
SSP585	2080-2099	52.3 (11.5)	46.1 (12.2)	60.8 (10.7)

1 Values in parentheses represent the change from the modeled historical value.

Table 7-3 summarizes the modeled historical and projected precipitation values for the project. SSP245 projected an increase in precipitation for all time periods. SSP370 projected a decrease in precipitation from 2040 to 2079 and an increase from 2080 to 2099. SSP585 projected an increase in precipitation for all time periods.

Table 7-3 Modeled Historical and Projected Total Precipitation Trends for the Project

Scenario	Time Period	Total Annual Precipitation (in) – Ensemble Mean[1]
Historical	1995-2014	31.4
SSP245	2040-2059	32.7 (1.3)
SSP245	2060-2079	31.8 (0.4)
SSP245	2080-2099	32.8 (1.4)
SSP370	2040-2059	29.6 (-1.7)
SSP370	2060-2079	28.9 (-2.5)
SSP370	2080-2099	32.7 (1.3)
SSP585	2040-2059	31.6 (0.2)
SSP585	2060-2079	33.8 (2.4)
SSP585	2080-2099	34.5 (3.2)

1 Values in parentheses represent the change from the modeled historical value.

Table 7-4 summarizes the modeled historical and projected annual days with precipitation greater than 0.01 inches, 1 inch, and 2 inches. The number of annual days with precipitation greater than 0.01 inches is projected to decrease under all scenarios. The number of annual days with precipitation greater than 1 inch is projected to increase from 2040 to 2059 and 2080 to 2099 and decrease from 2060 to 2079 under SSP245; decrease from 2040 to 2079 and increase from 2080 to 2099 under SSP370; and decrease from 2040 to 2059 and increase from 2060 to 2099 under SSP585. The number of annual days with precipitation greater than 2 inches is projected to increase under all scenarios.

Table 7-4 Modeled Historical and Projected Annual Days with Precipitation Trends for the Project

Scenario	Time Period	Total Annual Days with Precipitation > 0.01 inches - Ensemble Mean[1]	Total Annual Days with Precipitation > 1 inch - Ensemble Mean[1]	Total Annual Days with Precipitation > 2 inches - Ensemble Mean[1]
Historical	1995-2014	125.9	7.0	1.8
SSP245	2040-2059	124.8 (-1.1) (-0.9%)	7.3 (0.3) (4.4%)	2.1 (0.3) (15.4%)
SSP245	2060-2079	121.0 (-4.9) (-3.9%)	6.8 (-0.2) (-3.3%)	2.0 (0.2) (12.6%)
SSP245	2080-2099	120.0 (-5.9) (-4.7%)	7.3 (0.3) (4.2%)	2.3 (0.5) (30.4%)
SSP370	2040-2059	115.9 (-10.0) (-7.9%)	6.3 (-0.7) (-10.2%)	1.9 (0.1) (3.8%)
SSP370	2060-2079	112.9 (-13.0) (-10.3%)	6.2 (-0.8) (-11.4%)	2.0 (0.2) (11.7%)
SSP370	2080-2099	118.3 (-7.6) (-6.0%)	7.4 (0.4) (6.2%)	2.4 (0.6) (34.6%)
SSP585	2040-2059	121.2 (-4.7) (-3.7%)	6.9 (-0.1) (-0.8%)	2.0 (0.2) (10.8%)
SSP585	2060-2079	120.0 (-5.9) (-4.7%)	8.0 (1.0) (13.8%)	2.5 (0.7) (37.9%)
SSP585	2080-2099	117.7 (-8.2) (-6.5%)	8.0 (1.0) (14.4%)	2.8 (1.0) (54.7%)

1 Values in parentheses represent the change from the modeled historical value.

The First Street Risk Factor risk assessment and map tool was used to determine a risk assessment for Duluth, MN, to help identify climate change risks over the next thirty years (reference (4)). According to Risk Factor, flood risk is minor, fire risk is moderate, and air quality risk is minor (references (5), (6), (7)).

b. For each Resource Category in the table below: Describe how the project's proposed activities and how the project's design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

Anticipated climate risks for the project and adaptations are discussed further in Table 7-5.

Table 7-5 Project-Related Climate Considerations and Adaptations

Resource Category	Climate Variables	Project Components and Potential Environmental Effects	Adaptation Strategies
Project Design	Increased heavy precipitation, runoff, and sediment transport to coastal wetlands and backwater bays. Warmer temperatures and changing hydrologic conditions.	Tallas Bay receives sediment from Knowlton Creek and watershed runoff. Continued sedimentation could reduce water depth, decrease habitat diversity, and impair connectivity between wetland and aquatic habitats. The project mechanically dredges accumulated sediment to restore deeper pools and improve bathymetric diversity and connectivity.	The project removes accumulated sediment and restores depth diversity within Tallas Bay, increasing the ability of the bay to maintain aquatic habitat functions under future sedimentation and hydrologic variability. Restored connectivity provides greater habitat resiliency during fluctuating water levels.
Land Use	Addressed in Item 10.	Addressed in Item 10.	Addressed in Item 10.
Water Resources	Addressed in Item 12.	Addressed in Item 12.	Addressed in Item 12.
Contamination/ Hazardous Materials/Wastes	Addressed in Item 13.	Addressed in Item 13.	Addressed in Item 13.
Fish, wildlife, plant communities, and sensitive ecological resources (rare features).	Addressed in Item 14.	Addressed in Item 14.	Addressed in Item 14.

8 Cover Types

Estimate the acreage of the site with each of the following cover types before and after development:

Table 8-1 summarizes cover types within the dredging area before and after the project. Other cover types will not be impacted by the project. The offloading and dewatering site, the off-site placement or disposal facility, and the staging area are not included; however, cover types will not change from pre and post construction and these areas will be primarily or all impervious surfaces.

Table 8-1 Cover Types Before and After Development

Cover Types	Before (acres)	After (acres)
Wetlands and shallow lakes (<2 meters deep)	2.55	2.19
Deep lakes (>2 meters deep)	0.48	0.84
Wooded/forest	-	-
Rivers/streams	-	-
Brush/grassland	-	-
Cropland	-	-
Livestock rangeland/pastureland	-	-
Lawn/landscaping	-	-
Green infrastructure TOTAL (from table below*)	-	-
Impervious surface	-	-
Stormwater Pond (wet sedimentation basin)	-	-
Other (describe)	-	-
TOTAL	3.03	3.03

The project does not involve newly proposed infrastructure and therefore planning for green infrastructure is not applicable.

The project does not involve any tree clearing and therefore the potential for new trees to be planted for compensatory purposes is not applicable.

9 Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Permits and approvals required for the project are summarized in Table 9-1.

Table 9-1 Required Permits and Approvals

Unit of Government	Type of Application	Status
DNR	Public Waters Work Permit	To be submitted
DNR	Water Appropriations Permit - Temporary	To be submitted
DNR	Natural Heritage Information System Review	Submitted
MPCA	Management of Dredged Material Permit	To be submitted
MPCA	NPDES/SDS Construction Stormwater General Permit	To be submitted
MPCA	CWA Section 401 Certification	To be submitted, if required; or included with NWP 27 approval
MPCA	Solid Waste	To be submitted, if required
U.S. Army Corps of Engineers (USACE)	CWA Section 10/404 Permit – anticipated Nationwide Permit 27	To be submitted
EPA (lead federal agency)	Section 106 Consultation – National Historic Preservation Act	In Progress
USACE	Section 10 Permit – Rivers and Harbors Act	To be submitted
City of Duluth (LGU)	Wetland Conservation Act	To be submitted
MN SHPO	Section 106 Consultation – National Historic Preservation Act	To be submitted
City of Duluth	Fill and Grade	To be submitted, if required
City of Duluth	Erosion and Sediment Control Permit	To be submitted
City of Duluth	Shoreland Permit	To be submitted
City of Duluth	Transportation Permit	To be submitted
City of Duluth	Contractor's Haul Route Permit	To be submitted
City of Duluth, DNR, Federal Emergency Management Agency (FEMA)	No Rise Certification and/or LOMR	To be submitted
U.S. Fish and Wildlife Service (USFWS)	Federal Threatened/Endangered Species Review	Complete

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

All potential cumulative impacts are discussed in EAW Item 22, Cumulative Potential Effects.

10 Land Use

a. Describe:

   i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.

The project is located in Tallas Bay, a shallow bay/backwater wetland complex on the northwest bank of the St. Louis River. It is adjacent to the Riverside neighborhood in the City of Duluth, Minnesota. An island separates the bay from the St. Louis River. The land use of the project area and nearby shoreline is considered undeveloped open space. Adjacent parcels are either undeveloped open space, manufacturing, harbor, or multi-family residential (reference (8)). The RiverWest development, a mixed-use commercial and residential redevelopment area, is located west of the project area. Existing nearby features include the Spirit Mountain water intake pipeline and pump station on the northwest bank.

The Waabizheshikana: The Marten Trail, a 3 mile out and back gravel trail that offers direct access to the shoreline of the St. Louis River, is located directly west of the project area. Riverside Park, Riverside Community Garden, and Spirit Lake Marina & RV Park are located southwest and southeast of the project area, respectively. The Spirit Mountain Adventure Park ski area is located just west of the project area, across Minnesota Trunk Highway 23 (MN 23). No cemeteries or prime or unique farmlands are located within or adjacent to the project area.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

City of Duluth Comprehensive Land Use Plan, Imagine Duluth 2035 (reference (8))

The future land use in the project area is identified as open space. Open space is defined as having high natural resource or scenic value, with substantial restrictions and development limitations. Areas adjacent to the project area are identified as general mixed use and urban residential. General mixed use is the broadest mix of uses, including light industrial, office, commercial, and residential use, with performance standards to ensure compatibility. It includes areas that are in transition from past industrial uses and large redevelopments that require master plans and phased development. General or heavy industrial can be included when a large site is master planned to allow appropriate separation of uses. Urban residential includes the greatest variety of building types, medium to high densities. This land use can be representative of larger infill areas close to downtown, entertainment or activity centers, and waterfront residential areas. Generally, they are connected or adjacent to parks and open space and may include student housing areas, live/work units, and limited neighborhood retail.

St. Louis River Watershed Comprehensive Watershed Management Plan 2023-2032 (reference (9)).

The project is located in the Duluth Urban Planning Area, a 141 square mile area located in the Duluth metropolitan area; it is the most developed part of the entire planning area. The priority issues in the Duluth Urban Planning Area include:

- Surface water quality
- Land use
- Altered hydrology
- Habitat

The St. Louis River Estuary is the nation’s largest freshwater estuary. Due to unregulated industrial dumping, the St. Louis River was one of the most polluted waterways in the U.S. The St. Louis River Estuary is designated as an Area of Concern on the Great Lakes due to significant historical issues with

pollution and degraded habitat. Because of this designation, a great deal of support has been generated for this resource and a significant amount of planning and work has been done to improve it. Given the level of effort currently being directed to the restoration and protection of the St. Louis River Estuary (relative to other portions of the Duluth Urban Planning Area), the planning partners have decided to address it as an important downstream receiving water and resource, but not a subject of this the St. Louis River Watershed Comprehensive Watershed Management Plan. As such, it is not assigned resource-specific issues, goals, or implementation activities. The St. Louis River Comprehensive Watershed Management Plan aims to support the work of the estuary where it aligns with the plan's established priorities. Projects in the St. Louis River's tributary sub-watersheds that reduce pollutant loading to the estuary are an example where priorities overlap.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

The City of Duluth Legislative Code was last updated in August 2026(reference (10)). The project is within several zoning and overlay districts (Map 4). The project area is currently zoned as I-G – Industrial General. The I-G district is intended to provide for general- to heavy- impact industrial, processing, assembly, fabrication, and manufacturing uses off-site impacts and are generally isolated or buffered from other uses. Other uses are allowed provided they are clearly incidental to and supportive of on-site industrial uses. The district is intended primarily for locations close to major transportation corridors and active commercial centers.

The project is also located within lands recognized through the City of Duluth's Duluth Natural Areas Program (DNAP) that was established by City ordinance (Article XXIX) (reference (11)). DNAP is used to identify and permanently protect lands with significant ecological value, including areas that provide wildlife habitat, water quality benefits, flood attenuation, and other ecosystem services. The DNAP supports the City's long-term open space and natural resource conservation objectives and reflects the importance of preserving and restoring natural lands within the St. Louis River estuary and adjacent waterfront areas.

The City of Duluth shoreland management zones specify development setback standards that apply to shorelands within 1,000 feet of Lake Superior or within 300 feet of rivers, creeks, streams, and tributaries. There are three shoreland management zone types: general development waters, natural environmental waters, and cold-water rivers. General development waters is the least restrictive, while cold-water rivers is the most restrictive. For example, structures in general development waters, natural environmental waters, and cold-water rivers must be set back 50 feet, 75 feet, and 150 feet, respectively. The project area is in two of the three shoreland management zone types: general development and cold-water rivers.

The project area is also within a designated Federal Emergency Management Agency (FEMA) 100-year floodplain (reference (12)). The City of Duluth regulates floodplain areas through the Natural Resources Overlay District to minimize flood-related risks and protect natural floodplain functions. Development within Special Flood Hazard Areas must meet standards that reduce flood damage, maintain flood-carrying capacity, provide adequate drainage, and prevent erosion and sediment from entering surface waters.

The project is within the Lake Superior Coastal Zone, which is administered by the DNR through the Minnesota Lake Superior Coastal Program (MLSCP) (reference (13)). Because this is a federal project, the responsible federal agency must determine whether federal consistency review is required. The DNR

and federal agencies must follow the requirements of 15 Code of Federal Regulations (CFR) 930, Subpart C, which requires a review of federal activities or federally funded projects to determine consistency, to the maximum extent practicable, with the enforceable policies of MLSCP.

The evaluation of federal consistency by DNR is a brief evaluation of the relationship of the proposed activity and its reasonably foreseeable coastal effects considered enforceable under the review. The review includes identifying whether federally approved state coastal policies are met, such as approved county shoreland ordinances and approved floodplain ordinances. The project is intended to be compatible with the terms of the review.

As noted above under EAW Item 10 ii., the St. Louis River Estuary is located in an Area of Concern due to significant historical pollution and habitat degradation. This 1987 designation triggered multi-agency collaborative work to restore the St. Louis River and its nearly 12,000-acre estuary by addressing the following nine impaired beneficial uses for the St. Louis River Estuary (references (14) and (15)):

- Fish consumption advisories
- Degraded fish and wildlife populations
- Fish tumors and other deformities
- Degradation of benthos
- Restrictions on dredging
- Excessive loading of sediment and nutrients
- Beach closings and body contact restrictions
- Degradation of aesthetics
- Loss of fish and wildlife habitat

The project area is not located in a designated wild and scenic river.

iv. If any critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

No critical facilities are proposed within the floodplain.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

The project is compatible with all nearby land uses, local zoning ordinances, and associated plans. The project would support the future open space land use designation and the City of Duluth's open space mission and the broader multi-agency efforts in the St. Louis River estuary by restoring Tallas Bay toward pre-flood conditions and improving the ecological function of an existing shallow bay/backwater wetland complex.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

No incompatibility has been identified.

11 Geology, Soils, and Topography/Land Forms

a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

The bedrock geology in the project area consists of layered troctolite and gabbro of the Troctolitic Series of the Duluth Complex (Map 5) (reference (16)). Surficial geology is dominated by post glacial floodplain alluvium consisting of sand and gravel in channels and finer-grained sand and silt on floodplains (Map 6) (reference (16)). Depth to bedrock is between 200 feet and 300 feet below ground surface (Map 7) (reference (16)). There are no known susceptible geologic features, such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions, on or near the project (reference (17)). The project would not impact site geology.

The project area seismic risk is very low; it is located within an area rated as less than a two-percent chance of damage from natural or human-induced earthquakes in 10,000 years (reference (18)).

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections, or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the project is comprised of two different soil types and water (reference (19)). The soils information is included in Table 11-1 and Map 8.

Table 11-1 Soils within the project

Map Unit Symbol	Map Unit Name	Acres within Project	Percent of Project
F128A	Hulligan fine sandy loam, 0 to 1 percent slopes	0.70	23.2
1020A	Bowstring and Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded	0.06	2.1
N/A	Water	2.26	74.7

Organic matter content is low for F128A and high for 1020A. The soil texture is fine sandy loam for F128A and muck for 1020A. The parent material for F128A is loamy material over gravelly outwash and 1020A is from alluvium (reference (19)).

Project sediments were sampled in 2023 to characterize the chemical and physical characteristics. Material to be dredged during the project consists primarily of silt, sand, and clay with some organics. Coarse aggregate/gravel was identified near the mouth of Knowlton Creek. Sampled material was documented as not contaminated and suitable for unrestricted upland use as discussed further in Section 13 (Appendix B).

Topography along the shoreline near the project is generally flat. The pre-dredge hydrographic survey measured the project marine areas below Low Water Datum (LWD) elevation 601.1 (Appendix A).

The project is limited to mechanical dredging and would avoid dredging native material. The EPA, or its contractor, will selectively dredge up to 12,000 cubic yards of sediment within Tallas Bay, corresponding to a depth range of approximately 4 to 7 feet. The estimated removal quantity of approximately 9,400 cubic yards was calculated by using existing bathymetric conditions from USACE-conducted hydrographic and topographic survey completed in October 2022 and the post-dredge bottom elevations from the 2010–2013 dredging project. Together they define the accumulation of sediment within the proposed dredging footprint.

A slope stability analysis was completed to better understand the potential impacts of deeper dredging in Tallas Bay. The analysis indicated that any digging into native soil would require either a shallower slope or over-excavation and replacement with granular material to maintain a stable 3:1 slope along the shoreline. The current design avoids dredging into native material which reduces the potential for shoreline instability and limits the need for soil correction or structural stabilization measures. The project would not include placement of material or permanent grading.

> NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 12 must be consistent with the geology, soils, and topography/land forms and potential effects described in EAW Item 11.

The project is not a silica sand project and therefore this is not applicable.

12 Water Resources

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

    i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

Tallas Bay is a shallow, hydraulically connected backwater of the St. Louis River. It is located within the St. Louis River estuary, a large (~12,000-acre) freshwater coastal system characterized by

interconnected bays, wetlands, and channels. In the vicinity of the project, there are multiple surface-water features including Tallas Bay, Knowlton Creek, and the St. Louis River (Map 9). Within Tallas Bay, a northern pool at the mouth of Knowlton Creek connects to a larger southern pool through a linear channel, with the southern pool also connected to the St. Louis River. Knowlton Creek delivers runoff and sediment to Tallas Bay, and the St. Louis River, a designated Area of Concern (AOC). Together, Tallas Bay and the St. Louis River forms the receiving water system.

Hydrologically, the bay functions as a low-energy depositional environment where sediment transported from the Knowlton Creek watershed accumulates. Prior to previous dredging efforts, this sediment accumulation had converted portions of the bay into wet meadow conditions. The St. Louis River estuary supports a mosaic of coastal wetlands, shallow aquatic habitat, and open water, and the project area is also directly influenced by fluctuating Lake Superior water levels and estuarine flow dynamics. The site lies within a heavily modified estuarine system where past dredging, filling, and industrial activity have altered natural hydrology and wetland extent. Restoration efforts are ongoing to improve habitat, connectivity, and water quality.

Tallas Bay is within the St. Louis Bay assessment unit, designated as AUID 69-1291-02 (reference (20)). Under Minnesota Rules Chapter 7050, this waterbody is designated as Class 2B, protected for cool/warm water fisheries and aquatic recreation. The project area is also located within the St. Louis River Estuary National Water Trail. The mapped water trail route passes on both sides of Tallas Island, providing recreational paddling access through the vicinity of the project area.

It is listed on the Minnesota Pollution Control Agency (MPCA) 303(d) Impaired Waters List (reference (20)) for aquatic consumption and aquatic recreation impairments. Impairments within 1 mile of the project area include mercury, Polychlorinated biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin, and toxaphene, reflecting legacy contaminated sediments and aquatic toxicity. Additionally, sulfate has been added as a new impairment for this reach. This is important given the presence of shallow, sheltered littoral zones capable of supporting wild rice production.

Two aquatic invasive species documented in the St. Louis River Estuary and Duluth-Superior Harbor include non-native common reed *(Phragmites australis*) and zebra mussel (*Dreissena polymorpha*). Non-native Phragmites has been the subject of removal efforts within the estuary, while zebra mussels were first confirmed in the Duluth-Superior Harbor in 1989 (reference (21)). The project area is also identified as important coastal wetland and migratory bird habitat within the St. Louis River Area of Concern and Lake Superior coastal ecosystem (reference (22)).

National Wetland Inventory (NWI) wetland types and acreages in the project area include freshwater emergent wetland (PEM), freshwater forested/shrub wetland (PFO/PSS), and unconsolidated bottom/open water (PUB), totaling approximately 3.025 acres.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Groundwater is not a primary consideration because the project area in Tallas Bay is located within a shallow coastal estuary and open-water/wetland complex that is hydraulically connected to the St. Louis River. Regional hydrogeologic information indicates that the Duluth area has a bedrock geology consisting of layered troctolite and gabbro of the Troctolitic Series of the Duluth Complex. Groundwater

flow in the vicinity is likely limited to shallow glacial sediments, bedrock fractures, and localized sand lenses that discharge to nearby surface waters. Because the project area is located in open water and saturated soils, a conventional upland depth to groundwater is not applicable. No springs or seeps have been identified within the project area (reference (17)).

The project area is not located within a Minnesota Department of Health Wellhead Protection Area. The Minnesota County Well Index database (Minnesota Geological Survey 2019) was reviewed and no wells were identified within the project area. The nearest well is an unverified well (Unique Well ID 552018 (MW-3 CITY OF DULUTH) and located approximately 0.9 miles from the project area at the Spirit Mountain ski resort. The well depth is reported as 11 feet, while the ground-surface elevation is not reported. No major municipal or industrial wells are known to occur in the immediate project vicinity. The City of Duluth relies on Lake Superior as its municipal water supply rather than groundwater extraction.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

    i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

The project is a mechanical dredging and habitat restoration activity and would not generate sanitary, municipal/domestic, or industrial wastewater during long-term operation, consistent with similar dredging projects.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

No discharge to a publicly owned treatment works is identified, and no impacts to municipal wastewater infrastructure or treatment capacity are anticipated.

2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and the suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.

The project does not include septic systems or subsurface sewage treatment systems (SSTS); therefore, SSTS design flow, site suitability, and septage management requirements are not applicable.

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.

Temporary drainage/discharge water generation will occur during construction as part of dredged-material dewatering. Dredged material will be conveyed to a designated dewatering area where water is separated from sediment, collected, treated, monitored, and discharged under controlled conditions prior to release. Anticipated treatment measures include sediment settling and dewatering controls associated with the contractor's dewatering system. Construction specifications also require turbidity monitoring and operational adjustments if water quality impacts are observed during dewatering activities. Treated dewatering effluent may be discharged to the St. Louis River estuary at controlled discharge point(s), subject to applicable MPCA National Pollutant Discharge Elimination System (NPDES)/ State Disposal System (SDS) permit requirements. These measures are intended to minimize short-term increases in turbidity, suspended solids, and potential contaminant mobilization during construction.

Final permit conditions and contractor-specific dewatering methods have not yet been identified, so the specific outfall designation, treatment technology, and monitoring thresholds have not been established. Final construction plans and permit documents will identify the discharge location(s), applicable turbidity or water-quality criteria, monitoring requirements, and any additional treatment measures required prior to discharge. Overall, drainage/discharge water associated with the project is expected to be temporary, construction-related, and managed through treatment, monitoring, and controlled discharge procedures designed to protect water quality in the St. Louis River estuary.

ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate, and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

During construction, temporary stormwater-related effects may occur as a result of equipment staging, sediment handling and transport, dredged-material dewatering activities, and localized soil disturbance at staging or dewatering areas. Temporary construction activities could increase the potential for erosion, sediment-laden runoff, and inadvertent releases of fuels or other contaminants if not properly managed. Runoff from the project area drains directly to Tallas Bay, which is hydraulically connected to the St. Louis River estuary. The St. Louis River subsequently discharges to Lake Superior.

The project will comply with the NPDES/SDS Construction Stormwater Permit for disturbance exceeding one acre. Contract specifications require development of an Environmental Protection Plan and Stormwater Pollution Prevention Plan (SWPPP) that identify and implement best management practices (BMPs), including:

- Stormwater pollution prevention measures
- Erosion control measures such as stabilization, erosion-control blankets, and other erosion-prevention practices
- Sediment control measures such as containment, settling, and sediment-management practices
- Runoff control and management procedures
- Spill prevention and response procedures
- Protection of wetlands, adjacent surface waters, and other natural resources
- Inspection, maintenance, and adaptive management procedures throughout construction

The project would not create new impervious surfaces or permanently alter watershed drainage patterns. Following completion of construction, runoff will continue to follow existing drainage pathways to Tallas Bay and the St. Louis River estuary. The project will maintain existing site hydrology and will not require permanent stormwater ponds, infiltration basins, underground treatment systems, or other structural stormwater-treatment practices. As a result, permanent stormwater management facilities are not proposed. Existing hydrologic conditions will be maintained, and the project is designed to restore aquatic habitat within Tallas Bay without altering natural watershed runoff processes.

Climate considerations were incorporated into the evaluation of stormwater effects. Increased frequency and intensity of precipitation events projected for Minnesota have the potential to increase erosion, sediment transport, and runoff during construction activities. Permit-required BMPs and adaptive management measures included in the Environmental Protection Plan and SWPPP would allow construction practices to be modified in response to observed site conditions, weather events, and water-quality monitoring results. Because of this, stormwater impacts associated with the project are expected to be temporary, construction-related, and effectively minimized.

iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

The project would not involve consumptive use of water resources. However, temporary water appropriation, water management, and discharge activities associated with dredging and dewatering operations would require authorization under an MDNR Temporary Water Appropriations General Permit No. 1997-0005. The contractor would obtain authorization through MPARS before pumping begins and

would comply with applicable measurement, reporting, discharge-control, and environmental-protection requirements

Water managed during dewatering would consist of Tallas Bay/St. Louis River water entrained in dredged sediment and separated from the dredged material at the designated offloading and dewatering site. The water would be used only as part of dredged-material handling and would be collected, treated as necessary, monitored, and discharged in accordance with project specifications and applicable permit requirements. Project specifications require water-quality monitoring during dewatering activities, controlled handling and disposal of process water, and measures to prevent uncontrolled infiltration at the dewatering site. Controlled dewatering systems would be used to manage water separated from dredged sediments and to minimize adverse effects on surrounding land and water resources. Final dewatering volume and duration would depend on contractor means and methods, dredging production rates, sediment moisture content, weather, and water-level conditions. The estimated quantity and duration of dewatering would be identified in the contractor's dewatering plan and applicable permit application.

No new wells would be constructed as part of the project, and no well abandonment would occur because of the project. Water used during dewatering is generated directly from dredging operations and does not involve long-term withdrawal of groundwater or surface water for consumptive use.

Potential environmental effects associated with dewatering are expected to be temporary. Effects may include temporary impacts to aquatic resources within the littoral zone of the bay, short-term handling, treatment, and discharge of dewatering effluent, and the potential for aquatic biota to be transported along with drained water. Potential impacts may also include localized increases in turbidity, suspended solids, or other water-quality parameters if dewatering water is not properly managed. Given the temporary nature of the activity, as well as the large volume and dynamic hydrology of the St. Louis River estuary, these effects are expected to be localized and short term.

To minimize potential impacts, the project would include the following mitigation measures:

- Dewatering water treatment
- Discharge monitoring and adaptive control
- Process-water containment and disposal
- Controlled dredging
- Sediment-spillage minimization
- Environmental Protection Plan and monitoring procedures

These measures are intended to minimize turbidity, reduce the potential for sediment releases, limit impacts to aquatic resources, and maintain compliance with applicable water-quality requirements.

The limited, temporary nature of dewatering activities is not expected to affect regional water supply, groundwater resources, surface-water availability, or overall hydrology. Because water managed during dewatering is generated from dredging operations rather than an external water-supply source, the project is also considered resilient to climate variability and changing hydrologic conditions. The project does not rely on new groundwater withdrawals, municipal water supplies, or long-term surface-water

appropriations and therefore is not expected to affect regional water availability under current or anticipated future climate conditions.

iv. Surface Waters

a. Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.

Project activities would impact more than one acre of public water wetlands, which triggers the preparation of this EAW. The estimated impact area is approximately 3 acres. These effects are associated with habitat restoration activities intended to address historical sediment accumulation and improve wetland and shallow-water habitat functions within Tallas Bay.

The project would dredge through sediment-filled shallow-water and wetland areas. Direct effects of the project include temporary turbidity and sediment disturbance during dredging activities, removal of vegetation and organic materials within targeted restoration areas, and short-term disruption of wetland functions during construction.

Indirect effects may include changes in wetland hydrology, vegetation composition, and sediment movement as restored areas reestablish. These changes are expected to improve hydrologic connectivity between Tallas Bay wetlands and the St. Louis River estuary and enhance habitat conditions in areas degraded by historical sediment accumulation. These are considered beneficial long-term effects, which also include increased habitat diversity, enhanced ecological function, and improved conditions for fish and wildlife species associated with coastal wetland ecosystems. By removing excess sediment and restoring wetland and shallow-water habitats, the project would support ongoing restoration goals within the St. Louis River Area of Concern.

Avoidance and minimization measures would be appropriately incorporated into final project design, applicable permit applications, and implementation. These would include measures like limiting dredging to targeted restoration areas and implementing BMPs. Construction activities would be monitored to minimize sediment transport, turbidity, and disturbance outside the designated work area. The project would comply with applicable wetland permitting requirements and would be considered a no net loss as the project’s purpose is to restore habitat.

Potential environmental effects are also considered in the context of current Minnesota climate trends and anticipated climate change. Increased precipitation intensity and frequency could increase watershed runoff, sediment delivery, and erosion within the Tallas Bay watershed. Restoring wetland connectivity, increasing habitat diversity, and improving hydrologic function are expected to enhance the resilience of the estuarine system to future climate-driven changes in runoff and water levels. BMP implementation, adaptive management, and restoration of wetland functions will help reduce vulnerability to these changing conditions.

b. Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

Long-term effects of the project are anticipated to be beneficial and include increased depth diversity, improved local water exchange and hydrologic connectivity, removal of sediment accumulation within targeted areas, enhanced aquatic habitat conditions, and improved ecological function within the estuary. Restoration of hydraulic connections between aquatic habitat areas is expected to improve fish passage, increase the diversity of aquatic habitats, and support ongoing restoration efforts within the St. Louis River Area of Concern. The project is intended to restore ecological functions that have been impaired by historic sediment deposition and habitat degradation.

Indirect effects may include changes in local flow patterns, redistribution of sediments within the bay, improved exchange of water among habitat areas, and shifts in aquatic vegetation communities as restored habitats become reestablished. At the watershed scale, the project is expected to improve the capacity of Tallas Bay to function as a connected estuarine habitat within the St. Louis River system while maintaining existing drainage patterns and watershed processes.

To avoid and minimize environmental effects to surface-water resources, the project incorporates several avoidance, minimization, and mitigation measures. Dredging activities will implement BMPs and be limited to targeted restoration areas to reduce unnecessary disturbance of aquatic habitats.

During construction activities, lights, signals, and buoys would be used to identify active work areas within Tallas Bay. Recreational users of the St. Louis River Estuary National Water Trail would be able to continue utilizing the trail by navigating around the opposite side of Tallas Island, outside of the active construction area.

The project is not expected to substantially change the number or type of watercraft using Tallas Bay or the St. Louis River estuary post construction activities. The project would not create new access points, boating facilities, or navigation channels. Improved depth conditions may enhance navigability, but no substantial increase in watercraft traffic, changes in watercraft type, or alterations to existing access patterns are anticipated. It is noted that avoiding dredging over the existing pipeline shown on Map 3 and discussed in the Project Description section would result in an undredged berm feature remaining in the vicinity of the pipeline following project activities. Depending on future water levels and recreational use patterns, the berm could potentially be contacted by anchors or other recreational boating equipment. Existing recreational and management-related watercraft use is expected to continue following project completion.

13 Contamination/Hazardous Materials/Wastes

a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The Minnesota Pollution Control Agency's "What's in My Neighborhood" database was queried to identify sites of known or potential contamination/environmental hazards within or near the project. There were no sites listed within 500 feet of the project boundary (Map 10) (reference (23)).

Sediment sampling conducted in June 2023 indicated the material sampled was not contaminated and suitable for unrestricted upland use; analytical results available upon request.

The contractor would prepare a Contaminant Prevention Plan and Spill Contingency Plan in accordance with applicable requirements and permits. The plans would summarize spill prevention measures, spill containment/control procedures, reporting requirements, and cleanup requirements.

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Construction would generate dredged sediment, screened vegetation/organic material, debris if encountered, and temporary construction waste which would require solid waste management reporting, disposal at approved facilities, certificates of disposal, and restoration of the offloading and dewatering site.

The project is not expected to generate significant amounts of other solid waste. The contractor would be responsible for hauling any construction-generated waste to the off-site placement or disposal facility. Should unanticipated materials be encountered during construction activity, they would be evaluated, and the contractor would be responsible for proper disposal. This could include hauling off-site to an appropriate solid waste management facility, which would be in accordance with all applicable federal, state, and local laws, rules, and regulations.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the project will use. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

The contractor's equipment requires fuel (diesel and/or gasoline) and oils (lubricating and hydraulic). The contractor would comply with the U.S. Coast Guard, and Wisconsin and Minnesota Departments of

Transportation regulations as applicable to marine work, construction activities, and truck transport for handling of fuels and oils.

No hazardous materials would be permanently stored on-site. Temporary storage of hazardous materials may occur during specific construction activities and would be limited to designated storage areas at least 100 feet from water or drainage ways. Hazardous material storage on-site would require secondary containment, signage, and preventive maintenance inspections. Spill kits would be stored near any hazardous materials. Vehicle maintenance would only be allowed in designated areas. Hazardous materials may be stored on barges during in-water construction work. Secondary containment, routine preventive maintenance inspections, and spill kits would be required.

The contractor would take special measures to prevent chemicals, fuels, oils, greases, and other pollutants from entering the waterway. The contractor would have a Contaminant Prevention Plan and a Spill Control Plan in the event of an unforeseen spill of a substance regulated by either the Emergency Response and Community Right-to-Know Act or under state or local laws or regulations. The contractor would report all spills immediately to the DNR contracting officer and any reportable quantities to the legally required federal, state, and local reporting channels (including the National Response Center 1-800-424-8802 and the Minnesota Duty Officer). The contractor is required to have spill kits on site to contain and/or neutralize accidental minor discharges. These safeguards minimize the chance of a significant impact.

The BMPs listed above reduce the chances of an accidental spill and would help to confine adverse impacts. Potential environmental impacts of an accidental spill or release include contamination of soil and water resources and degradation of habitat. Direct contact with hazardous materials or contaminated soil and water can disrupt the lifecycle of fish and wildlife and lead to sickness and death. Plant communities can also be damaged or killed by contact with contaminants. If spills are not properly isolated or remediated, these impacts can persist in the environment.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling

The sediments dredged for the project do not meet the definition of hazardous waste, and no other actions by the project would generate any hazardous waste.

14 Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

The DNR, in collaboration with the U.S. Forest Service, developed an Ecological Classification System (ECS) for hierarchical mapping and classification of Minnesota land areas with similar native plant communities and other ecological features. Based on the ECS, the upland area adjacent to the project area is located in the North Shore Highlands Subsection of the Northern Superior Uplands Section of the Laurentian Mixed Forest Province (reference (24)). The North Shore Highlands Subsection occupies the area adjacent to Lake Superior. Pre-settlement vegetation consisted of aspen-birch forest, white pine-red

pine forest, mixed hardwood-pine forest, conifer bogs and swamps, and the St. Louis River. Currently, the majority of the subsection remains forested, with areas of residential and industrial development.

The habitat type in the project area consists of a shallow bay and wetland complex on the northwest bank of the St. Louis River between the outlet of Knowlton Creek and Tallas Island (Map 1). This area provides habitat for a variety of fish/aquatic biota, birds, and mammals.

Fish and aquatic biota within and near the project area reflect the diverse warmwater and estuarine community of the St. Louis River system. The hydraulically connected backwater, shallow bay, and wetland habitats in Tallas Bay and the adjacent river provide suitable habitat for a variety of fish species, including northern pike, muskellunge, longnose sucker, and white sucker. These species utilize shallow vegetated areas and connected wetlands for spawning, nursery habitat, and seasonal refuge or run upstream into tributaries or utilize lake shoals. In addition, the broader St. Louis River estuary supports a diverse assemblage of warmwater fish typical of coastal wetland and backwater environments. Habitat conditions vary across shallow, low-energy depositional zones, channels, and open-water areas. The project area provides important habitat for multiple life stages of fish, including foraging areas, overwintering refuge in deeper pools, and migration corridors between Knowlton Creek, Tallas Bay, and the mainstem St. Louis River. Aquatic biota in the area also includes macroinvertebrates and other organisms associated with littoral and wetland habitats that support the overall food web and ecological function of the estuary.

The project is located in an area recognized by the National Audubon Society as the St. Louis River Estuary Important Bird Area (Map 11). This area provides habitat for waterfowl, raptors, shorebirds, gulls, and passerines, and is noted for being one of the best and most popular sites for bird watching in Minnesota. The area serves as a corridor for migrating songbirds, shorebirds, and raptors, and provides critical food and shelter for these migrants. Over the years, more than 240 bird species have been documented in the St. Louis River Estuary Important Bird Area (reference (25)). These species utilize the mosaic of open water, emergent wetlands, forested shoreline, and adjacent uplands within the estuary for nesting, foraging, resting, and migration stopover habitat.

A variety of mammals can be found in the area, including white-tailed deer, coyotes, red fox, skunks, raccoons, squirrels, chipmunks, rabbits, and woodchucks in the upland areas and beavers, muskrats, mink, and river otters in the river/wetland areas. These species reflect the mix of upland forest and wetland/aquatic habitats present in the project area and utilize the site for foraging, cover, and movement along the St. Louis River corridor. The semi-aquatic species are particularly associated with wetland and nearshore habitats found within Tallas Bay.

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-_) and/or correspondence number (MCE_) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

Barr queried the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) online tool on July 7, 2026, for a list of federally threatened and endangered species, proposed species, candidate species, and designated critical habitat that may be present within the vicinity of the project. The IPaC results represent a generalized screening tool and do not confirm the presence of these species within the project area. The IPaC query noted that the project area does not intersect any

designated critical habitat and identified six federal species that could potentially be in or near the project area, including three threatened species and three proposed endangered or threatened species (Appendix C). The IPaC query also identified the bald eagle (*Haliaeetus leucocephalaus*) and golden eagle (*Aquila chrysaetos*) as potentially being present within or near the project area. The species identified in the IPaC query, and their typical habitats are summarized in Table 14-1.

Federally proposed threatened or endangered species are species that the USFWS has determined are in danger of extinction throughout all or a significant portion of their range and has proposed a draft rule to list them as threatened or endangered. Until they are officially listed, proposed species are not protected by the take prohibitions of the federal Endangered Species Act. Bald eagles and golden eagles are protected under the federal Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).

Table 14-1 Federal Species Potentially Present within the Vicinity of the Project

Scientific Name	Common Name	Federal Status	State Status	Typical Habitat
Lynx canadensis	Canada lynx	Threatened	Special concern	Dense mixed northern boreal spruce-fir or boreal hardwood forests (reference (26)).
Canis lupus	Gray wolf	Threatened	Special concern	Forested portions of central and northern Minnesota but can be found in a wide range of habitats, depending on location of prey (reference (27)).
Calidris canutus rufa	Rufa red knot	Threatened		Majority follow migration routes along the east and west coasts of the U.S., but some have been documented along an inland route across the Midwest during spring and fall migrations. They typically use habitats such as alkali lakes and wetlands, including sparsely vegetated shorelines, sandbars, islands, salt-encrusted mud flats, and gravelly salt flats. The species does not breed in Minnesota (reference (28)).
Perimyotis subflavus	Tricolored bat	Proposed endangered	Special concern	Hibernates in caves or abandoned mines during the winter. During the summer, the tricolored bat may roost within leaf clusters of live, dead, or dying trees (reference (29)).
Bombus suckleyi	Suckley's cuckoo bumble bee	Proposed endangered	Not listed	Grasslands with flowering plants from April through October. This species parasitizes other bumble bee nests as nesting sites for hibernating queens to overwinter (reference (30)).
Danaus plexippus	Monarch butterfly	Proposed threatened	Not listed	This species is found in areas with a high number of flowering plants, which provide sources of nectar. Monarchs rely exclusively on the presence of milkweed (Asclepias spp.) to complete the caterpillar life stage (reference (31)).
Haliaeetus leucocephalaus	Bald eagle	Protected under MBTA and BGEPA	Not listed	Forested areas near larger lakes or rivers (reference (32)).
Aquila chrysaetos	Golden eagle	Protected under MBTA and BGEPA	Not listed	Open country in the vicinity of hills, cliffs and bluffs. Golden eagles are known to be sensitive to human activity and are known to avoid developed areas (reference (33)).

The DNR Natural Heritage Inventory System (NHIS) database (License Agreement #2025-012) was queried through the Minnesota Conservation Explorer (MCE) on July 7, 2026, to assess the presence of state and federally protected species within one mile of the project area. According to the NHIS database, no state or federally threatened or endangered species have been documented within one mile of the

project area. The NHIS database query did identify three records of state special concern species within one mile of the project area; these species and their typical habitats are summarized in Table 14-2. Special concern species are not legally protected under the Minnesota Endangered Species Statute.

Table 14-2 Species Identified in the Natural Heritage Information System Database within One Mile of the Project

Scientific Name	Common Name	Federal Status	State Status	Typical Habitat[1]
Acipenser fulvescens	Lake sturgeon	Not listed	Special Concern	Moderately clear, large rivers and lakes; most often found over firm sand, gravel, or rubble bottoms.
Elliptio complanata	Eastern elliptio	Not listed	Special Concern	Lakes and streams in a variety of substrate types.
Shepherdia canadensis	Soapberry	Not listed	Special Concern	Coniferous forest, usually in pine forests but also with hardwoods (fire-dependent forest), especially on steep rocky bluffs, rocky ledges, and outcrops.

1 (reference (34))

The MCE was reviewed for the presence of sensitive ecological resources within or adjacent to the project area. In addition to the St. Louis River Estuary Important Bird Area, the MCE identifies that the project area is located in a Minnesota Biological Survey (MBS) Site of Biodiversity Significance ranked moderate (Riverside to Grassy Point) and a Lake of Biological Significance ranked outstanding (St. Louis River Estuary).

The DNR describes a Site of Biodiversity ranked moderate as one that may have occurrences of rare species or moderately disturbed native plant communities. The project area is designated as a Site of Biodiversity Significance with a moderate rating (Map 11). The DNR has not mapped any native plant communities within this Site of Biodiversity Significance but two of the special concern species identified in Table 14-2, lake sturgeon and eastern elliptio, were documented in the Site of Biodiversity Significance.

The DNR maps certain waterbodies as Lakes of Biological Significance based on the unique presence of aquatic plants or animals. The DNR assigns biological significance classes (outstanding, high, or moderate) to these waterbodies based on a variety of factors, such as the quality of the lake/habitat and presence of certain plants and animals. The St. Louis River Estuary Lake of Biological Significance was ranked outstanding based on its bird and plant species composition (Map 11).

A Natural Heritage Review (NHR) was submitted to the DNR through the Minnesota Conservation Explorer (MCE) on July 7, 2026 (MCE #2026-00566) to obtain the DNR's input on potential impacts to protected species and sensitive ecological resources. A NHR response was received on August 7, 2026 and is provided in Appendix C.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The project may have minor temporary impacts on wildlife in the vicinity of the project area. Temporary impacts to wildlife may occur during construction activities, as a result of increased noise and human activity in the vicinity of the project area. Many species, even those accustomed to human disturbance, would likely temporarily avoid or abandon habitats near the project area during active construction, but are expected to return following completion of work.

The project could have temporary and permanent impacts on aquatic biota inhabiting the project area or its vicinity. During dredging activities, it is anticipated that the more mobile organisms would relocate to adjacent aquatic habitats, but that mortality of the more sessile aquatic organisms, such as mussels, could occur if they reside within the areas of active dredging. Temporary increases in turbidity and sediment disturbance may also affect aquatic organisms by reducing water clarity and altering habitat conditions during construction. Ultimately, the project is designed to improve aquatic habitat by removing accumulated sediment to create deeper pools, improve bathymetry for fish and wildlife habitat, enhance coastal wetland habitat, and improve connectivity to Knowlton Creek for stream-spawning fish. As discussed in EAW Item 6 (Project Description), these objectives reflect both ecological restoration and public resource goals, including improved resiliency and functional connectivity in a shallow bay/backwater system that has been affected by sedimentation and past watershed disturbance. Overall, temporary impacts are expected during construction, while long-term impacts are anticipated to be beneficial due to the restoration of habitat complexity, depth diversity, and hydrologic connectivity.

The project is not anticipated to have significant adverse impacts when considering future climate trends. Project improvements, including increased depth diversity and restored connectivity, are expected to enhance the ability of aquatic and wetland habitats to respond to climate-driven changes such as fluctuating water levels, increased temperatures, and altered precipitation patterns. The project would result in more diverse habitat that would allow fish, wildlife, and plant communities to adjust to changing conditions, thereby increasing their resilience to climate change impacts. Additionally, flood capacity may slightly improve as a result of the project.

Federally Protected Species

The project area and its immediate vicinity do not provide suitable habitat for the federally protected Canada lynx, gray wolf, Suckley's cuckoo bumble bee, or monarch butterfly; as such, impacts to these species are not anticipated from the project. The Minnesota-Wisconsin Endangered Species Determination Key (Minnesota-Wisconsin DKey) was evaluated in IPaC, and a no effect determination was concluded for the monarch butterfly and a may affect, not likely to adversely affect determination was concluded for Canada lynx and gray wolf (Appendix C). The Minnesota-Wisconsin DKey does not include Suckley's cuckoo bumble bee; however, it is anticipated that a no effect determination would be concluded for this species.

Rufa red knots are not common in Minnesota and do not nest in the state. However, it is possible that rufa red knots could inhabit the project area during migration (May 15 to June 15 and July 1 to September 30). Should project activities occur during the migration windows and rufa red knots be present in or near the project area, potential impacts could occur. The Minnesota-Wisconsin DKey was evaluated in IPaC and a may affect determination was concluded for rufa red knots (Appendix C).

The NHIS database does not indicate the documented presence of any tricolored bats within one mile of the project. Although suitable forested habitat is present adjacent to the project area, no trees would be removed as part of project construction. Due to lack of tree clearing and the fact that no tricolored bats have been documented near the project area, impacts to the tricolored bat are not anticipated from the

project. The Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key was evaluated in IPaC and a no effect determination was concluded for the tricolored bat (Appendix C).

Bald eagles are known to inhabit forested areas near the St. Louis River Estuary and Lake Superior. Impacts to bald eagles could occur should they be nesting within or adjacent to the project area. The USFWS bald eagle management guidelines indicate that activities within 660 feet of an active nest have the potential to disturb nesting bald eagles (reference (35)). The project area and its immediate vicinity do not provide suitable habitat for the federally protected golden eagle; as such, impacts to this species is not anticipated from the project.

State Protected Species

The project area and its immediate vicinity do not provide suitable habitat for the state special concern soapberry; as such, impacts to this species are not anticipated from the project. Suitable habitat for lake sturgeon and eastern elliptio is present in the project area and its vicinity. As mentioned previously, mobile aquatic species like lake sturgeon would likely flee the area during dredging activities but more sessile organisms, such as the eastern elliptio mussel, could be directly impacted if present in an area of active dredging. As noted above, state special concern species are not legally protected under the Minnesota Endangered Species Statute.

Temporary impacts to the St. Louis Estuary Important Bird Area, Site of Biodiversity Significance, and Lake of Biological Significance would occur during dredging; however, ultimately, habitat within these sensitive ecological resources would be improved upon as a result of the project.

Invasive Species

Construction activities have the potential to contribute to the introduction or spread of invasive species through the movement of equipment, materials, or disturbed soils and sediments. According to DNR sampling efforts in the St. Louis River Estuary, a variety of invasive species have entered the harbor over the last several decades. The DNR invasive species data indicates that the following invasive species have been documented within 1,000 feet of the project area: two fish species, Eurasian ruffe (*Gymnocephalus cernuus*) and white perch (Morone americana); one wetland/aquatic plant species, purple loosestrife (*Lythrum salicaria*), and three terrestrial plant species, wild parsnip (*Pastinaca sativa*), garlic mustard (*Alliaria petiolate*), and European buckthorn (*Rhamnus cathartica*). None of these species has been documented within the project area.

Invasive species also have the potential to be present at the offloading and dewatering site and, if present, could potentially be spread through the handling and transport of dredged materials between the offloading and dewatering site and the off-site placement or disposal facility. As noted in the project description, the offloading and dewatering site is assumed to be impervious but small patches of vegetation may be present and seeds can also be present in limestone or other onsite materials; therefore, there is a potential for the presence of invasive species at the offloading and dewatering site. The conceptual offloading and dewatering site to serve as an example of the type of facility that could be used as an offloading and dewatering site (reflected in Appendix A and Appendix B) has records dating from 2013 to 2019 of identified invasive species present.

d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.

Several measures would be implemented to avoid, minimize, and mitigate potential adverse effects to fish, wildlife, plant communities, and sensitive ecological resources. In their NHR response (Appendix C), the DNR recommends the following actions to avoid or minimize impacts to ecologically sensitive areas:

- As much as possible, operate within already-disturbed areas.
- Minimize vehicular disturbance in the MBS Site (allow only vehicles/equipment necessary for construction activities).
- Do not park equipment or stockpile supplies in the MBS Site.
- Do not place spoil in the MBS Site or other sensitive areas.
- Use effective erosion prevention and sediment control measures.
- Inspect and clean equipment prior to operation and follow recommendations to prevent the spread of invasive species.
- Revegetate disturbed soil with native species suitable to the local habitat as soon after construction as possible.
- Use only weed-free mulches, topsoils, and seed mixes. Of particular concern are birdsfoot trefoil (*Lotus corniculatus*) and crown vetch (*Coronilla varia*), two invasive species that are sold commercially and are problematic in prairies and disturbed open areas.

To minimize potential impacts to aquatic species, such as lake sturgeon and eastern elliptio, the DNR indicated in their NHR response (Appendix C) that effective erosion and sediment control practices should be implemented and maintained near the lake throughout the project to minimize turbidity to the extent feasible. As described above in EAW Item 12 (Water Resources), erosion and sediment control BMPs would be installed throughout the project area to minimize potential impacts to water quality during and after construction; this would minimize potential impacts to aquatic species. The DNR also recommends avoiding dredging from April through June 15 to protect spawning fish.

If an active bald eagle nest is identified within 660 feet of the project area, appropriate coordination with the USFWS would occur to avoid disturbance.

Impacts to the federally protected Canada lynx, gray wolf, tricolored bat, rusty-patched bumble bee, monarch butterfly, golden eagle or the state special concern soapberry are not anticipated from the project and no mitigation measures are proposed.

Conducting pre-construction surveys for the presence of rufa red knots during the migration windows (mid- April to early June and late July to early September) or avoiding construction activities during rufa red knot migration would minimize potential impacts. Should they be present within or near the project area, the project would undergo Section 7 consultation with the USFWS to develop strategies to avoid or minimize potential impacts to rufa red knots.

Typical contracting documents include language that requires preventing or limiting the introduction, establishment, and spread of invasive species during construction activities. Among other things, the contractor would be required to prevent invasive species from entering or spreading within a project area by cleaning equipment and clothing prior to arriving at the project site. If invasive species are determined to be within the proposed project limits, the contractor would also be required to clean equipment prior to

leaving the project limits. Adherence to Minnesota DNR invasive species prevention measures is expected to minimize the risk of introduction or spread of invasive species.

Additionally, project specifications require dredged materials to be transported in leak-tight vehicles equipped with spill- and splash-prevention measures. The specifications also require cleanup of dredged material that may be spilled during loading, unloading, or transport activities and require material deposited around vehicles during transfer operations to be removed prior to vehicles leaving the site. These requirements are intended to minimize the potential for dredged materials to be unintentionally dispersed during transport to an approved placement or disposal facility.

Collectively, these measures are expected to minimize short-term construction-related impacts while supporting long-term improvements to aquatic and wetland habitat quality and ecological function within the project area.

15 Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The project is on the traditional, ancestral, and contemporary lands of the Saulteaux, the Lakȟótiyapi (Lakota), the Southern Anishinaabemowin (Ojibwe), the Dakȟóta (Western Dakota), and the Dakhóta (Eastern Dakota) (reference (36)). These Native American nations have longstanding cultural, historical, and contemporary connections to Minnesota and continue to contribute to the state's culture and identity.

As the lead federal agency for Section 106 compliance, the EPA has initiated government-to-government consultation with the following Tribal Nations regarding the Project and potential effects on historic properties and cultural resources:

- Apache Tribe of Oklahoma
- Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation, Wisconsin
- Bois Forte Band (Nett Lake) of the Minnesota Chippewa Tribe
- Cheyenne and Arapaho Tribes, Oklahoma
- Citizen Potawatomi Nation, Oklahoma
- Fond du Lac Band of the Minnesota Chippewa Tribe
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
- Grand Portage Band of the Minnesota Chippewa Tribe
- Grand Traverse Band of Ottawa and Chippewa Indians

- Keweenaw Bay Indian Community, Michigan
- Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin
- Leech Lake Band of the Minnesota Chippewa Tribe
- Menominee Indian Tribe of Wisconsin
- Mille Lacs Band of Ojibwe (The Mille Lacs Band of the Minnesota Chippewa Tribe Mille Lacs Band of Ojibwe)
- Upper Sioux Community, Minnesota
- White Earth Band of the Minnesota Chippewa Tribe

During consultation, the Fond du Lac (Fond du Lac) Band of Lake Superior Chippewa have identified the potential for cultural resources within the Tallas Bay area, including the potential presence of archaeological materials associated with historic Tribal use of back-bay environments along the St. Louis River. The Fond du Lac Band also expressed concern that archaeological materials from upstream locations could be present within sediments deposited in portions of the Project area. EPA has coordinated with consulting Tribes regarding these concerns, cultural resource protection measures, and procedures for addressing inadvertent discoveries during construction. Cultural resource considerations have also informed project development, including efforts to limit dredging to previously disturbed sediments and avoid excavation into native soils where practicable. EPA has further coordinated with interested Tribal Nations regarding opportunities for Tribal participation during construction activities, including potential monitoring of dredging and material handling activities, subject to applicable agency procedures and available funding.

In addition to ongoing Tribal consultation, as part of the cultural resources assessment for the project, and on behalf of the RGU, Barr performed a records check through the Minnesota Office of the State Archaeologist (OSA) Portal and the Minnesota Statewide Historic Inventory Portal (MnSHIP) in July 2026 to identify previously recorded archaeological sites, historic cemeteries, and historic architectural resources located within the project area and within one mile (1-mi). No cultural resources have been documented within the project area. Within a 1-mi radius surrounding the project area, five archaeological sites and 46 historic architectural resources have been recorded. No historic cemeteries have been documented within the project area or within 1-mi of it.

The previously documented archaeological and historic cultural resources listed above will not be adversely impacted by the project work. As none of the listed resources lie within the project area, they will not be directly impacted by the disturbance caused by the project. No visual impacts would occur after construction activities as there are no above-ground structures.

During the project work, portions of some adjacent resources that fall within the project area viewshed may experience temporary impacts to their setting, an NRHP aspect of integrity. In particular, some areas of the Lake Superior & Mississippi (LS&M) Railroad Corridor Historic District: Duluth to New Duluth Segment, have sightlines to the project area, and the resource is eligible for the NRHP. Views of the St. Louis River, swamps, and smaller lakes are listed as important to the setting of this resource (reference (37)). Construction equipment and dredging activities may be visible from portions of the district during active construction and could result in temporary changes to the resource's setting.

Because these visual changes would be temporary, limited to the duration of construction, and no permanent above-ground features would be introduced into the viewshed, the undertaking would not permanently alter the characteristics that contribute to the district's NRHP eligibility or integrity.

The Section 106 review process is being led by EPA. Consultation with SHPO and consulting Tribal Nations is ongoing at the preparation of this EAW. No previously documented cultural resources eligible for or listed on the NRHP will be impacted by Project work. However, because the Project involves disturbance of submerged sediments, the Fond du Lac Band has identified the potential for previously undocumented cultural materials to be present within the Project area. The EPA and other participating agencies will continue coordination with the Fond du Lac Band and any other interested Tribal Nations regarding Project implementation, treatment of any cultural materials that may be encountered, and procedures for addressing inadvertent discoveries. In consultation with Tribal Nations, EPA has also discussed opportunities for Tribal participation during construction activities, including potential monitoring of dredging and material handling activities. Consistent with applicable agency procedures and available funding, Tribal representatives would be permitted access to monitoring locations during construction. Any monitoring activities would be coordinated among the EPA, participating Tribal Nations, and the construction team, as appropriate.

16 Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

Tallas Bay is visible from the surrounding shoreline and provides natural views characteristic of the St. Louis River estuary. The shoreline of Tallas Island is largely undeveloped, while the shoreline on the mainland includes the Knowlton Creek Pump Station, Bayhill Drive, and the Waabizheshikana: The Marten Trail. In addition, a water intake pipeline associated with the Cloquet Pumping Station crosses beneath portions of Tallas Bay. The project area has historically been managed for habitat restoration, recreational access and is valued for its natural setting and aquatic habitat.

No permanent buildings, towers, utility corridors, lighting systems, or other above-ground structures are proposed as part of the project. The project does not include industrial operations that would generate vapor plumes, smoke stacks, or other long-term visual emissions, and no permanent sources of glare are proposed.

Visual effects from the project are expected to be temporary and primarily associated with construction activities. Construction may involve the presence of dredging equipment, barges or scows, excavators, dewatering or material-handling equipment, haul trucks, temporary staging areas, and temporary stockpiles or containers associated with dredged material management. If work occurs during periods of limited daylight, temporary construction lighting may be used; however, lighting would be limited to the active construction period. Temporary visual changes would also result from disturbed work areas, equipment movement, and dredged material transfer operations. These temporary visual changes would be most noticeable to recreational users of the Waabizheshikana: The Marten Trail, boaters, and nearby shoreline residents.

Long-term visual effects are expected to be minimal and generally consistent with the habitat restoration objectives of the project. Following completion of dredging and restoration activities, the project would maintain the predominantly natural character of the bay while restoring open-water habitat.

Measures to minimize visual effects include the following: restricting work to approved dredging, staging, and transfer areas; maintaining construction equipment within designated work areas; removing temporary equipment, materials, and stockpiles upon completion of construction; and restoring temporary access, transfer, or dewatering areas to pre-construction conditions. Project specifications also require environmental protection measures, site housekeeping, waste management, and final cleanup activities that will help minimize temporary visual disturbances and ensure that construction-related impacts are not permanent.

17 Air

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

No stationary sources are anticipated for the project; therefore, no stationary source emissions would occur.

b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g., traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

Construction of the project would result in intermittent and temporary on- and off-road mobile source emissions of criteria pollutants. These emissions generally include combustion emissions from mechanical dredging equipment, support vessels, dewatering equipment, loaders/excavators, trucks hauling dewatered sediment/vegetation, and worker vehicles. These emissions would be dependent upon weather conditions, the amount of equipment at any specific location, and the period of operation required for construction at that location.

Air pollutants from the construction equipment would be limited to the immediate vicinity of the construction area and would be temporary. Measures would be taken to reduce vehicle idling to reduce emissions. Therefore, it is not anticipated that construction activities would independently cause or significantly contribute to an emission level that alters the air pollution score (including for sensitive groups) or attainment status for any of the national ambient air quality standards.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

Fugitive particulate emissions could be generated from the use of paved and/or unpaved roads during construction. Because upland activities are expected to occur primarily on impervious surfaces, substantial fugitive dust generation is not anticipated. Minor temporary dust could occur during material handling, truck traffic, or use of unpaved areas, if any. Appropriate dust-control measures would be implemented as needed.

The project is not anticipated to generate any odors.

18 Greenhouse Gas (GHG) Emissions/Carbon Footprint

a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

Identified GHG emissions for the project consist of direct emissions from off-road construction equipment, on-road haul trucks and boats, and those related to changes in land use. The project would generate minimal GHGs during operations.

Fuel usage was used to calculate construction emissions from off-road equipment, and vehicle miles traveled were used to calculate hauling materials. Emission factors used to calculate emissions from construction equipment are based on the U.S. Environmental Protection Agency Center for Corporate Climate Leadership Emission Factors for Greenhouse Gas Inventories (reference (38)). GHG emissions associated with construction combustion sources are approximately 73.5 metric tons of carbon dioxide equivalent (CO_2e).

GHG emissions generated from temporary changes in land carbon sinks were calculated using the emission factors from the Minnesota Environmental Quality Board Climate Calculator (reference (39)). Since the carbon stock for rivers and streams is 0 metric tons CO_2/acre, the GHG emissions associated with temporary changes in land use during construction are 0 metric tons CO_2e.

Table 18-1 summarizes the estimated GHG emissions for the project. Appendix D provides detailed calculations.

Table 18-1 Estimated Construction Greenhouse Gas Emissions

Emission Source	GHG Emissions (metric tons CO_2e)
Off-Road Equipment	71.1
On-Road Haul Trucks	2.4
Land Use Change	0.0
TOTAL	**73.5**

CO_2e: carbon dioxide equivalent

a. GHG Assessment

i. Describe any mitigation considered to reduce the project's GHG emissions.

The contractor will be choosing the most cost-effective and minimal route to achieve the project's purpose. The proposer is not proposing CO_2e mitigation for this project. However, the proposer would consider adaptive mitigation for the construction site, such as:

- Reduce any unnecessary clearing and grubbing
- Maintain tree canopy when feasible

- Practice vehicle and equipment maintenance
- Carpool when possible and turn off equipment when not in use

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project's GHG emissions. Explain why the selected mitigation was preferred.

The possible mitigation measures above could result in a small decrease in GHG emissions. These mitigation measures were selected based on typical construction protocols.

iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

The anticipated construction GHG emissions from the project are 73.5 metric tons CO_2e, which is less than 0.001% of the total CO_2e emissions that were emitted in Minnesota in 2022 (reference (38)). The net annual lifetime GHG emissions from the project are very small compared to the state total; therefore, the project's effects on achieving the Next Generation Energy Act goals are negligible. Nonetheless, the project would result in a net increase in overall GHG emissions, which would slightly impact Minnesota's GHG reduction goals.

19 Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

The existing noise environment of the area likely includes traffic, vegetation, insects, rail operations, marine traffic, and occasional aircraft. Nearby sensitive receptors include residences to the northwest of the project area. The nearest residences range from approximately 450 to 1,000 feet from expected equipment operations in the project area.

Construction noise associated with dredging activities would be temporary and would cease upon completion of the project. Anticipated noise sources include dredging equipment, support vessels, pumps, generators, dewatering equipment, loaders, excavators, and haul trucks. Noise levels from individual pieces of heavy construction equipment are commonly on the order of 75 to 85 dBA at 50 feet, with significant variability due to load cycles, overall utilization, movement within the project area, and source orientation at any given time. Noise levels at the residences located several hundred feet from the work area would be substantially lower due to distance attenuation. Despite this, construction activities would likely remain audible, particularly because sound may propagate efficiently across open water.

Minnesota's Noise Pollution Control Rules (Minn. R. 7030) establish daytime and nighttime noise standards at residential land uses. Although construction activities would likely be audible at nearby residences and recreational areas, the temporary and variable nature of dredging operations makes it difficult to predict specific receptor noise levels at this stage of project planning. Minnesota's noise standards are based on hourly statistical noise metrics that account for fluctuating sound levels over time. As a result, the intermittent and variable operation of dredging and construction equipment may produce lower noise impacts at sensitive receptors than would be predicted using conservative steady-state

operating assumptions. The need for mitigation would be considered based on the final dredging methods, equipment fleet, and work schedule.

Noise impacts would occur only during active construction and dredging operations and would cease upon completion of the project. Nighttime dredging operation is not currently anticipated. Any work to be performed between the hours of 9:00pm and 7:00 am central standard time must be previously authorized by the City Engineer. If approved, noise mitigation would be implemented as needed to limit impacts to nearby residences and other sensitive receptors.

Measures to minimize potential noise effects may include maintaining quality equipment mufflers, using broadband backup alarms on equipment, erecting temporary sound barriers, orienting directional equipment exhausts away from residences, and limiting nighttime operations especially within the nearest portions of the site.

No permanent noise sources would remain following project completion, and no long-term effects on quality of life related to noise are expected. Following construction, ambient noise conditions in the area would return to existing levels.

20 Transportation

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

The proposed project is a habitat restoration and dredging project and will not generate permanent traffic following construction. Project-related traffic will be limited to temporary construction activities, including mobilization and demobilization of equipment, construction worker vehicles, transportation of dredged material, use of transfer and dewatering sites, and hauling of dredged material to an approved placement or disposal location. The project does not include construction of any new buildings, public facilities, or transportation infrastructure that would generate ongoing vehicle trips. The project therefore will not result in long-term increases in traffic volumes.

No new permanent parking facilities are proposed. Construction personnel will likely utilize temporary staging and parking areas designated by the contractor as part of construction planning. Upon completion of construction, no additional parking demand is anticipated.

Average daily traffic and peak-hour traffic volumes cannot be precisely estimated at this time because final haul routes, disposal locations, truck capacities, construction scheduling, and dewatering methods will be selected by the contractor during final project implementation. Therefore, trip-generation estimates are not available at this stage of project development.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual,

Chapter 5 *(available at: http://www.dot.state.mn.us/accessmanagement/resources.html)* or a similar local guidance,

The project is not expected to generate an additional 250 vehicles or 2,500 trips per day on affected roads. Temporary increases in truck traffic may occur on roadways used to access the dredging area, as well as the transfer, dewatering, or disposal facilities. However, because final haul routes and disposal locations have not been selected, impacts to specific roadways cannot be quantified at this time. The contractor will identify proposed placement facilities, transfer sites, dewatering locations, and haul routes for review and approval prior to use.

No roadway improvements are currently anticipated. Any damage to roads caused by hauling operations shall be repaired by the contractor. Existing local and regional transportation facilities are expected to accommodate temporary construction traffic associated with the project. The project will not alter regional transportation patterns or create permanent transportation demand and therefore is not expected to adversely affect the regional transportation system.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

Potential transportation effects will be minimized through implementation of contractor-developed transportation and material handling plans required by the project specifications. The contractor will be required to identify and obtain approval for proposed transfer sites, dewatering locations, placement facilities, and haul routes before use. Contractor-furnished facilities, including haul roads, transfer sites, dewatering sites, and placement areas, are subject to review and approval requirements established in the project specifications.

Additional measures to minimize transportation effects may include restricting construction traffic to designated access and haul routes, coordinating transportation activities with applicable local, state, and federal agencies, maintaining clean haul routes, repairing any transportation-related damage caused by project activities, and removing temporary staging and construction facilities upon project completion. To minimize dust and sediment associated with construction traffic, the contractor will implement appropriate best management practices as needed for dust control on unpaved haul roads and removal of sediment tracked onto paved roadways. Measures will be identified in contractor work plans and implemented in accordance with applicable permit requirements and project specifications. Preparation of project work plans, construction schedules, environmental protection plans, and other submittals that help coordinate construction activities and minimize disruptions to the surrounding transportation network may also be required.

Because the project does not create new permanent development, no long-term transportation mitigation measures or transportation infrastructure improvements are anticipated following project completion. Transportation effects are expected to be temporary and limited to the construction period.

21 Cumulative Potential Effects

(Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The cumulative effects analysis for the project was evaluated within the geographic area encompassing Tallas Bay, the lower reach of Knowlton Creek, Tallas Island, adjacent portions of the St. Louis River estuary, and nearby aquatic and wetland habitats that are hydrologically connected to the project area. Because construction activities include dredging, sediment handling, dewatering, transportation, and disposal of dredged material, the cumulative effects assessment also considers temporary transfer, staging, dewatering, disposal, and haul-route areas associated with project construction.

The analysis considers both the temporary construction period, during which short-term impacts such as turbidity, noise, and truck traffic may occur, and the longer-term period during which habitat restoration, wetland connectivity improvements, and ecological responses are expected to develop following project completion.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

Past restoration efforts within the analysis area provide important context and include dredging activities conducted within Tallas Bay between 2010 and 2013, overseen by the State of Minnesota, and the Knowlton Creek Watershed Restoration Project (Appendix B), which was completed in 2017 to reduce erosion and sediment delivery from the watershed. These projects influence existing environmental conditions within Tallas Bay and contribute to the ongoing restoration of aquatic habitat within the St. Louis River estuary.

In addition, federal, state, tribal, and local partners continue to implement habitat restoration and resource management activities throughout the St. Louis River Area of Concern (AOC). Habitat restoration and management activities associated with the ongoing implementation of the St. Louis River AOC remediation and restoration program, including projects supported through the Great Lakes Restoration Initiative, are reasonably foreseeable within the broader estuary. These efforts generally focus on improving aquatic habitat, wetland function, hydrologic connectivity, water quality, and fish and wildlife resources and may include habitat restoration, sediment management, wetland enhancement, beneficial reuse of dredged material, shoreline stabilization, hydrologic reconnection, invasive species management, and long-term ecological monitoring activities. Several restoration projects have been completed and additional restoration activities are expected to continue throughout the estuary as agencies work toward addressing Beneficial Use Impairments and achieving long-term habitat and water resource objectives for the AOC (reference (22)).

No future projects are currently anticipated within the project area. However, St. Louis River estuary-wide restoration activities may occur and are expected to result in complementary environmental benefits. In addition, no major transportation, industrial, or land-development projects are expected to overlap with this project in a manner that would substantially increase cumulative environmental effects within the defined geographic area and timeframe.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

The cumulative effects analysis considers both potential temporary construction-related impacts and long-term habitat restoration benefits associated with the project. Potential adverse effects include temporary increases in suspended sediment and turbidity, localized disturbance to aquatic habitat and wetlands, short-term noise and air emissions from construction equipment, increased truck traffic, and management

of dredged materials. These effects are expected to be temporary, localized, and managed through permit requirements, environmental protection measures, erosion and sediment control best management practices, dewatering controls, spill prevention requirements, and other construction specifications. Significant cumulative adverse environmental effects are not anticipated due to the localized and temporary nature of anticipated construction impacts. The project is anticipated to implement required environmental protection measures and support long-term habitat restoration objectives.

The project is expected to generate long-term beneficial cumulative effects by removing accumulated sediment, restoring depth diversity, improving aquatic habitat, enhancing wetland connectivity, improving hydrologic connections between Knowlton Creek and the St. Louis River, and supporting fish and wildlife resources within the estuary. These improvements are consistent with and complementary to broader restoration efforts occurring throughout the St. Louis River AOC. The project is therefore expected to contribute incrementally to ongoing regional habitat restoration objectives and improve ecological conditions within Tallas Bay.

22 Other Potential Environmental Effects

If the project may cause any additional environmental effects not addressed by items 1 to 20, describe the effects here, discuss how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No additional potential environmental effects beyond those discussed in Items 1 through 20 have been identified based on the available design documents, technical specifications, and environmental review materials prepared for the Project. The primary project-related effects involve dredging activities, sediment handling and disposal, temporary construction disturbances, wetland and aquatic habitat alteration, transportation of dredged materials, and associated environmental protection measures, all of which are addressed within the applicable EAW sections.

Project specifications require implementation of an Environmental Protection Plan, erosion and sediment control measures, stormwater and waste management practices, spill prevention procedures, natural resource protection measures, and regulatory compliance requirements designed to minimize potential environmental effects during construction. These measures are expected to avoid or minimize any additional unforeseen impacts that could arise during project implementation.

Accordingly, no other potential environmental effects have been identified that would require further analysis beyond those addressed elsewhere in this EAW.

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

Signature/date block:

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected

actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.

- Copies of this EAW are being sent to the entire EQB distribution list.

Signature Jason Mozol Date 11/13/26

Title Senior Planner

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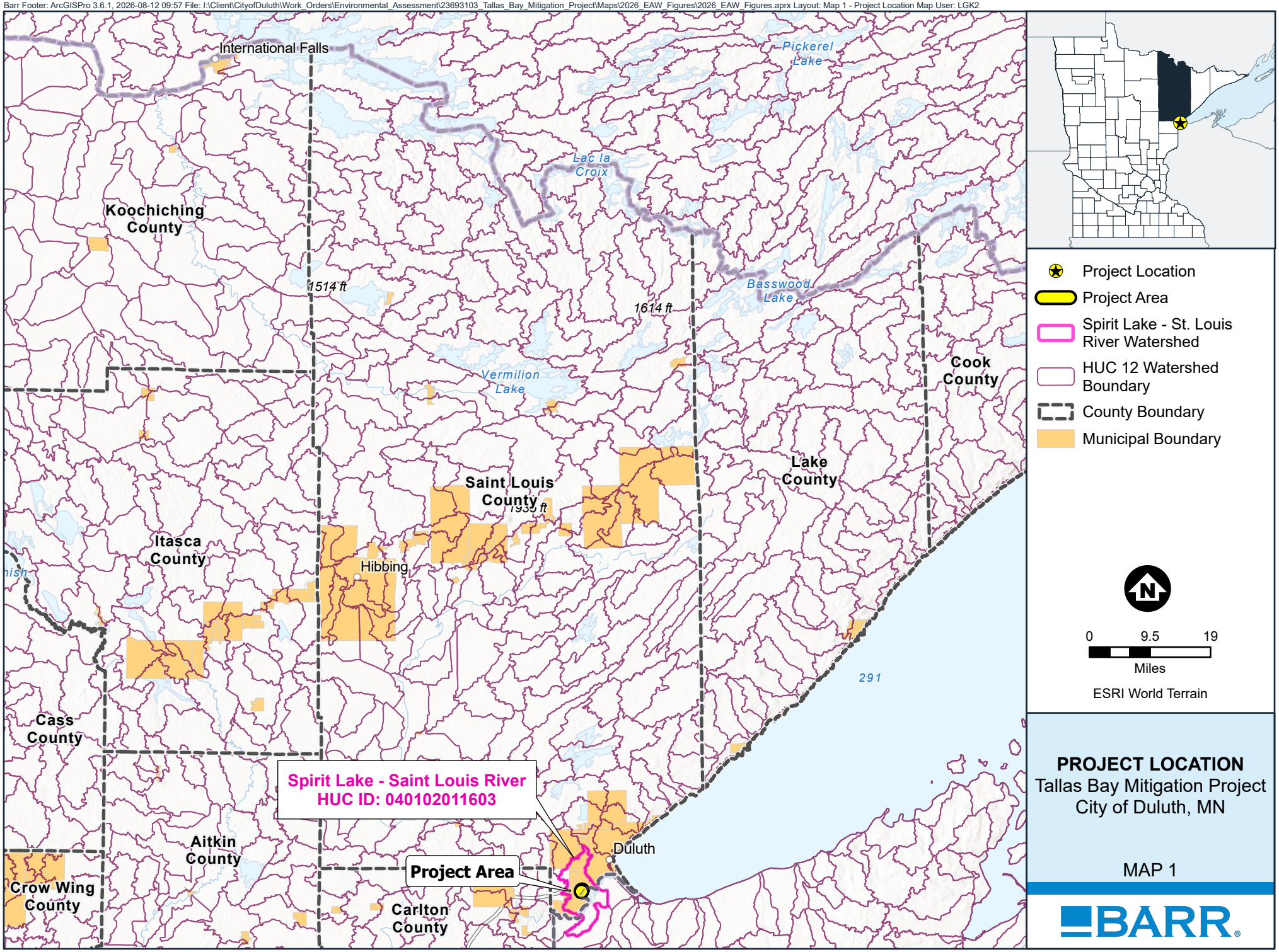
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Maps

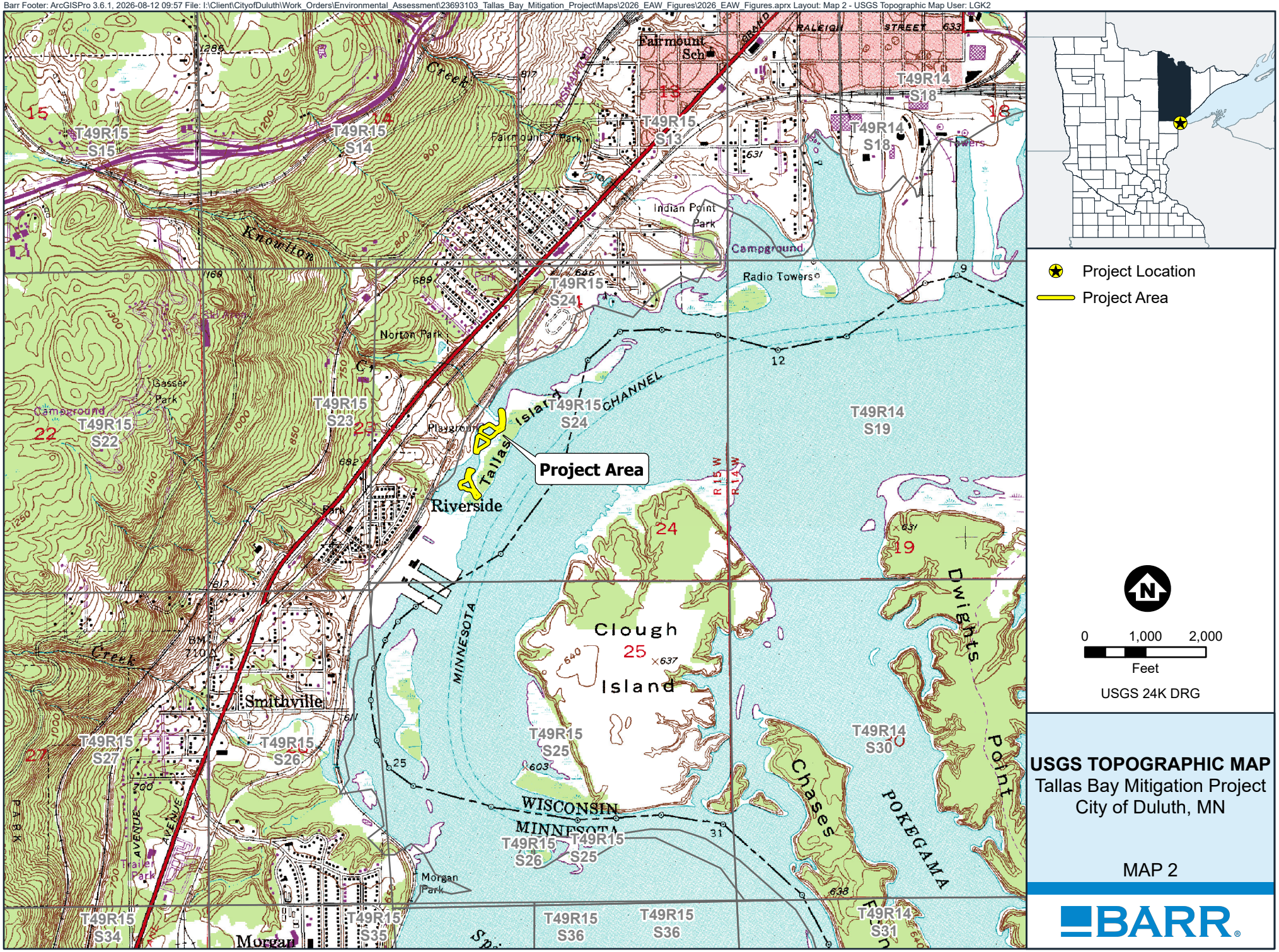
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PROJECT LOCATION
Tallas Bay Mitigation Project
City of Duluth, MN

MAP 1

BARR



Project Location

Project Area

0 1,000 2,000

Feet

USGS 24K DRG

USGS TOPOGRAPHIC MAP

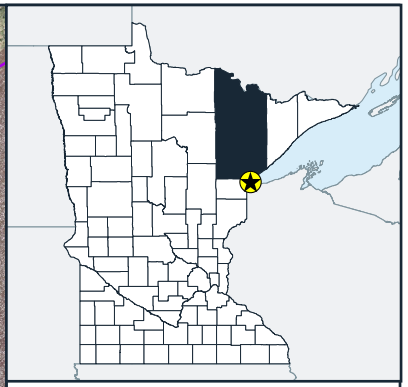
Tallas Bay Mitigation Project
City of Duluth, MN

MAP 2

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Project Location

Project Area

Parcel Boundaries

Pipeline

Note: Pipeline to be avoided during dredging activities, not shown in its entirety

N

0 100 210

Feet

NearMap Imagery, 06/20/2025

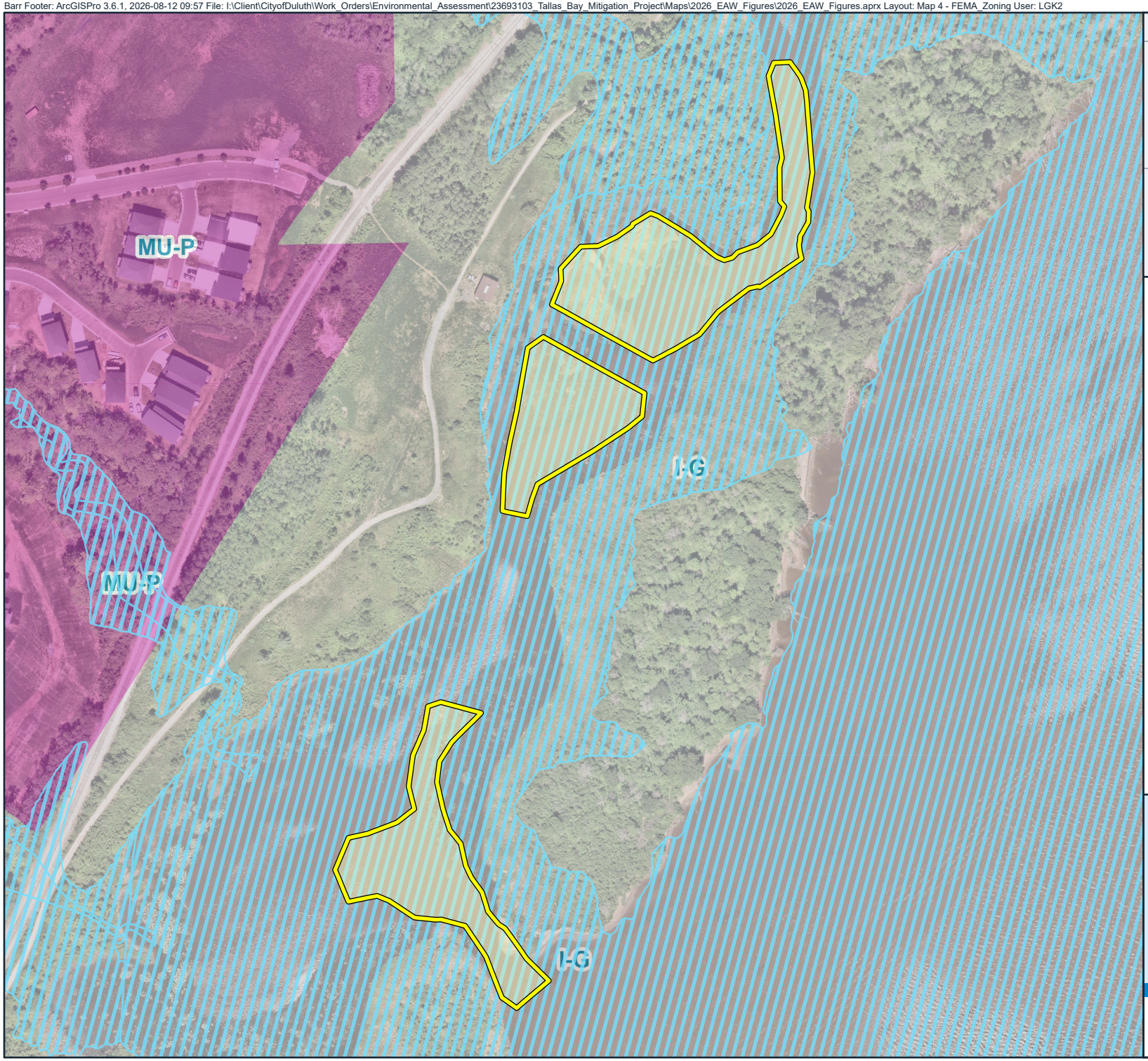
SITE LAYOUT

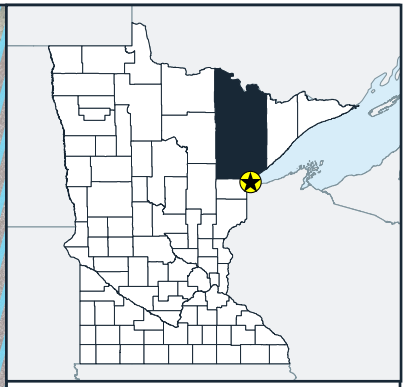
Tallas Bay Mitigation Project
City of Duluth, MN

MAP 3

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Project Location

Project Area

FEMA 100 Year Floodplain

Unified Development Code Zoning

MU-P (Mixed Use Planned)

I-G (Industrial General)

N

0 100 210

Feet

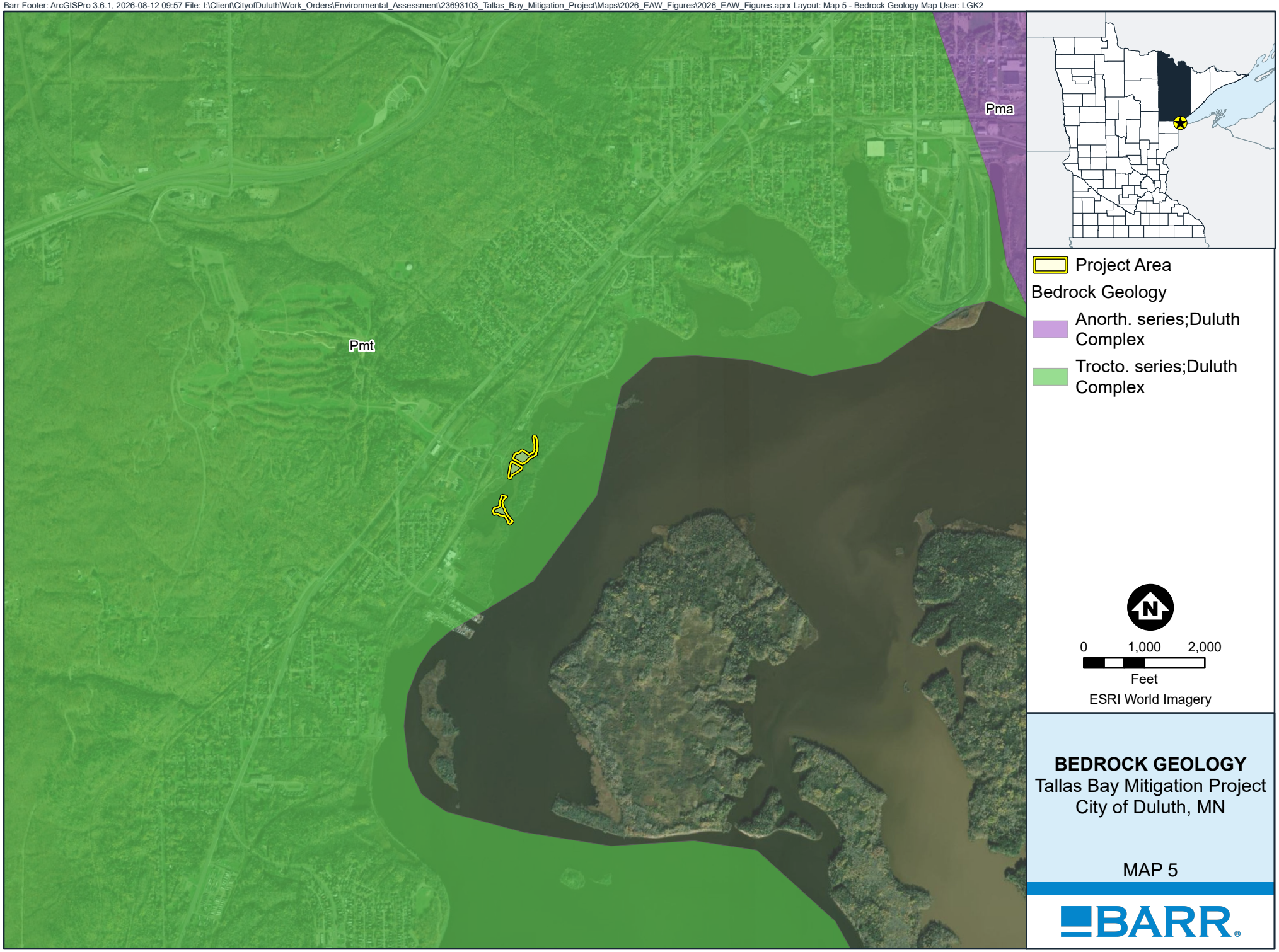
NearMap Imagery, 06/20/2025

REGIONAL ZONING AND FEMA FLOODPLAIN

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 4

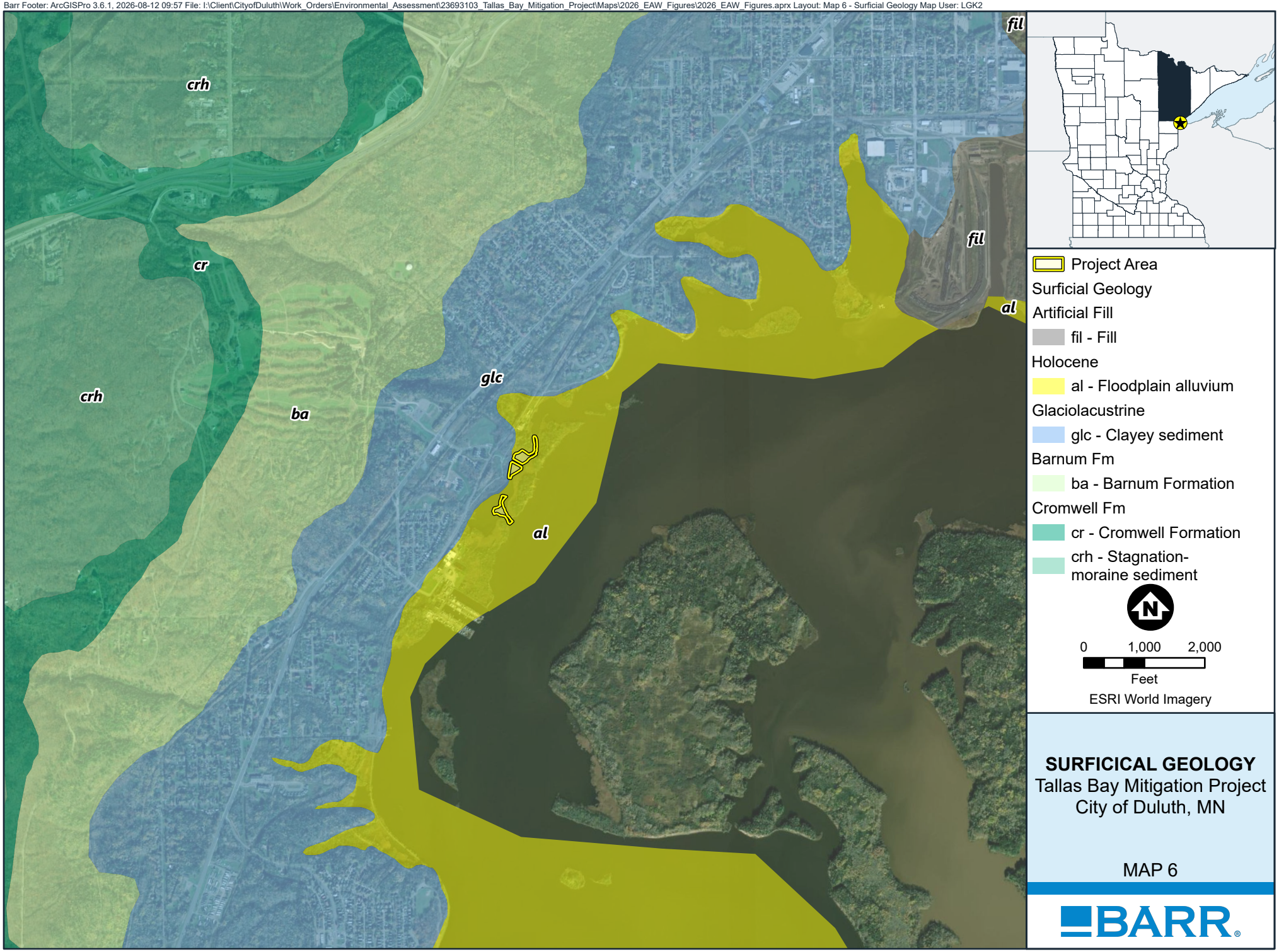
BARR



BEDROCK GEOLOGY
Tallas Bay Mitigation Project
City of Duluth, MN

MAP 5

BARR



Project Area

Surficial Geology

Artificial Fill

fil - Fill

Holocene

al - Floodplain alluvium

Glaciolacustrine

glc - Clayey sediment

Barnum Fm

ba - Barnum Formation

Cromwell Fm

cr - Cromwell Formation

crh - Stagnation-moraine sediment

N

0 1,000 2,000

Feet

ESRI World Imagery

SURFICICAL GEOLOGY

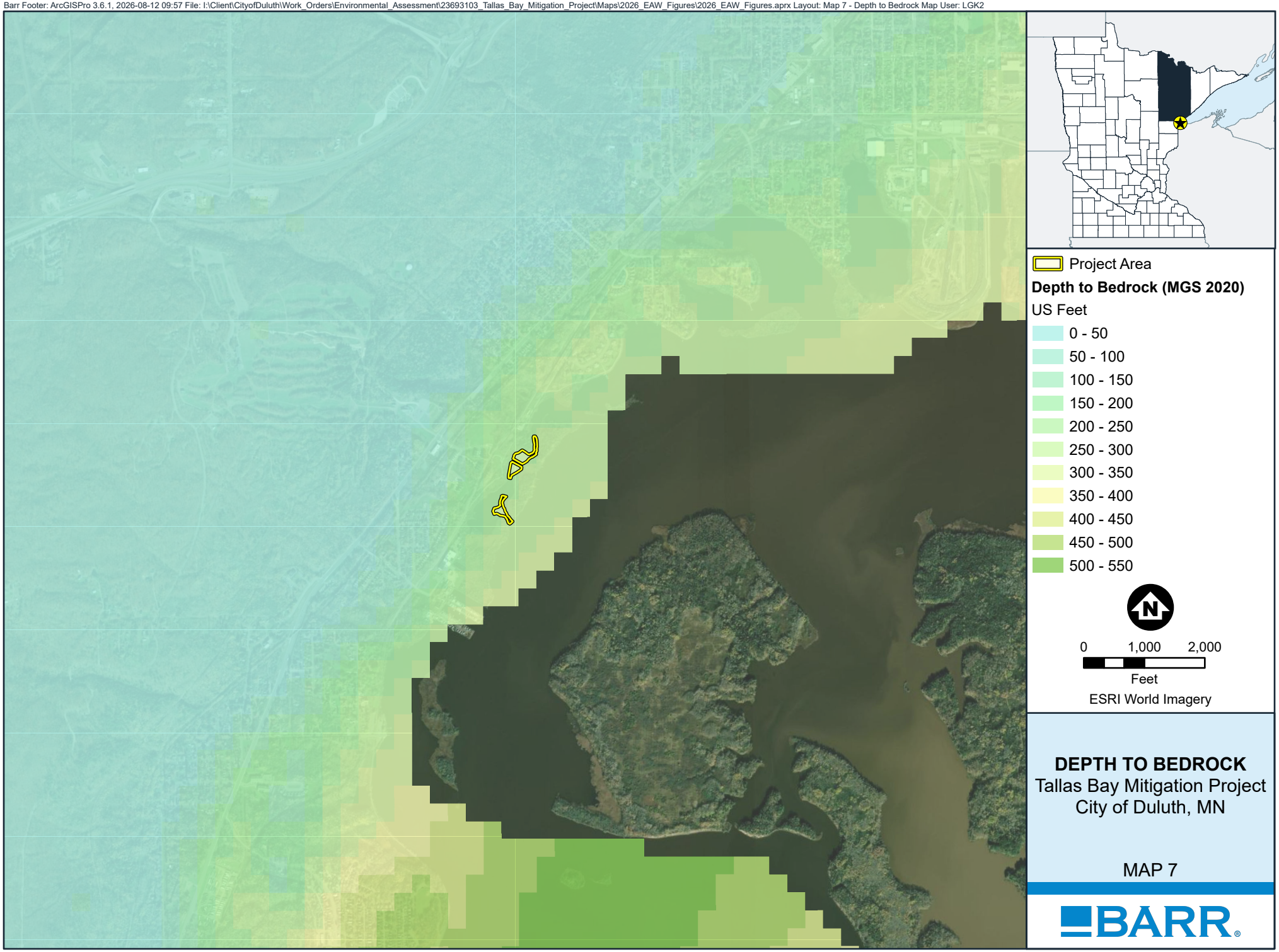
Tallas Bay Mitigation Project

City of Duluth, MN

MAP 6

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Project Area

Depth to Bedrock (MGS 2020)

US Feet

- 0 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- 200 - 250
- 250 - 300
- 300 - 350
- 350 - 400
- 400 - 450
- 450 - 500
- 500 - 550

N

0 1,000 2,000

Feet

ESRI World Imagery

DEPTH TO BEDROCK

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 7

BARR

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Project Area

Soil Map Units

- 1020A,Bowstring and Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded
- E9E,Miskoaki-Fluvaquents, frequently flooded, complex, 0 to 45 percent slopes
- E18B,Urban land-Cuttre-Rock outcrop complex, 0 to 8 percent slopes
- E25D,Urban land-Amnicon-Rock outcrop complex, 0 to 18 percent slopes
- F128A,Hulligan fine sandy loam, 0 to 1 percent slopes
- W,Water

N

0 100 200

Feet

ESRI World Imagery

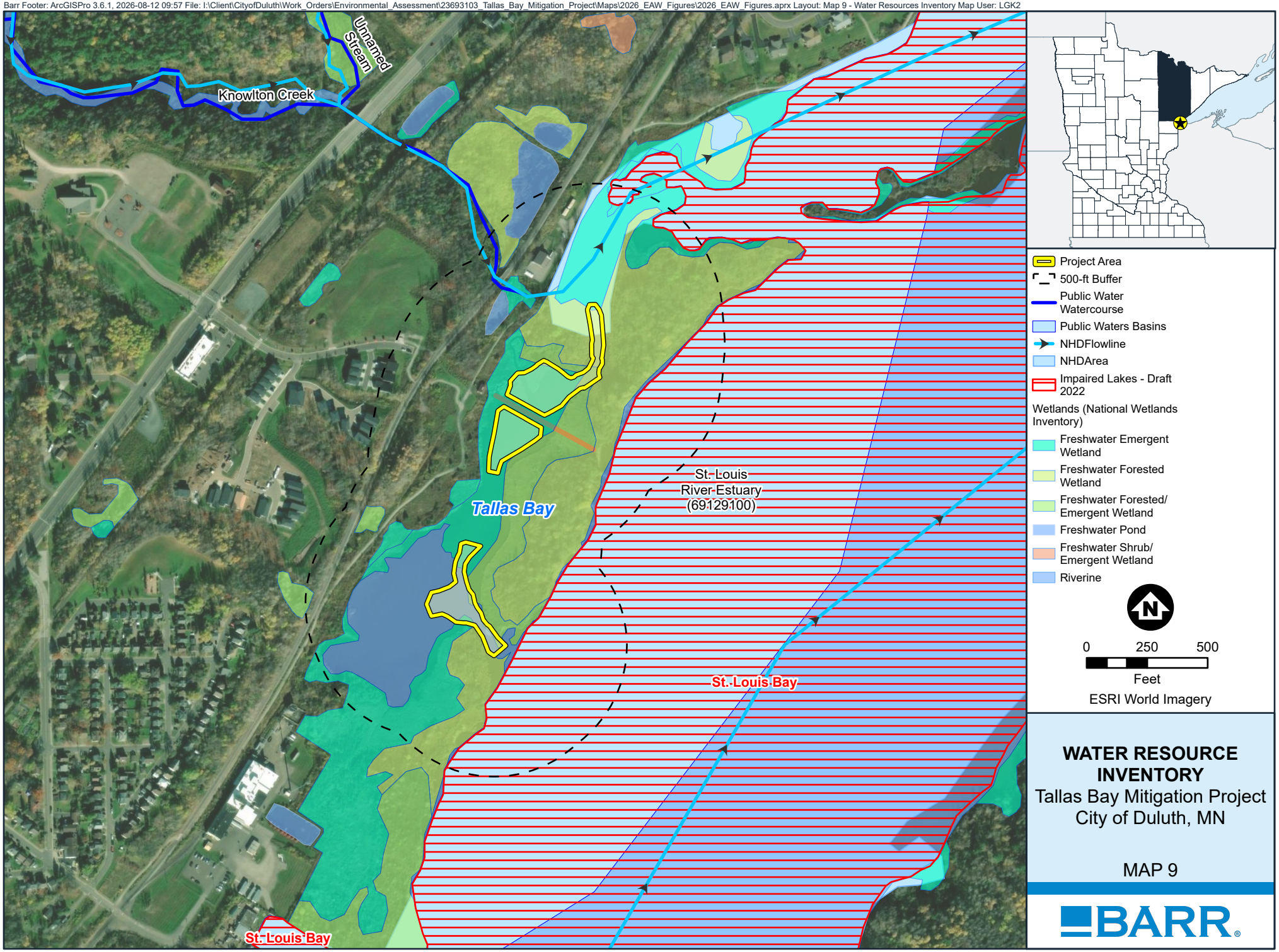
NRCS SOILS

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 8

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Project Area
500-ft Buffer
Public Water Watercourse
Public Waters Basins
NHDFlowline
NHDArea
Impaired Lakes - Draft 2022

Wetlands (National Wetlands Inventory)

Freshwater Emergent Wetland
Freshwater Forested Wetland
Freshwater Forested/ Emergent Wetland
Freshwater Pond
Freshwater Shrub/ Emergent Wetland
Riverine

N

0 250 500
Feet

ESRI World Imagery

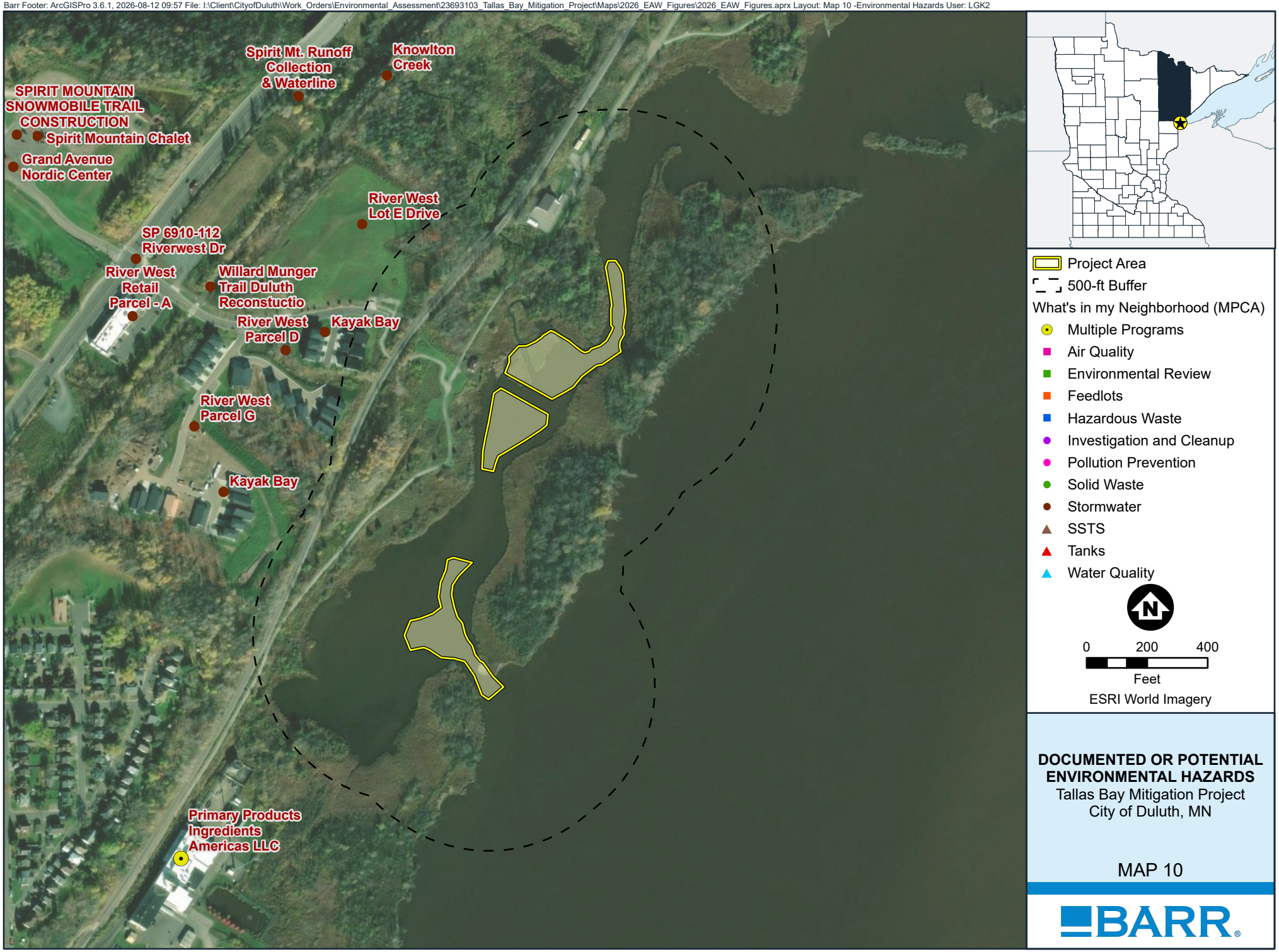
WATER RESOURCE INVENTORY

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 9

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Project Area

500-ft Buffer

What's in my Neighborhood (MPCA)

- Multiple Programs
- Air Quality
- Environmental Review
- Feedlots
- Hazardous Waste
- Investigation and Cleanup
- Pollution Prevention
- Solid Waste
- Stormwater
- SSTS
- Tanks
- Water Quality

N

0 200 400

Feet

ESRI World Imagery

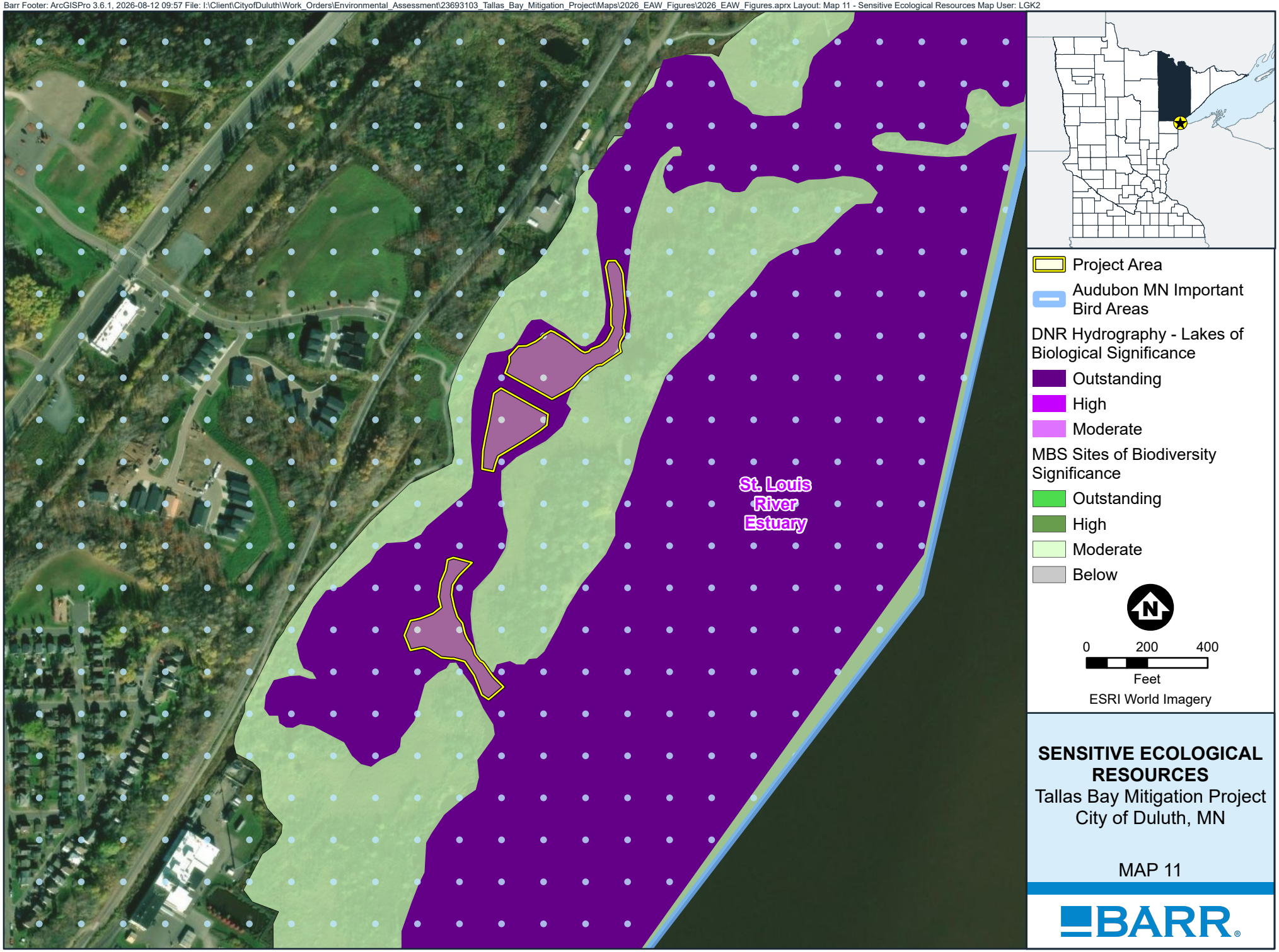
DOCUMENTED OR POTENTIAL ENVIRONMENTAL HAZARDS

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 10

BARR

Barr Footer: ArcGISPro 3.6.1, 2026-08-12 09:57 File: I:\Client\CityofDuluth\Work_Orders\Environmental_Assessment\23693103_Tallas_Bay_Mitigation_Project\Maps\2026_EAW_Figures\2026_EAW_Figures.aprx Layout: Map 11 - Sensitive Ecological Resources Map User: LGK2



Project Area

Audubon MN Important Bird Areas

DNR Hydrography - Lakes of Biological Significance

- Outstanding
- High
- Moderate

MBS Sites of Biodiversity Significance

- Outstanding
- High
- Moderate
- Below

N

0 200 400

Feet

ESRI World Imagery

SENSITIVE ECOLOGICAL RESOURCES

Tallas Bay Mitigation Project
City of Duluth, MN

MAP 11

BARR

Appendices

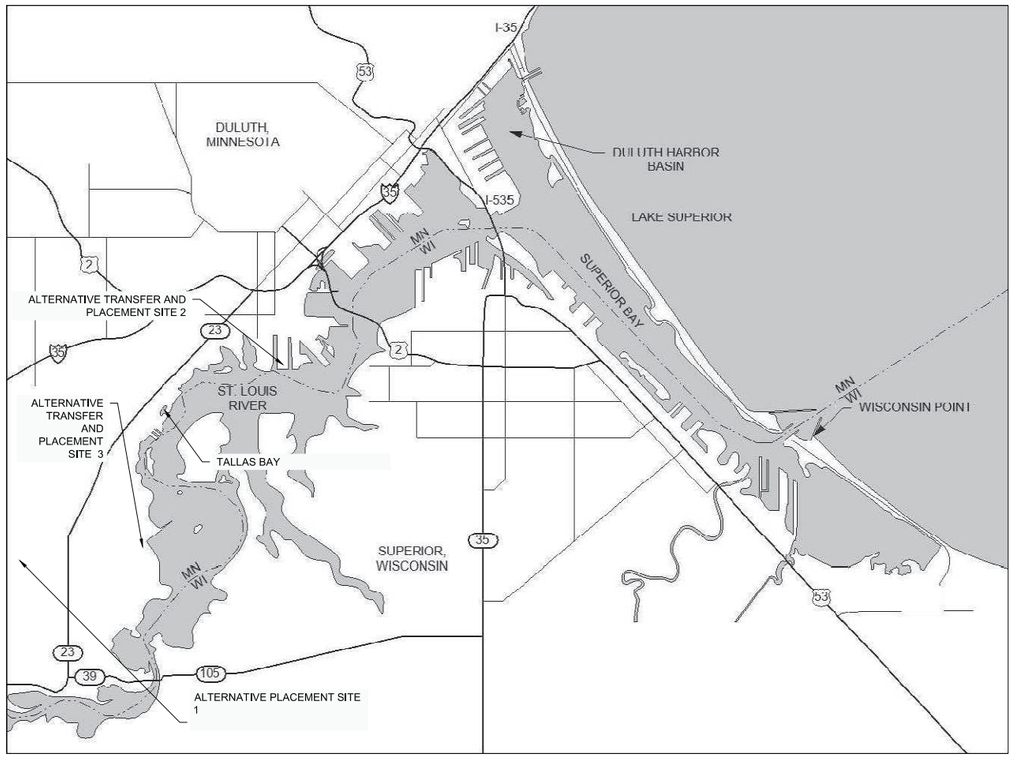
Appendix A

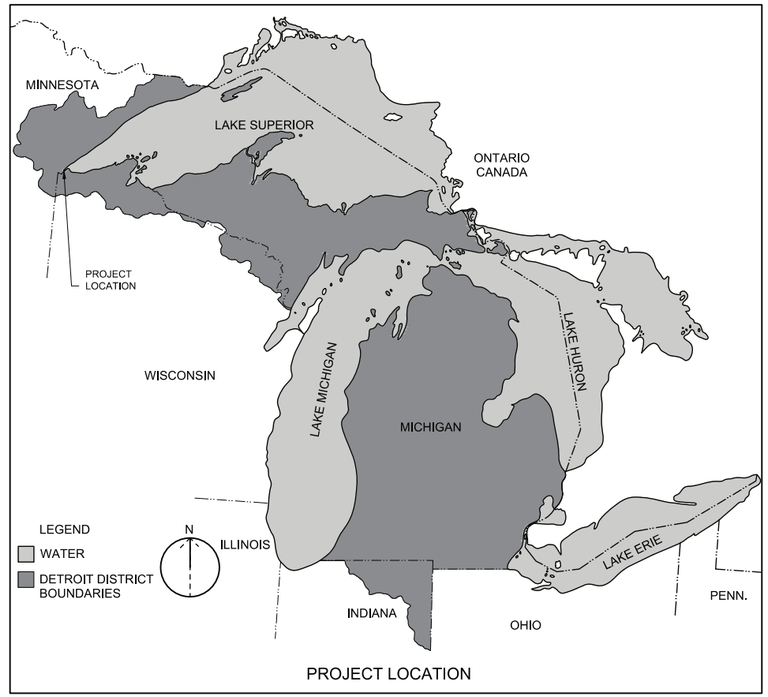
95% Design

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DETROIT DISTRICT

ST. LOUIS COUNTY
DULUTH MN
TALLAS BAY MITIGATION





PROJECT LOCATION

SOLICITATION NO.:	W911XK
CONTRACT NO.:	W911XK
ISSUE DATE:	01MAY2026

TIMOTHY C. SMITH P.E., CHIEF, DESIGN BRANCH

PHILLIP C. ROSS P.E., CHIEF, ENGINEERING & CONSTRUCTION DIVISION

THE PROJECT WAS DESIGNED BY THE DETROIT DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.

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MARK	DESCRIPTION	DATE

DESIGNED BY:	ISSUE DATE:
J. THORSBY	01MAY2026
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	##########
P. ROSS	H72DSHAR202205
SIZE:	##########
ANSI D	H72DSHAR202205 - G-001.dwg

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DETROIT DISTRICT
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ST. LOUIS COUNTY
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TALLAS BAY MITIGATION

COVER SHEET

SHEET ID

G-001

FINAL SUBMITTAL - 95% BCOES REVIEW

INDEX

GENERAL

G-001	COVER SHEET	H72DSHAR202205 - G-001.DWG
G-002	GENERAL INFORMATION	H72DSHAR202205 - G-002.DWG

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V-101	EXISTING CONDITIONS	H72DSHAR202205 - V-101.DWG
V-102	EXISTING CONDITIONS	H72DSHAR202205 - V-102.DWG

CIVIL

CN101	REQUIRED DREDGING AREAS PLAN	H72DSHAR202205 - CN101.DWG
CN102	REQUIRED DREDGE AREAS PLAN	H72DSHAR202205 - CN102.DWG

RESOURCE

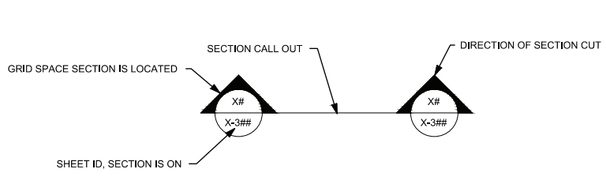
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RR104	REAL ESTATE PLAN ALTERNATE PLACEMENT SITE 2 US STEEL	H72DSHAR202205 - RR104.DWG

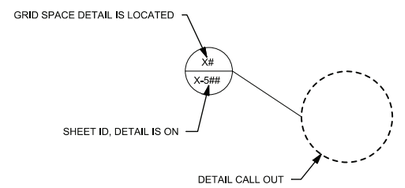
GENERAL NOTES

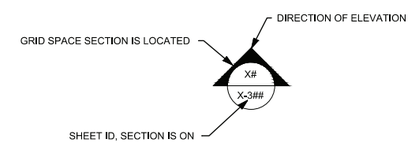
1. THE EXISTING INFORMATION DEPICTED ON THESE PLANS REPRESENTS TOPOGRAPHIC AND BATHYMETRIC SURVEY BY USACE IN OCTOBER 2022 AND INDICATES THE GENERAL CONDITIONS EXISTING AT THAT TIME.
2. GRID COORDINATES ARE BASED ON THE MINNESOTA STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, MINNESOTA NORTH ZONE, NORTH AMERICAN DATUM (NAD83). COORDINATES SHOWN ARE IN U.S. SURVEY FEET.
3. ITEMS ARE EXISTING UNLESS NOTED AS REQUIRED.
4. REPLACE ITEMS NOT SPECIFICALLY INDICATED FOR REMOVAL THAT YOU DAMAGE OR DESTROY.
5. EXISTING UTILITY SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR CONVENIENCE. PRIOR TO THE START OF CONSTRUCTION ACTIVITY, NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES. PROTECT EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE.
6. CONTOUR ELEVATIONS ARE IN US FEET AND ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM OF 1985 (IGLD85)

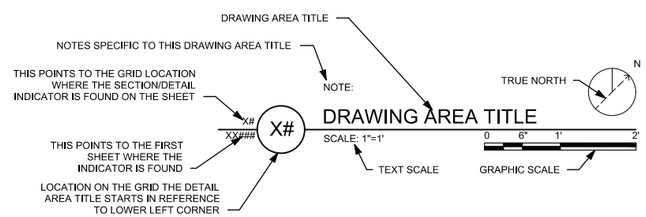
ABBREVIATIONS

APPROX	APPROXIMATE
C/L	CENTERLINE
C.S.	CHANNEL STATION
CY	CUBIC YARD
EA	EACH
ELEV	ELEVATION
EXIST	EXISTING
FT	FOOT
GFP	GOVERNMENT FURNISHED PROPERTY
GOVT	GOVERNMENT
IN	INCHES
IGLD	INTERNATIONAL GREAT LAKES DATUM
LWD	LOW WATER DATUM
MAT'L	MATERIAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NTS	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
OLWM	ORDINARY LOW WATER MARK
PS	PLACEMENT STATION
REQ'D	REQUIRED
COR	CONTRACTING OFFICER REPRESENTATIVE
USCG	UNITED STATES COAST GUARD
CDF	CONFINED DISPOSAL FACILITY
DMDF	DREDGED MATERIAL DISPOSAL FACILITY
COR	CONTRACTING OFFICER'S REPRESENTATIVE









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J. THORSBY	01MAY2026
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CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK-
SUBMITTED BY:	##########
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SIZE:	##########
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ST. LOUIS COUNTY
SOUTH MALL
TALLAS BAY MITIGATION

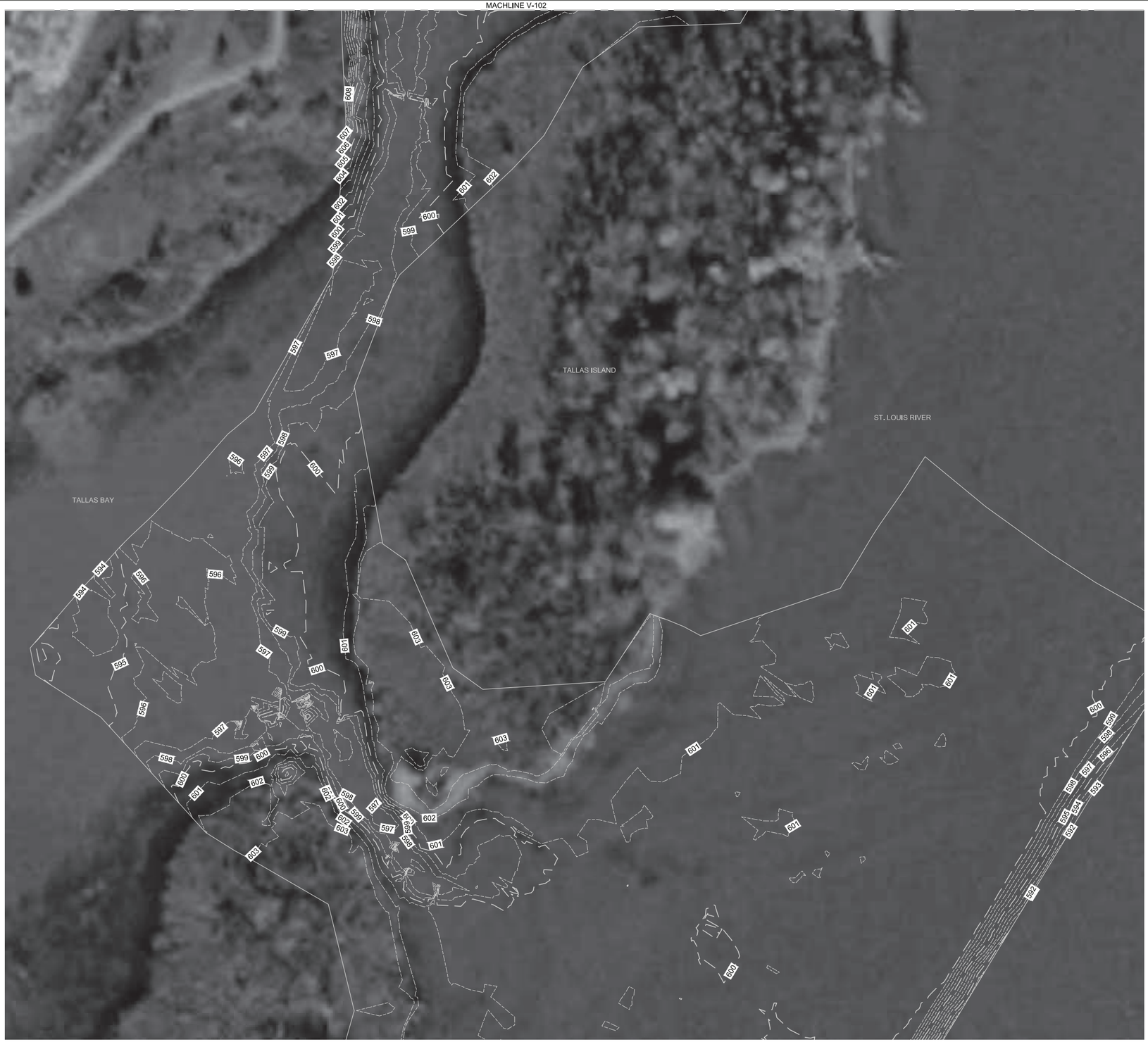
GENERAL INFORMATION

SHEET ID

G-002

FINAL SUBMITTAL - 95% BCOES REVIEW

MACHLINE V-102



A1 EXISTING CONDITIONS
SCALE:1"=50

0 50' 100'

LEGEND

MAJOR CONTOUR

MINOR CONTOUR

SURVEY EXTENTS

SHEET KEY MAP



SCALE: NTS

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SUBMITTED BY: P. ROSS
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CONTRACT NO.: W911XK
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H72DSHAR202205
########################
H72DSHAR202205 - V-101.dwg

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TALLAS BAY MITIGATION

EXISTING CONDITIONS

SHEET ID
V-101

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A1 EXISTING CONDITIONS
SCALE:1"=50

0 50' 100'

GENERAL SHEET NOTES

1. BOTH 24" AND 4" HDPE PIPELINES ARE PRESENT ALONG THE UTILITY ALIGNMENT SHOWN.

LEGEND

UTILITY OFFSET, SEE NOTE 1

UTILITY

MAJOR CONTOUR

MINOR CONTOUR

SURVEY EXTENTS

SHEET KEY MAP



SCALE: NTS

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Wave Engineering

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EXISTING CONDITIONS

SHEET ID
V-102

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MACHLINE CN102



A1 REQUIRED DREDGING AREAS PLAN
SCALE:1"=50

0 50' 100'

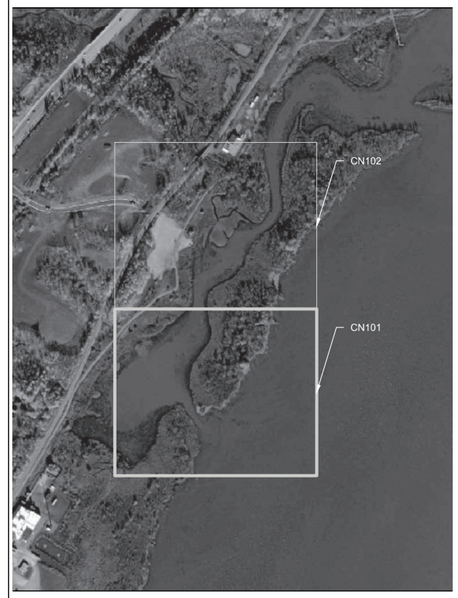
GENERAL SHEET NOTES

1. DO NOT DREDGE THE ACCESS CHANNEL DEEPER THAN ELEVATION 596.5 FT NAVD88.
2. ANY MATERIAL DREDGED FROM THE ACCESS CHANNEL MUST BE HANDLED AND PLACED WITH REMAINDER OF DREDGE MATERIAL IN TALLAS BAY. LIMITS OF ACCESS CHANNEL INCLUDES ALLOWABLE SPACE FOR DREDGING OF ACCESS CHANNEL AND CHANNEL SIDE SLOPES. DO NOT DISTURB GROUND LIMITS OF ACCESS CHANNEL SHOWN. DREDGE THE MINIMUM NECESSARY FOR EQUIPMENT ACCESS AND LEAVE STABLE SIDESLOPES UPON CONSTRUCTION COMPLETION.
3. SUBMIT ACCESS CHANNEL DREDGING PLAN I THE DREDGING, CONVEYANCE, AND STAGING WORK PLAN.

LEGEND

- REQUIRED AND OPTION MAJOR DREDGE CONTOUR
- REQUIRED AND OPTION MINOR DREDGE CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF ALLOWED ACCESS CHANNEL
- DREDGE AREA

SHEET KEY MAP



SCALE: NTS

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Value Pacific, Submit VECP's

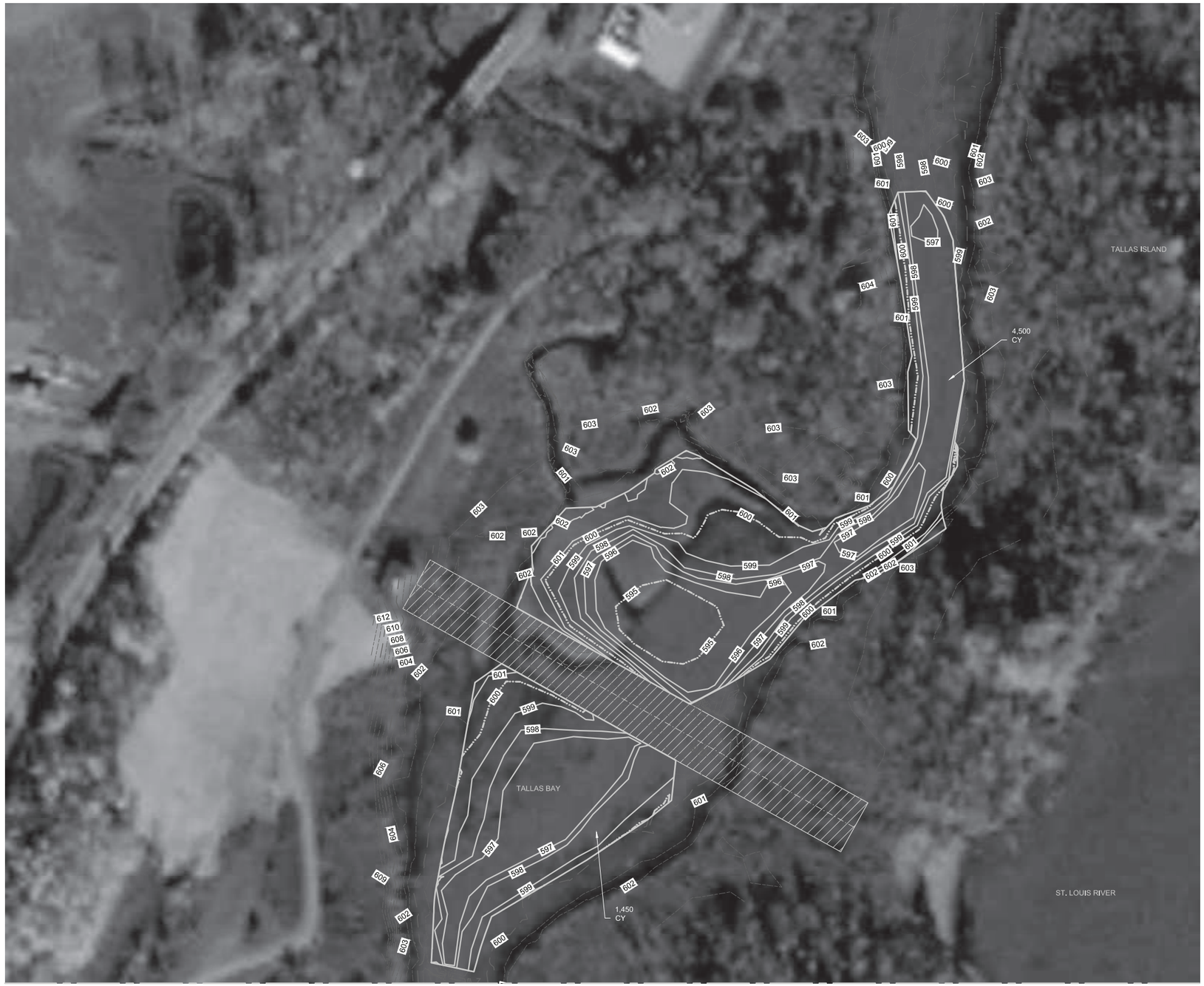
ST. LOUIS COUNTY
DULUTH, MN
TALLAS BAY MITIGATION

REQUIRED DREDGING AREAS PLAN

SHEET ID

CN101

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A1 REQUIRED DREDGING AREAS PLAN
SCALE:1"=50

0 50' 100'

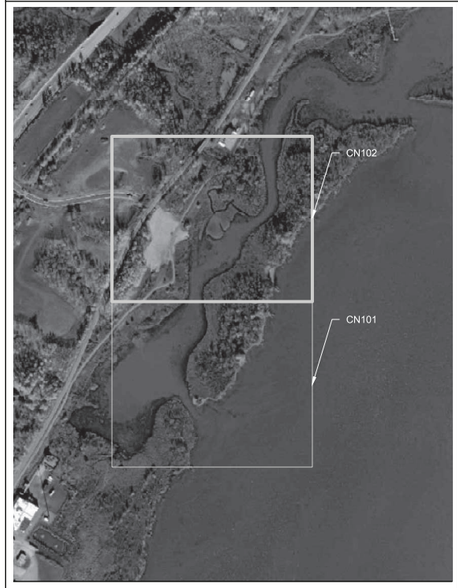
GENERAL SHEET NOTES

1. DREDGING WITHIN 25 FT OF UTILITY CROSSING IS PROHIBITED.

LEGEND

- UTILITY OFFSET, SEE NOTE 1
- UTILITY
- REQUIRED AND OPTION MAJOR DREDGE CONTOUR
- REQUIRED AND OPTION MINOR DREDGE CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- DREDGE AREA

SHEET KEY MAP



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SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK ##########
########## H72DSHAR202205
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ST. LOUIS COUNTY
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TALLAS BAY MITIGATION

REQUIRED DREDGE AREAS PLAN

SHEET ID
CN102

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A1 REAL ESTATE MAP DREDGE AREA
SCALE:1"=200'

N

0 200' 400'

GENERAL SHEET NOTES

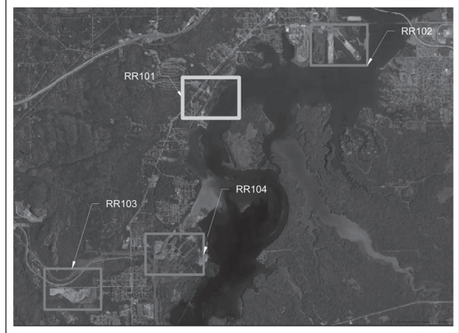
1. THE STATE OF MINNESOTA OWNS THE BED OF PUBLIC WATERS BELOW THE ORDINARY LOW WATER LEVEL.

LEGEND

DREDGE LIMITS

PARCEL BOUNDARY

SHEET KEY MAP



SCALE: NTS

N

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SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
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H72DSHAR200205
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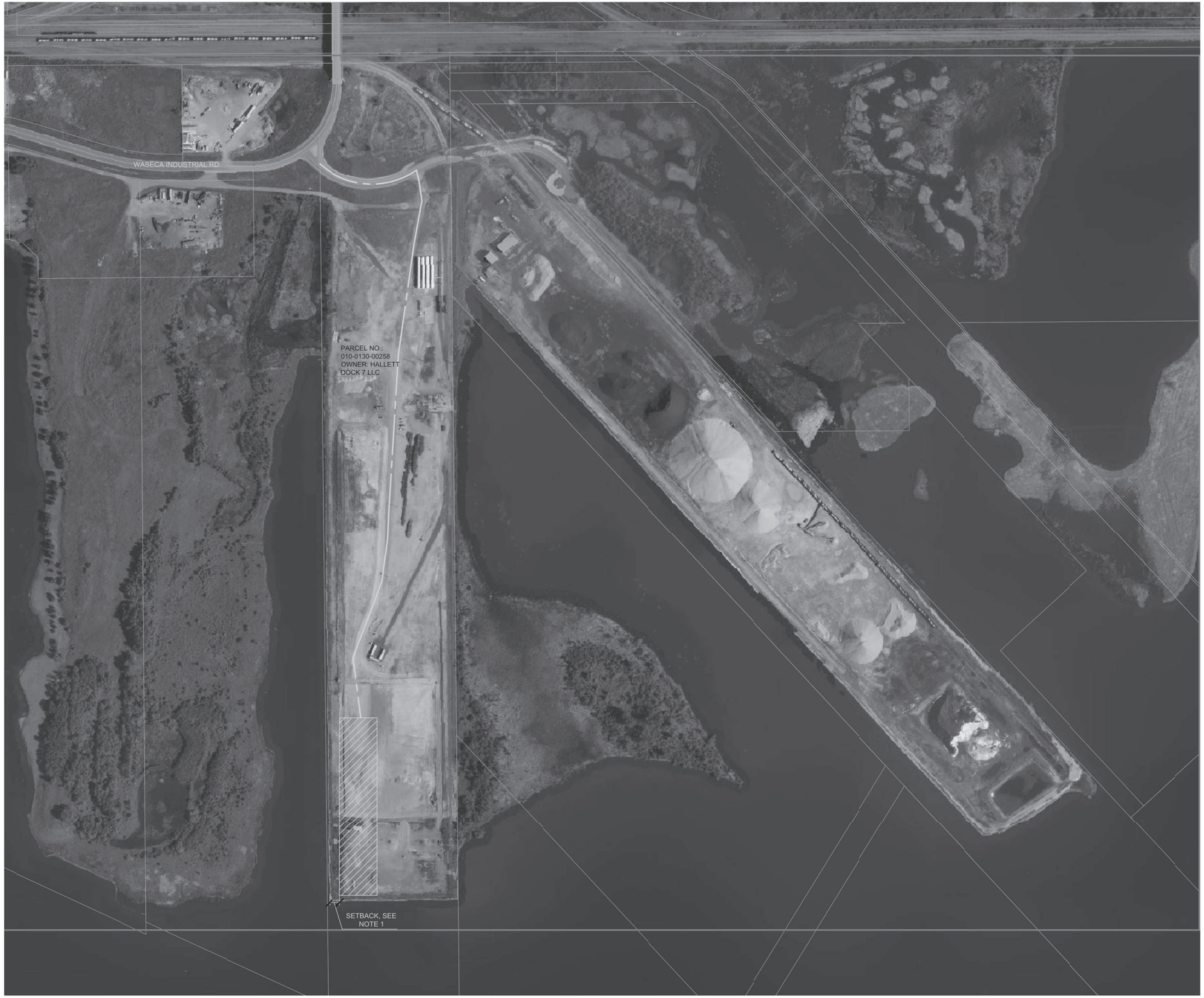
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TALLAS BAY MITIGATION

REAL ESTATE MAP
DREDGE AREA

SHEET ID
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A1 REAL ESTATE PLAN TRANSFER SITE AND ALTERNATE PLACEMENT SITE 3: HALLETT DOCK

SCALE:1"=200'

GENERAL SHEET NOTES

1. EQUIPMENT MUST BE AT LEAST 40 FT SET BACK FROM EDGE OF DOCK. DREDGE MATERIAL MUST BE AT LEAST 30 FT SET BACK FROM EDGE OF DOCK.
2. HALLETT DOCK SITE IS CONDITIONALLY AVAILABLE FOR USE AS A TRANSFER AREA AND PLACEMENT SITE FOR DREDGED MATERIAL. IF CONDITIONAL REQUIREMENTS AS INDICATED IN SPECIFICATION SECTION 01 30 00 CONTRACTOR-FURNISHED FACILITIES ARE MET, UTILIZE THE AREAS AS INDICATED.
3. COORDINATE USE OF ACCESS WITH PROPERTY OWNER AND OTHER CONTRACTORS DURING CONSTRUCTION. UPDATE THE GOVERNMENT THROUGHOUT CONTRACT ON THE USE OF ACCESS AREAS. NOTIFY CONTRACTING OFFICER OF CHANGES TO SCHEDULE OR TRANSPORT ROUTES.
4. MAINTAIN ACCESS ROADS DURING CONSTRUCTION AND RESTORE ROAD UPON CONSTRUCTION COMPLETION.
5. COORDINATE PLACEMENT OF MATERIAL WITH PROPERTY OWNER.

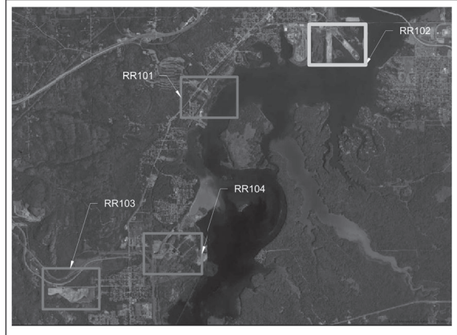
LEGEND

TRANSFER, MATERIAL HANDLING, AND DEWATERING AREA, IF NEEDED

PARCEL BOUNDARY

ACCESS ROAD

SHEET KEY MAP



SCALE: NTS

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SUBMITTED BY:	
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REAL ESTATE PLAN
TRANSFER SITE AND ALTERNATE PLACEMENT SITE 3
HALLETT DOCK

SHEET ID

RR102

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A1 REAL ESTATE PLAN ALTERNATE PLACEMENT SITE 1: VONCO LANDFILL

SCALE:1"=200'

N

0 200' 400'

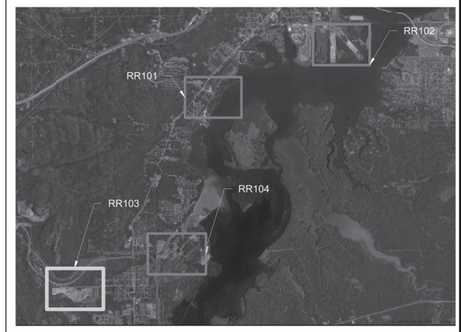
GENERAL SHEET NOTES

1. CONTRACTOR MAY PLACE MATERIAL AT VONCO LANDFILL IF ALL REQUIREMENTS ARE MET, SEE SPECIFICATION SECTION 01 30 00 CONTRACTOR-FURNISHED FACILITIES AND SECTION 35 20 25 SEDIMENT DEWATERING.

LEGEND

PARCEL BOUNDARY

SHEET KEY MAP



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REAL ESTATE PLAN
ALTERNATE PLACEMENT SITE 1
VONCO LANDFILL

SHEET ID
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A1 REAL ESTATE PLAN ALTERNATE PLACEMENT SITE 2: US STEEL

SCALE:1"=200'

N

0 200' 400'

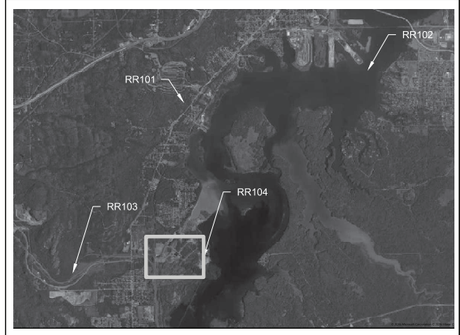
GENERAL SHEET NOTES

1. US STEEL SITE IS CONDITIONALLY AVAILABLE FOR USE AS A PLACEMENT SITE FOR DREDGED MATERIAL. IF REQUIREMENTS IN SPECIFICATIONS SECTION 01 30 00 CONTRACTOR-FURNISHED FACILITIES ARE MET, PLACE MATERIAL IN THE AREAS INDICATED.
2. COORDINATE USE OF ACCESS WITH PROPERTY OWNER AND OTHER CONTRACTORS DURING CONSTRUCTION. UPDATE THE GOVERNMENT CONTINUALLY ON THE USE OF ACCESS AREAS. NOTIFY CONTRACTING OFFICER OF CHANGES TO SCHEDULE OR TRANSPORT ROUTES.
3. MAINTAIN ACCESS ROADS DURING CONSTRUCTION AND RESTORE ROAD UPON CONSTRUCTION COMPLETION.

LEGEND

- ALTERNATE PLACEMENT LOCATION
- PARCEL BOUNDARY
- ACCESS ROAD
- E——E OVERHEAD ELECTRIC LINE
- ELECTRIC POLE

SHEET KEY MAP



SCALE: NTS

N

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J. THORSBY	01MAY2026
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SUBMITTED BY:	##########
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SIZE:	##########
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ST. LOUIS COUNTY
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TALLAS BAY MITIGATION

REAL ESTATE PLAN
ALTERNATE PLACEMENT SITE 2
US STEEL

SHEET ID

RR104

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Appendix B

65% DDR

Tallas Bay Dredging
Duluth, Minnesota

65% REVIEW
DESIGN DOCUMENTATION REPORT
July 2025



US Army Corps
of Engineers
Detroit District

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ATTACHMENT C – SITE PHOTOGRAPHY & TRIP REPORTS
ATTACHMENT D – CONSTRUCTION COST ESTIMATE
ATTACHMENT E – CONSTRUCTION SCHEDULE
ATTACHMENT F – MEETING MINUTES & REVIEW COMMENTS
ATTACHMENT G – SLOPE STABILITY ANALYSIS

1. PROJECT DESCRIPTION

1.1 Background

USACE was engaged by EPA to design a dredging project in Tallas Bay. The intent is to create deeper pools to provide fish habitat and facilitate recreational access to the area. EPA work at another nearby site resulted in the elimination of comparable habitat, so EPA is pursuing this project as compensation for that habitat. Minnesota DNR and PCA are also stakeholders on this project.

EPA has indicated interest in having USACE contract and oversee the construction work, however services beyond design-phase are not currently included in the interagency agreement for this project. EPA has stated that the construction budget for this project is approximately $1.2-million.

1.2 Priorities

Minnesota DNR identified six potential objectives for this project as stated below:

1) Restore the wetland complex at Tallas Bay to pre-flood conditions.
Objectives include removing excess sedimentation and associated delta at mouth of Knowlton Creek and improving bathymetry to mostly resemble a Type 5 (open water) wetland.

2) Restore optimum bathymetry for fish and wildlife habitat.
Objectives include increasing depth diversity, establishing deep off-channel overwintering habitat, creating littoral transition zones, promoting hydrodynamics and seiche impacts, and promoting resiliency.

3) Restore and enhance coastal wetland habitat.
Objectives include increasing seiche influence, connecting isolated wetlands, promoting diverse native vegetation, and creating shallow sheltered bay conditions.

4) Further support AOC BUI 9 by increasing fish and wildlife habitat.
Objectives include improving bathymetry, promoting diverse terrestrial and aquatic native vegetation, promoting a diverse benthic community, increasing natural shoreline, replacing non-native substrates with suitable natural materials, and establishing off-channel overwintering habitat. Ideally, there would be deeper habitat available (to prevent winterkill conditions) but recognize that goal may not be possible given scope and site constraints (Spirit Mountain pipeline).

5) Improve connectivity to Knowlton Creek for stream spawning fishes
Adjacent wetlands are becoming separated from the stream by a soil berm with some rock/rubble in places. The proposed objective is to restore stream function and wetland connectivity to allow warm water fish, such as Northern Pike, Muskellunge, Longnose, and White Sucker better wetland access for spawning.

6) Positively impact human health.

Objectives include supporting recreation (including recreational boating activities), improving aesthetics, promoting engagement with nature, promoting opportunities for social interaction and culture, and restoring sites to a condition that supports and compliments City of Duluth plans for future revitalization.

1.3 Location and Features

Tallas Bay is located on the northwest bank of the St. Louis River, north of the Spirit Lake area. It is located within the Duluth city limits in the State of Minnesota. The area is referred to as Tallas Island, or Tallus Bay depending on the map or GIS database.

An island separates the bay from the St. Louis River. Tallas Bay consists of a northern pool where the mouth of Knowlton creek is located. This pool tapers to the north into a channel which extends back to the St. Louis River. A larger southern pool includes a second connection to the river, on the east side of the bay.

1.4 History and Previous Work

The shallow hydraulically connected side stream that makes up Tallas Bay is documented as far back as 1861 on survey maps prepared by W.H. Hearding, which shows depths in the bay ranging from 4-ft to 8-ft. A portion of this map is shown in Figure 1 below with 2023 aerial photo (google earth) overlaid and the tallas bay shoreline outlined in red.

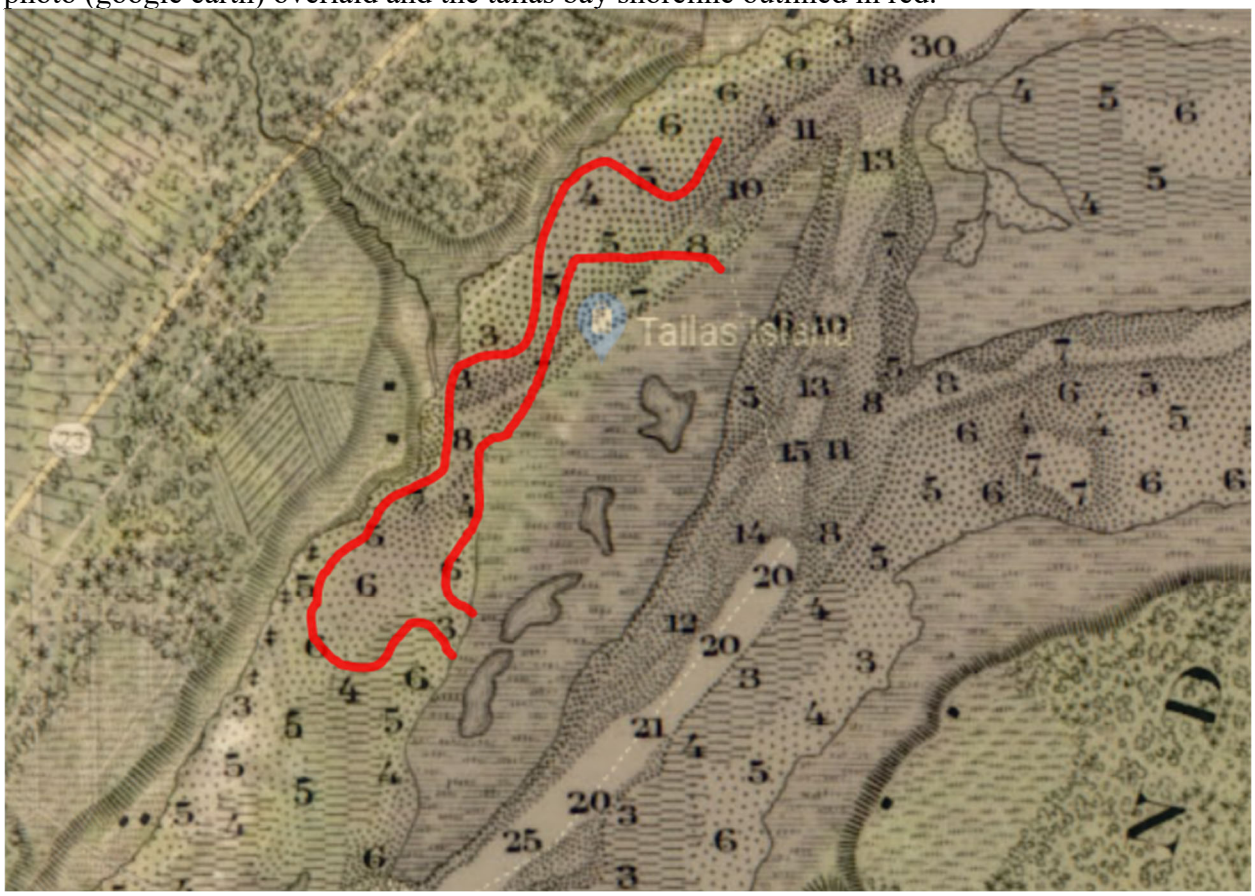


Figure 1. Tallas Bay is shown in the 1861W.H. Hearding Survey Map

A 1961 aerial photo of the bay shows that the southern connection to the St. Louis River has filled in. Accumulated sediment at the mouth of Knowlton Creek has also significantly restricted hydraulic connectivity at the northern portion of the bay. See Figure 2.

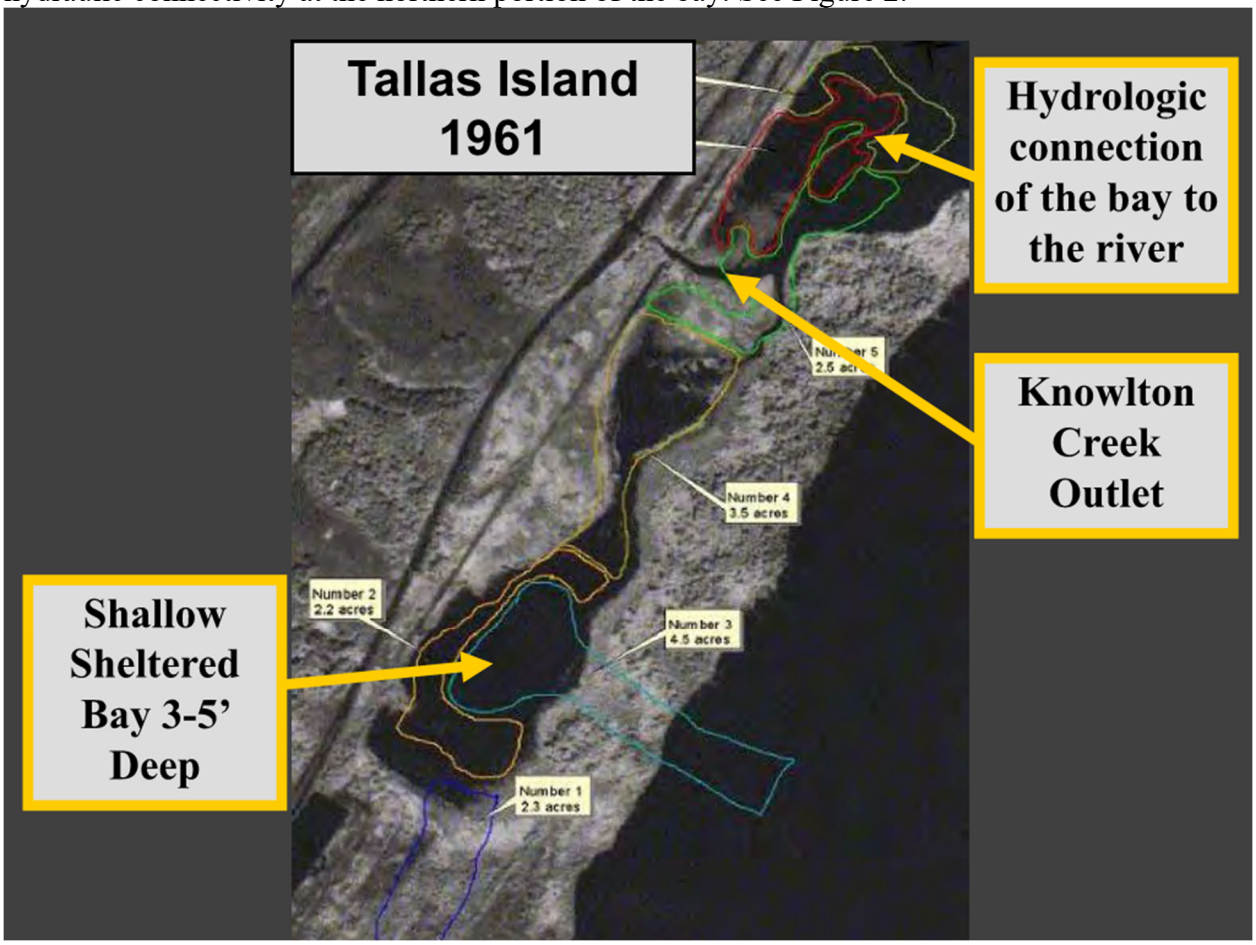


Figure 2. 1961 Aerial Photo of Tallas Bay.

By 2003 the bay had filled in with sediment to become a wet meadow, rather than a shallow bay. This is visible in Figure 3 which shows an aerial view of the bay as it was in 2003. A dredging project was executed in the bay from 2010 to 2013, overseen by the State of Minnesota. A photo of the dredging in-progress is shown in Figure 4.



Figure 3. Tallas Bay As Shown in 2003 Aerial Imagery



Figure 4. 2010 Dredging of Tallas Bay Underway.

Between April 2015 and May 2016 an intake pipeline was installed underneath Tallas Bay and a pump station was constructed on the northwest bank. These facilities are owned by Spirit Mountain and serve to pump water up from the St. Louis River for use in creating snow. The pipeline also serves the purpose of transporting runoff back to the river, reducing runoff flows in Knowlton Creek and mitigating sediment transport into Tallas Bay. Drawings for this pipelines are shown in Figure 5. The 2016 aerial photo in Figure 6 shows the results of the 2010-2013 dredging. The new pump station is also visible, as are the paths in which land had been disturbed to install the Spirit Mountain pipeline out to the St. Louis River.

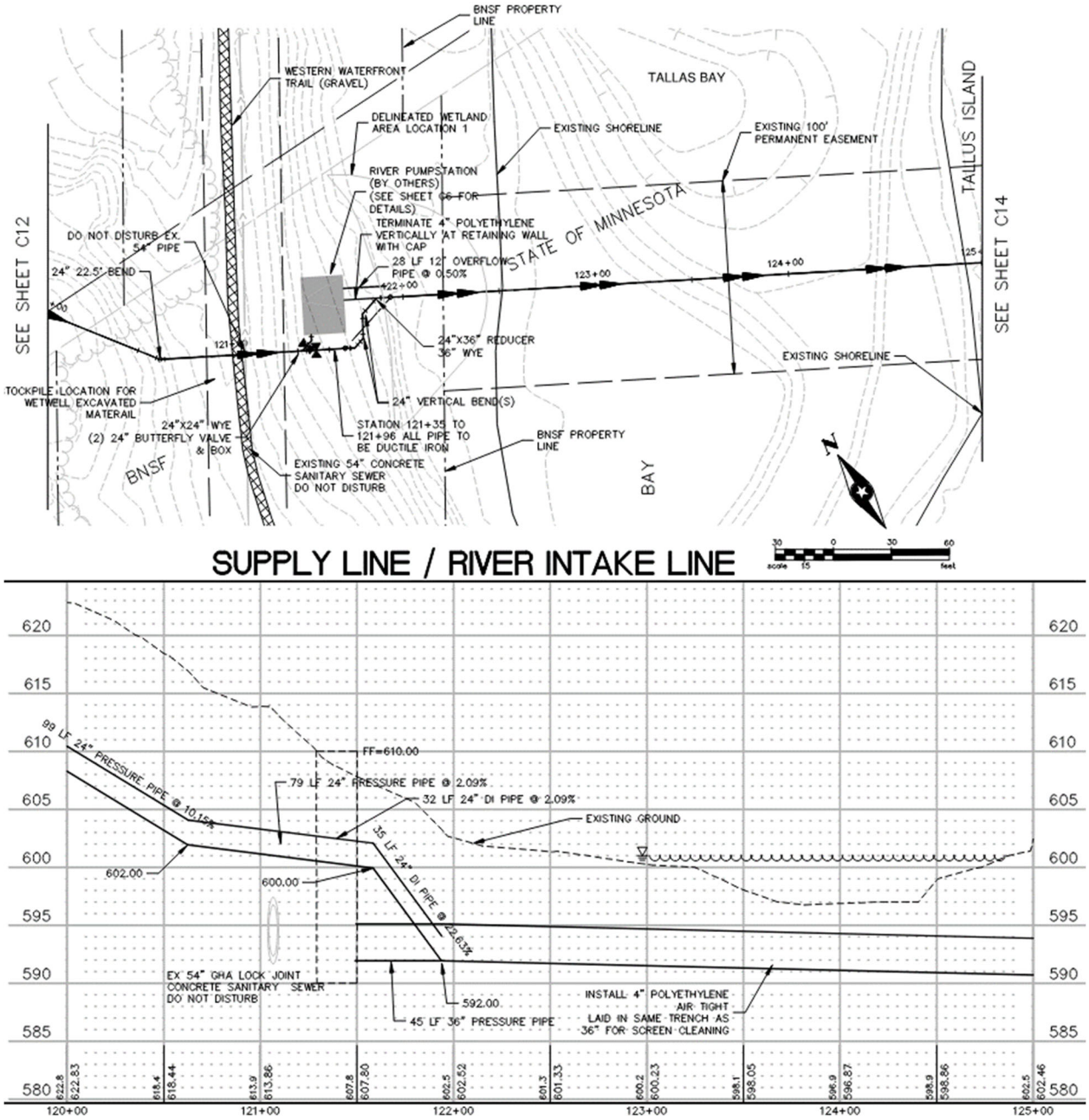


Figure 5. Plan and Section Drawings of Spirit Mountain Pipeline



Figure 6. 2016 Aerial Photo Showing Tallas Bay.

A 2015 sediment transport study overseen by the Detroit District of USACE and Stantec Consulting Services Inc. indicated that much of the recent sediment accumulation in Tallas Bay was transported by runoff from Knowlton Creek. Sediment transport from the creek is noted to have likely increased since the Spirit Mountain ski area was opened in 1974, and likely continued to increase as that facility and other land within the watershed continued to expand and become more developed. Proposed improvements recommended in the 2015 study were put into service through the Knowlton Creek Watershed Restoration Project, which completed construction in 2017.

It is understood that, in the time between the prior dredging work in 2010 and completion of the Knowlton Creek project in 2017, significant amounts of sediment likely continued to be transported by the creek and deposited into Tallas Bay. Of particular interest is aggregate material from a failed railroad grade that washed out during a 2012 flood event. There is concern that material may have ended up in Tallas Bay.

2. REFERENCES

The following is a list of references used in the design of the various project features:

3. PRIOR ENGINEERING STUDIES

Knowlton Creek Stream Restoration Project – See Section 1.4 for discussion of findings and relevance to the Tallas Bay project. Specific studies include:

- January 2023 Knowlton Creek Watershed 516(e) Sediment Study prepared by USACE Detroit District H&H Office
- October 2013 Reconnaissance Level Assessment prepared by Stantec Consulting Services
- April 2015 Hydraulic Analysis Report prepared by Stantec Consulting Services

4. DESIGN ALTERNATIVES

4.1 Design Scope

This design does not include placement of bio-medium or any other new material, or plantings. EPA and State of Minnesota stakeholders have stated clearly that this type of work is not in-scope for this project. The work is strictly limited to dredging. Based on the results of the sediment sampling study, this scope limitation is appropriate to achieve the project's objectives.

Dredging will be restricted along the alignment of the water intake pipe. The top-of-pipe elevation is only about 3-ft below the sediment surface in some areas. The pipe has a 50 ft easement on either side of the pipe. It is assumed that a no-dredge area will be designed within the easement.

The decision of where to place or dispose the dredge material is based on the results of the sediment sampling study. Preliminary discussions indicated that potential sites may include 21st street, if the material is suitable for beach nourishment, or upland placement at the US Steel site near Sprit Lake if not. A rough order of magnitude unit price of $65/CY was developed based on the assumption of transferring the material on to land at the Hallet dock and trucking the material to US Steel's Site 1 for placement, with including compaction to control for erosion. Mobilization and demobilization costs were estimated at approximately $465,000.

4.2 Dredging

4.2.1 Method

It was decided to restrict the dredging to mechanical. The area that is to be dredged is shallow with a significant amount of vegetation and gravel and would not be appropriate for a hydraulic dredge. In addition, dewatering will be simplified with mechanical dredging and offloading.

4.2.2 Alternatives

4.2.2.1 Alternative 1

An initial design alternative was developed for PDT and stakeholder consideration. This alternative represents the maximum depths and extents which stakeholders are interested in dredging under this project. The dredge locations were divided into three areas as shown below in Figure 7. Under this alternative, Area A and B would be dredged to 10-ft, which would allow sufficient depth for the desired habitat while also allowing for a reasonable amount of sediment accumulation from Knowlton Creek. Area C would be dredged to 7 feet to provide better hydraulic connectivity and access for fish and recreational vessels.

In total, this alternative would involve the removal of over 75,000-CY of material. Based on a unit price of $65/CY, the ROM project cost would be $5.34-million.

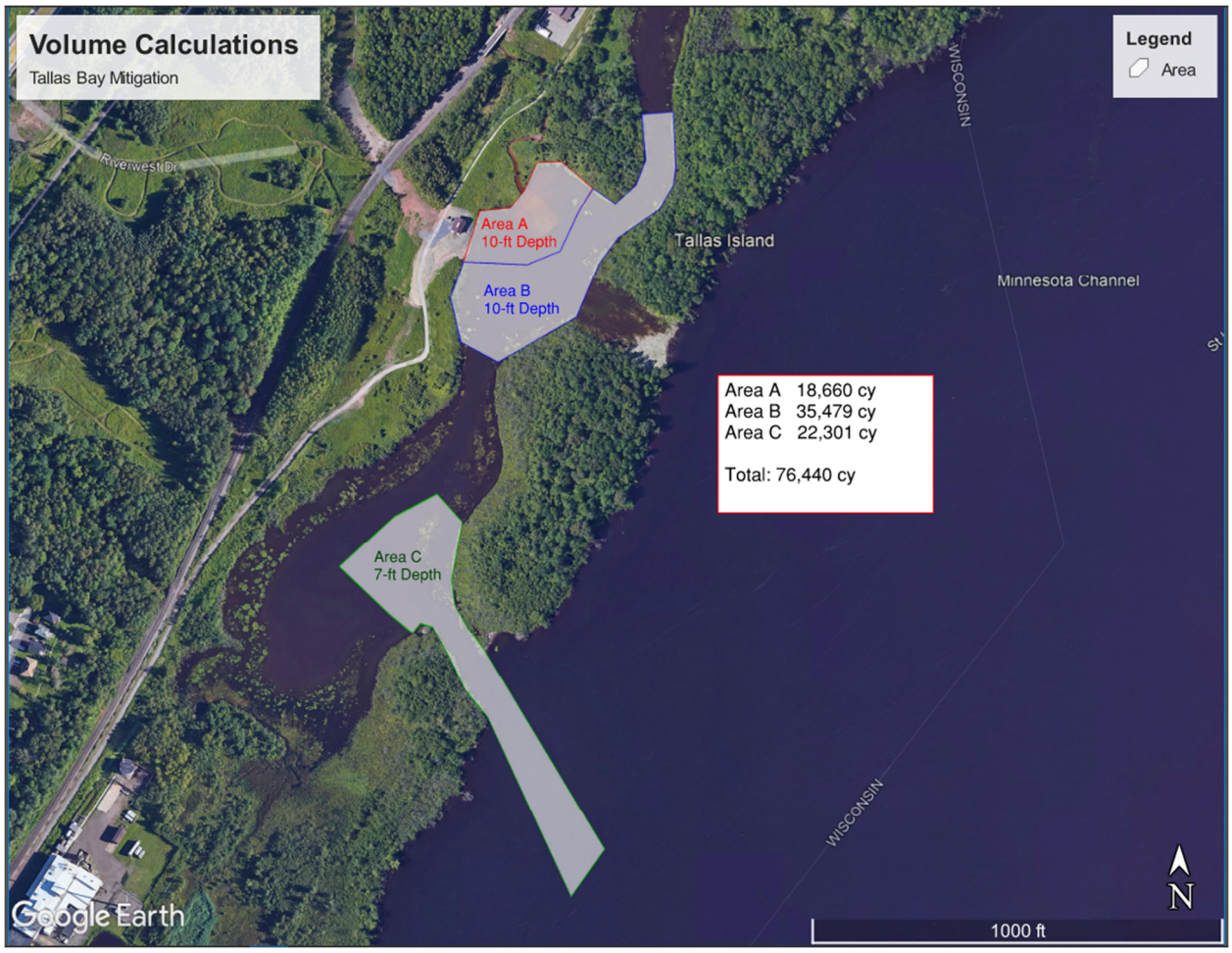


Figure 7. Preliminary Dredging Alternative

4.2.2.2 Alternative 2

Due to cultural resources concerns, alternative was considered to limit the extent of dredging to no more than the depths that were dredged in the 2010-2013 project and therefore would not dredge native material. The depths for this project range from approximately 3-7 feet deep. Preliminary volume calculations show this would remove a total of approximately 6,000-CY of material. The ROM cost for this alternative would be approximately $855,000.

4.2.2.3 Alternative 3

During design, the EPA discovered potential additional funding that could bring the total cost of the project to $4.75 million. Using this budget, a preliminary volume of approximately 65,000 CYD would be able to be dredged.

4.2.2.4 Alternative 4

After reviewing these alternatives, EPA settled on dredging up to 12,000 CYD within Tallas Bay, which corresponds to a depth range of 4 to 7 ft deep. The decision was made to not go in native soil and therefore dredge similarly to that dredged in 2012.

4.3 Placement Site

The sediment sampling indicated a high concentration of silt and clay within Tallas Bay, making most of the dredged material unsuitable for beach placement. However, there was a large amount of gravel found in the samples, particularly at the mouth of Knowlton Creek. Grassy Point and 40th Street were both identified as sites that could take the gravel. The benefit of these sites are that they would supplement additional habitat sites and would be an inexpensive method of disposal. However, it would also require additional sorting and coordination of the contractor prior to and during construction.

US Steel was identified as a site that could take the remainder of the material. The sites they offered would require sitework to place the material, but the dewatering requirements would be that which would be required to safely transport the material and would not require a paint filter test. The material could also potentially be reused by US Steel, if they needed it. However, a real estate agreement could not be established between USACE and US Steel.

Following this, Vonco Landfill (1100 W Gary St, Duluth, MN 55808) was identified as a potential placement site. Vonco did not require a real estate agreement or extensive coordination. However, it did require a paint filter test and would require payment for placement. It also would not be able to be reused after placement.

It was ultimately determined to allow the contractor to choose which placement site they would prefer to use, which could also include another site they identified on their own. Vonco Landfill was identified as an optional placement site to be included in the site plans and US Steel would also be included as an optional site.

4.4 Transfer Site

Similar to the placement site, a potential transfer site was identified in the plans. Hallett Dock has previously been used for similar projects. However, Hallett Dock will likely require payment, so EPA recommended we leave it up to the contractor to set up an agreement/payment to utilize the site.

4.5 Dewatering

Due to the soil composition, it was determined dewatering would likely be needed following dredging operations and prior to transporting the material in trucks. For similar projects, dredged material was amended with a polymer and dewatered in geotubes to ensure the most efficient dewatering. However, those projects were larger projects that were hydraulically dredged, which is not possible at Tallas Bay. Therefore, it is assumed the dewatering operation will require manual addition of amendment as well as moving the soil between containers. This will be left open to the contractor to decide how they would like to dewater the material.

The contract includes information for two placement sites: US Steel and Vonco Landfill (1100 W Gary St, Duluth, MN), but leaves it open to the contractor to find an alternative site. If placement occurs at Vonco Landfill, the sediment will require a paint filter test prior to transporting the material to Vonco.

5. VALUE ENGINEERING

A value engineering study is not required for this project as the construction budget is under $2.0-million.

6. DATA COLLECTION/INVESTIGATION

6.1 Survey

A survey was conducted by the Duluth Project Office from 17 to 20 October 2022. This included collection of both topographic and hydrographic data. Horizontal data was recorded in State Plane coordinates using SPCS Zone 2201, Minnesota North. Vertical data is recorded based on the IGLD85 datum. Measurements are recorded in US Survey Feet and are accurate to within +/- 0.2-ft.

6.2 Subsurface Investigation

Soil boring and sediment sampling was conducted in June 2023. The results of this survey indicate the material is not contaminated and suitable for unrestricted upland use. In general, the material is a sandy silt, with the exception of TB-23-05. The grain size analysis is shown below in Table 1. Sample locations are shown in Figure 8.

Table 1. Grain Size Analysis. Note that the analysis of TB-23-05 does not include coarse aggregate.

Grain Size Analysis Sample ID Date Collected	TB-23-01 06/27/23	TB-23-02 06/27/23	TB-23-03 06/27/23	TB-23-04 06/27/23	TB-23-05 06/27/23	TB-23-06 06/27/23	TB-23-07A 06/27/23	TB-23-08B 06/27/23	TB-23-09 06/27/23	TB-23-10B 06/27/23
% Coarse Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Fine Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Coarse Sand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Medium Sand	3.4	8.7	16.5	8.0	33.0	1.5	3.6	10.8	12.9	12.9
% Fine Sand	35.6	43.0	42.7	36.1	42.6	35.8	17.2	45.2	48.5	28.4
% Silt	50.2	44.5	33.1	49.6	20.9	52.1	43.1	36.5	31.7	43.1
% Clay	10.8	3.8	7.7	6.3	3.5	10.6	36.1	7.5	6.9	15.6
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Grain Size Analysis Sample ID Date Collected	TB-23-11B 06/27/23	TB-23-12 06/27/23	TB-23-13 06/27/23	TB-23-14 06/27/23	TB-23-15A 06/27/23	TB-23-16 06/27/23	TB-23-17B 06/27/23	TB-23-18 06/27/23	TB-23-19 06/27/23
% Coarse Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Fine Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Coarse Sand	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0
% Medium Sand	3.2	9.2	0.3	0.2	5.1	4.8	2.1	2.3	4.1
% Fine Sand	16.1	33.4	5.0	30.3	44.9	33.1	53.0	28.9	38.8
% Silt	62.0	49.5	76.0	62.7	40.5	54.8	39.3	64.1	50.6
% Clay	18.5	7.4	18.7	6.7	9.5	7.3	5.6	4.7	6.5
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

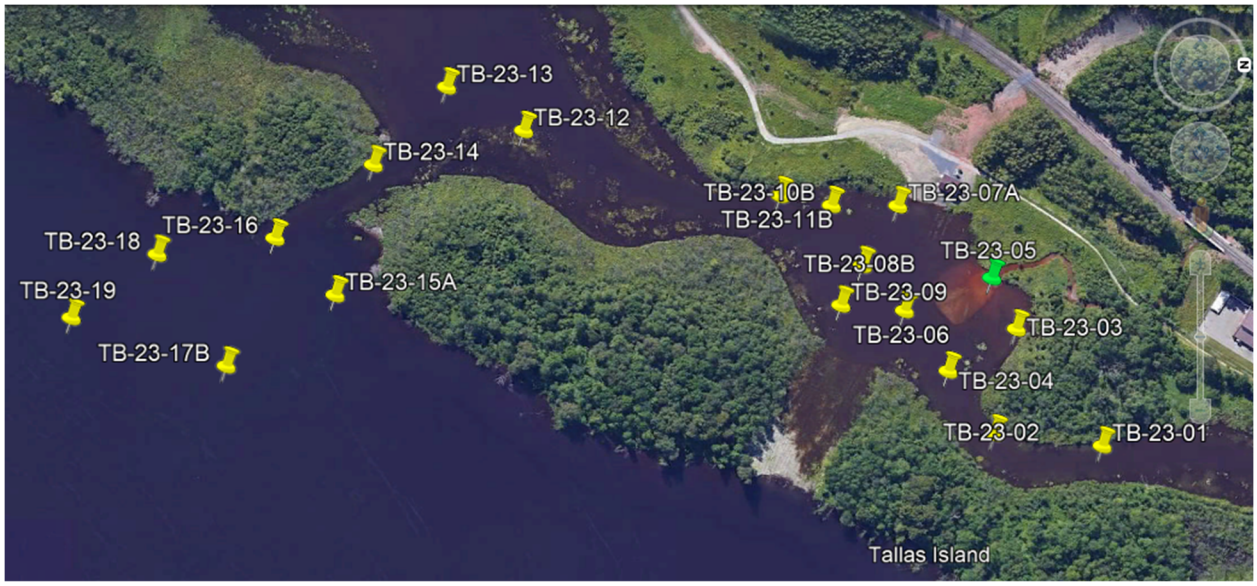


Figure 8. Sample Locations

The material sampled at TB-23-05 was an outlier in the sediment sampling analysis. This sample was taken from the mouth of Knowlton Creek and contains significant amounts of coarse aggregate. Photos of the TB-23-05 sample and a more representative sample are shown below in Figure 9. The methods used during the sediment sampling analysis did not allow for the quantification of this larger material, so additional sampling and gradation analysis was performed. The results indicated in this additional analysis that gravel and larger material was present at the mouth of Knowlton Creek.



Figure 9. Sediment Sample Images. Sample on the left is from the TB-23-05. Sample on the right is from TB-23-06 and is visually representative of all other samples.

6.3 Utility Crossings & Obstructions

A pipeline crosses under the northern pool of Tallas Bay at as discussed in Section 1.4. A 36" HDPE pipe is installed in the middle of a 100-ft wide easement, along with a 4" pipeline installed in the same trench. Issued-for-Construction drawings show the pipeline installed with the top-of-pipe elevation ranging from 595.0 to 594.0. The vertical datum is not called out on the plan set provided to USACE however the water level shown throughout the plan set is 601.1, which is consistent with the IGLD85 low water datum elevation for Lake Superior. The pipeline was fitted with concrete weights to eliminate buoyancy issues.

7. HYDRAULICS & HYDROLOGY

Although a thorough hydraulic analysis was not scoped for this project, a smaller analysis was done to better understand where the material leaving Knowlton Creek would end up in Tallas Bay. It was determined that most of the material would end up at the mouth of Knowlton Creek.

8. REGIONAL GEOLOGY

9. GEOTECHNICAL ANALYSIS

9.1 Soil/Sediment Properties

No available dredging material information is available. However, based on the sediment report, the expected material within the required dredging prism consists primarily of silt, sand and clay, with some and organics. Slab wood should remain as potentially encountered. Native material may be encountered in the overdepth prism and consists of soft to hard clay with coarse sand.

9.2 Slope Stability Analysis

At one point during the scoping effort, a larger amount of material was planned to be dredged. This would require dredging deeper and likely dredging into native material. However, this brought up concerns on the stability of the shoreline along Tallas Bay. Therefore, a slope stability analysis was done to better understand the impacts of dredging deeper in Tallas Bay. As a result, any digging into native soil was recommended to have either a shallower slope or over-excavated and replaced with granular material to be able withstand a 3:1 slope.

The slope stability report can be found in ATTACHMENT G.

10. DREDGE DESIGN

The dredging was designed to mimic the previously dredge design completed in 2010. This design including varying depths to provide habitat for key species and removed material from Knowlton Creek, an area prone to sediment build-up. Although the slope stability wasn't a concern, it was decided to avoid dredging into native material due to limited budget and cultural concerns of dredging in native material. The dredge design has the overdepth (6 inches) corresponding to the 2010 dredge design.

The total amount of material in the harbor using the 2022 survey and dredging down the 2010 post-dredge survey is about 9,400 CY. The contract is dictating going down the the

A copy of the design drawings has been included in ATTACHMENT A for illustrative purposes and design calculations can be found in ATTACHMENT B. To further understand PDT discussions and how decisions were made for the project, all meeting minutes and design review comments are included in ATTACHMENT F.

11. ENVIRONMENTAL AND CULTURAL RESOURCES SUMMARY

11.1 National Environment Protection Act (NEPA) Considerations

11.2 Cultural Resources Considerations

Local tribes, Fon du Lac Band of Lake Superior Chippewa (FDLB), have expressed interest in this project for the potential presence of cultural resources. Back bay areas within the St. Louis River, similar to Tallas Bay, were used by the Tribes to winterize their canoes. Canoes were intentionally sunk ahead of winter and stored in these bays until spring. Canoes could be left there for many reasons, including death of the canoe owner or difficulty relocating it. In addition, tribes have indicated that there was a trail along the shoreline of Tallas Bay area historically used by the tribes. There is also a concern that material deposited at the mouth of Knowlton Creek may include archaeological remains from the streambanks upstream.

FDLB was consulted during the scoping effort and they recommended having a monitor onsite during dredging and offloading to review material coming out of Tallas Bay.

12. CONSTRUCTION COST

13. CONSTRUCTION SCHEDULE

14. OPERATION AND MAINTENANCE

ATTACHMENT A

DESIGN DRAWINGS

ATTACHMENT B

DESIGN CALCULATIONS

ATTACHMENT C

SEDIMENT SAMPLING AND ANALYSIS REPORT

ATTACHMENT D

SUPPLEMENTAL COARSE AGGREGATE GRADATION

ATTACHMENT C

SITE PHOTOGRAPHY & TRIP REPORTS

ATTACHMENT D

CONSTRUCTION COST ESTIMATE

ATTACHMENT E

CONSTRUCTION SCHEDULE

ATTACHMENT F

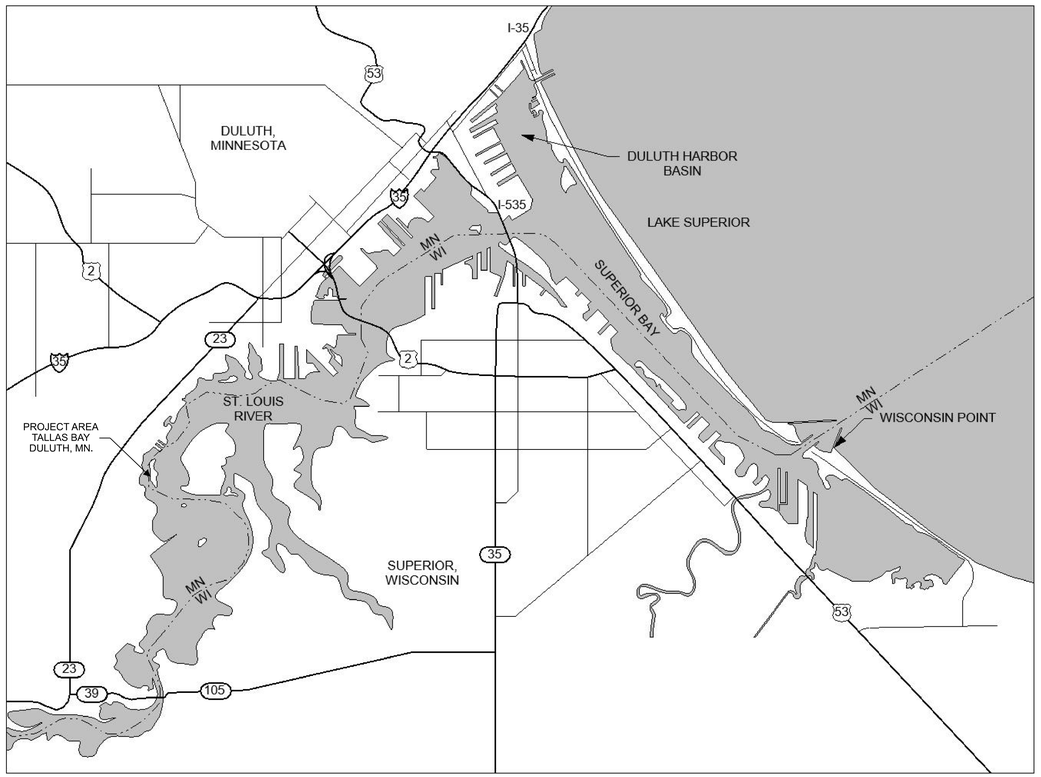
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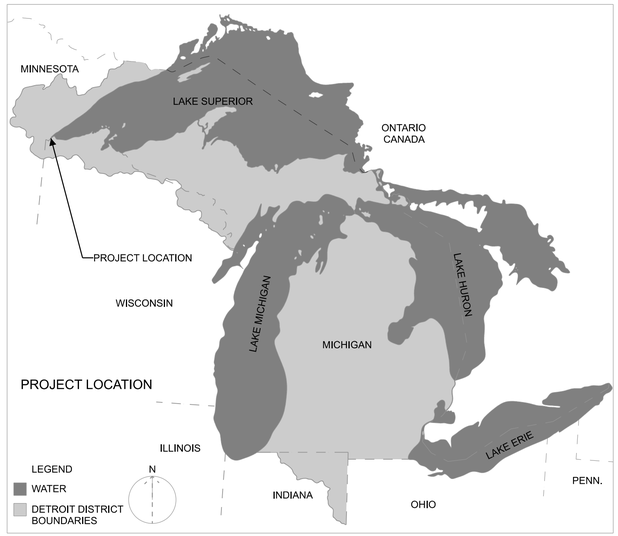
ATTACHMENT G

MEETING MINUTES & REVIEW COMMENTS

US Army Corps of Engineers®
DETROIT DISTRICT

ST. LOUIS COUNTY
DULUTH MN
TALLAS BAY MITIGATION





SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
ISSUE DATE: 29SEP2025

TIMOTHY C. SMITH P.E., CHIEF, DESIGN BRANCH

PHILLIP C. ROSS P.E.,CHIEF, ENGINEERING & CONSTRUCTION DIVISION

THE PROJECT WAS DESIGNED BY THE DETROIT DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. THORSBY
DRAWN BY: M. OTHMAN
CHECKED BY: T. SMITH
SUBMITTED BY: D. ROSS
SIZE: ANSI D
ISSUE DATE: 29SEP2025
SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
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U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
477 MICHIGAN AVE
DETROIT, MI 48226

Value Engineering

ST. LOUIS COUNTY
DULUTH MN
TALLAS BAY MITIGATION

COVER SHEET

SHEET ID
G-001

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

PRELIMINARY SUBMITTAL - 50% PDT REVIEW

INDEX

GENERAL

G-001	COVER SHEET	H72DSHAR202205 - G-001.DGN
G-002	GENERAL INFORMATION	H72DSHAR202205 - G-002.DGN

SURVEY/MAPPING

V-100	EXISTING CONDITIONS PLAN VIEW	H72DSHAR202205 - V-100.DGN
V-101	EXISTING CONDITIONS	H72DSHAR202205 - V-101.DGN
V-102	EXISTING CONDITIONS	H72DSHAR202205 - V-102.DGN

CIVIL

CN100	REQUIRED DREDGING PLAN VIEW	H72DSHAR202205 - CN100.DGN
CN101	REQUIRED DREDGING AREAS PLAN	H72DSHAR202205 - CN101.DGN
CN102	REQUIRED DREDGE AREAS PLAN	H72DSHAR202205 - CN102.DGN

RESOURCE

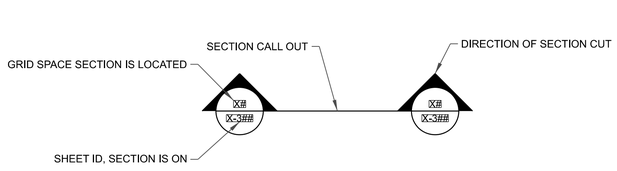
RR100	REAL ESTATE PLAN VIEW	H72DSHAR202205 - RR100.DGN
RR101	HALLETT DOCK TRANSFER SITE	H72DSHAR202205 - RR101.DGN
RR102	PLACEMENT SITE PLAN VIEW	H72DSHAR202205 - RR102.DGN
RR103	US STEEL ALTERNATE PLACEMENT SITE	H72DSHAR202205 - RR103.DGN

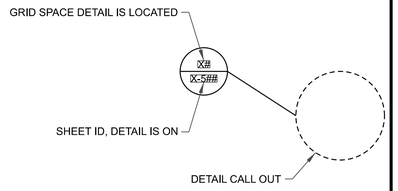
GENERAL NOTES

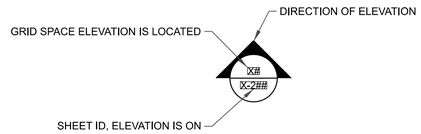
1. THE EXISTING INFORMATION DEPICTED ON THESE PLANS REPRESENTS TOPOGRAPHIC AND BATHYMETRIC SURVEY BY USACE IN OCTOBER 2023 AND CAN ONLY BE CONSIDERED AS INDICATED THE GENERAL CONDITIONS EXISTING AT THAT TIME.
2. GRID COORDINATES ARE BASED ON THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, MICHIGAN NORTH ZONE (2111). NORTH AMERICAN DATUM (NAD83). ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET.
3. ALL ITEMS ARE EXISTING UNLESS NOTED AS REQUIRED.
4. THE CONTRACTOR SHALL REPLACE, AT THEIR OWN EXPENSE, ANY ITEMS NOT SPECIFICALLY INDICATED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY THEIR OPERATIONS.
5. EXISTING UTLITY SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. PRIOR TO THE START OF ANY CONSTRUCTION ACITIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES. THE CONTRACT IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING UTILITIES OR STRUCTURES LOCATED AT THE WORK SITE.

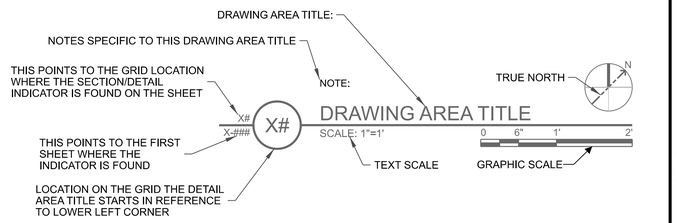
STANDARD ABBREVIATIONS

APPROX	APPROXIMATE
C/L	CENTERLINE
C.S.	CHANNEL STATION
CY	CUBIC YARD
EA	EACH
ELEV	ELEVATION
EXIST	EXISTING
FT	FOOT
GFP	GOVERNMENT FURNISHED PROPERTY
GOVT	GOVERNMENT
IN	INCHES
IGLD	INTERNATIONAL GREAT LAKES DATUM
LWD	LOW WATER DATUM
MAT'L	MATERIAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NTS	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
OLWM	ORDINARY LOW WATER MARK
PS	PLACEMENT STATION
REQ'D	REQUIRED
COR	CONTRACTING OFFICER REPRESENTATIVE
USCG	UNITED STATES COAST GUARD
CDF	CONFINED DISPOSAL FACILITY
DMDF	DREDGED MATERIAL DISPOSAL FACILITY
COR	CONTRACTING OFFICER'S REPRESENTATIVE









US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:	ISSUE DATE:
J. THORSBY	29SEP2025
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	%UOPTION 1%
A. ROSS	%UOPTION 2% H72DSHAR202205
SIZE:	%UOPTION 2% H72DSHAR202205 - G-002.dgn
ANSI D	

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
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Value Engineering

Veteran-Owned Small Business

ST. LOUIS COUNTY
DULUTH MN
TALLAS BAY MITIGATION

GENERAL INFORMATION

SHEET ID

G-002

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

PRELIMINARY SUBMITTAL - 50% PDT REVIEW

A1

EXISTING CONDITIONS PLAN VIEW

SCALE: 1"=200'

NOTE:



0 200' 400'

N

SHEET ID	V-100

ST. LOUIS COUNTY
DULUTH MN
TALLAS BAY MITIGATION

EXISTING CONDITIONS
PLAN VIEW

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
477 MICHIGAN AVE
DETROIT, MI 48226

DESIGNED BY: J. THORSBY	ISSUE DATE: 29SEP2025
DRAWN BY: M. OTHMAN	SOLICITATION NO.: W911XK
CHECKED BY: T. SMITH	CONTRACT NO.: W911XK
SUBMITTED BY: P. ROSS	%UOPTION 1% H72DSHAR200205
SIZE: ANSI D	%UOPTION 2% H72DSHAR202205 - V-100.dgn

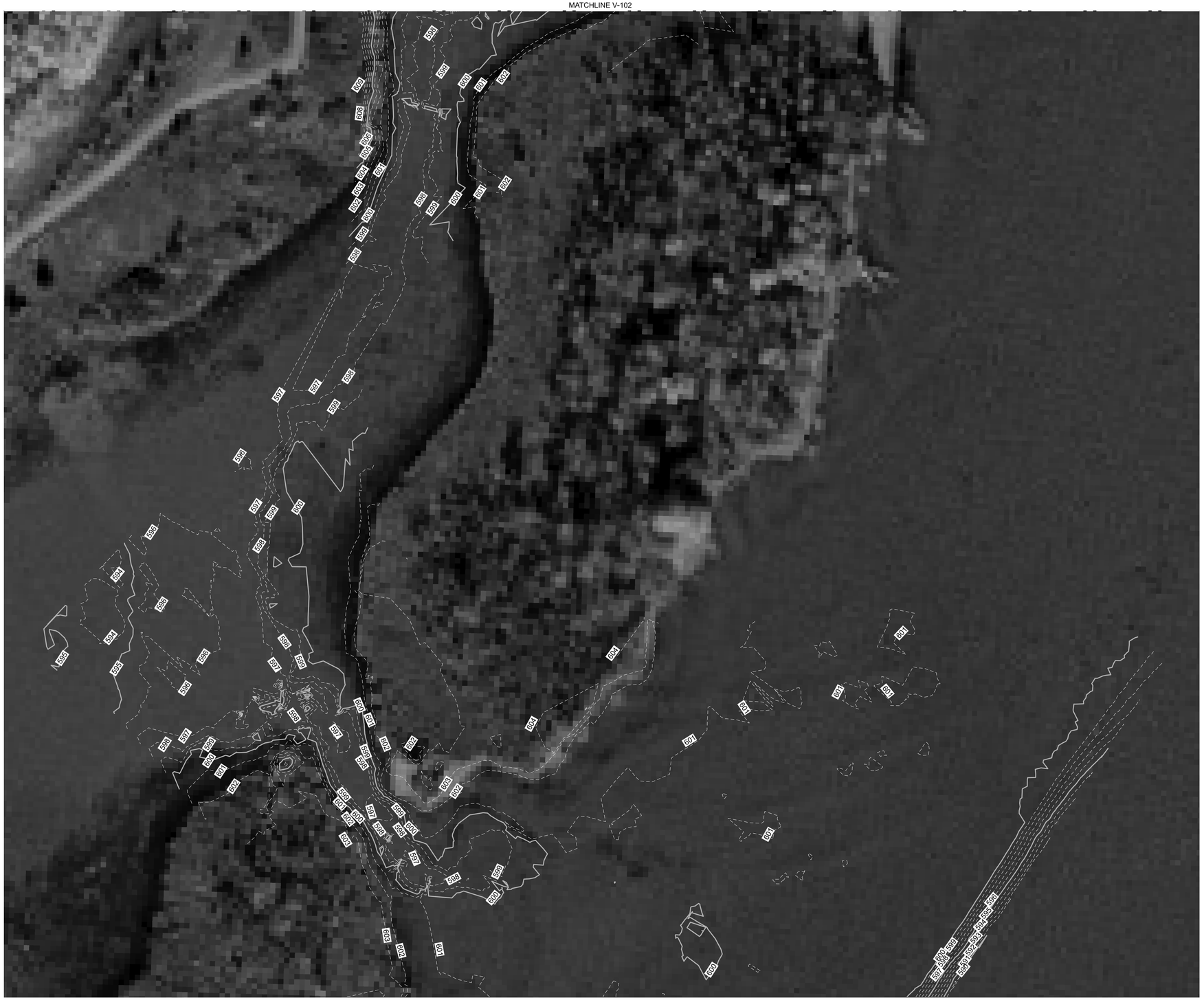
MARK	DESCRIPTION	DATE

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PRELIMINARY SUBMITTAL - 50% PDT REVIEW

%PRODUCTION DATA 2% %PRODUCTION DATA 3% %PRODUCTION DATA 1% %PRODUCTION DATA 4%

MATCHLINE V-102



A1 EXISTING CONDITIONS
SCALE: 1"=50'

0 50' 100'

GENERAL NOTES

1.

LEGEND

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%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. THORSBY
DRAWN BY: M. OTHMAN
CHECKED BY: T. SMITH
SUBMITTED BY: %JOPTION 2%
SIZE: ANSI D
ISSUE DATE: 29SEP2025
SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
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H72DSHAR202205
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EXISTING CONDITIONS

SHEET ID
V-101

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



GENERAL NOTES

1. DREDGING WITHIN 25 FT OF UTILITY CROSSING IS PROHIBITED, SEE SPECIFICATION SECTION DREDGING PARAGRAPH XX

LEGEND

UTL UTL UTL — UTILITY CROSSING

UTILITY OFFSET, SEE NOTE 1

A1 REQUIRED DREDGE AREAS PLAN

SCALE: 1"=50'

0 50' 100'

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MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY: J. THORSBY
DRAWN BY: M. OTHMAN
CHECKED BY: T. SMITH
SUBMITTED BY: CROSS
SIZE: ANSI D

ISSUE DATE: 29SEP2025
SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
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DETROIT, MI 48226

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TALLAS BAY MITIGATION

EXISTING CONDITIONS

SHEET ID

V-102

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



NOTE:

A1 REQUIRED DREDGING PLAN VIEW

SCALE: 1"=200'

N

0 200' 400'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY:	ISSUE DATE:
J. THORSBY	29SEP2025
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	%UOPTION 1%
CROSS	H72DSHAR202205
SIZE:	%UOPTION 2%
ANSI D	H72DSHAR202205 - CN100.dgn

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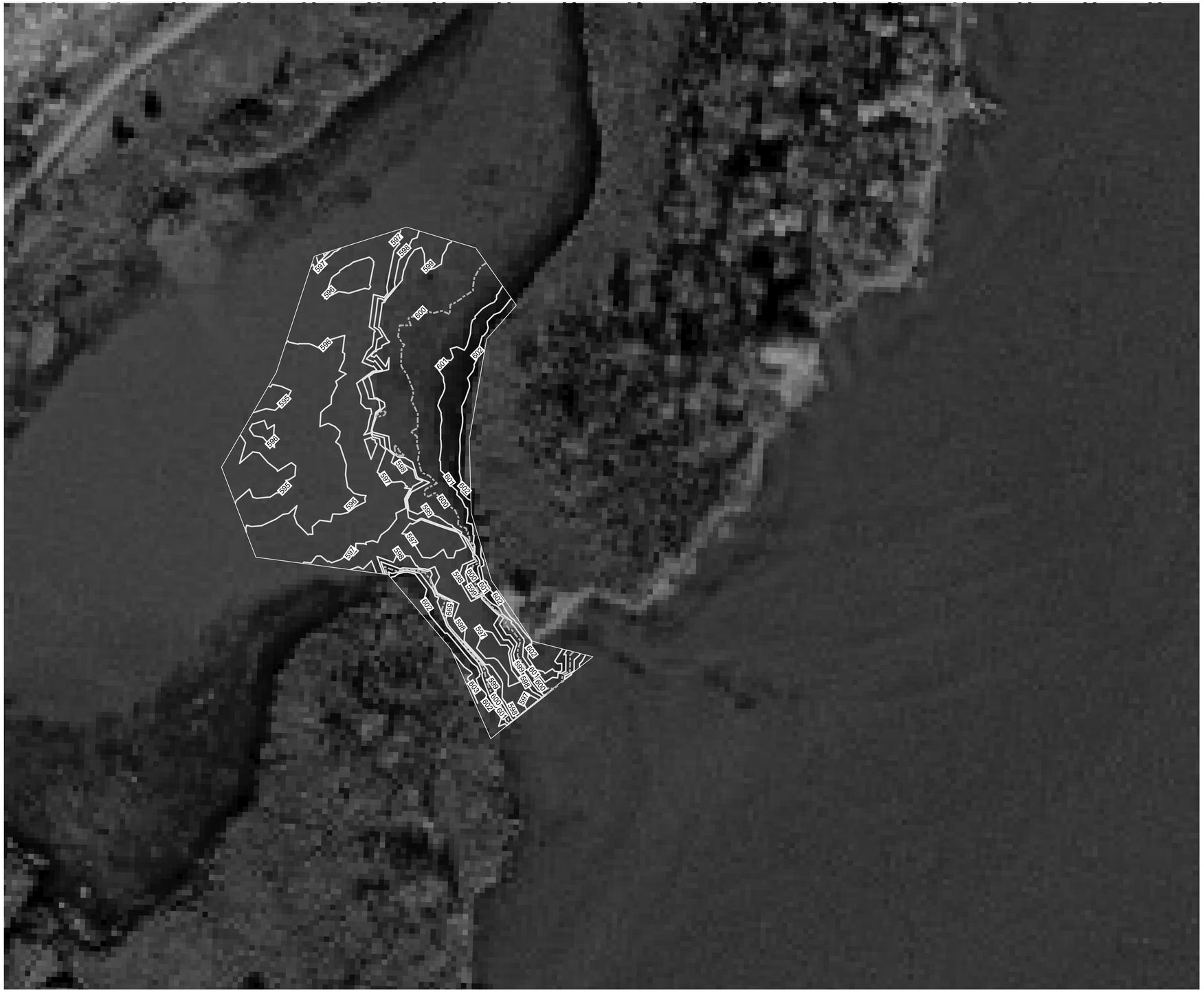
REQUIRED DREDGING
PLAN VIEW

SHEET ID

CN100

PRELIMINARY SUBMITTAL - 50% PDT REVIEW

MATCHLINE CN102



N

0 50' 100'

A1 REQUIRED DREDGE AREAS PLAN

SCALE: 1"=50'

GENERAL NOTES

1.

LEGEND

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MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY:	ISSUE DATE:
J. THORSBY	29SEP2025
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	%JOPTION 1%
CROSS	%JOPTION 2%
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REQUIRED DREDGING
AREAS PLAN

SHEET ID

CN101

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



A1 REQUIRED DREDGE AREAS PLAN
SCALE: 1"=50'

0 50' 100'

GENERAL NOTES

1. DREDGING WITHIN 25 FT OF UTILITY CROSSING IS PROHIBITED, SEE SPECIFICATION SECTION DREDGING PARAGRAPH XX

LEGEND

UTILITY CROSSING

UTILITY OFFSET, SEE NOTE 1

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

ISSUE DATE:	29SEP2025
SOLICITATION NO.:	W911XK
CONTRACT NO.:	W911XK
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%UOPTION 2%	H72DSHAR202205
H72DSHAR202205 - CN102.dgn	

DESIGNED BY:	J. THORSBY
DRAWN BY:	M. OTHMAN
CHECKED BY:	T. SMITH
SUBMITTED BY:	R. ROSS
SIZE:	ANSI D

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REQUIRED DREDGE AREAS PLAN

SHEET ID

CN102

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



NOTE:

A1 REAL ESTATE PLAN VIEW

SCALE: 1"=2000'

N

0 2000' 4000'

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MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY:	ISSUE DATE:
J. THORSBY	29SEP2025
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	%UOPTION 1%
ACROSS	%UOPTION 2% H72DSHAR202205
SIZE:	H72DSHAR202205 - RR100.dgn
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REAL ESTATE
PLAN VIEW

SHEET ID

RR100

PRELIMINARY SUBMITTAL - 50% PDT REVIEW

GENERAL NOTES

1.

LEGEND

TRANSFER AREA

NOTE:

A1 / RR101

HALLETT DOCK TRANSFER SITE

SCALE: 1"=200'

0 200' 400'

N

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY:	ISSUE DATE:
J. THORSBY	29SEP2025
DRAWN BY:	SOLICITATION NO.:
M. OTHMAN	W911XK
CHECKED BY:	CONTRACT NO.:
T. SMITH	W911XK
SUBMITTED BY:	%JOPTION 1%
ACROSS	H72DSHAR202205
SIZE:	%JOPTION 2%
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DULUTH MN
TALLAS BAY MITIGATION

HALLETT DOCK
TRANSFER SITE

SHEET ID

RR101

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



NOTE:

A1 RR101 — A1 PLACEMENT SITE
SCALE: 1"=200'

N

0 200' 400'

GENERAL NOTES

1. CONTRACTOR MAY PLACE MATERIAL AT US STEEL SITE IF ALL REQUIREMENTS ARE MET, SEE SPECIFICATION SECTION XX PARAGRAPH XX

LEGEND

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY: J. THORSBY
DRAWN BY: M. OTHMAN
CHECKED BY: T. SMITH
SUBMITTED BY: CROSS
SIZE: ANSI D

ISSUE DATE: 29SEP2025
SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
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%JOPTION 2% H72DSHAR202205 - RR102.dgn

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Vitus Engineering

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PLACEMENT SITE
PLAN VIEW

SHEET ID
RR102

PRELIMINARY SUBMITTAL - 50% PDT REVIEW



NOTE:

A1 RR101 A1 US STEEL ALTERNATE PLACEMENT SITE

SCALE: 1"=200'

N

0 200' 400'

GENERAL NOTES

1. CONTRACTOR MAY PLACE MATERIAL AT US STEEL SITE IF ALL REQUIREMENTS ARE MET, SEE SPECIFICATION SECTION XX PARAGRAPH XX

LEGEND

ALTERNATE PLACEMENT LOCATION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

%PRODUCTION DATA 1%
%PRODUCTION DATA 4%
%PRODUCTION DATA 3%
%PRODUCTION DATA 2%

DESIGNED BY: J. THORSBY
DRAWN BY: M. OTHMAN
CHECKED BY: T. SMITH
SUBMITTED BY: %JOPTION 2%
SIZE: ANSI D
ISSUE DATE: 29SEP2025
SOLICITATION NO.: W911XK
CONTRACT NO.: W911XK
%JOPTION 1%
H72DSHAR202205
%JOPTION 2%
H72DSHAR202205 - RR103.dgn

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DETROIT, MI 48226

Vista Engineering

ST. LOUIS COUNTY
DULUTH MN
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US STEEL ALTERNATE PLACEMENT SITE

SHEET ID

RR103

PRELIMINARY SUBMITTAL - 50% PDT REVIEW

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES
11/20, CHG 3: 02/23

PART 1 GENERAL

1.1 CONTRACT COST BREAKDOWN

Provide a breakdown of single job pay items within 30 days after the date of Notice to Proceed and prior to the submission of the first partial payment estimate. The Contracting Officer will review this breakdown to ensure proper distribution of the total cost to the various accounts. The Contracting officer will revise unbalanced items as between early and late payment items or other discrepancies to agree with a reasonable cost of the work included in the various items. This Contract cost breakdown is the basis for progress payments to the Contractor.

1.2 SINGLE JOB PAYMENT ITEMS

Payment items for the work under this Contract for which single job payments are made are listed in the bidding schedule. Costs for items of work that are not specifically mentioned to be included in a particular job or unit price payment item are included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed constitutes full compensation for furnishing plant, labor, materials, and equipment, and performing associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing work required for which separate payment is not otherwise provided.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work under this Contract for which unit price payments are made are listed in the bidding schedule. The unit price and payment made for each item listed constitutes full compensation for furnishing plant, labor, materials, and equipment, and performing associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing work required for each of the unit price items.

1.4 BIDDING SCHEDULE

1.4.1 Mobilization and Demobilization (Item No. 0001)

1.4.1.1 Payment

This item includes mobilization and demobilization for plant, equipment, materials, tools, supplies, and incidentals to complete the work. Mobilization consists of preparing plant and equipment for shipment and moving plant, equipment, materials, tools, supplies, and incidentals to the work site. Demobilization consists of preparing plant and equipment for removal; removing plant, equipment, tools, unused supplies, unused materials, and incidentals from the work site; and restoring staging areas used for construction operations. The Government will pay 60 percent of the job price upon completion of mobilization to the work site. The Government will pay the remaining 40 percent upon completion of demobilization. This item also includes payment for costs to obtain

construction bonds.

1.4.1.2 Unit of Measure

Unit of measure: job.

1.4.2 Dredging (Item Nos. 0002-0004)

1.4.2.1 Payment

This item includes work in accordance with SECTION 35 20 23 DREDGING. The Contract unit price per cubic yard of dredging includes the cost of removal, conveyance, and placement of materials meeting the description specified in SECTION 35 20 23 DREDGING paragraph Character of Materials, except original materials, ledge rock, boulders, cobbles, rock fragments, wrecks, scrap materials, snags, stumps, piles, debris or other material which cannot be removed by the plant specified in the accepted bid, or the equivalent of such plant, without blasting or special plant. The unit price also includes the cost of work to use the disposal area. Excepted material can be removed by special means at the Contract unit price. This item can also include costs associated with use of an upland placement site in accordance with SECTION 35 20 23 DREDGING.

If one or more options are exercised for increased quantity within the same channel reach, payment for material removed from that reach will first be made at the unit price for Base Bid dredging, followed by the unit prices for the exercised options in the order they are listed in the BIDDING SCHEDULE.

This item also includes work in accordance with SECTION 35 20 23.13 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SCOW - MONITORING AND ULLAGE PROFILE.

1.4.2.2 Measurement

See SECTION 35 20 23 DREDGING paragraph "MEASUREMENT."

1.4.2.3 Unit of Measure

Unit of measure: cubic yard.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 30 00

CONTRACTOR-FURNISHED FACILITIES
03/15

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E1527	(2021) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

1.2 CONTRACTOR-FURNISHED FACILITIES

1.2.1 Definition

The term "facility" used in this Section refers to Contractor-furnished features that are proposed by the Contractor in conjunction with execution and performance of dredging and that are not specifically identified in the solicitation. Examples of Contractor-furnished facilities include, but are not limited to, dredged material placement areas, dredged material transfer sites, dredged material dewatering sites, and haul roads.

1.2.2 Combination of Contractor and Government-Furnished Placement Areas

If a Contractor-furnished placement area is approved in combination with the Government-furnished placement area, place dredged material into the Contractor-furnished placement area in the quantity approved by the Government.

1.2.3 Expenses

Provide payment for expenses incurred in complying with requirements for use of a proposed Contractor-furnished facility. Operations in connection with a Contractor-furnished facility are at the Contractor's risk.

1.2.4 Required Data Needed if No Corps of Engineers Permit(s) Available

When proposing use of a Contractor-furnished placement facility that does not have a Corps of Engineers regulatory permit covering the proposed placement facility and the dredged material specified in the Contract, provide the data identified below for each proposed facility. The Government will conduct Section 106 of the National Historic Preservation Act coordination with the appropriate State Historic Preservation Office and federally recognized tribes. The Government will conduct Section 7 of the Endangered Species Act coordination with the appropriate U.S. Fish and Wildlife Service Office. Do not perform work at a Contractor-furnished placement site until notified by the Contracting Officer that the Section 106 process and the Section 7 process have been completed and work can proceed.

(1) Name and address of Property Owner(s).

(2) Location, site map, and legal description (or appropriate substitute) of area(s) and haul route(s).

(3) Previous Land Use Information for the last ten year period.

(4) A Topographic Map of the Area outlining the property boundary and specific placement location. Topography can be depicted on a USGS Quadrangle sheet (or a specific enlargement from the sheet) if the land elevations remain essentially the same as depicted on the sheet. Provide the name, date and latest photograph update to the Quadrangle sheet if a USGS Quadrangle sheet is used. If areas within the proposed placement location have been filled since the date of the Quadrangle sheet, then a new topographic survey is required including surveyor information and preparation date. Depict required cross sections on the topographic map.

(5) Photographs showing the area proposed for use.

(6) Data required to assess potential environmental impacts. This information is required in order to determine the necessity for environmental documentation for the proposed use of the site. Applicable data would include, but not be limited to, a Phase I Environmental Site Assessment of the proposed placement facility prepared in accordance with ASTM E1527.

(7) Capacity of placement area.

(8) Cross section(s) of the proposed fill area depicting existing grade, average depth of fill and final grades over placement area.

(9) Obtain a fully executed Contractor-Furnished Placement Facility Permit. A sample permit form is available upon request.

(10) Archaeological or arcitectural surveys perviously completed within 0.5 miles of the placement site and information related to past ground disturbing work at the placement site.

(11) Documentation of coordination of the use of the proposed placement facility with Federal, State, and local agencies having an interest. Provide written approval of these agencies for use of such facilities. Applicable agencies are:

Michigan:

(a) Matt Smar
Environmental Quality Specialist
Field Operations Support Section
Water Resources Division
Michigan Department of Environment, Great Lakes, and Energy
Constitution Hall
525 West Allegan Street
P.O. Box 30473
Lansing, Michigan 48909-7973
As a minimum, a determination that the proposed fill area does not contain regulated wetlands and that the site is not within a regulated floodplain.

(b) Mr. Scott Hicks
Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
2651 Coolidge Road
Suite 101
East Lansing, Michigan 48823
As a minimum, a determination that the site does not impact Federally listed Threatened or Endangered or Candidate species.

(c) Krystle Z. McClain, P.E.
NEPA & EJ Programs Supervisor
MultiMedia Section 2
Tribal and Multi-Media Programs Office
Office of the Regional Administrator
EPA Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604
Phone: (312) 886-7573
Email: mcclain.krystle@epa.gov

(d) Regulatory Branch
Operations Division
U.S. Army Corps of Engineers, Detroit District
477 Michigan Avenue, Detroit MI 48226

Minnesota:

(a) Mr. Dan Breneman, Dan Breneman, Lake Superior Unit, Minnesota Pollution Control Agency, 525 Lake Ave. South, Suite 400, Duluth, MN 55802. As a minimum, a determination that the proposed fill area does not contain regulated wetlands and that the site is not within a regulated floodplain.

(b) U.S. Fish and Wildlife Service, Ecological Services, 4101 American Blvd E, Bloomington, MN 55425-1665. As a minimum, a determination that the site does not impact Federally listed Threatened or Endangered or Candidate species.

(c) Mr. Kenneth Westlake, US Environmental Protection Agency, Region V, Environmental Planning and Evaluation, 77 West Jackson Boulevard, Chicago, IL 60604-3590.

(d) Regulatory Functions Branch, Construction-Operations Division, U.S. Army Corps of Engineers, St Paul, 190 Fifth Street East, St Paul MN, 55101.

Wisconsin:

(a) Jim Killian, Wisconsin Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921. As a minimum, a determination that the proposed fill area does not contain regulated wetlands and that the site is not within a regulated floodplain.

(b) U.S. Fish and Wildlife Service, Ecological Services, 2661 Scott Tower Drive, New Franken, WI 54229-9565. As a minimum, a determination that the site does not impact Federally listed Threatened or Endangered or Candidate species.

(c) Mr. Kenneth Westlake, US Environmental Protection Agency, Region V, Environmental Planning and Evaluation, 77 West Jackson Boulevard, Chicago, IL 60604-3590.

(d) Regulatory Functions Branch, Construction-Operations Division, U.S. Army Corps of Engineers, St Paul, 190 Fifth Street East, St Paul MN, 55101.

All States:

(a) Local Permit, including evidence of a Soil Erosion and Sediment Control (SESC) Permit from the appropriate local SESC agency or determination that no SESC permit is required.

1.2.5 Required Data Needed if a Corps of Engineers Permit(s) is Available

When proposing use of a Contractor-furnished placement facility that does have a Corps of Engineers regulatory permit which covers the proposed placement facility and the dredged material indicated in the Contract, provide the following data for each proposed facility:

(1) The Corps of Engineers Permit(s)

(2) State and Local permit(s)

(3) Obtain a fully executed Contractor-Furnished Placement Facility Permit. A sample permit form is available upon request.

The Government will review the permit and make a determination whether or not the Government is required to conduct additional Section 106 coordination.

1.2.6 Required Data Submittal, Review and Approval

1.2.6.1 Required Data Submittal if No Corps of Engineers Regulatory Permit(s) Available

Provide the required data specified under paragraph Required Data Needed if No Corps of Engineers Permit(s) Available with the initial proposal for use of a Contractor-furnished placement facility. Submit the required documents to the Contracting Officer for approval at least 90 calendar days in advance of the proposed placement facility usage to allow for Government review, coordination, and approval.

1.2.6.2 Required Data Submittal if a Corps of Engineers Regulatory Permit(s) is Available

Provide the required data specified under paragraphs Required Data Needed if a Corps of Engineers Permit(s) is Available with the initial proposal for use of a Contractor-furnished placement facility. Submit the required documents to the Contracting Officer for approval at least 30 calendar days in advance of the proposed placement facility usage to allow for Government review, coordination, and approval.

1.2.6.3 Contracting Officer's Approval

The Contracting Officer will issue approval of the Contractor-furnished placement facility by Contract modification in accordance with FAR 52.243-4 Changes. The modification to approve the Contractor-furnished placement facility does not adjust the Contract price and does not adjust the Contract performance period. Contracting Officer disapproval of a Contractor-furnished placement facility is not subject to FAR 52.233-1 Disputes and does not result in a time extension for delays to the Contractor.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES
08/18, CHG 4: 02/21

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

1.1.2 Project Type

The Contractor's Quality Control (CQC) System Manager must check and approve items before submittal and must stamp, sign, and date indicating action taken. Clearly identify proposed deviations from the Contract requirements and select "variation" on the submittal transmittal form. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates Of Insurance

Surety Bonds

List Of Proposed Subcontractors

List Of Proposed Products

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Environmental Protection Plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work are coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.

Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily logs and checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Confined space entry permits

Text of posted operating instructions

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that reviews the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Submittal Register; G, RO

1.4 SUBMITTAL CLASSIFICATION

1.4.1 Government Approved (G)

Government approval is required for extensions of design, critical materials, variations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.2 For Information Only

Submittals not requiring Government approval are for information only. Within the terms of the FAR 52.236-21 Specifications and Drawings for Construction, for information only submittals are not "shop drawings."

1.5 PREPARATION

1.5.1 Transmittal Form

Use the ENG Form 4025-R transmittal form for submitting both Government-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms or similar forms are included in the RMS CM software that the Contractor is required to use for this Contract. Properly complete this form by filling out the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the Contract drawings pertinent to the data submitted for each item.

1.5.2 Submittal Format

1.5.2.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.

b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Submit an electronic copy of drawings in PDF format and native electronic format.

1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space, no smaller than 1.0 inches on the right-hand side of each sheet for the Government disposition stamp.

1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization is acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals are not accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.2.4 Format of SD-04 Samples

1.5.2.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

a. Sample of Equipment or Device: Full size.

b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.

c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.

d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.

e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.

f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.

g. Sample Panel: 4 by 4 feet.

h. Sample Installation: 100 square feet.

1.5.2.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of an area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.6 Format of SD-06 Test Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization is acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Compile O&M data into a single document divided into sections coordinated with the Contracting Officer.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.3 Electronic File Format

Provide submittals in electronic format using RMS, with the exception of material samples required for SD-04 Samples items. Compile the submittal file as a single, complete document, to include the Transmittal Form described within, and also separately attach the native files which were used to create PDF. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Provide electronic files of sufficient quality that information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When submittals are required to be signed, include a valid electronic signature or a scan of a signature.

If requested by the Contracting Officer, e-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Contracting Officer. If requested by the Contracting Officer, provide electronic documents over 10 MB on an optical disc or through an electronic file sharing system such as the DOD SAFE Web Application located at the following website: https://safe.apps.mil/.

1.6 QUANTITY OF SUBMITTALS

1.6.1 Number of SD-01 Preconstruction Submittal Copies

Unless otherwise specified, submit one electronic file for each preconstruction submittal.

1.6.2 Number of SD-02 Shop Drawing Copies

Submit one electronic filefor each shop drawing submittal.

1.6.3 Number of SD-03 Product Data Copies

Submit in compliance with quantity requirements specified for shop drawings.

1.6.4 Number of SD-04 Samples

a. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples is retained by the approving authority and one is returned to the Contractor.

b. Submit one sample panel or provide one sample installation where directed. Include components listed in the technical section or as directed.

c. Submit one sample installation, where directed.

d. Submit one sample of nonsolid materials.

1.6.5 Number of SD-05 Design Data Copies

Submit in compliance with quantity requirements specified for shop

drawings.

1.6.6 Number of SD-06 Test Report Copies

Submit in compliance with quantity and quality requirements specified for shop drawings, other than field test results that are submitted with QC reports.

1.6.7 Number of SD-07 Certificate Copies

Submit in compliance with quantity requirements specified for shop drawings.

1.6.8 Number of SD-08 Manufacturer's Instructions Copies

Submit in compliance with quantity requirements specified for shop drawings.

1.6.9 Number of SD-09 Manufacturer's Field Report Copies

Submit in compliance with quantity and quality requirements specified for shop drawings other than field test results that are submitted with QC reports.

1.6.10 Number of SD-10 Operation and Maintenance Data Copies

Submit one searchable electronic copy of O&M data to the Contracting Officer for review and approval.

1.6.11 Number of SD-11 Closeout Submittals Copies

Unless otherwise specified, submit one searchable electronic submittal.

1.7 INFORMATION ONLY SUBMITTALS

Provide submittals without a "G" designation that have been certified by the QC manager to the Contracting Officer for information-only. Provide information-only submittals to the Contracting Officer a minimum of 14 calendar days prior to the Preparatory Meeting for the associated Definable Feature of Work (DFOW). Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. However, the Government reserves the right to return unsatisfactory submittals and require the Contractor to resubmit an item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; does not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.8 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications is provided as "Attachment A - Submittal Register."

1.8.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be comprehensive and additional submittals could be required. Maintain a submittal register for the project in accordance with Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM). The Government will provide the initial submittal register

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Throughout the Contract performance period, track submittals by maintaining a complete list, including completion of data columns and dates on which submittals are received by and returned by the Government.

1.8.2 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.8.3 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record

Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.8.4 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (l) Date submittal was received.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

1.8.5 Action Codes

1.8.5.1 Contractor Action Codes

DESIGN BID BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS – The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government Approval	G	GA
BLANK	Submittal is For Information Only (FIO)	BLANK	FIO
S	Submittal is for documentation of Sustainable requirements	S	S/FIO

1.8.6 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.9 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to FAR 52.236-21 Specifications and Drawings for Construction, and are considered where advantageous to the Government.

1.9.1 Considering Variations

Discussion of variations with the Contracting Officer before submission of a variation submittal helps ensure that functional and quality requirements are met and minimizes rejections and resubmittals. For variations that include design changes or some material or product substitutions, the Government may require an evaluation and analysis by a licensed professional engineer hired by the Contractor.

Specifically point out variations from Contract requirements in a variation submittal. If variations are not pointed out, the Government may require rejection and removal of such work at no additional cost to the Government.

1.9.2 Proposing Variations

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

1.9.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, is compatible with other elements of work.

1.9.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar days is allowed for the Government to consider submittals with variations.

1.10 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions are allowed for time lost in late submittals.

a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that submittal processing does not delay work. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.

b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the

contract documents but that have been omitted from the register or marked "N/A."

c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When the entire register has been fully approved, no further resubmittal is required.

The Contracting Officer will complete review of a submittal within 14 calendar days after the date of submission.

1.11 GOVERNMENT APPROVING AUTHORITY

When the approving authority is the Contracting Officer, the Government will:

a. Note the date on which the submittal was received.

b. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

c. Identify returned submittals with one of the actions defined in paragraph Review Notations and with comments and markings appropriate for the action indicated.

1.11.1 Review Notations

The Government will return submittals with the following notations:

a. Submittals marked "A - Approved as submitted (Completed)" authorize proceeding with the work covered.

b. Submittals marked "B - Approved, except as noted on drawings (Completed)" authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.

c. Submittals marked "C - Approved, resubmission required (Resubmit)" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.

d. Submittals marked "D - Returned by correspondence (Completed)" indicate that the submittal has been previously reviewed and approved or is not required. The Government will return a submittal marked "D - Returned by correspondence (Completed)" with an explanation of the reason it is not reviewed.

e. Submittals marked "E - Disapproved (see attached) (Resubmit)" indicate that the submittal does not have evidence of being reviewed and approved by the Contractor or is incomplete. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

f. Submittals marked "F - Receipt acknowledged (Completed)" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

g. Submittals marked "G - Other (Specify) (Resubmit)" indicate that the submittal is neither approved nor disapproved but requires resubmittal.

h. Submittals marked "X - Receipt acknowledged, does not comply (Resubmit)" indicate that the submittals have been received by the Government, but the submittals do not meet Contract requirements. This applies to "information-only submittals" as previously defined.

1.12 DISAPPROVED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers a correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, make such revisions and resubmit in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.13 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that

Approval or acceptance by the Government for a submittal does not relieve the Contractor of the responsibility for meeting the Contract requirements or for errors that exist, because under the Quality Control (QC) requirements of this Contract, the Contractor is responsible for ensuring information contained with in each submittal accurately conforms with the requirements of the contract documents.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment are considered unless accompanied by an explanation of why a substitution is necessary.

1.14 WITHHOLDING OF PAYMENT

The Government will not make payment for materials incorporated in the work if required approvals have not been obtained.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 35 13

SPECIAL PROJECT PROCEDURES
03/01

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that reviews the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Utility Location Plan and Findings

Notice to Mariners

Construction Schedule; G, RO

[Buoy Relocation Position]

Prework Photographs; G, RO

SD-06 Test Reports

Construction Photographs; G, RO

SD-07 Certificates

Survey Technician's Qualifications

SD-11 Closeout Submittals

Completion Photographs; G, RO

1.2 SEVERE WEATHER

a. This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with FAR 52.249-10 Default (Fixed-Price Construction). In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

1. The weather experienced at the project site during the contract period is found to be unusually severe, which is defined as weather being more severe than the adverse weather anticipated for the project location during a given month.

2. The unusually severe weather actually causes a delay to the completion of the project that is beyond the control and without the fault or negligence of the Contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar historical data for the project location and constitutes the base line for monthly weather time evaluations. In the progress schedule, reflect these anticipated adverse weather delays in weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS FOR *LAKE SUPERIOR* BASED ON 7 DAY WORK WEEK *

JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN
(31)	(29)	(31)	(15)	(5)	(7)	(7)

JUL	AUG	SEP	OCT	NOV 1-15	NOV 16-30	DEC
(7)	(9)	(11)	(15)	(8)	(15)	(31)*

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, record on the Quality Control (QC) Daily Report the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days prevent work on critical activities for 50 percent or more of the scheduled work day. The number of actual adverse weather delay days include days impacted by actual adverse weather (even if adverse weather occurred in a previous month), are calculated chronologically from the first to the last day of each month, and are recorded as full days. If the number of actual adverse weather days exceeds the number of anticipated adverse weather days, the Contracting Officer will convert qualifying delays to calendar days, giving full consideration for equivalent fair weather work days and issue a modification in accordance with FAR 52.249-10 Default (Fixed-Price Construction).

1.3 VETERANS EMPLOYMENT EMPHASIS FOR U.S. ARMY CORPS OF ENGINEERS CONTRACTS

In addition to complying with the requirements outlined in FAR Part 22.13, FAR Provision 52.222-38, FAR Clause 52.222-35, FAR Clause 52.222-37, DFARS 222.13 and Department of Labor regulations, U.S. Army Corps of Engineers (USACE) contractors and subcontractors are encouraged to promote the training and employment of U.S. veterans while performing under a USACE contract. While no set-aside, evaluation preference, or incentive applies to the solicitation or performance under the resultant contract, USACE contractors are encouraged to seek out highly qualified veterans to perform services under this contract. The following resources are available to assist USACE contractors in their outreach efforts:

- U.S. Department of Labor Veterans' Employment and Training Service (VETS): https://www.dol.gov/vets/
- Federal Veteran Employment Information: https://www.fedshirevets.gov/
- Veterans Opportunity to Work (VOW) Program: https://www.benefits.va.gov/vow/
- U.S. Army Warrior Transition Command Employment Index: https://wct.army.mil/modules/employers/index.html
- Hiring Our Heroes: https://www.uschamberfoundation.org/hiring-our-heroes

1.4 PROJECT/SITE CONDITIONS

1.4.1 Condition and Use of Project Site

Notify the Contracting Officer at least [5] calendar days prior to

bringing construction equipment or material upon the work site.

1.4.1.1 Physical Conditions

Notify the Contracting Officer immediately if project site conditions differ from the conditions represented in the drawings or specifications.

1.4.2 Waterways Navigation and Traffic

Be acquainted with information and regulations pertaining to navigation and vessel traffic within the waterways at the project site. Coordinate with the U.S. Coast Guard to ensure that a Notice to Mariners is issued prior to work activity at the project site. Send the completed form for the Local Notice to Mariners to the address stated in the paragraph "Temporary Lights, Signals and Buoys Required by U.S. Coast Guard". Submit the Local Notice to Mariners as published. Request Broadcast Notice to Mariners with the local Coast Guard Sector Command Center, local Waterways Division and submit documentation to the Government once the broadcast is made. The Government will not undertake to keep the waterways free from vessels or other obstructions, except to the extent of such regulations as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the River and Harbor Act approved 8 August 1917 (see Title 33, U.S.C.A. Sec. 1). Conduct work in such manner as to obstruct navigation as little as possible. In case the Contractor's plant so obstructs a channel as to make difficult or endanger the passage of vessels, move said plant promptly on the approach of another vessel to such an extent as is necessary to afford a practicable passage. Upon completion of the work, promptly remove the plant, including ranges, buoys, piles, and other marks placed by the Contractor under the contract in navigable waters or on shore.

1.4.2.1 Navigation

Information and regulations pertaining to navigation are found in the current issue of the "UNITED STATES COAST PILOT 6," issued annually by the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA). The "UNITED STATES COAST PILOT" is obtained from National Ocean Survey, NOAA, Distribution Division-C44, Riverdale, Maryland 20840.

1.4.2.2 Traffic

Vessels allowed to use the waterways at the project site consist of recreational craft and commercial vessels. It is possible for this traffic to interfere with Contract operations. Conduct work with due regard to and in coordination with the requirements of navigation. Information regarding the types and amount of passages made by commercial vessels that are allowed to use the waterways at the project site can be obtained from the current issue of the "Waterborne Commerce of the United States, Part 3, Waterways and Harbors, Great Lakes," published by the Department of Army, Corps of Engineers. The Department of the Army publication can be obtained at no charge from the following:

District Engineer, U.S. Army Engineer District, New Orleans, Waterborne Commerce Section, P.O. Box 60267, New Orleans, Louisiana 70160. Phone 504-862-1425, FAX 504-862-1091.

1.4.3 Existing Vegetation, Structures, Equipment, Utilities & Improvements

If existing utilities, vegetation, structures, equipment and improvements

are shown on the drawings, the locations indicated are approximate and are based upon the latest information available to the Government. Establish the exact horizontal and vertical location and size of existing utility lines that are located within the required work area. Submit a utility location plan and findings prior to commencing work on the site. Report utility lines that are not found by the Contractor, but are known to exist at the project site, to the Contracting Officer immediately. The Contracting Officer will have the option of directing commencement of work at the site or requiring the Contractor to submit further plans for locating the utility lines. Once utilities have been marked, the utilities are known to the Contractor, in accordance with FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements. If the Contractor damages existing utility lines, vegetation, structures, equipment, or improvements, immediately prepare a report documenting the cause and extent of damages and provide the report to the Contracting Officer.

1.4.4 Coordination with Others

The Government may have other Contractors engaged in work at the same area and Government-furnished placement area in accordance with FAR 52.236-8 Other Contracts.

1.4.5 Temporary Lights, Signals and Buoys Required by Coast Guard

Display temporary lights, signals and buoys required by the U.S. Coast Guard during the required work. Information regarding required signals, lights, buoys, and other requirements is obtainable from the Commander (oan), Ninth Coast Guard District, 1240 East Ninth Street, Cleveland, Ohio 44199-2060, Telephone (216) 902-6000.

1.4.6 Navigation Buoys

1.4.6.1 Relocation of Existing Buoys

If the relocation of existing navigation buoys is required to perform the contract work, request permission for their relocation from the U.S. Coast Guard through the Contracting Officer. Once relocated, maintain a record of the buoy relocation position(s). Provide the request to the Contracting Officer not less than 3 weeks prior to need of the buoy relocation. Perform the relocation work in accordance with U.S. Coast Guard requirements.

1.4.6.2 Temporary Dredging and Construction Buoys

In order to distinguish temporary buoys placed and maintained by the Contractor for dredging or construction purposes from aids to navigation placed by the U.S. Coast Guard, provide buoys that are white and the top 2.0 feet are light green in color. Remove temporary buoys at the completion of the work.

1.4.6.3 Buoy Markings

If buoys with special markings are needed to indicate the different sides of the navigable channel, make prior arrangements with the U.S. Coast Guard through the Contracting Officer.

1.4.7 Layout of Work and Surveys

1.4.7.1 Layout of Work

The following requirements are in addition to the requirements of FAR 52.236-17 Layout of Work. The Government will establish bench marks and horizontal control points at the site of the work. Horizontal control points and descriptions of bench marks are shown on the drawings or supplied by the Contracting Officer.

1.4.7.2 Surveyor Requirements

From these control points and bench marks, lay out the work by establishing lines, grades, range markers and gauges at the site as necessary to control the work. For each person assigned to conduct surveys, submit their identity and Survey Technician's Qualifications at least 10 calendar days in advance of conducting surveys. Record survey information in accordance with standard and approved methods and in the survey note format approved by the Contracting Officer. Provide field notes, sketches, recordings and computations made in performing the layout work to the Contracting Officer for ready examination, available continually during the progress of the work. Upon completion of the Contract work, turn over the originals to the Contracting Officer in ring binders.

1.4.7.3 Suspension

The Contracting Officer may require that work be suspended when location and limit marks established by the Contractor are not reasonably adequate to permit checking the work. The Contracting Officer will withdraw such suspension upon satisfactory replacement of location and limit marks. Such suspension comes at no additional cost to the Government and does not entitle the Contractor to an extension of time for completing the work.

1.4.7.4 Verification

The Government may make checks as the work progresses to verify lines and grades established by the Contractor and to determine the conformance of the completed work as it progresses with the requirements of contract specifications and drawings. Such checking by the Contracting Officer does not relieve the Contractor of its responsibility to perform the work in accordance with the contract drawings and specifications.

1.5 SEQUENCING AND SCHEDULING

1.5.1 Construction Schedule

Submit a practicable Construction Schedule in accordance with FAR 52.236-15 Schedule for Construction Contracts. Use the date of Notice to Proceed as the start date and show the work completed on the Contract Required Completion Date, in accordance with FAR 52.211-10 Commencement, Prosecution, and Completion of Work. Include the following items in the schedule at a minimum:

a. Submittal, Government review, and approval of preconstruction submittals, including the Contractor Quality Control Plan, the Accident Prevention Plan, the Environmental Protection Plan, and other major work plan and materials submittals

b. Procurement of long lead-time equipment or materials

c. Mobilization

d. Sequencing of each definable feature of work as an activity in the schedule, from preparatory work through completion of field work

e. Quality control inspections, check surveys, and corrections performed by the Contractor

f. Quality assurance surveys performed by the Government, providing not less than seven business days for this activity after completion of quality control and correction activities by the Contractor in each work area for which a discrete survey, inspection, and acceptance is allowed

g. Correction of dredge deficiencies

h. Pre-final inspection, correction of punch list items, and final inspection of non-dredging work items, providing not less than five business days for the Government to provide such inspection and results after notification by the Contractor that work has been completed without known deficiencies

i. Demobilization

j. Preparation, submittal, Government review, and approval of outstanding administrative and closeout submittals.

In accordance with FAR 52.236-15 Schedule for Construction Contracts, submit an electronic update to the approved project schedule each month via the Resident Management System or successor system identified by the Government. Show the actual work progress to date and update projected dates, durations, and sequencing of remaining activities through completion of the project.

With each schedule update submittal, include an electronic copy of:

a. A narrative that indicates the status of the project schedule; identifies changes to previous activity dates, duration, sequencing, float, and completion dates; and specifically identifies incurred delays, causes, and remedies to be undertaken by the Contractor

b. A tabulation of estimated earnings for each month of the project

1.5.2 Exclusion of Period in Computing Completion Schedules

No work is required during the period between 15 November and 15 April, inclusive, and the days in this period are not counted when computing the required completion date. Work can be performed, unless otherwise prohibited, during this period upon giving prior written notice to the Contracting Officer.

1.5.3 Weekend, Holiday And Night Operations

Notify the Contracting Officer at least 48 hours in advance of starting work on Saturdays, Sundays, holidays or at night. Provide adequate lighting for thorough inspection of night operations.

1.5.4 Work Period Restrictions

No work is allowed at the project sites during the following periods:

a. Federal Holidays:
https://www.opm.gov/policy-data-oversight/pay-leave/federal-holidays/

The Contractor may submit a request 48 hours in advance to work on these holidays or nights through the COR for approval. An approval for such request will be made at the discretion of the COR.

Additional work period restrictions can be found in 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS paragraph Allowed and Prohibited Dredging Periods.

1.6 PROGRESS PHOTOGRAPHS

1.6.1 Photographs

Take color photographs with ordinary digital cameras at high resolutions (minimum five megapixel) and submit as JPG files. Submit the JPG files electronically in RMS or as email attachments, as directed by the Contracting Officer. Select formats and media compatible with Government equipment. The Government utilizes ordinary office software and hardware with Windows based products.

1.6.2 Prework Photographs

Before work begins, photograph salient site features and conditions. Choose images so that a comparison with final photographs provides a comprehensive record of the work accomplished under this contract.

1.6.3 Construction Photographs

During construction, photograph every activity, every crew, and every major piece of construction equipment. Take special care to photograph activities resulting from each Contract modification.

1.6.4 Completion Photographs

At completion, photograph salient site features and conditions. Choose images so that a comparison with pre-work photographs provides a comprehensive record of the work accomplished under this contract.

1.6.5 Photograph File, Format and Naming

Compile a simple database for every photograph provided using common office software. Microsoft Access and Excel are examples of acceptable source software. Submitting the database in RMS. Prepare a single database where each photograph is represented by a single record. At a minimum, include with each photograph a descriptive title and the date taken.

1.6.6 Photograph Quantity

For the final submittal of prework, construction and completion photographs, select the clearest and most illustrative of the photos to document the progress of the work. Include a minimum of 5 and a maximum of 20 photos for each feature of work, unless otherwise directed by the COR.

1.7 PROGRESS MEETINGS

Conduct a weekly progress meeting with the Government (or as otherwise mutually agreed to) for the purpose of jointly reviewing the actual progress of the project as compared to the as-planned progress and to review planned actiities for the upcoming two weeks. Use the current approved schedule update for the purposes of this meeting and for the production and review of reports. As the weekly progress meeting, address the status of RFIs, RFPs, and Submittals. Hold regular progress meetings with the Government throughout construction and provide agendas and minutes.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS
05/24

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ANSI/ASSP A10.34	(2021) Protection of the Public on or Adjacent to Construction Sites
ANSI/ASSP A10.44	(2020) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations

ASTM INTERNATIONAL (ASTM)

ASTM F855	(2020) Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 1048	(2016) Guide for Protective Grounding of Power Lines
IEEE C2	(2023) National Electrical Safety Code

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z89.1	(2014; R 2019) American National Standard for Industrial Head Protection

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 51B	(2024) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70	(2023) National Electrical Code
NFPA 70E	(2024) Standard for Electrical Safety in the Workplace
NFPA 241	(2022) Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 306	(2024) Standard for the Control of Gas Hazards on Vessels

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 20	Standards for Protection Against Radiation
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1926	Safety and Health Regulations for Construction
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

1.2 DEFINITIONS

The following definitions are for the convenience of the reader. If there is a referenced document in the text of this specification section, that is the document that should define terms for that paragraph. If further clarification is needed, contact the Contracting Officer.

1.2.1 Site Safety and Health Officer (SSHO)

A Contractor Employee that is responsible for overseeing and ensuring implementation of the prime Contractor's Safety and Occupational Health (SOH) program according to the Contract, EM 385-1-1, applicable federal, state, and local requirements.

1.2.1.1 Level 1 SSHO

A designated employee with full-time SOH responsibility that meets and follows the requirements of EM 385-1-1.

1.2.1.2 Level 2 SSHO

A designated employee with Level 2 SSHO responsibility that meets and follows the requirements of EM 385-1-1. Level 2 SSHOs cannot be assigned to projects that have a residual Risk Assessment Code (RAC) of high or extremely high.

1.2.1.3 Level 3 SSHO

A designated Qualified Person or Competent Person with SOH responsibility that meets and follows the requirements of EM 385-1-1. Level 3 SSHOs cannot be assigned to projects that have a residual RAC of high or extremely high.

1.2.1.4 Alternate SSHO

An employee that meets the definition of the Contract-required level SSHO, but is not the primary SSHO.

1.2.2 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are unsanitary, hazardous, or dangerous to personnel, and who has authorization to take prompt corrective measures to eliminate them.

1.2.3 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project.

1.3 SUBMITTALS

Government Acceptance or Approval does not remove responsibility from the Contractors for their actions or liability.

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that reviews the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, RO

Dive Operations Plan; G, RO

SD-06 Test Reports

Accident Reports; G, RO

LHE Inspection Reports

Monthly Exposure Reports; G, RO

SD-07 Certificates

Activity Hazard Analysis (AHA); G, RO

Certificate of Compliance

Hot Work Permit

License Certificates

Portable Gauge Operations Planning Worksheet; G, RO

Radiography Operation Planning Work Sheet; G, RO

Standard Lift Plan; G, RO

1.4 PUBLIC HEALTH EMERGENCIES

In the event of a declared public health emergency, follow safety precautions as required by the Occupational Safety and Health Administration (OSHA) www.osha.gov, the Centers for Disease Control and Prevention (CDC) www.cdc.gov, and as required by federal, state and local requirements.

1.5 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report by the fifth of each month. This report is a compilation of employee-hours worked each month for site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the progress payment.

1.6 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations at the date of the Solicitation for this Contract. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.7 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.7.1 Site Safety and Health Officer (SSHO)

1.7.1.1 Qualifications of SSHO

Provide SSHOs meeting the training and experience requirements identified in the EM 385-1-1 and this Contract.

1.7.1.2 Duties of SSHO

SSHOs must carry out the roles and responsibilities as identified in this Contract and the EM 385-1-1. Designate SSHOs on an ENG Form 6282, provided by the Contracting Officer. SSHOs can not serve as the Project Superintendent. Project Superintendent, QC Manager, and SSHO are subject to dismissal if their required duties are not being effectively carried out. If either the Project Superintendent, QC Manager, or SSHO are dismissed, stop project work and do not resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.7.1.3 Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for supervisors at the project

location. The SSHO, supervisors, or foremen must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of scheduled meetings 7 calendar days in advance.

1.7.2 Roles and Responsibilities of SSHO

The SSHO must ensure that the requirements of applicable OSHA and EM 385-1-1 are met for the project. Ensure an SSHO or an equally qualified Alternate SSHO(s) is at the worksite continuously to implement and administer the Contractor's safety program and Government accepted Accident Prevention Plan. If the required SSHO has to leave the site for up to 24 hours of work due to unforeseen or emergency situations, a Level 1, Level 2, or Level 3 SSHO can be used in the interim and must be on the site of work continuously when work is being performed.

If the SSHO is off-site for a period longer than 24 hours, a qualified alternate that meets the Contract requirements must be onsite.

a. Ensure SSHO and Alternate SSHO:

(1) Are designated on an ENG Form 6282.

(2) Meet minimum training and experience requirements identified in EM 385-1-1.

(3) Execute roles and responsibilities identified in EM 385-1-1.

1.7.3 Dredging Contract Site Safety and Health Officer(s)(SSHOs) Requirements

1.7.3.1 Dredging SSHO Personnel Requirements

a. Provide a minimum of one primary Level 2 SSHO assigned for the primary shift.

b. For a project involving multiple work shifts, provide a minimum of a Level 2 SSHO for each additional shift.

c. For individual dredging projects, designate additional Level 3 SSHOs at locations where the primary Level 2 SSHO is not located (example: on dredge, tug, material placement site).

Examples of one dredging project site is reflected in each of the following:

(1) a mechanical dredge, tug(s) and scow(s), scow route, and material placement site; or

(2) a hydraulic pipeline dredge, attendant plant, and material placement site; or,

(3) a hopper dredge (include land-based material placement site - if applicable.)

d. Designated SSHOs must be present at the project site, located so that they have full mobility and reasonable access to major work operations

and must be available during their shift for immediate verbal consultation and notification.

e. Designated Level 1 and Level 2 SSHOs must have direct report authority to a senior project (or corporate) management official.

f. Designated Level 3 SSHOs must report potential safety and occupational health hazards, incidents, and concerns to the Level 1 or Level 2 SSHO on shift.

g. Level 1 and Level 2 SSHOs for dredging must have a minimum of 3 years experience in one of the following areas:

(1) Supervising or managing dredging activities.

(2) Supervising or managing marine construction activities.

(3) Supervising or managing land-based construction activities.

(4) Work managing safety programs or processes.

(5) Conducting hazard analyses and developing controls in activities or environments with similar hazards.

1.7.4 Competent Person for Confined Space Entry

Provide a CP for Confined Space Entry who meets the requirements of EM 385-1-1. The CP for Confined Space Entry must supervise the entry into each confined space in accordance with EM 385-1-1.

For work that involves operations that handle combustible or hazardous materials, this person must have the ability to understand and follow through on the air sampling, Personal Protective Equipment (PPE), and instructions of a Marine Chemist, Coast Guard authorized persons, or Certified Industrial Hygienist. Confined space and enclosed space work must comply with NFPA 306, 29 CFR 1915, "Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment," or as applicable in 29 CFR 1910 for general industry, 29 CFR 1926 for construction.

1.7.5 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the Project Superintendent, Site Safety and Occupational Health Officer, quality control manager, or other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs to be developed and implemented during the performance of the Contract. Review this list of proposed AHAs and reach an agreement with the Contracting Officer as to which phases require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays. Create the APP and Schedule after being given Notice to Proceed.

c. Deficiencies in the submitted APP, identified during the Contracting

Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.8 ACCIDENT PREVENTION PLAN (APP)

1.8.1 Accident Prevention Plan (APP)

Submit the Accident Prevention Plan (APP) for review and acceptance by the Government at least 15 calendar days prior to the start, after being given Notice to Proceed. A competent person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1, ENG Form 6293. Prepare the APP to be job-specific and address unusual or unique aspects of the project or activity for which the APP is written. Interface the APP with with the Contractor's overall safety and occupational health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Prime Contractor is the "controlling employer" for worksite safety and health of the subcontractors. Inform subcontractors of the safety provisions under the terms of the Contract and the penalties for noncompliance, coordinateg the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspect subcontractor operations to ensure that accident prevention responsibilities are being carried out. Sign the APP in accordance with the APP and ENG Form 6293 Accident Prevention Plan Worksheet. The SSHO must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments are enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, Project Superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should severe hazard exposure (i.e., imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ANSI/ASSP A10.34), and the environment.

1.8.2 Names and Qualifications

Provide plans in accordance with the requirements outlined in EM 385-1-1, including the following:

a. Names and qualifications (resumes including education, training, experience and certifications) of site safety and health personnel designated to perform work on this project to include the designated Site Safety and Health Officer and other competent and qualified personnel to be used. Specify the duties of each position.

b. As a minimum, designate and submit qualifications of Competent Persons (CP) for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance. Designate and submit qualifications for additional CPs as applicable to the work performed under this Contract.

1.8.3 Plans

Provide plans in the APP in accordance with the requirements outlined in EM 385-1-1, including the following:

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of work presenting hazards not experienced in previous project operations, or where a new work crew or subcontractor is to perform the work, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Project Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1 or as directed by the Contracting Officer. Submit the AHA for review at least 15 calendar days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards, site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, trenching, electrical work, fall protection, and scaffolding.

1.9.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required safety and health controls for that work activity.

1.9.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOW must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to

ensure a clear understanding of the AHA and its contents.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in paragraph REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment in accordance with EM 385-1-1. The Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS AND REPORTS

1.12.1 Accident Notification

Notify the Contracting Officer in accordance with the EM 385-1-1 Accident Reporting Timeline.

Table
Accident Reporting Required Timeline

Accident Type	Notify KO	Complete Final Accident Report on ENG 3394 and provide to KO
Fatality, in-patient hospitalization, amputation, eye loss, or property damage over $600,000.	Immediately, no later than (NLT) 8 Hours	Within 7 Days
All other accidents and near misses	Immediately, no later than (NLT) 24 Hours	Within 7 Days

Within notification include Contractor name; Contract title; type of Contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if property damage occurred; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of an accident or near miss.

1.12.2 Accident Reports

a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Accidents are reportable, regardless of whether or not it is recordable. Complete the applicable USACE Accident Report, ENG Form 3394, and provide the report to the Contracting Officer within 7 calendar days of the accident. The Contracting Officer will provide copies of required or special forms.

b. Near Misses: For Army projects, report "Near Misses" to the Contracting Officer, using local accident reporting procedures, within 24 hours. The Contracting Officer will provide the Contractor the required forms. Near miss reports are considered positive and proactive Contractor safety management actions.

1.12.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.12.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a Certificate of Compliance for LHE entering an activity under this Contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1 and using Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.13 HOT WORK PERMIT

1.13.1 Permit and Personnel Requirements

Submit and obtain a written permit prior to performing "Hot Work" (such as welding or cutting) or operating other flame-producing or spark producing devices, from the Contracting Officer. A permit is required from the Explosives Safety Office for work in and around where explosives are processed, stored, or handled. Contractors are required to meet criteria before a permit is issued. Provide at least two 20 pound 4A:20 BC rated extinguishers for normal "Hot Work". The extinguishers must be current inspection tagged, and contain an approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for "Hot Work" done at this activity. The Fire Watch must be trained in accordance with NFPA 51B and remain on-site for a minimum of 1 hour after completion of the task or as specified on the hot work permit.

When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Department phone number. Report fires, no matter how small, to the responsible Fire Department immediately.

1.13.2 Work Around Flammable Materials

Obtain permit approval from a NFPA Certified Marine Chemist, or Certified Industrial Hygienist for "Hot Work" within or around flammable materials (such as fuel systems or weldingor cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, or vaults) that have the potential for flammable or explosive atmospheres.

Whenever these materials, except beryllium and chromium (VI), are encountered in indoor operations, local mechanical exhaust ventilation systems that are sufficient to reduce and maintain personal exposures to within acceptable limits must be used and maintained in accordance with manufacturer's instruction and supplemented by exceptions noted in EM 385-1-1.

1.14 RADIATION SAFETY REQUIREMENTS

Submit License Certificates, employee training records, and Leak Test Reports for radiation materials and equipment to the Contracting Officer and Radiation Safety Office (RSO) for specialized and licensed material and equipment proposed for use on the construction project (excludes portable machine sources of ionizing radiation including moisture density and X-Ray Fluorescence (XRF)). Maintain on-site records whenever licensed radiological materials or ionizing equipment are on Government property.

Protect workers from radiation exposure in accordance with 10 CFR 20, ensuring personnel exposures are maintained As Low As Reasonably Achievable.

1.14.1 Radiography Operation Planning Work Sheet

Submit a Gamma and X-Ray Radiography Operation Planning Work Sheet to Contracting Officer 14 days prior to commencement of operations involving radioactive materials or radiation generating devices. For portable machine sources of ionizing radiation, including moisture density and XRF, use and submit the Portable Gauge Operations Planning Worksheet instead. The Contracting Officer will review the submitted worksheet and provide questions and comments.

Contractors must use primary dosimeters process by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

1.14.2 Site Access and Security

Coordinate site access and security requirements with the Contracting Officer for radiological materials and equipment containing ionizing radiation that are proposed for use on a Government facility. For gamma radiography materials and equipment, a Government escort is required for travel within the facility. The Government will meet the Contractor at a designated location outside the facility, ensure safety of the materials being transported, and will escort the Contractor for gamma sources into the facility, to the job site, and out of the facility. For portable machine sources of ionizing radiation, including moisture density and XRF, the Government authorized representative will meet the Contractor at the job site.

Provide a copy of calibration records, and utilization records for radiological operations performed on the site.

1.14.3 Loss or Release and Unplanned Personnel Exposure

Loss or release of radioactive materials, and unplanned personnel exposures must be reported immediately to the Contracting Officer, RSO, and Base Security Department Emergency Number.

1.14.4 Site Demarcation and Barricade

Properly demark and barricade an area surrounding radiological operations to preclude personnel entrance, in accordance with EM 385-1-1, Nuclear Regulatory Commission, and Applicable State regulations and license requirements, and in accordance with requirements established in the accepted Radiography Operation Planning Work Sheet.

Do not close or obstruct streets, walks, and other facilities occupied and used by the Government without written permission from the Contracting Officer.

1.14.5 Security of Material and Equipment

Properly secure the radiological material and ionizing radiation equipment continuously, including keeping the devices in a properly marked and locked container, and secondarily locking the container to a secure point in the Contractor's vehicle or other approved storage location during transportation and while not in use. While in use, maintain a continuous visual observation on the radiological material and ionizing radiation equipment. In instances where radiography is scheduled near or adjacent to buildings or areas having limited access or one-way doors, make no assumptions as to building occupancy. Where necessary, the Contracting Officer will direct the Contractor to conduct an actual building entry, search, and alert. Where removal of personnel from such a building cannot be accomplished and it is otherwise safe to proceed with the radiography, position a fully instructed employee inside the building or area to prevent exiting while external radiographic operations are in process.

1.14.6 Transportation of Material

Comply with 49 CFR 173 for Transportation of Regulated Amounts of Radioactive Material. Notify Local Fire authorities and the site Radiation Safety Officer (RSO) of Radioactive Material use.

1.14.7 Schedule for Exposure or Unshielding

Actual exposure of the radiographic film or unshielding the source must not be initiated until after 5 p.m. on weekdays.

1.14.8 Transmitter Requirements

Adhere to the base policy concerning the use of transmitters, such as radios and cell phones. Obey Emissions control (EMCON) restrictions.

1.15 CONFINED SPACE ENTRY REQUIREMENTS

Confined space entry must comply with EM 385-1-1, 29 CFR 1926, 29 CFR 1910, and Directive CPL 2.100. Potential for a hazard in the confined space requires a permit system to be used.

1.15.1 Rescue Procedures and Coordination with Local Emergency Responders

Develop and implement an on-site rescue and recovery plan and procedures. The rescue plan must not rely on local emergency responders for rescue from a confined space.

1.16 DIVE SAFETY REQUIREMENTS

Develop a Dive Operations Plan, AHA, emergency management plan, and personnel list that includes qualifications, for each separate diving operation. Submit these documents to the District Dive Coordinator (DDC) via the Contracting Officer, for review and approval at least 15 calendar days prior to commencement of diving operations. These documents must constantly be at the diving location. Provide each of these documents as a part of the project file.

1.17 SEVERE WEATHER PLAN FOR MARINE ACTIVITIES (SWPMA)

In the event of a severe storm warning, the Contractor must comply with the applicable Storm Plan and:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in by the nature of the work the employee is performing. Use personal hearing protection continuously in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried and available on each person. Mandatory PPE includes:

a. Head Protection that meets ANSI/ISEA Z89.1

b. Long Pants

c. Appropriate Safety Footwear

d. Appropriate Class Reflective Vests

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area or environment. Develop an employee check-in and check-out communication procedure to ensure employee safety.

3.1.2 Hazardous Material Exclusions

Notwithstanding other hazardous material used in this Contract, radioactive materials or instruments capable of producing ionizing or non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated

biphenyls, di-isocyanates, lead-based paint, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) prior to excepted items of radioactive material and devices being brought on base.

3.1.3 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e., 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during demolition, repair, renovation, or construction operations. Stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification.

3.2 UTILITY OUTAGE REQUIREMENTS

Apply for utility outages in sufficient time as to not result in impacts or delays to the project schedule. At a minimum, the written request must include the location of the outage, utilities being affected, duration of outage, necessary sketches, and a description of the means to fulfill energy isolation requirements in accordance with EM 385-1-1. In accordance with EM 385-1-1, where outages involve Government or Utility personnel, coordinate with the Government on activities involving the control of hazardous energy.

These activities include, but are not limited to, a review of Hazardous Energy Control Program (HECP) and HEC procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with EM 385-1-1 and NFPA 70E, work on energized electrical circuits must not be performed without prior Government authorization. Government permission is considered through the permit process and submission of a detailed AHA. Energized work permits are considered only when de-energizing introduces additional or increased hazard or when de-energizing is infeasible.

3.3 OUTAGE COORDINATION MEETING

After the utility outage request is approved and prior to beginning work on the utility system requiring shut-down, conduct a pre-outage coordination meeting in accordance with EM 385-1-1. This meeting must include the Prime Contractor, the Prime and subcontractors performing the work, the Contracting Officer, and the Public Utilities representative. Parties must fully coordinate HEC activities with one another. During the coordination meeting, parties must discuss and coordinate on the scope of work, HEC procedures (specifically, the lock-out/tag-out procedures for worker and utility protection), the AHA, assurance of trade personnel qualifications, identification of competent persons, and compliance with HECP training in accordance with EM 385-1-1. Clarify when personal protective equipment is required during switching operations, inspection, and verification.

3.4 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with EM 385-1-1, 29 CFR 1910, 29 CFR 1915, ANSI/ASSP A10.44, NFPA 70E.

3.4.1 Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Contractor and the subcontractor performing the work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer, and required by EM 385-1-1. Hold the meeting immediately preceding the start of work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must occur prior to conducting the outage and commencing with lockout/tagout procedures.

3.4.2 Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA and required by EM 385-1-1. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1.

3.4.3 Lockout/Tagout Removal

Upon completion of work, conduct lockout/tagout removal procedure in accordance with the HECP. In accordance with EM 385-1-1, each lock and tag must be removed from each energy isolating device by the authorized individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer's Representative), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's work will not be removed until the authorized Government employee receives the formal notification.

3.5 FALL PROTECTION PROGRAM

Establish a fall protection program, for the protection of employees exposed to fall hazards. Within the program include company policy, identify roles and responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures in accordance with EM 385-1-1.

3.5.1 Fall Protection Equipment and Systems

Constantly enforce use of personal fall protection equipment and systems designated (to include fall arrest, restraint, and positioning) for each specific work activity in the Site Specific Fall Protection and Prevention Plan and AHA when an employee is exposed to a fall hazard. Protect

employees from fall hazards as specified in EM 385-1-1.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1 and 29 CFR 1926.

3.5.1.1 Additional Personal Fall Protection Measures

In addition to the required fall protection systems, other protective measures such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with EM 385-1-1. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing work.

3.5.1.2 Personal Fall Protection Equipment

Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 3,600 lbs in each direction. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6 feet, unless the proper energy absorbing lanyard is used. Always take into consideration the total fall distance and swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. Equip full body harnesses with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance in accordance with EM 385-1-1.

3.6 EQUIPMENT

3.6.1 Use of Explosives

Explosives must not be used or brought to the project site without prior written approval from the Contracting Officer. Such approval does not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.

Storage of explosives, when permitted on Government property, must be only where directed and in approved storage facilities. These facilities must be kept continuously locked except for inspection, delivery, and withdrawal of explosives.

3.7 ELECTRICAL

Perform electrical work in accordance with EM 385-1-1.

3.7.1 Electrical Work

As described in EM 385-1-1, electrical work is to be conducted in a

de-energized state unless there is no alternative method for accomplishing the work. In those cases obtain an energized work permit from the Contracting Officer. The energized work permit application must be accompanied by the AHA and a summary of why the equipment or circuit needs to be worked energized. Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables to be cut must be positively identified and de-energized prior to performing each cut. Attach temporary grounds in accordance with ASTM F855 and IEEE 1048. Perform high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator is allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of energized electrical sources is the preferred method.

When working in energized substations, only qualified electrical workers are permitted to enter. When work requires work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety footwear, insulating gloves and electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA. Ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.

3.7.2 Qualifications

Electrical work must be performed by QP with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman to Apprentice ratio must be in accordance with State, Local requirements applicable to where work is being performed.

3.7.3 Arc Flash

Conduct a hazard analysis or arc flash hazard analysis whenever work on or near energized parts greater than 50 volts is necessary, in accordance with NFPA 70E.

Personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.7.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with NFPA 70 and IEEE C2 to provide a permanent, continuous and effective path to ground unless otherwise noted by EM 385-1-1.

3.7.5 Testing

Temporary electrical distribution systems and devices must be inspected, tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI)

protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

-- End of Section --

SECTION 01 45 00

QUALITY CONTROL
08/23, CHG 1: 05/24

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D3740	(2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	(2023) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include associated costs in the applicable Bid Schedule item.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G, RO

1.4 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC is comprised of plans, procedures, and organization necessary to produce an end product that complies with the Contract requirements. The QC system covers construction operations, both onsite and offsite, and must be keyed to the proposed construction sequence. The Quality Control Manager, Superintendent, Site Safety and Health Officer (SSHO), and on-site

supervisors are responsible for the quality of work and are subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. The Quality Control Manager continuously maintains a physical presence at the work site and is the primary individual responsible for quality control.

1.5 QUALITY CONTROL (QC) PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. The QC program consists of a QC Organization, QC Plan, QC Plan Meeting(s), a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections, QC certifications, and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations that comply with the requirements of this Contract. The QC program covers on-site and off-site work and is keyed to the work sequence. Do not perform construction work or testing unless the QC Manager is on the work site. The QC Manager reports to an officer of the firm and is not subordinate to the Project Superintendent or the Project Manager. Although the QC Manager is the primary individual responsible for quality control, individuals are held responsible for the quality of work on the job.

1.5.1 Meetings

1.5.1.1 Quality Control Plan Meeting

Prior to submission of the QC Plan, the Contractor may request a meeting with the Contracting Officer to discuss the QC Plan requirements of this Contract.

The purpose of this meeting is to develop a mutual understanding of the QC Plan requirements prior to plan development and submission and to agree on the Contractor's list of Definable Feature of Work (DFOW).

1.5.1.2 Coordination and Mutual Understanding Meeting

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer and discuss the Contractor's quality control system. During the meeting, develop a mutual understanding of the system details, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting are prepared by the Government and signed by the Contractor and the Government. Repeat the Coordination and Mutual Understanding Meeting when a new QC Manager is appointed. There can be other occasions when subsequent conferences are called by either party to reconfirm mutual understandings or address deficiencies in the CQC system or procedures which can require corrective action by the Contractor.

1.5.1.2.1 Purpose

The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, design intent, environmental requirements and procedures, coordination of activities to be performed, and the coordination of the Contractor's management, production, and QC personnel. At the meeting,

explain in detail how three phases of control are implemented for each DFOW, as well as how each DFOW is affected by each management plan or requirement as listed below:

a. Waste Management Plan.

b. Procedures for noise and acoustics management.

c. Environmental Protection Plan.

d. Environmental regulatory requirements.

1.5.1.2.2 Coordination of Activities

Coordinate activities included in various sections to assure efficient and orderly installation of each component. Coordinate operations included under different sections that are dependent on each other for proper installation and operation.

1.5.1.2.3 Attendees

As a minimum, the Contractor's personnel required to attend include an officer of the firm, the Project Manager, Project Superintendent, QC Manager, Alternate QC Manager, Environmental Manager, and subcontractor representatives. Have a principal of the firm for each subcontractor assigned QC responsibilities attend the meeting.

1.5.2 Contractor Quality Control (CQC) Plan

Submit no later than 15 calendar days after receipt of notice to proceed, the CQC Plan proposed to implement the requirements of FAR 52.246-12 Inspection of Construction. Do not begin construction until after acceptance of the CQC Plan.

1.5.2.1 Content of Contractor Quality Control (CQC) Plan

Provide a CQC Plan, prior to start of construction that includes a table of contents, with major sections identified, pages numbered sequentially, and that documents the proposed methods and responsibilities for accomplishing quality control during the construction of the project. Include the following sections in the CQC Plan:

a. A description of the quality control organization and acknowledgment that the CQC staff are going to implement the three phase control system for the work specified.

b. An organizational chart showing the quality control organization with individual names and job titles and lines of authority up to an executive of the company at the home office.

c. NAMES AND QUALIFICATIONS: Names and qualifications, in resume format, (including position titles and durations for qualifying experiences) for each person in the QC organization. Include the Construction Quality Management (CQM) for Contractors course certifications for the QC personnel as required by the paragraph CONSTRUCTION QUALITY MANAGEMENT TRAINING.

d. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL: Duties, responsibilities, and authorities of each person in the QC

organization.

e. OUTSIDE ORGANIZATIONS: A listing of outside organizations, such as architectural and consulting engineering firms, employed by the Contractor and a description of the services these firms are providing.

f. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager, and stating that they are responsible for implementing and managing the QC program as described in this Contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of control, and their authority to stop work that is not in compliance with the Contract. Letters of direction are to be issued by the QC Manager to quality control representatives outlining their duties, authorities, and responsibilities. Include copies of the letters in the QC Plan.

g. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving, scheduling, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to approval. Provide the initial submittal of the Submittal Register as specified in Section 01 33 00 SUBMITTAL PROCEDURES.

h. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraph ACCREDITATION REQUIREMENTS, as applicable.

i. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, associated feature of work required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.

j. Procedures to complete construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected. This phase is performed prior to beginning work on each definable feature of work, after required plans, documents, materials are approved, and after copies are at the work site.

k. Reporting procedures, including proposed reporting formats.

l. Procedures for submitting and reviewing design changes/variations prior to submission to the Contracting Officer.

m. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines, or it is work by the same trade in a different environment. A DFOW is by definition an item or activity on the construction schedule, and the schedule specification provides direction regarding how the DFOWs are to be structured. Include in the list of DFOWs for activities on the Construction Schedule. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. Identify the specification section number and schedule activity ID for each DFOW listed. Review the DFOW list in coordination with the construction schedule during the Coordination of Mutual Understanding Meeting.

n. PROCEDURES FOR PERFORMING AND TRACKING THE THREE PHASES OF CONTROL: Identify procedures used to ensure the three phases of control to manage the quality on this project. For each Definable Feature of Work (DFOW), fill out a Preparatory and Initial phase checklist during the Preparatory and Initial phase meetings. Conduct the Preparatory and Initial Phases and meetings with a view towards obtaining quality construction by planning ahead and identifying potential problems for each DFOW.

1.5.3 Acceptance of the Quality Control (QC) Plan

The Contracting Officer's acceptance of the Contractor QC Plan is required prior to the start of construction. The Contracting Officer reserves the right to require changes in the QC Plan and operations as necessary, including removal or addition of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview members of the QC organization to verify the submitted qualifications. QC organization personnel are subject to acceptance by the Contracting Officer. The Contracting Officer may require the removal of an individual for non-compliance with quality requirements specified in the Contract.

1.5.4 Notification of Changes

Notify the Contracting Officer, in writing, of proposed changes in the QC Plan or changes to the QC organization personnel. Proposed changes are subject to acceptance by the Contracting Officer.

1.6 QUALITY CONTROL (QC) ORGANIZATION

1.6.1 Personnel Requirements

The requirements for the CQC organization are a Site Safety and Health Officer (SSHO), QC Manager, and enough qualified personnel to ensure safety and Contract compliance. The SSHO reports directly to a senior project (or corporate) official independent from the QC Manager. The SSHO also serves as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly. The CQC staff always maintains a presence at the site during progress of the work and have complete authority and responsibility to take action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish letters, material submittals, shop drawing submittals, schedules, and other project documentation to the CQC organization. The CQC organization is responsible for always maintaining these documents and records at the site, except as otherwise acceptable to the Contracting Officer.

1.6.2 Quality Control (QC) Manager

1.6.2.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. The QC Manager must be employed by the Prime Contractor.In addition to implementing and managing the QC program, the QC Manager can perform the duties of the Site Safety and Health Officer (SSHO)if they are not serving as the superintendent. Alternatively, the QC manager can

perform the duties of the superintendent if they are not also serving as the SSHO. The QC Manager must attend the Coordination and Mutual Understanding Meeting, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this Contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by testing laboratory personnel and other inspection and testing personnel required by this Contract. The QC Manager is responsible for overall management of QC activities.

1.6.2.2 Qualifications

Provide a QC Manager with a minimum of 5 years combined experience in the following positions: Project Superintendent, QC Manager, Project Manager, Project Engineer or Construction Manager on dredging projects. The individual must have at least 2 years experience as a QC Manager. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification, safety compliance, and sustainability.

The QC Manager and members of the QC organization must be capable of reading, writing, and conversing fluently in the English language.

1.6.2.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager and members of the QC team must have completed the CQM for Contractors course. This course is periodically offered by the Naval Facilities Engineering Systems Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

The Construction Quality Management Training certificate expires after 5 years. If the QC Manager's certificate has expired, retake the course to remain current.

1.6.3 Organizational Changes

Maintain the QC staff continuously with personnel as required by the specification section. When it is necessary to make changes to the QC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

1.6.4 Alternate Quality Control (QC) Manager Duties and Qualifications

Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The qualification requirements for the Alternate QC Manager must be the same as for the QC Manager.

1.7 SUBMITTAL AND DELIVERABLES REVIEW AND APPROVAL

Procedures for submission, review and approval of submittals are described in Section 01 33 00 SUBMITTAL PROCEDURES. Include field verification of relevant dimensions and component characteristics by the QC organization prior to submittal being sent to the Contracting Officer. The CQC organization is responsible for certifying that submittals and deliverables are in compliance with the Contract.

1.8 THREE PHASES OF CONTROL

CQC enables the Contractor to ensure that the construction, including that of subcontractors and suppliers, complies with the requirements of the Contract. Conduct at least three phases of control by the QC Manager to adequately cover both on-site and off-site work for each definable feature of the construction work as follows:

1.8.1 Preparatory Phase

Document the results of the preparatory phase actions by separate minutes prepared by the QC Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required to meet Contract specifications.

Notify the Contracting Officer at least 2 business days in advance of each preparatory phase meeting. Hold a preparatory phase meeting conducted by the QC Manager and attended by the Project Superintendent and the foreman responsible for the DFOW. This phase is performed prior to beginning work on each definable feature of work, after required plans, documents, and materials are approved or accepted, and after copies are at the work site. Perform the following prior to beginning work on each DFOW:

a. Review each paragraph of the applicable specification sections, reference codes, and standards. Make available during the prepatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.

b. Review the Contract drawings.

c. Verify that field measurements are as indicated on construction or shop drawings or both before confirming product orders, to minimize waste due to excessive materials.

d. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.

e. Review the testing plan and ensure that provisions have been made to provide the required QC testing.

f. Examine the work area to ensure that the required preliminary work has been completed and complies with the Contract and ensure deficiencies/rework items in the preliminary work have been corrected and confirmed by the Contracting Officer.

g. Review coordination of product/material delivery to designated prepared areas to execute the work.

h. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data and are properly stored.

i. Check to assure that materials and equipment have been tested, submitted, and approved.

j. Discuss specific controls to be used, construction methods,

construction tolerances, workmanship standards, and the approach to provide quality construction by planning ahead and identifying potential problems for each DFOW.

k. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Safety Data Sheets (SDS) are submitted.

l. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

m. Discuss schedule and execution of the initial control phase and confirmation or construction quality compliance.

1.8.2 Initial Phase

Notify the Contracting Officer at least 2 business days in advance of each initial phase. When construction crews are ready to start work on a DFOW, conduct the initial phase with the Project Superintendent, and the foreman responsible for that DFOW. Observe the initial segment of the DFOW to ensure that the work complies with Contract requirements. Document the results of the initial phase in the daily CQC Report and in the Initial Phase Checklist. Repeat the initial phase for each new crew to work on-site when acceptable levels of specified quality are not being met. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases. Perform the following for each DFOW:

a. Check work to ensure that it is in full compliance with Contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full Contract compliance. Verify required control inspection and testing comply with the Contract.

c. Establish level of workmanship and verify that it meets the minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve workmanship issues.

e. Ensure that testing is performed by the approved laboratory.

f. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.

g. Review project specific work plans (i.e., HAZMAT Abatement, Stormwater Management) to ensure preparatory work items have been completed and documented.

1.8.3 Follow-Up Phase

Perform the following for on-going DFOW daily, or more frequently as necessary, until the completion of each DFOW. For the final Follow-Up of a DFOW, clearly note in the daily report that the DFOW is completed and that deficiencies or rework items have been completed. Include each DFOW that has completed the Initial Phase and has not completed the Final

Follow-up in each daily report. Note in the daily report if no work was performed on that DFOW for the period of that daily report. Document Follow-Up activities for DFOWs in the daily CQC Report:

a. Ensure the work including control testing complies with Contract requirements until completion of that particular work feature. Record checks in the CQC documentation.

b. Maintain the quality of workmanship required.

c. Ensure that testing is performed by the approved laboratory.

d. Ensure that deficiencies/rework items are being corrected. Conduct final follow-up checks and correct deficiencies prior to the start of additional features of work which may be affected by the deficient work.

e. Do not build upon nor conceal non-conforming work.

f. Assure manufacturers' representatives have performed necessary inspections if required and perform safety inspections.

1.8.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW has not started within 45 days of the initial preparatory meeting or has resumed after 45 days of inactivity, or if other problems develop.

1.8.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least 2 weeks prior to the start of the preparatory and initial phases.

1.9 TESTING

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to Contract requirements. Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of an U.S. Army Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. Perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with Contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including test documentation requirements, have been prepared.

e. Record results of tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference,

location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.

1.9.1 Laboratory Accreditation Authorities

Use laboratories validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at: https://mtc.erdc.dren.mil

1.9.2 Capability Check

The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this Contract. Use laboratories meeting the criteria detailed in ASTM D3740 and ASTM E329 for testing soils, concrete, asphalt, and steel.

1.9.2.1 Capability Recheck

If the selected laboratory fails the capability check, pay Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

1.9.2.2 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

1.9.3 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results must be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager.

1.10 COMPLETION INSPECTIONS

1.10.1 Punch-Out Inspection

Conduct an inspection of the work by the QC Manager near the end of the work, or an increment of the work established by a time stated in FAR 52.211-10 "Commencement, Prosecution, and Completion of Work", or by the

specifications. Prepare and include in the QC daily report a punch list of items which do not conform to the approved drawings and specifications, as required by paragraph DOCUMENTATION. Include within the list of deficiencies the estimated date by which the deficiencies are to be corrected. Make a second inspection by the QC Manager or staff to ascertain that deficiencies have been corrected. Once this is accomplished, notify the Government that the project is ready for the Government Pre-Final inspection.

For dredging features of work, a punch-out inspection is not required.

1.10.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the project is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. Ensure that items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct items noted on the Pre-Final inspection in a timely manner. These inspections and deficiency corrections required by this paragraph need to be accomplished within the time slated for completion of the entire work or a particular increment of the work if the project is divided into increments by separate completion dates.

For dredging features of work, the Government will perform the pre-final inspection in accordance with SECTION 35 20 23 DREDGING paragraph FINAL EXAMINATION AND ACCEPTANCE.

1.10.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer are required to be in attendance at the final acceptance inspection. Additional Government personnel can also be in attendance. The Contracting Officer will formally schedule the final acceptance inspection based upon results of the Pre-Final inspection. Notify the Contracting Officer at least 14 calendar days prior to the final acceptance inspection and include the Contractor's assurance that specific items previously identified to the Contractor as being unacceptable, along with remaining work performed under the Contract, are going to be complete and acceptable by the date scheduled for the final acceptance inspection. If work is not acceptably complete for this inspection, the Contracting Officer will bill the Contractor for the Government's additional inspection cost in accordance with FAR 52.246-12 "Inspection of Construction".

For dredging features of work, the final acceptance inspection is not required to be formally scheduled. The dredging final acceptance inspection is complete after the last passing pre-final inspection.

1.11 QUALITY CONTROL (QC) CERTIFICATIONS

1.11.1 Contractor Quality Control (CQC) Report Certification

Contain the following statement within the CQC Report: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used, and work performed during this reporting period is in compliance with the Contract drawings and specifications to the best of my knowledge, except as noted in this report."

1.11.2 Completion Certification

Upon completion of work under this Contract, the QC Manager must furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the Contract." Provide a copy of this final QC Certification for completion to the preparer of the Operation & Maintenance (O&M) documentation.

1.12 DOCUMENTATION AND INFORMATION FOR THE CONTRACTING OFFICER

Maintain current and complete records of on-site and off-site QC program operations and activities.

Contact the Contracting Officer for sample forms or print from RMS-QCS as needed. Prior to commencing work on construction, obtain a copy set of the current report forms. The report forms consist of the Contractor Quality Control (CQC) Report, CQC Report (Continuation Sheet), Contractor Production Report, Contractor Production Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Testing Plan and Log, and Rework Items List. Unless otherwise provided by the Contracting Officer, Contractor can use the forms provided as related material located at https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-00.

1.12.1 Construction Documentation

Reports are required for each day that work is performed and must be attached to the Contractor Quality Control Report prepared for the same day. Maintain current and complete records of on-site and off-site QC program operations and activities. Reports are required for each day work is performed. Account for each calendar day throughout the life of the Contract.

Provide CQC Reports signed by the QC Manager and provide Contractor Production Reports signed by the Superintendant. Fill in every space on the forms, using N/A if nothing can be reported in one of the spaces. Report work using terminology consistent with the construction schedule. In the "Remarks" sections of the reports, enter pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered, a record of visitors to the work site, quality control problem areas, deviations from the QC Plan, construction deficiencies encountered, and meetings held. For each entry in the report(s), identify the Schedule Activity No. that is associated with the entered remark.

1.12.2 Quality Control Activities

Prepare CQC Reports and Contractor Production Reports daily to maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

a. The name and area of responsibility of the Contractors and subcontractors.

b. Operating plant or equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When a Network Analysis Schedule (NAS) is used, identify each item of work performed each day by NAS activity number.

d. Control phase activities performed. Preparatory, and Initial phase Checklists associated with the DFOW referenced to the construction schedule. Follow-up phase activities identified to the DFOW. If testing or specific QC Specialist activities are associated with the Follow-up phase activities for a specific DFOW note this and include those reports.

e. Test and control activities performed with results and references to specifications and drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.

f. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications and drawings requirements.

g. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.

h. Offsite surveillance activities, including actions taken.

i. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

j. Instructions given/received and conflicts in plans and specifications.

1.13 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of detected non-compliance with the Contract. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, is deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders can be made the subject of a claim for extension of time for excess costs or damages by the Contractor.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 45 00.15 10

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)
11/23

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without direct compensation other than the payment received for Contract items.

1.3 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Closeout
Import/Export of Data

1.3.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. The Contracting Officer may require some documents such as correspondence, including pay requests and payrolls, in paper format with original signatures. Paper documents govern in the event of discrepancy with the electronic version. The Contracting Officer will determine which documents require submission of paper copies.

1.3.2 Other Factors

Other portions of this document have a direct relationship to the

reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under Fixed-Priced Construction Contracts; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL.

1.4 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (https://rms.usace.army.mil). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.5 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic Contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance(QA)comments, as well as other miscellaneous administrative information.

1.6 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

Enter current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.6.1.2 Subcontractor Information

Enter missing subcontractor administrative data and information into RMS CM within 7 calendar days of receiving access to the Contract in RMS or within 7 calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for subcontractors. A subcontractor is listed separately for each trade to be performed.

1.6.1.3 Correspondence

Identify Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office

with "H". Letters are numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C" or "RFP".

1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates in accordance with Section 01 45 00 QUALITY CONTROL.

1.6.1.5 Reports

Track the status of the project using the reports available in RMS. The value of these reports reflects the quality of the data input. These reports include but are not limited to the Progress Payment Request worksheet, Quality Control (QC) comments, Deficiency Tracking Log, Submittal Register Status, and Three-Phase Control worksheets in accordance with Sections 01 20 00 PRICE AND PAYMENT PROCEDURES, 01 33 00 SUBMITTAL PROCEDURES, and 01 45 00 QUALITY CONTROL.

1.6.1.6 Request For Information (RFI)

Create and track Requests For Information (RFI) in the RMS Administration Module for Government review and response.

1.6.2 Finances

1.6.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule. The sum of pay activities equals the total Contract amount, including modifications. Assign each pay activity to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

1.6.2.2 Payment Requests

Prepare progress payment requests using RMS. Update the work completed under the Contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data, either electronically or by hard copy.

1.6.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Link each deficiency and QC test to a pay activity. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain data on a daily basis. Ensure that RMS reflects quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments. Provide within 7 calendar days of Government acceptance of the CQC Plan.

1.6.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official

report. The Contractor can use other supplemental formats to record QC data, but information from supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Supplemental information can be entered into RMS as an attachment to the report. Finalize and sign QC Daily Reports in RMS within 24 hours after the date covered by the report.

1.6.3.2 Deficiency Tracking

Use the QC Daily Report Module to enter and track deficiencies. Enter deficiencies identified into RMS with a QC prefix and sequential numbering for tracking purposes. The Government will enter deficiencies identified into RMS with a QA prefix and sequential numbering for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.6.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS, and upload meeting minutes of the meetings. Worksheets for the three-phase control meetings are generated within RMS.

1.6.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.6.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. Monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS, and as required by other applicable Federal, State or local agencies.

1.6.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work can be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.6.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager. Prepare activity hazard analysis in accordance with Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS.

1.6.4 Submittal Management

Enter current submittal register data and information into RMS within seven calendar days of receiving access to the Contract in RMS. The Contractor will import the information shown in the submittal register following the specification Section 01 33 00 SUBMITTAL PROCEDURES unless otherwise directed by the Contracting Officer. Group electronic submittal documents into transmittal packages to send to the Government, except very

large electronic files, samples, spare parts, mock ups, color boards, or where hard copies are specifically required. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the Contract.

1.6.5 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that closeout documents are entered, completed and documented within RMS.

1.7 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.8 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within 7 calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS
11/15

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
33 CFR 320-330	General Regulatory Policies, Permits, Enforcement and Definitions
40 CFR 112	Oil Pollution Prevention
40 CFR 233	State Program Regulations
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40 CFR 258	Subtitle D Landfill Requirements
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards For Universal Waste Management
40 CFR 273.2	Standards for Universal Waste Management - Batteries
40 CFR 273.4	Standards for Universal Waste Management - Mercury Containing Equipment
40 CFR 273.5	Standards for Universal Waste Management - Lamps
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances

	Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 64	Compliance Assurance Monitoring
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings

1.2 DEFINITIONS

1.2.1 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or disposed of, meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (such as methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.2 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.2.3 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.4 Environmental Protection

Environmental protection is the prevention or control of pollution and habitat disruption that can occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.5 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

1.2.6 Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

Hazardous material is material that: Is regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.120; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.2.7 Hazardous Waste

Hazardous Waste is material that meets the definition of a solid waste and exhibit a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D.

1.2.8 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Comply with federal, state, and local laws and regulations.

1.2.9 Municipal Separate Storm Sewer System (MS4) Permit

MS4 permits are those held to obtain NPDES permit coverage for their stormwater discharges.

1.2.10 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.2.11 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and

sorbents which have come into contact with and have been contaminated by, POLs and can be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials can be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.2.12 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.2.13 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.14 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites include:

1.2.14.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials must not be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.2.14.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

1.2.14.3 Material not regulated as solid waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as

amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.2.14.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 263.

1.2.14.5 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.2.14.6 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.2.14.7 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

1.2.15 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, creeks or "waters of the United States". Surface discharges are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

1.2.16 Wastewater

Wastewater is the used water and solids from a community that flow to a treatment plant.

1.2.16.1 Stormwater

Stormwater is precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.2.17 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.2.18 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2.19 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

1.2.20 Wildlife Safe Materials

Wildlife safe materials are those that are 100% biodegradable and use a loose weave (often called leno weave) that allow animals to wiggle free. To minimize wildlife entanglement and plastic debris pollution, choose temporary erosion and sediment control products that either do not contain netting, or that contain netting manufactured from 100% biodegradable non-plastic materials such as jute, sisal, or coir fiber. Degradable, photodegradable, UV-degradable, oxo-degradable, or oxo-biodegradable plastic netting (including polypropylene, nylon, polyethylene, and polyester) are not acceptable alternatives.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES and as applicable, paragraph titled 'LICENSES AND PERMITS' in this specification section:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G, RO

Dirt and Dust Control Plan

SD-11 Closeout Submittals

Solid Waste Management Report; G, RO

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct

conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws can be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.5 SPECIAL ENVIRONMENTAL REQUIREMENTS

1.5.1 Control of Non-Indigenous Aquatic Nuisance Species

The Contractor shall conduct diligent operating practices to prevent the spread of Aquatic Nuisance Species (ANS) from one location to another on the Great Lakes, or from one waterbody to another. Such practices shall include, but not be limited to, cleaning equipment and watercraft (prior to it's being brought to the project site and prior to its removal when no longer needed at the site) to prevent the spread of seeds, eggs, larvae, soil, plant material, or other dispersal vectors; and discharging or exchanging ballast water or other water from a vessel per applicable federal, state and local laws, regulations and ordinances.

1.6 QUALITY ASSURANCE

1.6.1 Environmental Brief

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types and quantities of wastes or wastewater that could be generated during the Contract. Discuss the results of the Preconstruction Survey at this time.

Prior to initiating work on site, meet with the Contracting Officer to discuss the proposed Environmental Protection Plan (EPP). Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), and other measures to be taken.

1.6.2 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of observed noncompliance with federal, state or local environmental laws or regulations, permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping work until satisfactory corrective action has been taken. Time extensions and equitable adjustments are not granted when work is suspended during completion of corrective action. This is in addition to other actions the Contracting Officer may take under the Contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.7 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. Submit the EPP within 15 calendar days after notice to proceed and not less than 10 calendar days before the preconstruction meeting. Revise the EPP throughout the project to include reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section relieves the Contractor of following federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes the following elements:

1.7.1 General Overview and Purpose

1.7.1.1 Descriptions

A brief description of each specific plan required by environmental permit or elsewhere in this Contract such as stormwater pollution prevention plan, spill control plan, solid waste management plan, wastewater management plan, contaminant prevention plan, a historical, archaeological, cultural resources, biological resources and wetlands plan, traffic control plan, Hazardous, Toxic and Radioactive Waste (HTRW) Plan.

1.7.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.7.1.3 Procedures

A copy of standard or project-specific operating procedures that is used to effectively manage and protect the environment on the project site.

1.7.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.7.1.5 Contact Information

Emergency contact information, contact information (office phone number, cell phone number, and e-mail address).

1.7.2 General Site Information

1.7.2.1 Drawings

Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and conveyances, and stockpiles of excess soil.

1.7.2.2 Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

1.7.3 Management of Natural Resources

a. Land resources

b. Tree protection

c. Replacement of damaged landscape features

d. Temporary construction

e. Stream crossings

f. Fish and wildlife resources

g. Wetland areas

1.7.4 Protection of Historical and Archaeological Resources

a. Objectives

b. Methods

1.7.5 Stormwater Management and Control

a. Ground cover

b. Erodible soils

c. Temporary measures

(1) Structural Practices

(2) Temporary and permanent stabilization

d. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

1.7.6 Protection of the Environment from Waste Derived from Contractor Operations

Control and disposal of solid and sanitary waste. Control and disposal of hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. As a minimum, include the following:

a. List of the types of hazardous wastes expected to be generated

b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated

c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications

d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)

e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)

f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268)

g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar

h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures

i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.7.7 Prevention of Releases to the Environment

Procedures to prevent releases to the environment

Notifications in the event of a release to the environment

1.7.8 Regulatory Notification and Permits

List what notifications and permit applications must be made. Demonstrate that those permits have been obtained or applied for by including copies of applicable environmental permits. The EPP will not be approved until the permits have been obtained.

1.7.9 Clean Air Act Compliance

1.7.9.1 Haul Route

Submit truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route

and measures to reduce dirt, dust, and debris from roadways.

1.7.9.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that require federal, state, or local permits under the Clean Air Act. Provide a list of fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Contracting Officer's Representative.

1.8 LICENSES AND PERMITS

Obtain licenses and permits required for the construction of the project and in accordance with FAR 52.236-7 Permits and Responsibilities. Notify the Government of general use permitted equipment the Contractor plans to use on site.

1.9 Solid Waste Management Report

Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste.

1.10 REGULATORY REQUIREMENTS

1.10.1 Work Subject to the Clean Water Act, Section 401(a)

Activities that could result in discharge into navigable waters are not allowed unless a Section 401(a) Water Quality Certification is obtained from the State. Examples of activities that are not allowed without a permit include surface discharge from stockpiling at a transfer site, and barge overflow. If obtained by the Government, the 401(a) Water Quality Certification is provided in the solicitation.

1.10.2 Additional Work Proposed and Not Authorized

1.10.2.1 Work Subject to 33 CFR 320-330

Additional work (not specifically shown on the plans or delineated in the specifications) proposed by the Contractor in or affecting navigable waters, including wetlands (as defined in 33 CFR 320-330, published in the Federal Register Vol.51, No. 219, Thursday, November 13, 1986) must not be performed without a Department of the Army Permit. This requirement applies to permanent work, temporary work, and fill placement. The Department of the Army Permit must be approved by the District Engineer or Deputy District Engineer in accordance with the laws and regulations of the United States, including, but not limited to, the River and Harbor Act of 1899, the Clean Water Act and the National Environmental Policy Act of 1969, as amended. US Army Corps of Engineers employees (such as the Contracting Officer, the Contracting Officer's Representative, or construction representatives) are not delegated authority to authorize such work. Information on making application for such permit(s) can be obtained by contacting one of the offices as listed below. When applying for information or a permit, provide a copy of the correspondence to the Contracting Officer of this contract. If a permit is not obtained, the additional work cannot be accomplished. Delays in processing the permit do not constitute the basis of a claim under this contract. The fact that the Contractor is performing work under a Department of the Army Contract does

not give the Contractor greater rights than other applicants for a Department of the Army Permit.

MICHIGAN-INDIANA

Regulatory Branch
US Army Corps of Engineers, Detroit District
Corps of Engineers, Detroit District
477 Michigan Avenue
Detroit, Michigan 48226-2550
Telephone: 313-226-6413

1.10.2.2 Work Subject to 40 CFR 233

Additional work (not specifically shown on the plans or included in the specifications), proposed by the Contractor, in or affecting waters of the United States, including wetlands (as defined in 40 CFR 233, published in the Federal Register, Vol. 49 No. 192, Tuesday October 2, 1984) shall not be performed without a State regulatory permit. Information on making an application for such permit can be obtained by contacting the office listed below. When applying for a permit or for information, furnish copies of the correspondences to the Contracting Officer. If a permit is not obtained, do not perform the additional work. Delays in obtaining or processing the permit do not constitute a basis for a claim under this Contract.

STATE OF MICHIGAN

Department Environment, Great Lakes and Energy
Land & Water Management Division
P.O. Box 30458
Constitution Hall
Lansing, MI 48909
Telephone: 517-373-1170

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility.

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work as specified. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Protection of Birds

Many of the birds found a the disposal facilities, placement areas, and other project areas are protected by the Migratory Bird Treaty Act (16

U.S.C. 703-712, July 3, 1918, as amended). The Act makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, a migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations. According to the Act, a person, association, partnership or corporation which violates the Act or its regulations is guilty of a misdemeanor and subject to fines, jail time, or both.

3.1.2 Allowed and Prohibited Dredging Periods

The following environmental dredging restrictions apply for this Contract:

Dredging is not allowed from May 15 through July 15.

3.1.3 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as specified and permitted.

3.1.4 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.5 Streams

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with required permits including Clean Water Act Section 404, and Section 401 Water Quality.

The Contracting Officer's approval and appropriate permits are required before equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

3.2 STORMWATER

Do not discharge stormwater from construction sites to the sanitary sewer. If the water is noted or suspected of being contaminated, it can only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization in advance from the Contracting Officer's Representative for release of contaminated water.

3.2.1 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations. Preserve vegetation to the maximum extent practicable.

3.2.2 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.2.3 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.2.4 Municipal Separate Storm Sewer System (MS4) Management

Comply with the MS4 permit requirements.

3.3 PROTECTION OF CULTURAL RESOURCES

3.3.1 Archaeological Resources

If, during excavation or other construction activities, previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, stop activities within 100 ft of the discovery. Do not work within 100 ft of the discovery until the Contracting Officer has given written permission allowing work to resume in this area. Resources covered by this paragraph include, but are not limited to: human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and indication of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer and the Government will consult with the appropriate parties in accordance with Section 106 of the National Historic Preservation Act (NHPA) and other applicable laws. Stop activities that result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. Do not disclose archeological information without written Government approval.

3.4 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with 40 CFR 64 and state air emission and performance laws and standards.

3.4.1 Burning

Burning is prohibited.

3.4.2 Accidental Venting of Refrigerant

Accidental venting of a refrigerant is a release and must be reported immediately to the Contracting Officer.

3.4.3 EPA Certification Requirements

Heating and air conditioning technicians must be certified through an EPA-approved program. Maintain copies of certifications at the employees' places of business; technicians must carry certification wallet cards, as provided by environmental law.

3.4.4 Dust Control

Keep dust down continually, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster.

3.4.4.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be constantly controlled, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with state and local visibility regulations.

3.4.5 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and must not constitute a health hazard.

3.5 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management Section of the EPP. Describe the anticipated types of the hazardous materials to be used in the

construction when requesting information.

3.5.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

3.6 WASTE MANAGEMENT AND DISPOSAL

3.6.1 Waste Determination

Potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g. scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 261 or corresponding applicable state or local regulations.

3.6.2 Solid Waste Management

3.6.2.1 Solid Waste Management Report

Provide copies of the waste handling facilities' weight tickets and receipts.

3.6.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste. Solid waste disposal offsite must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

3.6.3 Control and Management of Hazardous Waste

Do not dispose of hazardous waste at the project site. Do not discharge waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal at the project site without written approval of the Contracting Officer.

3.6.3.1 Hazardous Waste Disposal

3.6.3.2 Universal Waste Management

Manage the following categories of universal waste in accordance with federal, state, and local requirements and installation instructions:

a. Batteries as described in 40 CFR 273.2

b. Lamps as described in 40 CFR 273.5

c. Mercury-containing equipment as described in 40 CFR 273.4

Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed.

3.6.3.3 Electronics End-of-Life Management

Recycle or dispose of electronics waste, including, but not limited to, used electronic devices such computers, monitors, hard-copy devices, televisions, mobile devices, in accordance with 40 CFR 260-262, state, and local requirements, and installation instructions.

3.6.4 Releases/Spills of Oil and Hazardous Substances

3.6.4.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the local Fire Department, the Contracting Officer and the state or local authority.

Submit verbal and written notifications as required by the federal (40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 calendar days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.6.4.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor- responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.7 HAZARDOUS MATERIAL MANAGEMENT

Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto project site that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting

Officer prior to bringing the material on the project site. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

3.8 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

3.9 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided.

3.9.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

3.9.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overfill protection for oil storage tanks. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be onsite to clean up spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. If tanks and containers with an aggregate aboveground capacity greater than 1320 gallons will be used onsite (only containers with a capacity of 55 gallons or greater are counted), provide and implement a SPCC plan meeting the requirements of 40 CFR 112. Do not bring underground storage tanks to the project site for Contractor use

during a project. Submit the SPCC plan to the Contracting Officer for approval.

Monitor and remove rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present.

3.10 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with FAR 52.236-12 "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --

SECTION 01 99 90

LISTING OF ENCLOSED DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS
01/07

PART 1 GENERAL

1.1 ENCLOSURES

This Section contains documents referenced in other Sections of the specifications. They are consolidated in this Section for the convenience of the Contractor and the State. The Contractor may reproduce the enclosed forms for its use or obtain a supply of the forms from the State Authorized Representative.

TITLE

1. Attachment A - Submittal Register

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION 02 21 00

SURVEYS
10/21

PART 1 GENERAL

1.1 SECTION INCLUDES

A. REFERENCED SECTIONS

B. REFERENCES

C. QUALIFICATIONS OF SURVEYORS

D. DESCRIPTION

E. PROJECT DATUMS

F. SUBMITTALS

G. SURVEY REFERENCE POINTS

1.2 QUALIFICATIONS OF SURVEYORS

A. Surveyors shall be independent personnel not responsible for or directly supervising construction work.

B. The qualifications of the Surveyors (Topographic and Hydrographic Surveyors) shall be submitted in the Survey Work Plan outlined herein. The Government reserves the right to disallow the person(s) selected by Contractor for surveying. If, in the Government's opinion, the person is not qualified to do the work, the Contractor shall select another surveyor and submit qualifications until a qualified person is approved. Use of alternative surveyors shall be at no additional cost to the Government.

C. TOPOGRAPHIC SURVEYOR
The Topographic Surveyor selected by the Contractor shall be a Professional Land Surveyor licensed in the State of Minnesota with qualifications acceptable to the Government, and shall perform the topographic surveys. The Topographic Surveyor shall have actively engaged in land survey operations during the past 3 years.

D. HYDROGRAPHIC SURVEYOR
The Hydrographic Surveyor selected by Contractor shall be a Registered Hydrographic Surveyor certified by the American Congress on Surveying and Mapping with qualifications acceptable to the Government, and shall perform the hydrographic surveys. The Hydrographic Surveyor shall have actively engaged in hydrographic survey operations during the past 3 years.

1.3 DESCRIPTION

A. Contractor shall perform all topographic and hydrographic survey work described in the Specifications and shown on the Drawings.

B. Contractor shall retain the services of a Topographic Surveyor to

perform the following surveys, at minimum, and provide Survey Record Drawings as specified herein:

1. Pre-construction topographic survey of remediation areas, including the sediment processing area, or other relevant areas to confirm Site features, topography, working points, and control points (horizontal control and vertical benchmarks), and certify that the Work is located as required by the Contract.

2. Pre-construction utility survey of upland and nearshore areas.

3. Post-construction topographic surveys of any area affected by the Work. Contractor's Topographic Surveyor shall perform post-construction topographic surveys and provide Survey Record Drawings as specified herein, including, but not limited to, the following features:

a. Remediation area.

b. Utilities.

c. Other, as needed.

D. Contractor shall perform all hydrographic survey work described in the Specifications and shown on the Drawings. This work includes, but is not limited to, the following areas:

1. Pre-dredge hydrographic survey of the remediation area and the Scow Loading/Offloading Area, if applicable.

2. Post-dredge hydrographic survey of the remediation area and the Scow Loading/Offloading Area, if applicable.

3. Post-confirmation sampling re-dredge/re-excavation areas, as needed and dictated by confirmation sampling results for the areas described in SECTION 35 20 23.

E. Contractor shall retain the services of a Hydrographic Surveyor to perform hydrographic surveying in accordance with the USACE Engineering and Design – Hydrographic Surveying guidance for all payment surveys.

F. Contractor's Topographic and Hydrographic Surveyors shall make all necessary measurements of cut depth necessary to calculate surface elevations of the Work performed consistent with these Specifications and as shown on the Drawings. The results of these survey measurements and all relevant backup calculations shall be provided to the Government for review and approval.

G. Contractor shall prepare Survey Record Drawings to be used for confirming required surface elevations and documenting construction. The final Survey Record Drawings shall be prepared and certified by Contractor's Surveyors and in accordance with Section 01 78 00 – Closeout Submittals.

1.4 PROJECT DATUMS

A. All topographic and hydrographic surveys shall be prepared using the project datums listed in these Specifications and as shown on the Drawings:

1. Horizontal Datum: North American Datum of 1983 (NAD 83) Minnesota

State Plane, North Zone (2201) in U.S. Survey Feet.

2. Vertical Datum: International Great Lakes Datum of 1985 (IGLD 85) in U.S. Survey Feet.

1.5 SUBMITTALS

SD-01 Preconstruction Submittals

Alternative Survey Methods; G

Survey Work Plan; G

Pre-Construction Surveys; G

SD-02 Shop Drawings

Construction Verification Surveys; G

SD-11 Closeout Submittals

Final Surveys; G

1.6 SURVEY REFERENCE POINTS

A. Existing control points (horizontal and vertical control) for the project will be provided prior to Construction.

B. Locate and protect monuments and control points prior to starting the Work and preserve all permanent reference points during Construction.

1. Contractor shall not make changes or relocations without prior written notice to Owner’s Representative and after obtaining approval.

2. Contractor shall report to Owner’s Representative when any reference point is lost, is destroyed, or requires relocation because of necessary changes in grades or locations.

3. Topographic Surveyor shall correctly replace project monuments or control points that may be lost or destroyed and establish replacements based on original horizontal and vertical controls at no additional cost to Owner.

1.7 ALTERNATIVE SURVEY METHODS

The Contractor may propose different survey methods than those described herein. Proposed alternative survey methods, including equipment, procedures, calibration methods, calibration frequency, and estimated precision/accuracy of measurements need to be provided as part of Contractor’s Bid.

1.8 SURVEY WORK PLAN

The Contractor shall submit a Survey Work Plan within 45 days of Notice to Proceed in accordance with Section 01 33 00 – Submittal Procedures. Work shall not commence until submittal is approved. At a minimum, this Survey Work Plan shall include the following:

a. Name, address, and summary of qualifications of the Surveyor(s)

selected to be used to complete the survey work and a copy of the State of Minnesota license for the Surveyors that will certify the topographic and hydrographic work.

b. A listing of all required surveying tasks and areas to be surveyed for both horizontal limits and elevations as necessary to perform and document the Work described in the Specifications and on the Drawings.

c. A description of proposed survey methods, including equipment, procedures, calibration methods, calibration frequency, and estimated precision/accuracy of measurements.

d. Instrument and Global Positioning System (GPS) calibration certificates (6 months current).

e. A description of recordkeeping procedures during surveying.

1.9 PRE-CONSTRUCTION SURVEYS

The topographic and hydrographic data presented on the Drawings are based on the latest available Site surveys conducted during the dates indicated on the Drawings. The Contractor's selected Surveyor(s) shall conduct topographic and hydrographic surveys and a pre-construction utilities location survey of the upland and marine areas at least 30 days, but no more than 60 days, prior to the start of Construction. Contractor shall perform hydrographic surveys of the Site as a basis for comparison with interim and final surveys at least 30 days, but no more than 60 days, prior to the start of dredging.

a. Contractor's Surveyor(s) shall perform the pre-construction topographic and hydrographic surveys in accordance with the requirements of this Specification.

b. Contractor shall submit detailed survey information in accordance with the requirements of this Specification.

c. Contractor shall submit the pre-construction and pre-dredge topographic and hydrographic Survey Record Drawings within 10 days after the survey is completed. The Survey Record Drawings shall be certified by Contractor's Surveyor(s). Material removal activities shall not be initiated until the survey work is accepted by the Government.

d. Contractor shall submit a letter certifying that the Work is located as required by the Contract within 10 days after the survey is completed. If Contractor's Surveyor determines that the Work is not located as required by the Contract, Contractor shall notify the Government immediately and provide documentation prepared by Surveyor(s) describing and illustrating the inconsistencies with the Contract.

1.10 Construction Verification Surveys

1. Contractor's Hydrographic Surveyor shall conduct surveys and submit Survey Record Drawings for the following:

a. Post-dredge verification hydrographic survey.

b. Interim hydrographic surveys as required, for progress payment requests only.

2. Contractor shall submit a daily visual presentation of dredge area and residual sand cover layer placement progress consistent with the requirements of this Specification.

3. Contractor shall submit topographic and hydrographic surveys conducted during Construction within 2 business days after the completion of the survey and in accordance with Section 01 78 00. Dredging, residual sand cover placement, and biomedium placement shall not continue until the survey work is accepted by the Government for each respective survey, unless approval is given by the Government. If the surveys are not accepted, Contractor shall re-survey at no additional cost to the Government.

4. At any time during the Work, Contractor shall provide, on request of the Government, documentation of accuracy of survey work, survey logs, and survey field notes.

1.11 FINAL SURVEYS

Contractor shall submit final combined hydrographic and topographic plans as part of the Survey Record Drawings within 10 business days after the completion of the Work and in accordance with Section 01 78 00. The Survey Record Drawings will be used to determine the final compliance with the Contract.

Contractor shall submit, at the completion of Construction, all survey logs and field notes developed over the course of Construction.

PART 2 MATERIALS

NOT USED

PART 3 TITLE

3.1 SECTION INCLUDES

A. SURVEY LIMITS

B. REQUIRED SURVEYS – UTILITIES

C. REQUIRED SURVEYS – REMEDIAL AREA AND SCOW LOADING/OFFLOADING AREA

D. REQUIRED SURVEYS – UPLAND AND MARINE AREAS

E. PROJECT SURVEY REQUIREMENTS

F. SURVEY RECORD DRAWINGS AND REPORTING

3.2 SURVEY LIMITS

A. Contractor’s Surveyor(s) shall use horizontal and topographic and hydrographic survey methods to execute the survey work outlined in this Specification. The survey method for each area is described herein. Contractor’s Surveyor(s) shall provide the required surveys for a given area using a consistent survey technique over the course of construction.

B. Contractor’s Topographic Surveyor shall use topographic survey methods in areas above the mean low water (MLW) elevation, and including any dredging areas as needed. Topographic survey methods shall be used to survey the following areas:

1. Remedial area.

2. Utilities (installed and existing).

3. Other as, needed.

C. The Contractor’s Hydrographic Surveyor shall use hydrographic survey methods to survey the marine areas below Low Water Datum (LWD) elevation 601.1 (IGLD 85).

D. Contractor may propose a different survey method than that described herein for a given area. Proposed survey methods for each area shall be provided as part of Contractor’s Bid and submitted for approval as specified herein.

E. The survey limits for a given area shall extend a minimum of [40 feet] beyond the planned Limits of Work or beyond the designated area footprint for the survey.

3.3 REQUIRED SURVEYS – UTILITIES

A. Contractor shall conduct a pre-construction utilities location survey. Existing utilities shall be clearly marked, defined, and protected if applicable. The Government shall be notified immediately of any utility discrepancies.

B. Contractor shall survey locations of any utilities capped during the Work, and provide survey results to the Government within 10 days of completion of survey.

3.4 REQUIRED SURVEYS – REMEDIAL AREA AND SCOW LOADING/OFFLOADING AREA

A. PRE- AND POST-DREDGE SURVEYS

1. Pre-dredge Surveys

a. Contractor’s Hydrographic Surveyor shall perform a pre-dredge survey prior to construction.

b. The pre-dredge survey must be accepted by the Government before dredging work commences.

2. Post-dredge Surveys

a. Contractor’s Hydrographic Surveyor shall conduct a post-dredge survey in the remedial area within 5 days following the completion of dredging.

b. The post-dredge survey shall be used as the basis for acceptance of dredging work by the Government.

c. Pre- and post-dredge surveys shall be conducted using the methods outlined in this Specification. The same survey method

shall be used for both the pre- and post- dredging surveys for a given area.

3. Contractor is required to achieve the dredge elevations as shown on the Drawings and as specified in Section 35 20 23. If required dredging has not been achieved as determined by the Government, the Contractor shall re-dredge and re-survey the area. The re-surveying shall be conducted at no additional cost to the Government.

3.5 REQUIRED SURVEYS – UPLAND AND MARINE AREAS

A. PRE-CONSTRUCTION SURVEY

1. Contractor’s Surveyor(s) shall conduct an initial survey to confirm Site features, topography, and working points, and to certify that the Work is located as required by the Contract.

2. Pre-construction survey shall be performed to the project survey requirements specified herein.

B. LINE AND GRADE CONTROL

1. Contractor shall be responsible for establishing and maintaining Line and Grade Control for all aspects of the Work and as specified on the Drawings and described herein, as well as any other sections of these Specifications.

2. All Work shall be performed within the accuracy specified in these Specifications and shown on the Drawings.

3. Temporary working points: Provide and maintain stakes, lines, benchmarks, batter boards, and other temporary working points, lines, and levels. Construct temporary working points to be permanent during Construction. Remove working points when they are no longer needed after obtaining approval from the Government of removal prior to removal.

4. Deviations: Do not deviate from indicated lines and grades without approval from the Government.

C. POST-CONSTRUCTION SURVEY

1. Contractor’s Topographic Surveyor shall perform post-construction surveys and provide Survey Record Drawings for areas and features specified herein.

2. The post-construction surveys shall be performed to certify that the Work is located as required by the Contract. Survey Record Drawings shall include horizontal and vertical locations including, but not limited to, the following:

a. Perimeter and topography of features specified herein.

b. Limits of pavement, fencing, roadways, and other areas shown on the Drawings.

c. Site features within the Limits of Work.

3. Contractor’s Topographic Surveyor shall provide the Government with

Survey Record Drawings as specified herein and in Section 01 78 00 – Closeout Submittals.

3.6 PROJECT SURVEY REQUIREMENTS

A. Both topographic and hydrographic survey methods shall be used during the execution of this Specification including pre-construction surveys, Line and Grade Control, pre- and post-excavation surveys, post-construction surveys, pre- and post dredge surveys, post-residual sand cover placement, and post-biomedium placement surveys.

B. Survey procedures including, but not limited to, positioning modes, calibration, and data reduction, adjustment, processing, and plotting shall conform to recognized industry standards. Horizontal location observations shall compensate for errors, geodetic corrections, and atmospheric variations. Failure to perform and process such surveys in accordance with recognized standards will result in a rejection and non-payment for work performed.

C. Contractor’s Surveyor(s) shall verify work utilizing manufacturer calibration and field verification procedures per industry standards.

D. Topographic surveys shall meet the following additional criteria, at a minimum:

1. Measure the target horizontal and vertical position to an accuracy of 0.01 foot and the target elevation to an accuracy of 0.01 foot.

2. For post-excavation and post-residual cover topographic surveys, Contractor’s Surveyor shall provide coverage of the Work area based on the size of the area to adequately characterize the surface and to subsequently calculate elevations subject to the approval of the Government.

E. Hydrographic surveys shall meet the following additional criteria, at a minimum:

1. Single-beam and multi-beam hydrographic surveys shall comply with the standards defined in the USACE Engineering and Design – Hydrographic Surveying guidance, unless otherwise stated herein.

2. Transect spacing for hydrographic data collected using single-beam survey equipment to support progress payments shall not exceed 15 feet.

3. All hydrographic surveys shall meet the following repeatable accuracy:

a. For elevation, to the nearest 0.1 foot.

b. For horizontal distance, to plus or minus 3.0 feet.

4. Positioning shall be by Real-Time Kinematic (RTK) Differential Global Positioning System (DGPS) or equivalent technology capable of providing the same level of positioning accuracy.

3.7 SURVEY RECORD DRAWINGS AND REPORTING

A. Maintain a complete, accurate log of all control and survey work as it progresses. Survey logs and field notes are to be provided to Owner’s

Representative upon request.

B. Update Drawings as a condition for approval of progress and final payment requests per Specification Section 01 78 00 – Closeout Submittals.

C. Final quantity computations for dredging, residual sand cover placement, and biomedium placement shall be computed by Contractor’s Surveyor(s). Elevations and thicknesses shall be computed to the required accuracies in the work areas indicated on the Drawings. Contractor shall submit in tabular format a summary of the actual dredging, residual sand cover placement, and biomedium elevations and thicknesses achieved. The Government may verify all measurements and thicknesses for final documentation.

D. The Government will review the results of the survey including the provided thicknesses within 7 working days of the submittal and give subsequent release if Contractor has successfully fulfilled the requirements of the Work.

E. Contractor shall provide the Government the following items for Survey Record Drawings and reporting, unless otherwise approved:

1. All Survey Record Drawings, which shall meet the requirements specified in Section 01 78 00 – Closeout Submittals.

2. For Marine Areas: AutoCAD Civil 3D (2020) format or compatible Digital Terrain Model (DTM) of the survey. The DTM must contain adequate 3-D points and 3-D break lines required to accurately model the digital surface to within the above-stated accuracy. The DTM must also provide a two-dimensional (2-D) polyline defining the limits and footprint of the area(s) surveyed.

-- End of Section --

SECTION 02 81 00

TRANSPORTATION AND DISPOSAL OF NON-HAZARDOUS MATERIALS
11/18

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" classification. Submittals not having a "G" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Sediment Transportation And Disposal Plan; G

Solid Waste Management Permit; G

SD-06 Test Reports

Recordkeeping; G

Spill Response

Exception Report; G

SD-07 Certificates

Waste Minimization

SD-11 Closeout Submittals

MPCA Dredge Material Management Permit

Permits And Liscenses

1.2 QUALITY ASSURANCE

1.2.1 Laws and Regulations Requirements

Comply with Federal, state, and local laws and regulations which are applicable. These requirements are amended frequently and compliance with amendments is required as they become effective. Notify the State immediately if compliance exceeds the scope of work or conflicts with specific requirements of the contract.

1.3 SEDIMENT TRANSPORTATION AND DISPOSAL PLAN

Contractor must submit the Sediment Transportation and Disposal Plan fifteen (15) or more calendar days prior to the start of dewatering work. The Sediment Transportation and Disposal Plan must include the following:

a. the manner in which dewatered non-contaminated sediment will be transported offsite

b. the methods to ensure the dewatered sediment meet shipment requirements

c. the haul routes for dewatered sediment transported from the dewatering containment pad area to the proposed disposal facility

d. For the disposal facility, provide letter(s) of acceptance from the facility covering the materials being disposed and a copy of the facility's state and local solid waste management permit.

1.4 REGULATORY REQUIREMENTS

1.4.1 Permits and Licenses

The Contractor must obtain all other required federal, state, and local permits for disposal of non-contaminated material. Obtain permits at no additional cost to the Government. Submit the acquired permits.

1.4.1.1 MPCA Dredge Material Management Permit

Beneficial reuse of non-contaminated dredge material for aquatic, residential, or industrial purposes requires acquisition of a Dredge Material Management Permit from the Minnesota Pollution Control Agency. Submit permit to the State. Permit requirements can be founds at the following site:
https://www.pca.state.mn.us/business-with-us/dredged-materials-management

PART 2 PRODUCTS

2.1 MATERIALS

Provide all the materials required for the packaging, labeling, marking, placarding and transportation of hazardous wastes and hazardous materials in conformance with Department of Transportation standards. Details in this specification must not be construed as establishing the limits of the Contractor's responsibility.

2.1.1 Spill Response Materials

Provide spill response materials including, but not limited to, containers, adsorbent, shovels, and personal protective equipment. Spill response materials must be compatible with the type of material being handled.

PART 3 EXECUTION

3.1 TRANSPORT OF DEWATERED SEDIMENT

Load dewatered sediment material onto trucks for transport and disposal at the offsite facility. Offsite transportation and disposal of dewatered sediment shall be in accordance with the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN, and requirements established by Federal, state, and local laws and regulations which are applicable. Requirements for selected offsite disposal facilities shall be confirmed by the Contractor prior to commencing work. Contractor's proposed disposal facility shall be included in the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN.

3.2 TRANSPORT OF SEGREGATED VEGETATION

Load stockpiled vegetation segregated from the sediment onto trucks for

transport and disposal at the offsite facility. Offsite transportation and disposal of vegetation material shall be in accordance with the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN and requirements established by Federal, state, and local laws and requlations which are applicable. Contractor's proposed disposal facility shall be included in the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN.

3.3 WASTE MINIMIZATION

Minimize the generation of waste to the maximum extent practicable and take all necessary precautions to avoid mixing clean and contaminated wastes. Identify and evaluate recycling and reclamation options as alternatives to land disposal. Submit written certification that waste minimization efforts have been undertaken to reduce the volume and toxicity of waste to the degree economically practicable and that the method of treatment, storage, or disposal selected minimizes threats to human health and the environment.

3.4 SPILL RESPONSE

In the event of a spill or release of a contaminated substance (as designated in the Contract), or pollutant or contaminant, or oil (as governed by the Oil Pollution Act (OPA), 33 U.S.C. 2701 et seq.), notify the State immediately. Direction from the State concerning a spill or release is not considered a change under the contract. If the spill exceeds a reporting threshold, follow the pre-established procedures for immediate reporting to the State. Comply with applicable requirements of Federal, state, or local laws or regulations regarding any spill incident.

-- End of Section --

SECTION 31 11 00

CLEARING AND GRUBBING
11/18

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Tree Wound Paint

1.2 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site, and handle in a manner which will maintain the materials in their original manufactured or fabricated condition until ready for use.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Tree Wound Paint

Use bituminous based paint from standard manufacture specially formulated for tree wounds.

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 Protection

3.1.1.1 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

3.1.1.2 Trees, Shrubs, and Existing Facilities

Protect trees and vegetation to be left standing from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.1.1.3 Utility Lines

Protect existing utility lines that are indicated to remain from damage. Notify the Government immediately of damage to or an encounter with an unknown existing utility line. The Contractor is responsible for the repair of damage to existing utility lines that are indicated or made

known to the Contractor prior to start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, notify the Government in ample time to minimize interruption of the service. Refer to Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS for additional utility protection.

3.2 CLEARING

Clearing consists of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within the areas to be cleared. Clearing also includes the removal and disposal of structures that obtrude, encroach upon, or otherwise obstruct the work.Contractor shall dispose of the woody debris, vegetation, and other debris at a landfill approved by the COR. Contractor is responsible for disposal and incidental costs of debris removed from the site during execution of this contract. Cut off flush with or below the original ground surface trees, stumps, roots, brush, and other vegetation in areas to be cleared, except such trees and vegetation as may be indicated or directed to be left standing. Trim dead branches 1-1/2 inches or more in diameter on trees designated to be left standing within the cleared areas and trim all branches to the heights indicated or directed. Neatly cut close to the bole of the tree or main branches, limbs and branches to be trimmed. Paint, with an approved tree-wound paint, cuts more than 1-1/2 inches in diameter. Apply herbicide in accordance with the manufacturer's label to the top surface of stumps designated not to be removed.

3.2.1 Tree Removal

Tree removal shall be limited to areas essential for performance of contract work. This work includes the felling of such trees and the removal of their stumps and roots as specified in paragraph GRUBBING. Dispose of trees as specified in paragraph DISPOSAL OF MATERIALS.

3.2.2 Grubbing

Grubbing consists of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas. Remove material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract, such as areas for buildings, and areas to be paved. Fill depressions made by grubbing with suitable material and compact to make the surface conform with the original adjacent surface of the ground.

3.3 DISPOSAL OF MATERIALS

Dispose of excess materials in accordance with the approved solid waste management permit and include those materials in the solid waste management report.

All wood or wood like materials remaining from clearing, prunning or grubbing such as limbs, tree tops, roots, stumps, logs, rotten wood, and other similiar materials shall become the property of the Contractor and disposed of as specified. All timber and wood or wood like materials remaining from timber harvesting such as limbs, tree tops, roots, stumps,

logs, rotten wood, and other similiar materials shall become the property of the Contractor and disposed as specified.

-- End of Section --

SECTION 35 20 23

DREDGING

PART 1 GENERAL

1.1 SINGLE JOB PAYMENT ITEMS

1.1.1 Work Covered by Contract Price

The contract price per job for dredging in the Tallas Bay site shall include the cost of dredging, conveyance and staging of all sand, silt, clay, cobbles and rock fragments within the limits as shown on contract drawings except original materials, ledgerock, boulders, wrecks, scrap materials, snags, stumps, driftwood, piles, debris or other material which cannot be removed by the plant specified in the accepted bid, or the equivalent of such plant, without blasting or special apparatus. Excepted materials can be removed by special means at the contract unit price. The unit price shall also include the cost of all work required to be performed for the use of the placement area. The unit price shall include clearing, grubbing, and debris removal activities for dredged material. The contract price also includes removing woody debris and vegetation from the specified dredge areas prior to dredging, and disposing of woody debris and vegetation. The unit price shall also include transport of the dredged sediment to the sediment dewatering pad at Hallett Dock #7, Duluth, Minnesota, or other Government approved location. Nothing in this Paragraph shall be construed as prohibiting the removal of excepted material by special means at prices agreed and approved in accordance with applicable provisions of the contract.

1.2 Definition

Hard material is defined as material requiring the use of special equipment for economical removal, and includes boulders or fragments too large to be removed in one piece by the dredge.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Schedule; G

15 calendar days prior to start of construction, the Contractor shall provide the construction schedule for the project including the following items: ; planned start of dredging in the Tallas Bay; planned end of dredging in the Tallas Bay; planned start and completion of dewatering of the sediment; planned start and completion of disposal of the dewatered sediment. Contractor shall include bathymetric surveys and topographic surveys including processing and mapping in the construction schedule.

Sounding Equipment Description and Calibration Data; G

Sounding equipment shall be submitted 30 days prior to commencing work. Submittal shall include product data of the Contractor's sounding equipment and transducer frequency. The Contractor is responsible to verify that the sounding equipment has been calibrated to correspond with the Government's Hydrographic Surveying Manual EM 1110-2-1103.

Dredging, Conveyance, and Staging Work Plan; G

Thirty days prior to bringing equipment to the project site, submit work plans of the proposed dredging, conveyance and staging operations. Dredging, conveyance, and staging work plan shall include details of equipment, set up, layout, sequencing of dredging, conveying dredged material to the dewatering area, dredging rates, and equipment size. The work plan shall include the following:

1. Provisions for minimizing spillage during transport of dredged material from the Tallas Bay site to the sediment dewatering area shall be described.

2. A plan for handling, separating, and disposal of root masses or vegetation that contain sediment.

3. The plan for conveyance and transport of the dredged sediment from the Tallas Bay site to the dewatering pad area.

4. Sounding/Positioning Equipment Description and Calibration Data.

Notice of Start of Construction Stages; G

Provide 14 calendar days prior to planned start of the actual dredging in the Tallas Bay site; and (48) hours advance written notice of the following construction stages: (2) planned end of dredging in the Tallas Bay site; (4) planned start of excavation of dewatered sediment from dewatering pad area; (5) planned completion of excavation of dewatered sediment from dewatering pad area.

Daily Report Of Dredging Operations; G

Report of Operations forms (ENG FORM 4267 or ENG FORM 27A), as appropriate to the type of work being performed shall be completed and furnished daily. Each report shall contain in the "REMARKS" space attesting that no overflow or discharge occurred from the dredging vessel(s) while dredging and while in transit from the dredging area to the dewatering pad area. In the event an overflow or discharge occurs while dredging or while in transit, an oral notification shall not be made, and complete written report on the incident shall be made to the Government in shortest possible time. Wqhen appropriate and approved, quality control compliance inspections may be reported under the "REMARKS" item on the form.

Debris Transportation And Disposal Plan; G

Contractor shall submit the Debris Transportation and Disposal Plan 15 or more calendar days prior to the start of dredging work. The Debris Transportation and Disposal Plan shall detail the

manner in which cleared and grubbed materials will be transported offsite; identify the methods to ensure the materials meet shipment requirements; and identify haul routes for debris transported from the Tallas Bay site to the proposed disposal facility. For the disposal facility, provide letter(s) of acceptance from the facility covering the materials being disposed. Written documentation of waste transported offsite shall be submitted in the Sediment Dewatering Report.

SD-02 Shop Drawings

Progress Soundings

SD-06 Test Reports

Daily Report Of Dredging Operations

Test Reports

SD-11 Closeout Submittals

Material Placement Records

1.4 CHARACTER OF MATERIALS

The material within the required dredging prism consists primarily of medium fine sand to very dense gravelly sand and clay. Native material may be encountered in the required dredging and overdepth prism, and consists of meduim fine sand and very dense garvely sand. Cobbles are expected to be found in some areas of the project.

The records of previous dredging and sampling are available for inspection at the Office of the Engineering, Design & Construction Office, U.S. Army Corps of Engineers, Detroit District, 477 Michigan Avenue, McNamara Building, Detroit, Michigan.

1.5 CLEARING AND GRUBBING

The Contractor shall remove woody debris and vegetation from the specified dredge areas shown in the drawings prior to dredging. The locations of the woody debris shall be identified by the Contractor using bathymetric survey methods as shown in the their Underwater Debris Removal and Disposal Plan. Due to the large amount of seasonal vegetation growth, bathymetric survey methods may need to be aided by other survey methods. Contractor shall dispose of the woody debris, vegetation, and other debris at a landfill approved by the COR. Should debris or other material be encountered which cannot be removed, the Contractor shall coordinate with the COR for direction. Contractor is responsible for disposal and incidental costs of debris removed from the site during execution of this contract.

[1.6 STAGING DREDGE MATERIAL

Transport materials dredged from within the Tallas Bay site directly to the transfer pad area as shown on the contract drawings. Sediment dewatering operations will be performed within the dewatering pad area, as needed. Dredged material must not be stockpiled outside the dewatering pad area. Debris larger than 6-inches in diameter shall be separated out from

the sediment, and disposed without treatment. Debris shall be disposed in accordance with applicable local, state, and federal requirements.]

1.7 SEQUENCING AND SCHEDULING

The Contractor shall notify the Government a minimum of four (4) calendar days prior to the need for each Government bathymetric survey. The Contractor shall assume a 96-hour collection and processing time for each survey by the Government.

1.7.1 Delivery of Plant and Order of Work

Prior to bringing equipment to the project site, the contractor shall submit a Dredging, Conveyance and Staging Work Plan describing in detail the plans on accomplishing the proposed work. Unless otherwise directed by the Government, the Contractor shall accomplish the required work within the time established in the Contract documents.

1.8 ARTIFICIAL OBSTRUCTIONS

Debris is anticipated in the dredging areas in the Tallas Bay site. The Government has knowledge of a 3 ft pressure pipe through Tallas Bay as shown on the contract drawings. Any existing crossing that is damaged due to the Contractor's operations shall be repaired by the Contractor and at its expense. If actual conditions differ from those stated or shown, or both, an adjustment in contract price or time for completion, or both, will be made in accordance with FAR 52.236-2, Differing Site Conditions.

1.9 SOUNDINGS

The contract drawings represent the conditions existing at the time of survey. Determination of quantities removed will be made from after dredging soundings taken by the Contractor's Independent Surveyor and the calculations made there from to determine quantities by in-place measurement. The Government determination of the quantities to be paid for in the area specified, after having once been made, will not be reopened, except on evidence of collusion, fraud, or obvious error. Contractor shall perform soundings or probes to measure dredge cut depths in the specified dredge units. The Contractor shall include the results of the sounding measurements in the daily report of dredging operationsDAILY REPORT OF DREDGING OPERATIONS.

1.10 VOLUME CALCULATIONS

Volume calculations will be based on pre and post bathymetric surveys by the Contractor's Independent Surveyor to achieve final elevations of dredging.

In project areas surveyed using single-beam sonar, the volume of material removed shall be calculated using the average end area method. The HYPACK software Philadelphia Pre Dredge and Post Dredge volume calculation method shall be used for all single-beam volume computations.

In project areas surveyed using multi-beam sonar, the volume of material removed will be computed using a TIN (Triangulated Irregular Network) model as outlined in the Hydrographic Surveying Manual EM-1110-2-1003, dated November 30, 2013. The HYPACK software TIN model Philadelphia volume calculation method will be used for all multi-beam volume computations. A 1-foot, by 1 foot matrix using the average depth sounding will be

generated from the edited multi-beam data to perform the TIN volume computations. The corresponding plotted sounding sheets will be generated using a plot-scale dependent matrix cell utilizing the minimum depth from the 1x1 Average dataset used to calculate volumes. InRoads and/or OpenRoads software by Bentley will be used to calculate the cut and fill volumes.

Plots of soundings provided to the Contractor during administration of this contract shall be a graphical representation only and shall not be used for volume calculations. Survey data used for volume computations shall be available to the Contractor upon request.

1.11 DREDGING TOLERANCES

Dredge equipment tolerances are specified in Part 2 PRODUCTS. The finished dredge surface shall not deviate from the lines and grades shown by more than the following tolerances:

a. Above Neatline = 0 inches
b. Below Neatline = 6 inches

Tolerances are measured perpendicular to the indicated neatlines. Dredging shall meet the tolerances at over 90% of the placement area as measured by bathymetric survey.

1.11.1 OVERDEPTH DREDGING

When dredging within the Tallas Bay site, the Contractor shall ensure that overdepth dredging does not create a surplus of cut material for dewatering and disposal. Dredging below the allowed 6 inches below the neatline will be considered as excessive dredging and for which payment will not be made. Dredge depths shall be measured by the bathymetry survey.

1.11.2 Side Slopes

An allowance for the specified dredging tolerances will be made for dredging beyond the indicated or specified side slopes, except as provided herein. Dredging for sides slopes outside of dredging area indicated on the contract drawings shall be minimized to the extent required for stable slopes.

1.11.3 Excessive Dredging

Materials taken from beyond the limits specified in Subparagraphs OVERDEPTH DREDGING and SIDE SLOPES, will be excluded from the computed total amount dredged as excessive dredging or excessive side slope dredging and for which payment will not be made. The final determination of the amounts of excessive dredging will be based wholly on the surveys made for final examination and acceptance. See Paragraph entitled FINAL EXAMINATION AND ACCEPTANCE.

1.12 PERMITS

The Contractor shall comply with conditions and requirements of the [Corps of Engineers Permit] and other State or Federal permits. Permits for dredging and placement of material are attached as indicated. The Contractor is responsible for obtaining any additional permits as necessary to perform the work.

1.13 ENVIRONMENTAL PROTECTION REQUIREMENT

Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with Federal, State, and local regulations pertaining to water, air, and noise pollution.

1.13.1 Spill Guard

Contractor shall protect sediment handling transfer areas by use of an apron/guard to control spills when transferring dredged material by mechanical methods. Apron type and layout shall be included in the Contractor's Dredging, Conveyance, and Staging Work Plan.

PART 2 PRODUCTS

2.1 EQUIPMENT POSITIONING SOFTWARE

Removal shall be performed with equipment outfitted with RTK DGPS with the necessary sensors, to enable accurate positioning of the removal bucket. The information generated by the RTK DGPS shall be submitted upon request. A qualified positioning equipment technical support personnel shall be on the Project Site whenever removal activities take place. If GPS downtime is greater than 10 hours per week for work in the removal area, alternate positioning equipment systems must be provided with written approval from the COR.

2.1.1 Capabilities

The RTK DGPS shall be capable of:

a. Inputting and presenting a removal prism file (an x, y, z file on a gridded interval of 1 foot by 1 foot).

b. Recording all sensor information in standard ASCII format or other approved format to a hard disc so that the position and movements of the dredge can be reviewed at a later date (playback capability).

c. Producing plots showing the location where each removal bucket closing (x,y,z) was attempted and if the bucket was closed.

d. Showing the removal operator, in real-time, the depth of material as the bucket takes a bite in relation to the dredge target elevation.

e. Using a true 3-dimensional computational system to calculate the position of the bucket taking into account the tilt and list of removal platform as well as standard positioning sensors.

f. Show that the removal buckets positioning system’s error budget is within the stated vertical and horizontal accuracies. The error budget shall include all errors associated with measuring the positioning of the bucket.

2.1.2 Verification

The RTK DGPS employed shall be verified in the field prior to the scheduled use of equipment. The equipment verification can be completed on

land or on water and shall demonstrate the ability to achieve, monitor, and report these tolerances. The Government will be present for the operation and must approve the verification procedures. Procedures for verification shall be submitted for written approval in advance of field verification. On-land verifications are considered contingent and shall be re-verified once the equipment is on the water and before the equipment is used for removal. The Contractor must verify its error budget (i.e., quality control check of positioning sensors to verify that individually and together they operate within an error range that satisfies the error budget requirement) at least one time per day.]

[2.2 SCOWS

Scows used to transport dredged sediment shall be watertight; testing may be conducted to certify that the scows are watertight. Scows shall be clearly numbered and labeled for identification purposes to help with reporting requirements. Provide and maintain markings on all material scows clearly indicating the draft of the scows. Each scow shall be used with an ullage table (i.e., displacement table) to provide required information regarding tonnage located in or on the scow. Provide and maintain sufficient spot or floodlights to permit the reading of the draft on the sides of material scows at bow and stern from the tow boat at night and when visibility is impaired. Ensure that adequate time is allowed by the tow boat captain for these readings to be obtained. These tonnage report logs shall be part of the daily progress report.]

PART 3 EXECUTION

3.1 CLEARING, GRUBBING, DEMOLITION AND DISPOSAL

The Contractor shall remove woody debris and vegetation from the specified dredge areas shown in the drawings prior to dredging. The locations of the woody debris shall be identified by the Contractor using bathymetric survey methods as shown in the their Subaqueous Debris Removal and Disposal Plan. Due to the large amount of seasonal vegetation growth, bathymetric survey methods may need to be aided by other survey methods. Contractor shall dispose of the woody debris, vegetation, and other debris at a landfill approved by the COR. Should debris or other material be encountered which cannot be removed, the Contractor shall coordinate with the COR for direction. Contractor shall provide adequate equipment to remove vegetation and root mass materials in required dredge areas. Contractor is responsible for disposal and incidental costs of debris removed from the site during execution of this contract.

The Contractor is responsible for disposal and incidental costs of debris removed from the site during execution of this contract. Written documentation of waste transported offsite shall be submitted in the Sediment Dewatering Report, including: waste manifests or bills of lading; and certificates of disposal to document the ultimate disposal of the waste.

3.2 DREDGING

The Contractor shall perform dredging work to remove material to the required depths within the limits shown on the drawings and as specified.

3.2.1 Method

Dredging under this contract is limited to mechanical means.

3.2.2 Obstructions

Should original material, ledge rock, boulders, cobbles, rock fragments, wrecks, scrap materials, snags, stumps, piles, debris or other material be encountered which cannot be removed by the plant specified in the accepted bid, or equivalent plant, without blasting or special apparatus, the Contractor shall remove all overlying material within the required dredging prism which in the judgment of the Government can be removed by the use of the plant specified in the accepted bid or equivalent plant. The Contractor shall immediately notify the COR if an obstruction is encountered within the required dredge areas. If debris objects located within the subaqueous cover areas extend more than 1-ft above final grade, Contractor shall coordinate with the COR for direction. Obstructions do not include vegetation or dense root masses.

3.3 INSPECTION

The Contractor shall inpect the work, keep records of work performed, and ensure that gauges, targets, ranges, and other markers are in place and usable for the intended purpose. Furnish, at the request of the Government, boats, boatmen, laborers, and materials necessary for inspecting, supervising, and surveying the work. When required, provide transportation for the and inspectors to and from the dredging area and between the dredging plant and convenient boarding points on shore.

3.4 CONDUCT OF DREDGING WORK

3.4.1 Restriction

Do not dredge below a grade three (3) feet above pipes, cables, tunnels, and other submerged crossings shown on the contract drawings. This restriction applies for a distance of twenty-five (25) feet away from each crossing. If an existing crossing is damaged due to Contractor operations repair the crossing at the Contractor's expense.

3.4.2 Order of Work

Prior to dredging, Contractor shall remove woody debris and vegetation from the dredge areas as described in CLEARING, GRUBBING AND DEMOLITION. Dredge the sediment surface in the required dredge areas to elevations shown in the drawings prior to placement of any subaqueaous cover materials. The Government reserves the right to change the order of work at any time.

3.4.3 Lights

The Contractor shall not shine lights in the direction of nearby residential and commercial properties, unless otherwise approved by the COR. Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, pipelines, ranges, markers, and turbidity curtain. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting shall conform to United States Coast Guard requirements for visibility and color.

3.4.4 Ranges, Gages, and Lines

Furnish, set, and maintain ranges, buoys, and markers needed to define the work and to facilitate inspection. Establish and maintain gages in locations observable from each part of the work so that the depth may be determined. Suspend dredging when the gages or ranges cannot be seen or followed. The Government will furnish, upon request by the Contractor, survey lines, points, and elevations necessary for the setting of ranges, gages, and buoys.

3.4.5 Plant

Maintain the plant, scows, barges, and associated equipment to meet the requirements of the work. Promptly repair leaks or breaks and remove dredged material placed due to leaks and breaks.

3.4.6 Placement of Dredged Material

3.4.6.1 Method of Placement

Hydraulic placement of materials is prohibited. Convey dredged materials to the placement site using only the method approved by the Contracting Officer. Temporary dumping or placement of materials outside of the placement area for subsequent rehandling into the placement area is prohibited unless otherwise approved by the Contracting Officer.

3.4.6.2 Offload Platform Site

The Contractor shall coordinate use of an offload platform to be used in the contract. An offload platform site used for similar projects has been included in the Contract Drawings. Use of any facility shall be coordinated with others who may be performing work in the area. Hauling routes and procedures shall be coordinated with and approved by the Contracting Officer’s Representative (COR).

3.4.6.3 Vehicular Conveyance

Dredged materials that are conveyed into a placement area via vehicle shall have leak tight cargo bodies or compartments with spill and splash preventing devices as well as necessary sidewall height. Vehicles shall not be loaded over their capacity, nor shall any loads exceed the limits of the thoroughfare over which the vehicles are operated. If the dredged materials are transferred from vessels to vehicles by bucket type equipment or any device which may leak or spill, make provisions to prevent water and materials from escaping into the waterways. In addition, ensure that materials that are splashed around vehicles during loading or unloading operations are cleaned up prior to the vehicle leaving the site so as to prevent materials from being tracked on to public thoroughfares or escaping into the waterways. Immediately clean up any materials spilled on the public thoroughfares. In addition, the Contractor shall maintain the transfer site in a neat and orderly condition.

3.4.6.4 Placement in Indicated Placement Areas

Prior to placement of dredge material, submit a Dredging Placement Safety Plan, describing in detail the means and methods to be utilized to provide for the public safety at the placement area, in accordance with the

Accident Prevention Plan. Deposit dredged materials within the Government-furnished placement area. The Government-furnished placement area has sufficient capacity to contain materials dredged under the Contract. Except as otherwise authorized by the Contracting Officer in writing, perform placement with a representative of the Contractor for Quality Control present. Place dredged materials using only the method approved by the Contracting Officer.

3.4.6.5 Misplaced Material

Dredged materials that are deposited at locations other than in areas designated or approved by the Contracting Officer are misplaced materials and are not paid for. At no additional cost to the Government, remove misplaced materials, place the materials in the designated or approved areas, and restore the site of misplaced materials to pre-existing conditions.

3.4.6.6 Government Furnished Placement Area

Deliver the dredged materials to the Government Furnished Placement Site at Vonco Landfill as shown on the Contract drawings.

Dewater sediment prior to placement at Vonco Landfill in accordance with 35 20 25 SEDIMENT DEWATERING.

Specific placement location of dredged material arriving will be coordinated with Vonco Landfill. Dredged materials placed outside of the placement limits shown on the contract drawings shall be removed at no additional cost to the Government and deposited within the area approved for placement of the dredged materials.

Throughout the contract, take necessary actions to prevent fugitive dust. Additionally, keep all haul routes clean by washing trucks at the placement site prior to departing back to the transfer site and by sweeping the roadway. Restore haul routes and the placement site to existing conditions.

3.4.6.7 Contractor Furnished Placement Area

Contract drawings provide information on an alternate placement area at US Steel with requirements as defined in 01 30 00 CONTRACTOR-FURNISHED FACILITIES.

The Contractor may also propose to use a different alternate site.

3.4.7 Loading and Unloading of Scows

Load and unload scows using methods that do not create an unsafe situation or a situation causing spillage or submergence (tipping) of the scow. Load scows evenly to maintain stability of the scow. During loading operations, measure and record on the daily progress report the tonnage of each scow on an hourly basis and also report tonnage upon departure from the dredge area and upon arrival at the offloading area. Prior to unloading scows, pump out free water for treatment. Once movement of the dredge bucket toward the scow begins, the dredge shall maintain continuous movement of the bucket toward the scow until the dredged material is loaded in the scow; except where scow stability is a concern, where otherwise noted, or

where otherwise directed by the Government. Conduct dredging and scow loading operations in a manner to optimize the quantity of sediment in the scow while maintaining scow stability and integrity. Do not overload scows.

When scow unloading is performed with the use of a clamshell or bucket, Contractor shall use a solid apron/guard or chute for loading and unloading of scows, and the disposal area shall be returned to its original condition by removing all material deposited thereon to the satisfaction of the Government.

3.4.8 Method of Communication

Provide a system of communication between the dredge crew and the crew at the transfer site. A portable two-way radio is acceptable.

3.4.9 Salvaged Material

Anchors, chains, firearms, and other articles of value, which are brought to the surface during dredging operations, shall remain or become the property of the Government and shall be deposited on shore at a convenient location near the site of the work, as directed.

3.4.10 Safety of Structures and Utilities

The prosecution of work shall ensure the stability of piers, bulkheads, other structures and utility lines, lying on or adjacent to the site of the work, insofar as structures may be jeopardized by dredging operations. Repair damage resulting from dredging operations caused by variation in location or depth of dredging from that indicated or permitted under the contract.

3.4.11 Plant Removal

Upon completion of the work, promptly remove plant, including ranges, buoys, piles, and other markers or obstructions.

3.4.12 Equipment

Nautical vessels and land based transport and conveyance systems shall be operated, loaded and unloaded in such manner as to prevent overflow, spills, leaks, waste, or other loss of dredged materials between point of pick-up and point of deposition within the subaqueous cover area. Hauling vessels shall have sufficient sidewall height and integrity and containment systems to prevent drainage over or through the sides and bottom during hauling.

3.4.13 Method of Sediment Transport

The method employed by the Contractor in conveying dredged materials to the offload dock shall be as approved by the Government at all times. Temporary dumping or placement of materials outside of the transfer site for subsequent rehandling into the dewatering area is prohibited unless otherwise approved by the Government.

3.4.13 Specific Areas and Periods

For required and option dredging, the specific areas where the Contractor shall be directed and required to remove shoals will be determined by the Contracting Officer from surveys made by the Government indicating the condition of the channels prior to dredging operations. The Contracting

Officer may limit the channel width and will direct the dredge depth based on the quantity of material to be dredged from any or all of these spcified areas to control the payment quantity. As part of the Contractor's Quality Control system, the Contractor is required to monitor their removal operations to assure that the final total quantity in each dredging area and contract line item, as specificed by the contract, is not exceeded.

3.5 CONTRACTOR QUALITY CONTROL

Establish and maintain a quality control system for dredging and placement operations to ensure compliance with the Contract requirements. Prepare daily Dredge Reports in Resident Management System Contractor Mode (RMS CM). Inspect the following items each day and record the results in the Dredge Report:

a. Layout of work, and dewatering areas.

b. Proper dredging depths.

c. Conveyance and staging operations.

d. Removal of misplaced material.

e. Safety requirements.

3.5.1 Soundings During Progress of Work

After mobilization begins, perform soundings prior to dredging in accordance with EM 1110-2-1003 to ensure sounding equipment is functioning properly. Submit drawings of Contractor prior soundings to compare with Government prior soundings. Perform soundings behind the dredge as work progresses to verify quality of dredging depth. Submit drawings of progress soundings. Select and calibrate sounding equipment in accordance with EM 1110-2-1003. Provide a description of the selected sounding equipment, including the proposed transducer frequency. Submit sounding equipment description and calibration data before starting to dredge.

3.6 MEASUREMENT

The material removed is measured by cubic yard in place, by means of volume difference between soundings taken before and after dredging. Measurements for payment are based on Government soundings or as directed by the Contracting Officer. The Government will take prior soundings once. If additional prior soundings are required as a result of the Contractor's operations, the Government will charge the Contractor for each additional sounding operation. The cost for each additional sounding operation is the same as specified in paragraph FINAL EXAMINATION AND ACCEPTANCE.

3.6.1 Method of Measurement

The Government will perform measurement soundings in accordance with EM 1110-2-1003. The Government may perform measurement soundings with multi-beam sounding equipment or with single beam sounding equipment. The Government will use the same equipment for prior and after soundings, using the same work platform.

3.7 FINAL EXAMINATION AND ACCEPTANCE

As soon as practicable after the completion of the entire work or section of work (if the work is divided into sections) as in the opinion of the Contracting Officer will not be subject to damage by further operations under the Contract, the Government will examine the area by sounding or sweeping, or both. Continue dredging to remove remaining shoals disclosed by the Government examination. The Contracting Officer may waive the requirement to remove remaining shoals if the channel bottom is soft and the Contracting Officer determines that the shoal areas are small and do not form a material obstruction to navigation. The Government will notify the Contractor when soundings or sweepings are to be made. The Contractor is allowed to accompany the sounding or sweeping party and to inspect the data and methods used in preparing the final quantity for payment. The Government will accept the area finally when the area is found to be in a satisfactory condition.

If two Government sounding or sweeping examinations in an area disclose remaining shoals, subsequent sounding or sweeping examinations are charged to the Contractor in the amount of $10,108 for each day that the Government plant is engaged in sounding, engaged in sweeping, enroute to the site, enroute from the site, held at the site, or held near the site.

-- End of Section --

SECTION 35 20 25

SEDIMENT DEWATERING
12/19

PART 1 GENERAL

1.1 SINGLE JOB PAYMENT ITEMS

1.1.1 Work Covered by Contract Price

The contract price per job for sediment dewatering shall include the cost of dewatering containment pad construction; dredge handling; [screening to separate vegetation;] water collection, treatment, and disposal; excavation of dewatered sediment from containers; testing dewatered sediment samples for disposal requirements; and transportation of dewatered sediment and screened vegetation to an off site disposal facility. The contract price includes the cost of containment pad construction at the Tallas Bay staging site; and drainage water treatment and disposal. The contract price includes work in the Tallas Bay site and the offloading and material handling area. The Contractor shall perform all dewatering operations at the designated material handling area.

1.2 REFERENCES

ASTM INTERNATIONAL (ASTM)

ASTM D737	Standard Test Method for Air Permeability of Textile Fabrics
ASTM D3786	Standard Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method
ASTM D4533	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
ASTM D4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
ASTM D4833	Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
ASTM D5199	Standard Test Method for Measuring the Nominal Thickness of Geosynthetics

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Schedule; G

Meet the requirements of SECTION 35 20 23, 'SUBMITTALS'

Dredging, Conveyance, and Staging Work Plan; G

Meet the requirements of SECTION 35 20 23, 'SUBMITTALS'

Notice of Start of Construction Stages; G

Meet the requirements of SECTION 35 20 23, 'SUBMITTALS'

Sediment Dewatering Safety Plan; G

Thirty days prior to commencing dewatering work at the site, describe in detail the means and methods to be utilized to provide for public safety at the dewatering area, all in accordance with the Accident Prevention Plan.

Sediment Dewatering Work Plan; G

Thirty days prior to bringing equipment to the project site, Contractor submits a work plan of the proposed sediment dewatering operations. Include in the Contractor's Sediment Dewatering Work Plan : site preparation and dewatering containment pad plan and baseline and post-construction sampling and analyses plan; sediment dredging methods; vegetation filter/screen method; and proposed disposal facility for the dewatered sediment and the vegetation filtered from the sediment. Include proposed plans for confirming dewatering efficacy with the Paint Filter Liquids test. Include a monitoring plan for the period when no other work will occur at the site except dewatering of sediments.

Dewatering Test Report; G

Prior to bringing equipment to the project site, submit the dewatering test report for the specific material to be dewatered and the proposed amendment, if needed. The test report results shall support use of the proposed amendment.

Daily Reports; G

a) Submit a contractor daily report. Reporting commences upon mobilization to the site and continue through contractor demobilization
b) Report will:
    1. Discuss what work related to specific pay item was performed.
    2. Discuss CQC Manager actions and inspections, issues identified, corrective action taken to resolve issue and prevent reoccurance in the future.
    3. Identify all issues and concerns with construction and existing conditions.
    4. Include safety reports at a frequency specified in the SSHP.

c) Discuss issues and concerns in the next progress meeting or sooner if Contractor believes they are time critical.
d) Submit photographs in accordance with Section 01 35 13 and 01 33 00.

SD-03 Product Data

[Dewatering Pad Liner; G

Include the following components the dewatering pad liner: non-permeable membrane; drainage medium consisting of non-woven geotextile and/or drainage aggregate layer. Submit the following information and data for the sources of each component of the dewatering pad liner fifteen (15) or more calendar days prior to the date the Contractor is scheduled to obtain materials from such sources:

a. Name and address of source
b. Product sheets, certification reports and/or other suitable items which show that the product requirements are met]

Dewatering Amendment or Coagulant Data; G

Submit the following information and data for the source of Dewatering Amendment for dewatering the sediment fifteen (15) or more calendar days prior to the date the Contractor is scheduled to obtain materials from such sources:

a. Name and address of source
b. Product sheets, certification reports and/or other suitable items which show that the product requirements are met

SD-06 Test Reports

Aggregate Gradation Reports; G

Submit the following information and data for the source of aggregate for construction of the Dewatering Pad drainage medium fifteen (15) or more calendar days prior to the date the Contractor is scheduled to obtain materials from such source(s):
a. Name and address of source
b. Gradation reports (particle size distribution test reports including D50 designation)

Paint Filter Liquids Test Results; G

During performance of the dewatering sediment work, submit confirmation results of the Paint Filter Liquids Tests after dewatering and prior to transport of the treated sediment for disposal. Confirmation test results indicate that no portions of the dewatered sediment sample passed through and dropped from the filter within the 5-min test period. Contractor shall include the proposed Paint Filter Test frequency in the Sediment Dewatering Work Plan.

Sediment Dewatering Report; G

Submit the Sediment Dewatering Report within thirty (30) calendar days after the finish of dewatering work.

SD-07 Certificates

Qualifications of the Paint Filter Testing laboratory; G

Submit the name of the USACE validated laboratory to perform the Paint Filter testing to the COR fifteen (15) or more calendar days prior to the start of dewatering work. The Paint Filter Testing Laboratory must be

approved by the COR prior to commencement of dewatering work.

Dewatering Quality Control Plan; G

Submit the Dewatering Quality Control Plan fifteen (15) or more calendar days prior to the start of dewatering work. The Dewatering Quality Control Plan shall include the proposed testing schedule for the EPA Method 9095B, "Paint Filter Liquids Test", chemical analyses testing of dewatered sediment and treated discharge water, any other testing required for disposal of the treated sediment at the landfill, and the name and address of the proposed laboratory performing the testing.

Sediment Transportation and Disposal Plan; G

Submit the Sediment Transportation and Disposal Plan fifteen (15) or more calendar days prior to the start of dewatering work. The Sediment Transportation and Disposal Plan shall detail the manner in which dewatered sediment will be transported offsite; identify the methods to ensure the dewatered sediment meet shipment requirements; and identify haul routes for dewatered sediment transported from the dewatering containment pad area to the proposed disposal facility. For the disposal facility, provide letter(s) of acceptance from the facility covering the materials being disposed and a copy of the facility's state and local Solid Waste Management Permit. Written documentation of waste transported offsite shall be submitted in the Sediment Dewatering Report.

1.4 CHARACTER OF MATERIALS

Refer to SECTION 35 20 23, 'CHARACTER OF MATERIALS'

1.5 SEDIMENT DEWATERING

Start dewatering after constructing the dewatering containment pad, and constructing the vegetation screen system, and the amendment system. Sediment dredged from the Tallas Bay site shall be transferred to the dewatering containment pad area for dewatering. [Vegetation that has been dredged during the sediment dredging operations shall be screened to segregate it from the sediment. Screen opening size will be proposed by the Contractor, and should range between 1-inch to 6-inch, depending on the proposed dredge and pumping system equipment.] Add amendment to the sediment. Effluent water shall be allowed to drain away from the material handling areas. Upon completion of the dewatering period, the Contractor shall perform any testing required by the placement site. Upon acceptance of the results of the testing by the COR, the dewatered sediment shall be excavated from the containers and loaded onto trucks for transport to the placement site and disposed.

1.6 SEQUENCING AND SCHEDULING

1.6.1 Delivery of Equipment and Order of Work

Prior to bringing equipment to the project site, submit a Sediment Dewatering Work Plan describing in detail how the Contractor plans on accomplishing the proposed work. Unless otherwise directed by the Government, accomplish the required work within the time established in the contract documents.

1.7 ENVIRONMENTAL PROTECTION EQUIPMENT

Meet requirements of SECTION 35 20 23, 'ENVIRONMENTAL PROTECTION REQUIREMENT'

PART 2 PRODUCTS

2.1 DEWATERING AMENDMENT

The Contractor can use a chemical conditioning program to aid dewatering of the sediment. The Contractor shall identify the amendment and the dosing rate to effectively dewater the sediment. The proposed amendment and dosing rate shall be described by the Contractor in the SEDIMENT DEWATERING WORK PLAN.

2.2 NON-PERMEABLE MEMBRANE LINER

Include a non-permeable membrane liner at the base the dewatering containment pad. The non-permeable liner must be free of holes or other damage. The non-permeable liner material must be reinforced polyethylene with a minimum thickness of [17 mils].

2.3 DRAINAGE MEDIUM MATERIALS

Include a drainage medium on top of the non-pervious membrane liner and below the containers the dewatering containment pad. Acceptable materials include a three-dimensional honeycomb geotextile filter fabric or washed crushed aggregate. The three-dimensional geotextile filter fabric must meet or exceed the values shown on the following tables:

MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE MD CD
Grab Tensile Strength	ASTM D4632	kN (lbs)	1.891 (425) 1.558 (350)
Trapezoid Tear Strength	ASTM D4533	kN (lbs)	0.935 (210) 0.690 (155)
Puncture Strength	ASTM D4833	kN (lbs)	0.734 (165)
Mullen Burst Strength	ASTM D3786	kPa (psi)	5511.112 (800)
Air Flow	ASTM D737	cfm	1300
Thickness	ASTM D5199	mm (mils)	4.826 (190)

PHYSICAL PROPERTIES	TEST METHOD	UNIT	TYPICAL VALUE
Weight	ASTM D 5261	g/m^2 (oz/yd^2)	342.390 (10.1)
Fiber Content			100% PP
Construction		EPI x PPI	26 x 18

Washed crushed aggregate must consist of minimum 6-inch thick layer of 1-1/2 inch D50 size, Minnesota Department of Transportation 2018 Standard Specifications for Construction Aggregate Section 3601, Rip Rap Material,

meeting paragraph A.1 quality.

PART 3 EXECUTION

3.1 CONDUCT OF WORK

3.1.1 ORDER OF WORK

Perform this order of work or Contractor's proposed work sequence as approved by the COR for Sediment Dewatering Work:

a. Prepare the dewatering containment pad.
[b. Prepare the vegetation screen system at the dewatering containment pad.]
c. Transfer the sediment dredged from the Tallas Bay site to the dewatering containment pad area.
[d. Screen the sediment to remove and segregate vegetation from the dredge material.]
e. Mix the screened sediment with amendment.
f. Collect water for discharge to the St. Louis River.
g. Transport dewatered sediment to the proposed disposal facilities, and dispose.
[h. Transport segregated vegetation to the proposed disposal facility, and dispose.]
i. Restore the dewatering containment pad area, and collect post-dewatering work soil samples from the footprint of the dewatering pad area.
j. Prepare and submit SEDIMENT DEWATERING REPORT.

3.1.2 DEWATERING CONTAINMENT PAD PREPARATION

a. Photographic Documentation
Prior to construction of the temporary dewatering containment pad, collect photographic documentation (or video documentation) of pre-construction conditions of the Hallett Dock #7 including: haul roads, dock sea walls, above ground utilities, and structures adjacent to the area.

b. Existing Structures and Utilities
Coordinate with the appropriate utility locating agencies to field locate land-based and water-based utilities. No intrusive activities (e.g., grading, dredging) shall be performed until site utilities have been field located. Take the necessary precautions to ensure no damage occurs to existing structures and utilities. Damage to existing structures and utilities resulting from the Contractor's operations shall be repaired at no additional cost to the Government. Utilities encountered that were not previously shown or otherwise located shall not be disturbed without approval from the COR.

c. Dust Control
Maintain strict dust control at all times to prevent dust particles from becoming airborne. Apply dust suppressants or water to exposed material (e.g., stockpiles) to control dust. Avoid erosion of exposed material when applying dust suppressants or water.

d. Clearing
Clear areas as required and directed by the COR of all trees, stumps, downed timber, brush, rubbish, and matted roots prior to commencing operations. Trees, stumps, roots, brush, and other vegetation in areas to

be cleared shall be cut off flush with or below the original ground surface.

e. Areas in which containers are to be placed shall be constructed according to the lines and grades shown in the SEDIMENT DEWATERING WORK PLAN prepared by the Contractor. Clear and grub the Dewatering Containment Pad Area for preparation of the dewatering pad. Dispose of vegetation and woody debris at a landfill approved by the COR. Any trash, waste, or other debris located at, dug up, or unearthed at the Stockpile & Dewatering area shall be properly removed, collected, and disposed of off-site. Should debris or other material be encountered which cannot be removed by the clearing and grading equipment, coordinate with the COR for direction. Contractor is responsible for disposal and incidental costs of debris removed from the site during execution of this contract. Contractors to bring areas below the allowable grades to grade. Construct an effluent collection trench to collect the discharge water from the dewatering containers during dewatering. The dewatering pad must include construction of a 2 ft. high containment berm with 1:1 side slopes around the perimeter of the dewatering pad, as shown in the Contractor's SEDIMENT DEWATERING WORK PLAN.

[f. Perform a baseline soil sampling and chemical analyses program of the prepared surface to monitor possible impact of the dewatering operation on the dewatering containment pad area. Repeat the sampling and analyses program of the prepared surface upon completion of the dewatering operation and removal of the dewatering pad. The baseline sampling and analyses program will be described in the Contractor's SEDIMENT DEWATERING WORK PLAN.]

g. The dewatering containment pad shall include a non-permeable membrane placed on the prepared surface to underlay the entire dewatering site and to cover the perimeter containment berms.

h. Drainage medium shall be installed on top of the non-permeable membrane and under the containers, as described in paragraph (a). Acceptable materials are described in paragraph 2.4 DRAINAGE MEDIUM MATERIALS. If used, the three-dimensional geotextile filter fabric shall be installed prior to placement of the containers and may be installed in between each layer of tubes. If used, the thickness of the crushed aggregate layer shall be measured by the Contractor at a frequency described in the Contractor's SEDIMENT DEWATERING WORK PLAN.

i. Immediately prior to placing the containers, the Government shall inspect the prepared dewatering containment pad area, and no containers shall be placed thereon until the area has been approved by the Government.

3.1.3 [VEGETATION SCREENING SYSTEM

Provide a system to screen and segregate vegetation from the incoming sediment dredge prior to adding ammendment to the sediment dredge and subsequent dewatering operations. The screen shall be adequately sized to remove vegetation and organic material from the incoming dredge line. The segregated vegetation shall be temporarily stockpiled at the dewatering area for transport and disposal at a landfill. Remove sediment from the vegetation root mass, and dewater the vegetation for disposal. The effluent sediment from the vegetation screening system will be pumped directly to the polymer make down and injection unit. The proposed vegetation screening system shall be described by the Contractor in the SEDIMENT DEWATERING WORK PLAN.]

3.2 INSPECTION

Refer to SECTION 35 20 23, 'INSPECTION'.

[3.3 EXCAVATION FROM CONTAINERS

Upon completion of predicted dewatering period, perform required testing on the dewatered sediment to determine efficacy of the dewatering operations. Confirmation test results shall indicate that no portions of the dewatered sediment sample passed through and dropped from the filter within the 5-min test period. Upon achieving the Paint Filter Liquid testing results presented in the Contractor's DEWATERING QUALITY CONTROL PLAN, the dewatered sediment shall be excavated from the containers and loaded onto trucks for transport and disposal. Provide alternative measures to dewater sediment that does not achieve the Paint Filter Liquid testing results presented in the Contractor's DEWATERING QUALITY CONTROL PLAN. Sample and test dewatered sediment for all parameters required by the disposal facility at the frequencies described in the DEWATERING QUALITY CONTROL PLAN and SEDIMENT TRANSPORTATION AND DISPOSAL PLAN.]

3.4 TRANSPORT OF DEWATERED SEDIMENT

Load dewatered sediment material onto trucks for transport and disposal at the offsite facility. Offsite transportation and disposal of dewatered sediment shall be in accordance with the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN, and requirements established by Federal, state, and local laws and regulations which are applicable. Requirements for selected offsite disposal facilities shall be confirmed by the Contractor prior to commencing work. Include Contractor's proposed disposal facility in the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN.

3.5 TRANSPORT OF SEGREGATED VEGETATION

Load stockpiled vegetation segregated from the sediment onto trucks for transport and disposal at the offsite facility. Offsite transportation and disposal of vegetation material shall be in accordance with the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN, Section 02 61 14 TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIALS, and requirements established by Federal, state, and local laws and requlations which are applicable. Include Contractor's proposed disposal facility in the SEDIMENT TRANSPORTATION AND DISPOSAL PLAN.

3.6 DRAINAGE WATER COLLECTION AND TREATMENT

Furnish labor, materials, and equipment necessary for collecting and discharging of liquid generated from sediment during the dewatering operations. Collect drainage water from the containers in an effluent collection trench, and pump the water to the water treatment units located at the dewatering containment pad area. Discharge the water filtered through the drainage medium to the St. Louis River estuary. Effluent may not be allowed to infiltrate the ground surface at the dewatering site and should be transported directly to the estuary.

Following initial discharge to the St. Louis estuary, visually monitor discharge continuously for signs of increased turbidity. If increased turbidity is noted, adjust operations to minimize discharge turbidity.

3.7 LIGHTS

Meet the requirements of SECTION 35 20 23, 'LIGHTS'.

3.8 RANGES, GAGES AND LINES

Meet the requirements of SECTION 35 20 23, 'RANGES, GAGES, AND LINES'.

3.9 DEWATERING EQUIPMENT

Maintain the dewatering and water treatment equipment, and associated equipment to meet the requirements of the work.

3.10 CONDITION OF DEWATERING CONTAINMENT PAD

Maintain the drainage containment pad, to meet the requirements of the work.

3.11 NAVIGATION WARNINGS

Meet the requirements of SECTION 35 20 23, 'NAVIGATION WARNINGS'.

3.12 METHOD OF COMMUNICATION

Meet the requirements of SECTION 35 20 23, 'METHOD OF COMMUNICATION'.

3.13 PLANT AND EQUIPMENT REMOVAL

Upon completion of the work, promptly remove equipment, including ranges, buoys, piles, other markers or obstructions, vegetation screen equipment, amendment mixing equipment, and dewatering containment pad materials. Remove the dewatering containment pad berms by grading the material to restore the grade to elevations presented in the SEDIMENT DEWATERING WORK PLAN. Disposed of dewatering containment pad geotextile materials and containers at the offsite facility described in the SEDIMENT DEWATERING WORK PLAN.

3.14 SITE RESTORATION

Repair any damage to the offload and dewatering sites resulting from project construction activities to restore to pre-construction conditions.

3.15 EQUIPMENT

Meet the requirements of SECTION 35 20 23, 'EQUIPMENT'.

3.16 CONTRACTOR QUALITY CONTROL

The Contractor shall establish and maintain a quality control system for sediment dewatering operations to assure compliance with the Contract requirements and provide a Daily Report of Dewatering Operations by completing the appropriate form and completing all inspections of items under this system, including, but not limited to, the following:

a. Layout of work, and dewatering containment pad areas.
b. Conveyance and staging operations.
c. Paint Filter Liquids Testing results.
d. Chemical analyses results, as required by disposal facility.

e. Safety requirements.

3.17 GOVERNMENT INSPECTION

Refer to SECTION 35 20 23, 'GOVERNMENT INSPECTION'.

3.18 SEDIMENT DEWATERING REPORT

Contractor shall submit the Sediment Dewatering Report within thirty (30) calendar days after the finish of dewatering work. The Sediment Dewatering Report shall include the following information as a minimum:

a. Quantity of materials removed from each dredge area shown on the drawings.
b. Quantity of materials processed and dewatered.
c. Sampling methods used for collection of samples for Paint Filter Liquids, chemical analysis testing, and pre and post construction soil samples.
d. Sampling collection data such as time and date of collection.
e. Sample chain-of-custody forms.
f. Copies of all Paint Filter Liquid test and chemical analysis test results.
g. Waste manifests or bills of lading.
h. Certificates of disposal to document the ultimate disposal of the waste.
i. Waste profile sheets.
j. Copies of all chemical and physical test results in both hardcopy and electronic data format.
k. Figures showing all investigation sample locations and data.
l. Scale drawings showing limits of dredging, known underground utilities, sample locations, and sample identification numbers. On-site stockpile, storage, treatment, and loading areas shall also be shown on the drawings.
m. Progress Photographs. Document progress of the work using color photographs. Take a minimum of four views of the site showing the entrance/exit road and any other notable site conditions before work begins. After work has been started, photographically record activities at each work location weekly. Follow photograph procedures in 01 35 13 SPECIAL PROJECT PROCEDURES Section 1.6 PROGRESS PHOTOGRAPHS and include:
    (1) Dewatering Containment Pad construction.
    (2) Sediment removal and sampling.
    (3) Unanticipated events such as spills.
    (4) Site or task-specific employee respiratory and personal protection.
    (5) Post-construction photographs. After completion of work at each site, take a minimum of four views of each work area.

A digital version of all photos shown in the report shall be included with the Sediment Dewatering Report. Photographs shall be included in a photograph log that includes the following information for each photograph: Project Name; Location; Photograph Number; Date/Time; Direction of View; and Description of View.

-- End of Section --

Appendix C

Protected Species Documentation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 256-7289

In Reply Refer To: 07/07/2026 17:24:57 UTC
Project Code: 2026-0112740
Project Name: Tallas Bay Mitigation Project

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

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

Threatened and Endangered Species
The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance
Please refer to refer to our Section 7 website for guidance and technical assistance, including step-by-step instructions for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, USDA Rural Development projects, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

We recommend running the project (if it qualifies) through our **Minnesota-Wisconsin Federal Endangered Species Determination Key (Minnesota-Wisconsin ("D-key"))**. A demonstration video showing how-to access and use the determination key is available. Please note that the Minnesota-Wisconsin D-key is the third option of 3 available d-keys. D-keys are tools to help Federal agencies and other project proponents determine if their proposed action has the potential to adversely affect federally listed species and designated critical habitat. The Minnesota-Wisconsin D-key includes a structured set of questions that assists a project proponent in determining whether a proposed project qualifies for a certain predetermined consultation outcome for all federally listed species found in Minnesota and Wisconsin (except for the northern long-eared bat- see below), which includes determinations of “no effect” or “may affect, not likely to adversely affect." In each case, the Service has compiled and analyzed the best available information on the species’ biology and the impacts of certain activities to support these determinations.

If your completed d-key output letter shows a "No Effect" (NE) determination for all listed species, print your IPaC output letter for your files to document your compliance with the Endangered Species Act.

For Federal projects with a “Not Likely to Adversely Affect” (NLAA) determination, our concurrence becomes valid if you do not hear otherwise from us after a 30-day review period, as indicated in your letter.

If your d-key output letter indicates additional coordination with the Minnesota-Wisconsin Ecological Services Field Office is necessary (i.e., you get a “May Affect” determination), you will be provided additional guidance on contacting the Service to continue ESA coordination outside of the key; ESA compliance cannot be concluded using the key for “May Affect” determinations unless otherwise indicated in your output letter.

Note: Once you obtain your official species list, you are not required to continue in IPaC with d-keys, although in most cases these tools should expedite your review. If you choose to make an effects determination on your own, you may do so. If the project is a Federal Action, you may want to review our section 7 step-by-step instructions before making your determinations.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

For projects that intersect with or are adjacent to Tribal lands: The Service has federal Trust responsibilities and a strong commitment to working with Tribal governments to help sustain fish and wildlife resources for future generations.?Tribal governments should be provided with sufficient opportunity to express their perspectives and/or concerns for proposed projects.?If your project intersects with Tribal lands or impacts culturally sensitive resources, please engage with the federally recognized Tribe to ensure they have an opportunity to provide input on this project.

Northern Long-Eared Bats
Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected. For bat activity dates, please review Appendix L in the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A monoculture stand of shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:

- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or

- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

If any of the above activities are proposed, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the northern long-eared bat and tricolored bat range-wide D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys helps to determine if prohibited take might occur and, if not, will generate an automated verification letter. Additional information about available tools can be found on the Service's northern long-eared bat website.

Whooping Crane
Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "Establishment of a Nonessential Experimental Population of Whooping Cranes in the Eastern United States."

Other Trust Resources and Activities
Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a permit. A nest take permit is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

State Department of Natural Resources Coordination
While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. **Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.**

Minnesota
Minnesota Department of Natural Resources - Endangered Resources Review Homepage
Email: Review.NHIS@state.mn.us

Wisconsin
Wisconsin Department of Natural Resources - Endangered Resources Review Homepage
Email: DNRERReview@wi.gov

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

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
3815 American Blvd East
Bloomington, MN 55425-1659
(952) 256-7289

PROJECT SUMMARY

Project Code: 2026-0112740
Project Name: Tallas Bay Mitigation Project
Project Type: Dredge/Fill
Project Description: The project would mechanically dredge shallow areas of Tallas Bay between Knowlton Creek and Tallas Island to remove excess sediment, increase depth diversity and wetland connectivity, improve fish and coastal wetland habitat, and facilitate recreational access.

The design objectives identified by the DNR include restoring the wetland complex toward pre-flood conditions by physically manipulating Tallas Bay through the removal of accumulated sediment to create deeper pools, improve bathymetry for fish and wildlife habitat, enhance coastal wetland habitat, support St. Louis River Area of Concern habitat beneficial-use objectives, improve connectivity to Knowlton Creek for stream-spawning fish, and improve human health/recreation/aesthetics. These objectives reflect both ecological restoration and public resource goals, including improved resiliency and functional connectivity in a shallow bay/ backwater system that has been affected by sedimentation and past watershed disturbance.

The design is limited to mechanical dredging of accumulated sediment down to the native soil layer; there would be no bio-medium placement, new material placement, or plantings. Dredging would remove excess sedimentation, including ongoing sediment delivery associated with Knowlton Creek and additional coarse and other material mobilized and deposited during the 2012 Duluth flood event.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.712314649999996,-92.19867429492545,14z



Counties: St. Louis County, Minnesota

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 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 Fisheries[1], 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.

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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 *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Gray wolf *Canis lupus* Population: MN There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4488	Threatened
Tricolored bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
rufa red knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

INSECTS

NAME	STATUS
Monarch butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's cuckoo bumble bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information

on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* 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
Golden Eagle *Aquila chrysaetos* 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

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

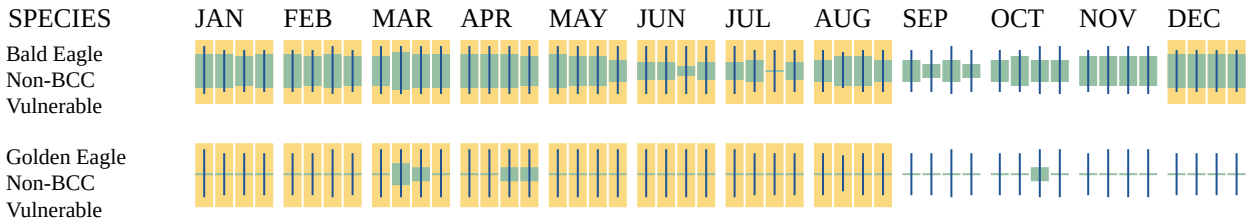
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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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)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* 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 Tern *Chlidonias niger surinamenisis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black-billed Cuckoo *Coccyzus erythropthalmus* 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 *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Common Tern *Sterna hirundo* 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/4963	Breeds May 1 to Aug 31
Connecticut Warbler *Oporornis agilis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9442	Breeds Jun 15 to Aug 10
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* 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 *Vermivora chrysoptera* 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

NAME	BREEDING SEASON
Le Conte's Sparrow *Ammospiza leconteii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9469	Breeds Jun 1 to Aug 15
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Ruddy Turnstone *Arenaria interpres morinella* 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/10633	Breeds elsewhere
Veery *Catharus fuscescens fuscescens* 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/11987	Breeds May 15 to Jul 15
Whimbrel *Numenius phaeopus hudsonicus* 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/11991	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

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 "Supplemental

Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

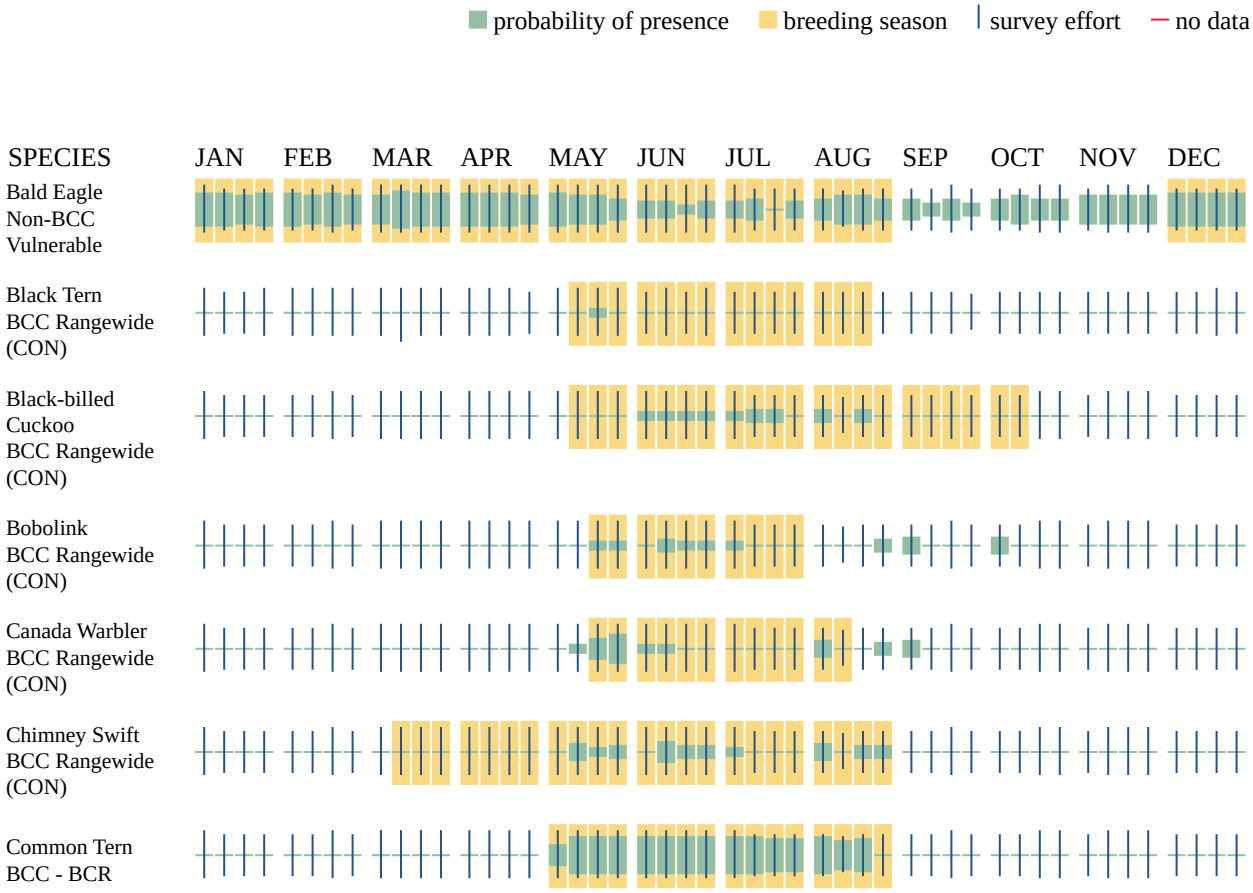
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1C
- PEM1F

RIVERINE

- R2UBH
- R3UBH

FRESHWATER POND

- PUBG
- PUBF

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1/EM1A
- PFO1C
- PFO1/EM1C

IPAC USER CONTACT INFORMATION

Agency:	Barr Engineering
Name:	Jess Butler
Address:	4300 MarketPointe Drive
Address Line 2:	Suite 200
City:	Minneapolis
State:	MN
Zip:	55435
Email	jbutler@barr.com
Phone:	9528322694

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 256-7289

In Reply Refer To: 07/20/2026 13:18:51 UTC
Project code: 2026-0112740
Project Name: Tallas Bay Mitigation Project

Federal Nexus: yes
Federal Action Agency (if applicable): Environmental Protection Agency

Subject: Record of project representative's no effect determination for 'Tallas Bay Mitigation Project'

Dear Jess Butler:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 20, 2026, for 'Tallas Bay Mitigation Project' (here forward, Project). This project has been assigned Project Code 2026-0112740 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the **Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey)**, invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat and/or Tricolored Bat

Based upon your IPaC submission and a standing analysis, your project has reached the following effect determinations:

Species	Listing Status	Determination

Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered	No effect

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Canada Lynx *Lynx canadensis* Threatened
- Gray wolf *Canis lupus* Threatened
- Monarch butterfly *Danaus plexippus* Proposed Threatened
- rufa red knot *Calidris canutus rufa* Threatened
- Suckley's cuckoo bumble bee *Bombus suckleyi* Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the species covered by this key. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Minnesota-Wisconsin Ecological Services Field Office and reference Project Code 2026-0112740 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Tallas Bay Mitigation Project

2. Description

The following description was provided for the project 'Tallas Bay Mitigation Project':

> The project would mechanically dredge shallow areas of Tallas Bay between Knowlton Creek and Tallas Island to remove excess sediment, increase depth diversity and wetland connectivity, improve fish and coastal wetland habitat, and facilitate recreational access.
> The design objectives identified by the DNR include restoring the wetland complex toward pre-flood conditions by physically manipulating Tallas Bay through the removal of accumulated sediment to create deeper pools, improve bathymetry for fish and wildlife habitat, enhance coastal wetland habitat, support St. Louis River Area of Concern habitat beneficial-use objectives, improve connectivity to Knowlton Creek for stream-spawning fish, and improve human health/recreation/aesthetics. These objectives reflect both ecological restoration and public resource goals, including improved resiliency and functional connectivity in a shallow bay/backwater system that has been affected by sedimentation and past watershed disturbance.
> The design is limited to mechanical dredging of accumulated sediment down to the native soil layer; there would be no bio-medium placement, new material placement, or plantings. Dredging would remove excess sedimentation, including ongoing sediment delivery associated with Knowlton Creek and additional coarse and other material mobilized and deposited during the 2012 Duluth flood event.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.712314649999996,-92.19867429492545,14z



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the species covered by this determination key. Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species that is not covered by an existing section 10 (a)(1)(A) Recovery Permit, exempted under section 4(d) or authorized by a section 6 cooperative agreement? **Note:** Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/ encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Note for projects in Pennsylvania: Projects requiring authorization under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act would be considered as having a federal nexus. Since the U.S. Army Corps of Engineers (Corps) has issued the Pennsylvania State Programmatic General Permit (PASPGP), which may be verified by the PA Department of Environmental Protection or certain Conservation Districts, the need to receive a Corps authorization to perform the work under the PASPGP serves as a federal nexus. As such, if proposing to use the PASPGP, you would answer ‘yes’ to this question.

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   Yes

9. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum or winter roost? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

   Automatically answered
   No

10. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

11. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

    No

12. Is the action located in New England (CT, MA, ME, NH, RI, or VT)?

    No

13. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    No

14. Will the action result in effects to a culvert or tunnel at any time of year?

    No

15. Are trees present within 1000 feet of the action area? **Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines.

    Yes

16. Does the action include the intentional exclusion of bats from a building or building-like structure? **Note:** Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

17. Does the action involve removal, modification, or maintenance of a human-made building-like structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

18. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

20. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

21. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

22. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

23. Will the action include drilling or blasting?

    No

24. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use at night)?

    No

25. Will the proposed action involve the use of herbicides or pesticides (e.g., fungicides, insecticides, or rodenticides)?

    No

26. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season? Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining. **Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines.

    No

27. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable forested northern long-eared bat or tricolored bat roosting habitat? **Note:** Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines.

    No

28. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    No

29. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

30. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

31. Is the action area located within 0.5-mile of radius of an entrance/opening to any known tricolored bat hibernacula or winter roost?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

    Automatically answered
    No

32. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

33. Has a presence/probable absence bat survey targeting the tricolored bat and following the Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines been conducted within the project area?

    No

34. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities? (If unsure, answer ""Yes."") **Note:** If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    Yes

35. Do you have any documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Barr Engineering
Name: Jess Butler
Address: 4300 MarketPointe Drive
Address Line 2: Suite 200
City: Minneapolis
State: MN
Zip: 55435
Email jbutler@barr.com
Phone: 9528322694

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 256-7289

In Reply Refer To: 07/20/2026 12:49:25 UTC
Project code: 2026-0112740
Project Name: Tallas Bay Mitigation Project

Subject: Technical Assistance letter for 'Tallas Bay Mitigation Project' for specified threatened and endangered species that may occur in your proposed project location consistent with the Minnesota-Wisconsin Endangered Species Determination Key (Minnesota-Wisconsin DKey).

Dear Jess Butler:

The U.S. Fish and Wildlife Service (Service) received on **July 20, 2026** your effect determination(s) for the 'Tallas Bay Mitigation Project' (Action) using the Minnesota-Wisconsin DKey within the Service's Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.).

Based on your responses to the Service's Minnesota-Wisconsin DKey, you made the following effect determination(s) for the proposed Action:

Species	Listing Status	Determination
Canada Lynx (*Lynx canadensis*)	Threatened	NLAA
Gray wolf (*Canis lupus*)	Threatened	NLAA
Monarch butterfly (*Danaus plexippus*)	Proposed Threatened	No effect
rufa red knot (*Calidris canutus rufa*)	Threatened	May affect

Determination Information

Consultation with the Service is not complete. Further consultation with the Minnesota-Wisconsin Ecological Services Field Office is required for those species with a determination of "May Affect," listed above. Please email our office at TwinCities@fws.gov and attach a copy of this letter, so we can discuss methods to avoid or minimize potential adverse effects to those species.

Additional Information

Sufficient project details: Please provide sufficient project details on your project homepage in IPaC (Define Project, Project Description) to support your conclusions. Failure to disclose important aspects of your project that would influence the outcome of your effects determinations may negate your determinations and invalidate this letter. If you have site-specific information that leads you to believe a different determination is more appropriate for your project than what the Dkey concludes, you can and should proceed based on the best available information.

Future project changes: The Service recommends that you contact the Minnesota-Wisconsin Ecological Services Field Office or re-evaluate the project in IPaC if: 1) the scope or location of the proposed Action is changed; 2) new information reveals that the action may affect federally listed species or federally designated critical habitat in a manner or to an extent not previously considered; 3) the Action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

For non-Federal representatives: Please note that when a project requires consultation under section 7 of the Act, the Service must consult directly with the Federal action agency unless that agency formally designates a non-Federal representative (50 CFR 402.08). Non-Federal representatives may prepare analyses or conduct informal consultations; however, the ultimate responsibility for section 7 compliance under the Act remains with the Federal agency. Please include the Federal action agency in additional correspondence regarding this project.

Species-specific information

Gray Wolf: Please notify the Service if there is observed gray wolf activity in close proximity to the project site, especially if it could indicate a den or rendezvous site.

Rufa Red Knot: Rufa red knot may be present in the Action area. Projects have potential to adversely affect red knot if they permanently modify beaches, dunes, mudflats, peat banks, sandbars, shoals, or other red knot habitats and/or result in increased human disturbance or predation during the red knot migration windows (May 15 through June 15 in the spring OR July 1 through September 30 in the fall). During migration, habitat loss, disturbance, and increased predation could result in adverse effects and warrant additional evaluation separate from the Minnesota-Wisconsin DKey. If these actions occur outside of the migration window, adverse effects are discountable. **Please coordinate with the Minnesota-Wisconsin Ecological Services Field Office to further evaluate effects of the Action on rufa red knot.**

Bald and Golden Eagles: Bald eagles, golden eagles, and their nests are protected under the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (Eagle Act). The Eagle Act prohibits, except when authorized by an Eagle Act permit, the “taking” of bald and golden eagles and defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” The Eagle Act’s implementing regulations define disturb as “… to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

If you observe a bald eagle nest in the vicinity of your proposed project, you should follow the National Bald Eagle Management Guidelines (May 2007). For more information on eagles and conducting activities in the vicinity of an eagle nest, please visit our regional eagle website or contact Margaret at Margaret_Martin@fws.gov. If the Action may affect bald or golden eagles, additional coordination with the Service under the Eagle Act may be required.

Additional Species Requiring Review

In addition to the species described above, the following species or critical habitats may also occur in your project area and are not covered by this conclusion:

- Suckley's cuckoo bumble bee *Bombus suckleyi* Proposed Endangered
- Tricolored bat *Perimyotis subflavus* Proposed Endangered

Coordination with the Service is not complete if additional coordination is advised above for any species.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Tallas Bay Mitigation Project

2. Description

The following description was provided for the project 'Tallas Bay Mitigation Project':

> The project would mechanically dredge shallow areas of Tallas Bay between Knowlton Creek and Tallas Island to remove excess sediment, increase depth diversity and wetland connectivity, improve fish and coastal wetland habitat, and facilitate recreational access.
> The design objectives identified by the DNR include restoring the wetland complex toward pre-flood conditions by physically manipulating Tallas Bay through the removal of accumulated sediment to create deeper pools, improve bathymetry for fish and wildlife habitat, enhance coastal wetland habitat, support St. Louis River Area of Concern habitat beneficial-use objectives, improve connectivity to Knowlton Creek for stream-spawning fish, and improve human health/recreation/aesthetics. These objectives reflect both ecological restoration and public resource goals, including improved resiliency and functional connectivity in a shallow bay/backwater system that has been affected by sedimentation and past watershed disturbance.
> The design is limited to mechanical dredging of accumulated sediment down to the native soil layer; there would be no bio-medium placement, new material placement, or plantings. Dredging would remove excess sedimentation, including ongoing sediment delivery associated with Knowlton Creek and additional coarse and other material mobilized and deposited during the 2012 Duluth flood event.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@46.712314649999996,-92.19867429492545,14z



QUALIFICATION INTERVIEW

1. This determination key is intended to assist the user in evaluating the effects of their actions on Federally listed species in Minnesota and Wisconsin. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes. Additionally, this key DOES NOT cover wind development, purposeful take (e.g., for research or surveys), communication towers that have guy wires or are over 450 feet in height, aerial or other large-scale application of any chemical (such as insecticide or herbicide), and approval of long-term permits or plans (e.g., FERC licenses, HCP's).

   Click **YES** to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

   Yes
2. Is the action being funded, authorized, or carried out by a Federal agency?

   Yes
3. Are you the Federal agency or designated non-federal representative?

   No
4. Does the action involve the installation or operation of wind turbines?

   No
5. Does the action involve purposeful take of a listed animal?

   No
6. Does the action involve a new communications tower?

   No
7. Does the activity involve aerial or other large-scale application of ANY chemical, including pesticides (insecticide, herbicide, fungicide, rodenticide, etc)?

   No
8. Will your action permanently affect local hydrology?

   Yes

9. Does your project have the potential to impact the riparian zone or indirectly impact a stream/river (e.g., cut and fill; horizontal directional drilling; construction; vegetation removal; pesticide or fertilizer application; discharge; runoff of sediment or pollutants; increase in erosion, etc.)?

   Note: Consider all potential effects of the action, including those that may happen later in time and outside and downstream of the immediate area involved in the action.

   Endangered Species Act regulation defines "effects of the action" to include all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (50 CFR 402.02).

   Yes

10. Will your action disturb the ground or existing vegetation?

    Note: This includes any off-road vehicle access, soil compaction (enough to collapse a rodent burrow), digging, seismic survey, directional drilling, heavy equipment, grading, trenching, placement of fill, pesticide application (herbicide, fungicide), vegetation management (including removal or maintenance using equipment or prescribed fire), cultivation, development, etc.

    No

11. Will your action include spraying insecticides?

    No

12. Does your action area occur entirely within an already developed area?

    Note: Already developed areas are already paved, covered by existing structures, manicured lawns, industrial sites, or cultivated cropland, AND do not contain trees that could be roosting habitat. Be aware that listed species may occur in areas with natural, or semi-natural, vegetation immediately adjacent to existing utilities (e.g. roadways, railways) or within utility rights-of-way such as overhead transmission line corridors, and can utilize suitable trees, bridges, or culverts for roosting even in urban dominated landscapes (so these are not considered "already developed areas" for the purposes of this question). If unsure, select NO..

    No

13. Will the action occur during the red knot migration windows (May 15-June 15 or July 1-September 30?)

    Yes

14. Will the action modify beaches, dunes, mudflats, peat banks, sandbars, shoals, or other red knot habitats?

    For example, the following actions may modify red kot habitat: groins, jetties, sea walls, revetments, bulkheads, rip-rap, beach nourishment, nearshore dredging, dredge spoil disposal, sand mining/borrowing, beach bulldozing, sandbagging, sand fencing, vegetation planting/alteration/removal, deliberate or possible introduction of non-native vegetation, beach raking/mechanized grooming, boardwalks, aquaculture development.

    Yes

15. Is there any potential for this action to harm Canada lynx directly (e.g., mammal trapping, poison bait, broadcasting disease control agents for wild animals, capturing animals for research projects, or regular human activity that may exclude lynx from forested habitat including blasting or explosives)?

    No

16. Is your action associated with the U.S. Forest Service?

    No

17. Is there any potential for this action to harm Canada lynx indirectly (e.g., increased traffic volume and speed that may result in vehicle strikes, regular human activity that may disturb or exclude lynx from forested habitat, blasting or explosives)?

    No

18. Will the action result in changes to Canada lynx or snowshoe hare habitat quality, quantity, or availability that is greater than 10 acres?
    E.g., thinning and/or other timber management and logging practices; residential and commercial development; road, railroad and utility corridors development; mining activities; prescribed fire; trail development; winter activities that compact snow such as winter road use, snowmobiling, cross country skiing, and dog sledding.

    No

19. Is there any potential for the action to harm wolves directly (e.g., mammal trapping, poison bait), or indirectly (e.g., increasing vehicle use that may result in vehicle strikes, exposure to potential human persecution)?

    No

20. [Hidden Semantic] Does the action area intersect the Threatened gray wolf AOI?

    Automatically answered
    Yes

21. [Hidden Semantic] Does the action area intersect the monarch butterfly species list area?

    Automatically answered
    Yes

22. Under the ESA, monarchs remain warranted but precluded by listing actions of higher priority. The monarch is a candidate for listing at this time. The Endangered Species Act does not establish protections or consultation requirements for candidate species. Some Federal and State agencies may have policy requirements to consider candidate species in planning. We encourage implementing measures that will remove or reduce threats to these species and possibly make listing unnecessary.

    If your project will have no effect on monarch butterflies (for example, if your project won't affect their habitat or individuals), then you can make a "no effect" determination for this project.

    Are you making a "no effect" determination for monarch?

    Yes

IPAC USER CONTACT INFORMATION

Agency: Barr Engineering
Name: Jess Butler
Address: 4300 MarketPointe Drive
Address Line 2: Suite 200
City: Minneapolis
State: MN
Zip: 55435
Email jbutler@barr.com
Phone: 9528322694

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency

Appendix D

GHG Calculations

Table 1. Summary of Construction GHG Emissions

Emission Source	CO_2 (metric tons)	CH_4 (metric tons)	N_2O (metric tons)	CO_2e (metric tons)
Off-Road Fuel Combustion	68.92	2.54E-02	5.57E-03	71.10
On-Road Fuel Combustion	2.36	1.71E-05	7.76E-05	2.38
Land Use Change	4.33	--	--	4.33
TOTAL - ALL SOURCES	**75.61**	**2.54E-02**	**5.65E-03**	**77.81**

Table 2. Conversions

Unit	Amount	Unit
ton	2000	lbs
ton	0.907185	metric tons
ton	907.185	kg
ton	907185	grams
lb	453.592	grams
MWh	1000	kWh
hectare	2.47105	acres

Table 3. Global Warming Potentials

Greenhouse Gas Name	CAS Number	Chemical Formula	Global Warming Potential (100-yr.) [1]
Carbon dioxide	124–38–9	CO_2	1
Methane	74–82–8	CH_4	28
Nitrous oxide	10024–97–2	N_2O	265

[1] Global Warming Potentials from EPA CCCL Emission Factors for Greenhouse Gas Inventories, 2025. https://www.epa.gov/system/files/documents/2025-01/ghg-emission-factors-hub-2025.pdf

Table 4. Construction GHG Emissions from Off-Road Combustion Sources

Equipment Description[1]	Number of Units[1]	Fuel Type[1]	Fuel Consumption[1] (gal/hp-hr)	Engine Size[1] (hp)	Total Hours of Operation[2]	Total Fuel Consumption (gallons)	CO_2 Emission Factor[3] (kg/gallon)	CH_4 Emission Factor[4] (g/gallon)	N_2O Emission Factor[4] (g/gallon)	CO_2 (metric tons)	CH_4 (metric tons)	N_2O (metric tons)	CO_2e[5] (metric tons)
Diesel Ships and Boats	2	Diesel	0.05	125	540	3,375	10.21	1.01	0.94	34.46	3.41E-03	3.17E-03	35.39
Diesel Construction Equipment	2	Diesel	0.05	125	540	3,375	10.21	6.51	0.71	34.46	2.20E-02	2.40E-03	35.71
TOTAL	--	--	--	--	--	--	--	--	--	**68.92**	**2.54E-02**	**5.57E-03**	**71.10**

[1] Equipment description, number of units, fuel type, fuel consumption rate, and engine size estimated based on project description. Days of operation based on estimated construction duration of 3 months.

[2] Hours of operation based on estimated based on a 9-hour work day, 5 days per week, and 12 week duration.

[3] Table 2, Mobile Combustion CO2. Emission Factors for Greenhouse Gas Inventories, EPA CCCL. January, 2025. https://www.epa.gov/climateleadership/ghg-emission-factors-hub

[4] Table 5, Mobile Combustion CH4 and N2O for Non-Road Vehicles. Emission Factors for Greenhouse Gas Inventories, EPA CCCL. January, 2025. https://www.epa.gov/climateleadership/ghg-emission-factors-hub

[5] Global Warming Potentials from EPA CCCL Emission Factors for Greenhouse Gas Inventories, 2025. https://www.epa.gov/system/files/documents/2025-01/ghg-emission-factors-hub-2025.pdf

Table 5. Summary of Construction GHG Emissions from On-Road Combustion Sources

Source[1]	Number of Trips[1]	Fuel Type[2]	Distance Traveled[3] (miles/round trip)	Total Vehicle Miles Traveled (VMT)	Fuel Usage (gallons)	CO_2 Emission Factor[4] (kg/gallon)	CH_4 Emission Factor[5] (g/vehicle-mile)	N_2O Emission Factor[5] (g/vehicle-mile)	CO_2 (metric tons)	CH_4 (metric tons)	N_2O (metric tons)	CO_2e[6] (metric tons)
Material Hauling	90	Diesel	20	1,800	230.77	10.21	0.0095	0.0431	2.36	1.71E-05	7.76E-05	2.38
TOTAL		--	--	--	--	--	--	--	**2.36**	**1.71E-05**	**7.76E-05**	**2.38**

[1] Assumed 1 trip/day for a 3-month construction duration.

[2] Fuel type assumed.

[3] Assumed a distance of 20 miles/round trip.

[4] Fuel efficiency from 2023 values from U.S. Department of Transportation, Federal Highway Administration, Highway Statistics (Washington, DC: Annual Issues), Table VM-1. https://www.fhwa.dot.gov/policyinformation/statistics/2023/vm1.cfm

Vehicle Type	Average Fuel Consumption (miles/gal)
Single-Unit Trucks	7.8

[5] Table 2, Mobile Combustion CO2. Emission Factors for Greenhouse Gas Inventories, EPA CCCL. January, 2025. https://www.epa.gov/climateleadership/ghg-emission-factors-hub

[6] CH4 and N2O emissions calculated using the EPA CCCL emission factors for on-road diesel vehicles, Table 4: Mobile Combustion CH4 and N2O for On-Road Diesel and Alternative Fuel Vehicles, 2025. https://www.epa.gov/system/files/documents/2025-01/ghg-emission-factors-hub-2025.pdf

Vehicle Type	Model Year	CH4 Emission Factor (g/vehicle-mile)	N2O Emission Factor (g/vehicle-mile)
Medium- and Heavy-Duty Vehicles	2007-2022	0.0095	0.0431

[7] Global Warming Potentials from EPA CCCL Emission Factors for Greenhouse Gas Inventories, 2025. https://www.epa.gov/system/files/documents/2025-01/ghg-emission-factors-hub-2025.pdf

Table 6. Summary of Construction GHG Emissions from Land Use Change

Existing Land Type[1]	Carbon Stock (metric tons CO_2/acre)[2]	Estimated Disturbance (acres)[1]	Estimated CO_2 Emissions (metric tons)[3]
Rivers and streams	0.00	0.48	-
Wetlands: mineral soil, non-forested	203.87	2.55	4.33
Total	**-**	**3.03**	**4.33**

[1] Existing land type determined from satellite imagery.

[2] Equation 8. Net Change in Carbon Stock from Construction , Minnesota Climate Calculator, Final Report, March 2026, Version 1.2, Minnesota Environmental Quality Board.
https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.eqb.state.mn.us%2Fsites%2Feqb%2Ffiles%2Fclimate_calculator_v1.2_final_report_march_2026.docx&wdOrigin=BROWSELINK
Conversion of 44/12 was applied to convert from carbon to CO_2.

[3] Emission factors assumes full realization of the land transition over 30 years. Therefore, emissions have been pro-rated to temporary construction disturbance.

Construction timeframe estimated as 3 months.

Estimated construction duration = 0.25 years

Attachment 2

Comment Letters

David Schimpf, 1125 Brainerd Avenue, Duluth dschimpf@d.umn.edu 25 September 2026

The Environmental Assessment Worksheet (EAW) for this proposed project should be considered incomplete because the on-land site at which dredged material would be offloaded and dewatered is not designated. Although it is stated that this would be an approved site, which one gets used may affect some of the precautions to be taken. Therefore, I think that the on-land location should be considered part of the project site. If the on-land location were directly on-shore from the dredging site, I expect that it would be included as part of the project site. Hallett Dock is cited on EAW print page 5 as one possible location for these steps in the process. There are multiple locations known as Hallett Dock. The invasive plant species diffuse knapweed, *Centaurea diffusa*, has been documented at the Hallett Dock that is shown in EAW Appendix A sheet RR102, and probably nowhere else in Minnesota or western Wisconsin. This species is designated Prohibited – Eradicate, the most restrictive status, by the State of Minnesota. Trucks hauling dewatered sediments from Hallett Dock to U. S. Steel or Vonco could inadvertently move seeds of diffuse knapweed to the that placement or disposal destination, or drop them along the truck route. Diffuse knapweed was found at Hallett Dock in pale gray limestone railroad ballast, stone that likely was shipped from Rogers City, Michigan. Even if that species were eradicated from its original site at Hallett, it could reinfest it via seedy limestone that may be already in the port or arrives before the proposed project would use Hallett.

On EAW p. 5 it states that there will be no plantings, because that is beyond the scope of the proposed project. Why is that the limit of the scope? Presumably the former aquatic habitats that are being compensated for, which were eliminated by earlier remediations elsewhere, had aquatic vegetation originally, so to restore Tallas Bay to original depths but leave it unvegetated would not seem to qualify as ecological restoration. A listed priority is to promote diverse aquatic native vegetation (e.g., EAW Appendix B page 1). If agency rules prevent adding this modest component to this proposed project, will there be a separate subsequent project at Tallas to promote desirable aquatic vegetation there? The Hearding map (EAW Appendix B figure 1) does not show aquatic vegetational composition in the mid-1800s, but surely wetland biologists could provide educated guesses about that. Intentional planting would not automatically prevent invasion by narrowleaf cattail or hybrid cattail, but should nonetheless create benefits.

On EAW p. 6, how will leaving the corridor for the buried Spirit Mountain pipeline undredged affect the hydraulic connectivity in Tallas Bay, or how may it affect future sedimentation dynamics? Will the pipeline berm be at risk from recreational watercraft dragging anchors on it? Appendix B states on its page 1 that the pipeline is a constraint on achieving the proposed project's restoration goals. The EAW does not even specify the depth of the pipeline corridor; one must read the appendices to find those details. The EAW should be rewritten to put this fundamental information in the main body of the document.



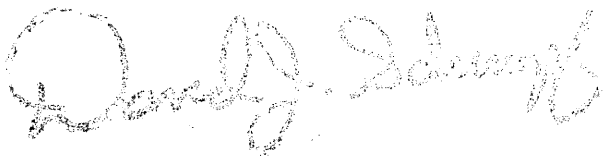
David Schimpf, 1125 Brainerd Avenue, Duluth dschimpf@d.umn.edu 25 September 2026

On EAW p. 15, the RiverWest development is located west, not east, of the proposed project. It is not really "along" the St. Louis River waterfront; it would be better to state how far it is from the water's edge. The Western Waterfront Trail is mentioned, but not its new preferred names.

On EAW p. 20, it says that Duluth bedrock is sandstone, siltstone, and conglomerate, a complete contradiction to the assertion on p. 18 that it is troctolite and gabbro.

On EAW p. 26, it states that existing recreational watercraft use is expected to continue after project completion. The document does not mention that The St. Louis River Estuary National Water Trail passes through Tallas Bay (https://stlouisriver.org/national-water-trail-map). That designation was not in place during the previous round of dredging of Tallas Bay. Presumably recreational usage has increased because of this higher profile, although conclusive evidence of that may be hard to come by. How would watercraft users be notified of the blockage of the map route, and detoured, while dredging takes place?

On EAW p. 33, the invasive plant species purple loosestrife and wild parsnip (both of which are designated as Prohibited – Control in Minnesota), and garlic mustard and common buckthorn (both of which are designated as Restricted in Minnesota) are noted as being in the general area but not documented in the project area. Although those plants may not be growing in Tallas Bay itself, there could be germinable seeds of these species, as well as germinable seeds or viable propagating parts of other invasive species, in the sediments of Tallas Bay, which could be dispersed to new locations by transport of those sediments. It is nearly certain that there will be germinable seeds of purple loosestrife in the large volume of material to be dredged, based on the findings in: Johnson, C. C. 2003. Predicting the early vegetation of a wetland created from dredged sediments in Duluth-Superior harbor, Minnesota-Wisconsin, USA. Thesis, University of Minnesota.



Outlook

Fw: SHPO # 2023-0860 & 2026-1573 RE: Preliminary Finding of Effect Cover Letter - Tallas Bay Sediment Sampling Event

From Jason Mozol <jmozol@DuluthMN.gov>
Date Wed 9/30/2026 11:25 AM
To Anna R. Kadrie <akadrie@barr.com>; Sarah L. Johnson <sjohnson@barr.com>
Cc Reina Owecke <rowecke@DuluthMN.gov>

CAUTION: This email originated from outside of your organization.

Fyi, I'll pass along any further correspondence in this thread.

Jason Mozol | Senior Planner | **City of Duluth** | 411 West First Street, City Hall Rm 160, Duluth, MN 55802 | 218-730-5331| jmozol@duluthmn.gov

***Find** Zoning information for property within the City of Duluth.*

Visit https://duluthmn.gov/eplace to submit applications and permits.

From: Harrington, Lucy (She/Her/Hers) (ADM) <Lucy.Harrington@state.mn.us>
Sent: Tuesday, September 29, 2026 4:36 PM
To: Denis.Kali@epa.gov <Denis.Kali@epa.gov>; winter.courtney@epa.gov <winter.courtney@epa.gov>; Jason Mozol <jmozol@DuluthMN.gov>
Subject: SHPO # 2023-0860 & 2026-1573 RE: Preliminary Finding of Effect Cover Letter - Tallas Bay Sediment Sampling Event

Good afternoon Kali Denis,

Our office received a Minnesota state level Environmental Assessment Worksheet (EAW) for the proposed Tallas Bay Mitigation Project, which appears to be an EPA proposed project. The EAW (available online here: duluthmn.gov/media/z42jkefh/environmental-assessment-worksheet-tallas-bay-mitigation-project.pdf) states that the EPA is consulting with our office (MN SHPO) under Section 106 of the NHPA and its implementing regulations. I am not aware of consultation with our office regarding the Tallas Bay Mitigation Project. We last provided comments to the EPA regarding the Tallas Bay Sediment Sampling Event (SHPO # 2023-0860). In the EPA's letter to our office regarding that project, you stated that consultation regarding the Mitigation project would occur in the future.

Can you please clarify?

I have copied Jason Mozol from the City of Duluth, who is the Responsible Government Unit on the state level EAW.

Thank you,
Lucy

Lucy Harrington
Environmental Review Archaeologist | State Historic Preservation Office

Pronouns: she/her/hers

Minnesota Department of Administration
50 Sherburne Avenue
Saint Paul, MN 55155
651-201-3283
mn.gov/admin





From: Beimers, Sarah (ADM) <sarah.beimers@state.mn.us>
Sent: Wednesday, February 15, 2023 5:24 PM
To: MN_ADM_ENV Review SHPO <ENReviewSHPO@state.mn.us>
Subject: FW: Preliminary Finding of Effect Cover Letter - Tallas Bay Sediment Sampling Event

Ended up in my junk mail inbox. I've alerted EPA staff to send future requests to our dedicated email address. Please log this in as received 2/15 and I'll take if from there.
Thanks!

Sarah Beimers (she/her) **| Environmental Review Program Manager**
State Historic Preservation Office
Minnesota Department of Administration
50 Sherburne Avenue, Suite 203
Saint Paul, Minnesota 55155
(651) 201-3290
sarah.beimers@state.mn.us

Please subscribe to receive SHPO notices for the most current updates regarding office hours, accessing research files, or changes in submitting materials to the SHPO.

To access historic resource information please visit our webpage on Using SHPO's Files.

From: Denis, Kali <Denis.Kali@epa.gov>
Sent: Friday, January 6, 2023 4:01 PM
To: Beimers, Sarah (ADM) <sarah.beimers@state.mn.us>
Cc: Winter, Courtney <winter.courtney@epa.gov>
Subject: Preliminary Finding of Effect Cover Letter - Tallas Bay Sediment Sampling Event

This message may be from an external email source.
Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Good afternoon Mr. Beimers,

I am a Project Manager with the U.S. EPA Great Lakes National Program Office (EPA GLNPO). GLNPO is working with the U.S. Army Corp of Engineers on a planned sampling event for the proposed Spirit Lake Great Lakes Legacy Act (GLLA) mitigation project at Tallas Bay in Duluth, MN.

I have included a Preliminary Finding of Effect cover letter as a request for Minneota SHPO consultation and concurrence under Section 106 of the National Historic Preservation Act (NHPA). This letter contains additional details regarding our undertaking at Tallas Bay.

Please contact me if you have any questions or require any additional information.

Kindest regards,

Kali Denis
Great Lakes National Program Office
U.S. Environmental Protection Agency
77 W Jackson Blvd, Chicago, IL 60604
312-886-6746 | denis.kali@epa.gov