DEPARTMENT OF NATURAL RESOURCES

RECORD OF DECISION

In the Matter of the Determination of the Need for an Environmental Impact Statement for the Kingsbury Bay – Grassy Point Habitat Restoration project in St. Louis County, Minnesota

FINDINGS OF FACT, CONCLUSIONS, AND ORDER

FINDINGS OF FACT

1. The framework for addressing degradation of Great Lakes aquatic resources has evolved over more than a quarter century into a binational effort to remove impairments in specific areas of the Great Lakes where wildlife habitat had degraded or serious sediment contamination had occurred. The Minnesota Department of Natural Resources (DNR) is a partner in this effort, working along with other federal, state, and local agencies and community partners to focus on the St. Louis River Estuary. As part of this process of remediation planning, the DNR and partners identified the need to restore wetlands at Kingsbury Bay and Grassy Point, which contained excess sediments and a large volume of wood waste from early lumber milling operations, respectively.

2. Under the management of the Environmental Protection Agency and the Government of Canada, the U.S.-Canada Great Lakes Water Quality Agreement (Annex 2 of the 1987 Protocol) was established to identify Areas of Concern (AOCs). AOCs are defined as "geographic areas that fail to meet the general or specific objectives of the agreement where such failure has caused or is likely to cause impairment of beneficial use (BUIs) of the area's ability to support aquatic life." More simply put, an AOC is a location that has experienced significant environmental degradation. Forty-three AOCs have been identified: 26 located entirely within the United States; 12 located wholly within Canada; and five that are shared by both countries.

3. Seven of the AOCs selected, including the St. Louis River AOC, are located within the Lake Superior basin. The St. Louis River is the only AOC located in Minnesota and one of five AOCs in Wisconsin. The St. Louis River, the largest U.S. tributary to Lake Superior, enters the southwest corner of the lake between Duluth, Minnesota and Superior, Wisconsin. As it approaches Duluth and Superior, the river forms a 12,000 acre freshwater estuary.

4. The two federal governments are cooperating with state and provincial governments to develop and implement Remedial Action Plans (RAPs), which address any one of 14 beneficial use impairments identified for the Great Lakes AOCs. Examples of BUIs associated with the St. Louis River AOC include fish consumption advisories, fish tumors and other deformities, excessive loading of sediment and nutrients, and loss of fish and wildlife habitat. Sediment contamination is a serious problem in many AOCs. The binational effort is meant to restore beneficial uses of the ecosystem by cleaning up severely contaminated and degraded locations around the Great Lakes.

5. Delisting the AOCs contributes to the sustainability of local communities and of the Great Lakes region. Delisting is achieved by essentially two processes: restoring fish and wildlife habitat and populations that are ecologically and economically significant at a local, lake and basin-wide scale;

and removing major sources of contaminants and other stressors that have been impairing water quality and restricting beach use and fish and wildlife consumption.

6. In 1992, the RAP for the St. Louis River AOC outlined future cleanup projects necessary for delisting the area of concern. The RAP was updated in 1995 and 2013. Wisconsin and Minnesota have been working together since 2010 on restoration and remediation projects at the most critical sites in the St. Louis River.

7. The 2013 RAP update, referred to as the St. Louis River AOC Implementation Framework and completed by the Minnesota Pollution Control Agency (MPCA) and Wisconsin Department of Natural Resources (WDNR), outlined plans to be taken by federal, state, and local organizations to remove the nine BUIs identified for the St. Louis River AOC. The comprehensive strategic action plan provides the procedures necessary to delist this AOC by 2025.

8. Loss of Fish and Wildlife Habitat (BUI-9) was listed for the St. Louis River AOC because fish and wildlife habitats overall were threatened by water quality impairments and large losses of physical habitat had occurred. Water quality impairments included inadequately treated municipal and industrial wastes, contaminated sediments, degraded benthic communities, and high sedimentation rates resulting in turbidity. Physical habitat impairments included loss through dredging and filling activities and decline in the quality of wetlands due to an increasing presence of non-native vegetation.

9. Given the amount of physical habitat that was lost or degraded during the last century, fish and wildlife habitat impairments are being targeted for restoration and protection against further losses. Removal of BUI-9 would be justified when several key tasks are completed, including the rehabilitation of at least 1,700 aquatic habitat acres, 50% of the area known to be degraded, through the implementation of projects at specified restoration sites. Completion of the Kingsbury Bay – Grassy Point project would contribute towards meeting this acreage goal.

10. Kingsbury Bay – Grassy Point is located at the upper end of the Duluth-Superior Port in the St. Louis River Estuary.

11. The project is proposed to mitigate sediments historically impacted by industrial processes, manage legacy wood waste, and manage excessive sedimentation, thereby restoring 240 acres of fish and wildlife habitat within the St Louis River AOC. Historic wood waste would be excavated to produce desired bathymetry and beneficially reused to create habitat features. Areas with excess sedimentation would be deepened and the clean materials transported and reused for capping, shallowing, or softening shorelines. Shallow sheltered bay habitats that support productive estuarine marshes of Lake Superior would be restored.

12. Pursuant to *Minnesota Rules*, chapter 4410.4300, subpart 1, an Environmental Assessment Worksheet (EAW) must be prepared for projects that meet or exceed the threshold defined in any of the subparts 2-37. The proposed project exceeds the threshold defined under *Minnesota Rules*, chapter 4410.4300, Subp. 27, item A, regarding public waters and public water wetlands. The proposed project would change or diminish the course, current or cross-section of one acre or more of a public water and therefore required the completion of an EAW.

13. Pursuant to *Minnesota Rules*, part 4410.0500, subpart 1, for any project listed in part 4410.4300, the government unit specified in those rules is the responsible government unit (RGU) unless the project would be carried out by a state agency, in which case that state agency is the RGU.

Therefore, as the proposer of the Kingsbury Bay – Grassy Point Habitat Restoration project, the DNR is delegated the duties of the RGU for conducting the required environmental review.

14. The DNR prepared an EAW for the proposed project according to *Minnesota Rules*, parts 4410.1400 and 4410.1500.

15. The EAW was filed with the Minnesota Environmental Quality Board (EQB) and a notice of its availability was published in the EQB Monitor on March 19, 2018. A copy of the EAW was sent to all persons on the EQB Distribution List, to those persons known by the DNR to be interested in the proposed project, and to those persons requesting a copy. A press release announcing the availability of the EAW was sent to newspapers and radio and television stations statewide. Copies of the EAW were also made available for public review and inspection at the Minneapolis Public Library; the DNR Library (St. Paul); the Duluth, MN public library; the Superior, WI public library, and the DNR Northeast Regional Office (Grand Rapids). The EAW was also made available to the public via posting on the DNR's website.

16. The 30-day EAW public review and comment period began March 19, 2018, and ended April 18, 2018, pursuant to *Minnesota Rules*, part 4410.1600. The comment period closed at 4:30 pm. The opportunity was provided to submit written comments on the EAW to the DNR by U.S. Mail, by facsimile, or electronically by email.

17. The EAW is incorporated by reference into this Record of Decision on the determination of need for an environmental impact statement (EIS).

18. During the 30-day EAW public review and comment period, five written comments on the EAW was received. Comments are listed below and a summary of the comment and responses are included with this Record of Decision. The findings numbered 19 through 30 include further discussion on comments received and responses from the DNR. Copies of the comments received have been attached to this Record of Decision (Attachment 1).

    A. Christopher E. Smith (March 19, 2018)
    B. Mark Herwig (March 20, 2018)
    C. Kelly Gragg-Johnson, SHPO (April 16, 2018)
    D. Dwight Morrison (April 18, 2018)
    E. Patrice Jensen, MPCA (April 18, 2018)

19. Commenter A. recommended incorporating development of habitat for the hairy-necked tiger beetle into the project design. The commenter recommended this habitat include sandy soils at a variety of elevations from below the Ordinary High Water Level (OHWL) to 3 meters above the OHWL, and that this habitat be protected from recreational uses such as motorized vehicles and hiking.

    RESPONSE: The hairy-necked tiger beetle is a state-listed endangered species for which a limited amount of information is known regarding the preferred habitat and success of the species. The nearest recorded location of the hairy-necked tiger beetle is approximately 5.5 miles from the proposed project location, so it is unlikely the hairy-necked tiger beetle would be negatively impacted by the proposed project, and the likelihood of hairy-necked beetle populations colonizing the proposed project site is unknown. However, the proposed project design is not incompatible with the type of habitat known to be used by the hairy-necked tiger beetle. While development of habitat for this species is not required, the recommendation to

incorporate this type of habitat characteristics within final project designs would be provided to the project proposer.

20. Commenter B. expressed support for the project and included a recommendation for restoration of wild rice beds.

    RESPONSE: The DNR appreciates this review and the comment. As RGU for the EAW, DNR is mandated to evaluate the environmental effects of the proposed project; therefore, comments regarding the merits of the proposed project would generally not be addressed in this Record of Decision. As described in the EAW, wild rice would be planted in portions of the project site and other areas of the St. Louis River Estuary, based on DNR's 2014 Wild Rice Restoration Implementation Plan for the St. Louis River Estuary.

21. Commenter C., the Minnesota State Historic Preservation Office (SHPO), provided a comment that, not having yet received cultural resource survey reports, they were unable to provide comments on the EAW. However, SHPO notes in their letter that they plan to provide comments to the Environmental Protection Agency (EPA) as part of a federal review required under Section 106 of the National Historic Preservation Act.

    RESPONSE: The DNR appreciates the comments provided by SHPO and understands that any future comments regarding this project would be handled via the Section 106 process that is being facilitated by EPA.

22. Commenter D. provided a comment that the transportation route and technique should be further defined by DNR prior to issuing a contract.

    RESPONSE: The DNR and their contractor, in coordination with partners, would be developing more detailed transportation routes and techniques based upon the seasonality and sequencing of construction. The development of this level of detail commonly occurs during final staging and implementation of the project, and due to the approximately two-year duration of the project, cannot be more specifically timed at this point.

23. Commenter D. expressed concern that not all of the wood waste at Grassy Point would be removed as part of this project, implying that contamination would remain within the site for the foreseeable future. The commenter further is concerned that the proposed project does not include further testing of the waste wood material, and that the level of contamination at the Grassy Point site is unknown.

    RESPONSE: EAW Items 6, 11, 12a and 12b describe the sampling and project design work that has been conducted at Grassy Point to determine potential contaminants and levels of contamination, as well as mechanisms to best handle any potentially contaminated materials. Sediment sampling at Grassy Point initially identified multiple, discreet locations of potential sediment contamination, but upon further toxicity testing and bioaccumulation evaluation, insignificant toxicity was indicated. Therefore, it is proposed to leave these sediments undisturbed at these locations during project construction.

    Wood waste at Grassy Point was sampled and found not to be contaminated. Due to the high volume of material and logistical challenges, wood waste at Grassy Point cannot be economically removed in its entirety. Some wood waste has been removed in the past from Grassy Point as part of previous restoration efforts. As part of this project, wood waste would be removed in quantities sufficient to produce desired habitat results, as described in EAW

Item 6b. Because wood waste has not been shown to be contaminated, further testing is not required.

24. Commenter D. expressed concerns related to potential E. coli contamination at the beaches along the St. Louis River, based upon historic testing conducted by the US Army Corps of Engineers.

    RESPONSE: While E. coli may have been present in previous testing, it has not been identified as a contaminant of concern for the proposed restoration project. Therefore, management of E. coli is not an objective for the proposed project. E. coli also is unlikely to be generated or spread due to the proposed project. Recreational features of the project include boating, kayaking and hiking opportunities, but no swimming beaches are planned as part of the currently proposed project. Thus, recreational activities in the project area are unlikely to be impacted by E. coli contamination.

25. Commenter E. questioned the relationship between any potential or planned work that would occur in Lower Keene Creek Channel and Wetland Restoration Sector Unit (RSU) 11 and the current project. The commenter asks if there are activities that are required in RSU 11 prior to considering the Kingsbury Bay – Grassy Point project complete, and if so, what the schedule and affected areas would be for these activities.

    RESPONSE: Restoration activities located in Lower Keene Creek Channel (RSU 11) are not planned to occur during this project due to planning and funding constraints. Therefore there are no activities that would be required in RSU 11 as part of this current proposal. The EAW discussed possible future activities in RSU 11 simply to provide context for some of the anticipated, but not yet fully planned, projects in the project area.

26. Commenter E. recommended spelling out the acronym QAPP in the record for clarity.

    RESPONSE: The comment is noted. The meaning for the acronym QAPP is Quality Assurance Protection Plan and thus has been added to the record.

27. Commenter E. expressed confusion regarding the tables included in the EAW on pages 14 and 32. Specifically, the commenter requested the clarification of how the various cover types listed in the tables correlate. The commenter asked whether the tables indicate a net loss of 18 acres of surface water as a result of the project.

    RESPONSE: The comment is noted. The table on EAW p. 32 has been updated to better correlate cover types and clarify changes to surface water acres. Below is a revised version of the table from the EAW. These changes do not depict any project design changes. Rather, the information has simply been reorganized for ease of understanding. The table below indicates an overall conversion of unvegetated open water that primarily contains legacy wood waste, to deep marsh that would be anticipated to support improved growth of aquatic vegetation and other biota. A total of 18 acres is proposed to be converted from shallow marsh (10 acres) and unvegetated open water (8 acres) to upland, primarily to build up an existing impaired shallow wetland feature and create an island and baymouth bar complex.

project Area	Cover Type	Restoration project Area		
		Before (Acres)	After (Ac.)	Change (Ac.)
Kingsbury Bay	Cover Types **Altered** By Construction			
	Shallow Marsh	15	0	-15
	Deep Marsh	48	64	+16
	Wetland Scrub/Shrub	1	0	-1
	Cover Types **Unaltered** By Construction			
	Marsh and Wetland Scrub	16	16	---
	Wetland Subtotal (all types)	**80**	**80**	---
	TOTAL	**80**	**80**	
Grassy Point	Bog and Shallow Marsh	21	18	-3
	Shallow Marsh	9	0	-9
	Deep Marsh	12	45	+33
	Bog and Scrub Shrub	27	18	-9
	Wetland Subtotal (all types)	**69**	**81**	**+12**
	Cover Types **Altered** By Construction			
	Wetland	52	64	+12
	Deep Water/Streams	30	0	-30
	Upland[1]	0	18	+18
	Cover Types **Unaltered** By Construction			
	Wetland	17	17	---
	Deep Water/Streams	47	47	---
	Upland[2]	14	14	---
	TOTAL	**160**	**160**	
	[1] Upland is the sum of the following cover types: wooded/forest, brush/grassland, and impervious surface as referenced in the table under Item 7, above.			

28. Commenter E. identifies a technical error that, while Lake Superior has been designated as Outstanding Resource Value Water (ORVW), the St. Louis Bay is not an ORVW, as stated in the EAW.

    RESPONSE: The comment is noted. The correction is incorporated into the record.

29. Commenter E. identifies a technical error that Water Use Classifications included in Item 11.a.i should be listed as 2Bg instead of 2B, consistent with MPCA's new water quality standards classification system that became effective in October 2017.

    RESPONSE: The comment is noted. The correction is incorporated into the record.

30. Commenter E. seeks further information regarding proposed mitigation for total surface water impacts that would meet the requirements of *Minnesota Rules* 7050.0285 in support of the Section 401 Water Quality Certification.

RESPONSE: For clarity, the following information revises language that was included in EAW Item 11.b.iv.b to provide a summary of the anticipated impacts and planned mitigation needed. This information does not reflect any project design changes. It would be furnished to the US Army Corps of Engineers (USACE) and the MPCA for their consideration and their respective 404 permitting and 401 Certification processes.

> Island formation would result in the creation of approximately 18 acres of upland habitat at Grassy Point. Creating these new islands would destroy benthic organisms in the 8.2-acre RSU 3 fill area, where some benthic communities have been ranked in good-excellent condition and are considered unimpaired. The DNR proposes to balance the loss of surface water due to island creation in four distinct ways:
>
> (1) creating 12 additional wetland acres in areas heretofore not supporting aquatic vegetation (see Table within EAW Item 11.b.iv.a on page 32);
>
> (2) improving 34.1 acres of low quality wetlands impaired by wood waste, non-native vegetation, and/or excess sediments by converting these areas to open water wetland (see EAW Figure 11C);
>
> (3) deepening 14.5 acres of shallow (0 to 2 ft) wetlands currently supporting invasive monocultures of non-native vegetation resulting in a more supportive habitat for a coastal marsh community (Figures 13A and 13B); and
>
> (4) deepening approximately 10 acres of wetlands at Grassy Point (RSUs 8N and 8S) and 16 acres at Kingsbury Bay (RSU 1), areas previously at an elevation unsupportive of benthic macroinvertebrates that would be capable of supporting new communities post-project.
>
> The proposed islands provide additional habitat benefits to Grassy Point by partially protecting shallow sheltered bay habitat and improving conditions for establishing aquatic vegetation. The islands also add approximately 6200 feet of naturalized shoreline, increasing the extent of littoral zones which support diverse and desirable vegetation. This would provide a greater diversity of habitats within the project area.

31. On May 7, 2018, the DNR requested a 15-day extension from the Minnesota Environmental Quality Board (EQB) for making a decision on the need for an EIS for the proposed project. On May 8, 2018 the DNR was granted the extension by EQB. See Minn. R. 4410.1700, subp. 2b.

32. The DNR has determined that the following issues reviewed for potential environmental effects in the EAW have no or very limited potential for environmental effects.

    a. Land Use (EAW Item No. 9). Due to the nature of project activities, the construction and operation of this project would not have a negative effect on land use, as the existing land use of the area has historically been industrial, in addition to aquatic habitat and recreational uses. Anticipated positive outcomes of the project include improvements to existing recreational values and habitat.

    b. Geology (EAW Item 10a). The project would not affect geology, nor does geology affect the project. Based on the underlying geology, there are no areas within the project that have been

identified as susceptible to sinkholes. Nor were any shallow limestone formations, unconfined/shallow aquifers, or karst conditions identified.

c. Hazardous Waste Historical Presence or Generation (EAW Items 12c and 12d). No potential environmental effects related to existing or generation of hazardous wastes on or near the project area were identified.

d. Groundwater (EAW Item 11.a.ii). No potential environmental effects related to groundwater were identified within or near the project area.

33. Based upon the information contained in the EAW, the DNR has identified the following potential environmental effects associated with the project:

a. Physical Impacts to Public Waters and Wetlands
b. Soils and Sediment Quality
c. Wastewater and Water Quality
d. Water Surface Use (Recreation and Navigation)
e. Solid Waste
f. Wildlife Impacts and Habitat
g. Archaeological and Historical Resources
h. Visual Impacts
i. Noise, air emissions, odors, and dust
j. Traffic
k. Cumulative Potential Effects

Each of these environmental effects is discussed in more detail below.

a. **Physical Impacts to Public Waters and Wetlands.** This topic was addressed in Items 6 and 11.
<u>Kingsbury Bay</u>

Kingsbury Bay is an 80-acre shallow sheltered bay currently used for wildlife and fisheries habitat and outdoor recreation approximately six miles inland from Lake Superior and one mile upstream of Grassy Point (Figure 2). The bay is surrounded by land containing the Indian Point Campground and shoreline trails owned by the City of Duluth and residential development along the north shore. Sedimentation from Kingsbury Creek watershed has converted approximately 24 acres of former open water wetland (Type 5) to a one-to-three foot deep emergent marsh (Type 3) dominated by narrow-leaved cattail, an invasive species. The shallowing has reduced the hydrodynamic effects of the Lake Superior seiche, diversity of fish habitat, and access for recreational boaters.

Kingsbury Bay is composed of three Restoration Site Units, including RSU 1, RSU 4 and RSU 5. Shallow sheltered bay habitat would be reestablished in this sector by the removal of approximately 174,000 cubic yards (CY) of sediment excavated from Kingsbury Creek, the Kingsbury Bay Delta, and open water area. Proposed depths of these areas following construction would range from zero to six feet, designed to support of shallow marsh (Type 3) that transitions to open water wetlands (Type 5) in deeper areas.

In Kingsbury Bay, the proposed project would not alter total wetland acreages, but would result in a decrease in wetland scrub/shrub and shallow marsh wetland types in favor of deep marsh wetland.

Grassy Point

Grassy Point is a 160-acre impaired wetland complex located in an area heavily influenced by historic industrial activities, about five miles from Lake Superior, near the upstream limits of Duluth's active harbor (Figure 3). Land in proximity to Grassy Point remains largely devoted to industrial use. The site is bounded on the north by Burlington Northern/Santa Fe (BNSF) Railroad line, on the east by the main shipping channel and on the southwest by the C. Reiss Coal Dock, an operating bulk materials handling facility.

The DNR proposes to remediate wood waste over approximately 50 acres. Open water wetlands approximately three to five feet deep would be created by excavating approximately 173,000 CY of wood waste and wood-sediment mixes. The excavated material would be beneficially reused on-site to create upland features. The excavation would be followed by the placement of clean fill from Kingsbury Bay to support conditions for the development of vegetation and benthic organisms. Where modifying the existing bathymetry is not part of the design, wood wastes would be left intact and covered with approximately six inches of clean fill to support growth of aquatic vegetation and other biota.

Upland features would be created by covering areas with the deepest wood deposits or historic pilings. An 8-acre island would be built up using excavated wood waste to support upland vegetation and a portion of its eastern flank would be extended to serve as a baymouth bar. The baymouth bar would be hydrodynamically modeled for stability and function and strategically located to provide partial protection of a large area designed to function as shallow sheltered bay habitat. The island would be planted with native forbs, shrubs, and trees.

In Grassy Point, the proposed project would result in a decrease in shallow marsh, bog and scrub shrub, and an increase in deep marsh wetland. The project would also result in an overall project change in cover types of an increase of wetland acreage by 12 acres and an increase of upland by 18 acres, in place of 30 acres of non-vegetated open water.

b. **Soils and Sediment Quality.** This topic was addressed in the EAW under Items 10b, 11b and 12.

Kingsbury Bay and Grassy Point are situated on the eastern edge of the North Shore Highlands Subsection of the Laurentian Mixed Forest Province (DNR Ecological Classification System). Soils consist of lake and riverine sediments. The uplands around Kingsbury Bay and Grassy Point have been affected by human influence, resulting in increased sedimentation to the project area. Topography of the area is relatively flat (less than 2% slopes). Legacy wood waste in the project area accumulated from mills operating in the immediate vicinity. Terrestrial areas of the project are primarily wetlands and are within six feet of the water surface. The remainder of the project area is in open water ranging from 0-10 feet deep.

Dredge Material Management: Multiple sampling efforts have helped characterize sediment across the project Area relative to the type and level of pollutants in the MPCA's established Soil Reference Values (SRVs). The SRVs are defined as generic health-based criteria for soil and health risk limits that are based on a standard exposure scenario for contaminated sites. The sediment characterization was necessary to determine the dredge material disposal options. Sediment characteristics would be assessed against SRVs during the permitting process. Sediment samples were also analyzed for contaminants to determine sediment quality for supporting benthic organisms. Materials above Sediment Quality Target Level II (SQT II) were analyzed further to determine the nature and extent of contamination and whether materials would require remediation.

Preliminary sampling conducted by MPCA and the United States Army Corps of Engineers (USACE) at Grassy Point identified lead, polycyclic aromatic hydrocarbons (PAHs), and dioxin/furans contaminants in sediment. Most samples taken showed contaminant levels above SQT Level I. Four locations contained chemicals with concentrations higher than SQT Level II, resulting in additional sampling that was completed in June of 2017 by the USACE. Sediments were analyzed for a suite of chemical and physical characteristics and a risk assessment of sediment toxicity on human health and the environment was conducted. No effect on aquatic organisms was indicated from the toxicity test conducted at the four sites and the study indicated that remediation of sediment associated with four locations is not warranted. The risk assessment applied an analysis of data based on the Minnesota guidelines for the SLRAOC Quality Assurance Program Plan (QAPrP) and Federal Section 404 guidelines. Fundamental to these guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it is demonstrated that such a discharge would not have an adverse impact on the aquatic ecosystem. Specifically, sediments excavated as part of restoration activities should be handled in a manner consistent with guidelines for the re-use of navigational dredge materials.

Preliminary sampling at Kingsbury Bay revealed no sediment sampling points above SQT Level II.

Contamination levels in the Grassy Point samples were almost across-the-board higher than the Kingsbury Bay samples. Placing clean sediments over contaminated layers at Grassy Point would further isolate the latent contamination, reduce benthic organisms' exposure and limit the passing of contaminants up the food chain to higher level animals.

Two areas adjacent to Grassy Point showed elevated levels of contamination: the SLRIDT Superfund site and the Ponds behind Erie Pier site. The SLRIDT site, located just west of the XIK Dock #7, consisted of 94 acres of aquatic habitat where sediments were contaminated primarily with PAHs, volatile organic compounds (VOCs), and cyanide. Measures already taken to remediate the site included dredging, capping sediments in place, and burying sediments in place with an aquatic disposal containment area, therefore completing remediation. Monitoring to evaluate the success of this hazardous waste containment and site restoration is ongoing. The analysis of the Ponds behind Erie Pier near the Grassy Point site indicated this site had contaminant concentrations requiring cleanup. Therefore, under the restoration work of the AOC, the Ponds are designated as a contaminated sediment cleanup site, and a feasibility study for this work is currently underway by the MPCA Remediation Division.

The CWA Section 401 Water Quality Certification, the Section 404 Clean Water Act permit, the Section 10 Rivers and Harbors Act Permit, and the Public Waters Work Permit include best management practices (BMPs) designed to prevent adverse effects on water quality due to dredging operations by minimizing the amount of sediment resulting from dredging. Any dredged material that does not show significant toxicity to test organisms under the methodologies and analysis of Section 404(b)(1) and Minnesota Rules 7050 would be documented for beneficial use as in-water placement. Sediment samples from Kingsbury have indicated minimal contamination. While contamination levels are higher at Grassy Point, sampling and assessment completed by USACE identified no contamination at Grassy Point that would require remediation.

c. **Wastewater and Water Quality.** This topic was addressed in the EAW under Item 11.b

Hydraulically dredged material. The hydraulically dredged materials would be moved by pipeline or barge from Kingsbury Bay to Grassy Point and immediately applied on the riverbed using a baffled outlet to reduce the degree of turbidity. The materials moved by barge would be loaded

with an excavator. If slurry materials need to be settled and solidified, the carrier water (wastewater) would be drained back into the St. Louis River. Water quality of the wastewater would be sampled and analyzed according to state 401 Certification conditions prior to its release. The risk of the carrier water from Kingsbury Bay being containing chemical pollutants is low as sediments have had limited exposure to contaminants.

Impacts from Excavation of Dredged Material. Sand and fine sediments (some high in organic matter) would be excavated from Kingsbury Bay, then transported and placed on top of the recently dredged areas at Grassy Point to enhance the growth of aquatic vegetation. The short-term water quality impact to the areas subject to dredging includes turbidity in the water column and likely the loss of existing native and invasive aquatic vegetation. Impacts would be minimized by employing in-water BMPs, such as use of a silt curtain at the dredge location and spill containment at transfer points. It is anticipated that submergent vegetation would reestablish to depths of about eight feet. At depths greater than eight feet, lack of light generally restricts vegetative growth.

Project construction activities would mainly occur within the public water. However, several activities would occur in uplands or on shoreland. These terrestrial activities some construction and use of access points and roads; establishment and maintenance of material and equipment staging areas and office facilities located at the XIK dock; loading and unloading of materials in storage areas (XIK dock) and potentially other upland areas nearby or on-site; placement of stationary equipment such as pump stations; trucks entering and exiting the site and along haul routes between sites; settling of materials for the construction of waste containment islands; and possibly others.

Impacts from Placing Dredged Material into the project Site. The project would use dredged material suitable for in-water placement to create variable water depths that would encourage the growth of diverse aquatic vegetation and a healthy benthic macroinvertebrate community. The placement of dredged material in the project Site would result in short-term turbidity in the water column. The hydraulic placement of dredged material would result in increased concentrations of suspended solids during and immediately after placement operations. Although the water column oxygen concentration would be temporarily reduced, the impact would be limited to a short period of time at the construction site. Dredged materials with a finer texture, such as those present in the open water portions of Kingsbury Bay, might create higher concentrations of suspended sediments that would require longer to settle. These impacts would occur both within the construction area, where the DNR would place the dredged material, and outside of the construction zone, depending on the flow velocity and direction of water flow.

BMPs to Mitigate Impacts on Dredge Placement Areas. Turbidity would be monitored on-site and maintained per permitted conditions. During and immediately after construction, the DNR would use appropriate BMPs to minimize the amount of suspended solids. Silt curtains would be implemented as required.

To help minimize temporary impacts to the fishery, state and federal agency permits generally require restoration projects to avoid spawning periods (from April 1st to July 1st). As a result, the project would not create adverse effects on the fishery. In addition, the project would ultimately help reduce the exposure of fish and other biota to contaminated sediment.

The immediate receiving water is the St. Louis River and the downstream receiving water is Lake Superior. Each of the access points, storage areas, equipment maintenance/holding areas, and shoreline edges, could generate stormwater discharges to the St. Louis River. Stormwater discharges could carry sediment and incidental fuel and hydraulic fluid leaks/spills from these areas.

The DNR would be required to obtain an NPDES/State Disposal System (SDS) Construction Stormwater General permit. The DNR, together with the construction contractor, would prepare a Stormwater Pollution Prevention Plan (SWPPP) to address the BMPs necessary to manage, control, and/or treat stormwater runoff before it enters the St. Louis River and/or nearby creeks. The SWPPP would identify areas where control structures would be needed to manage stormwater runoff, including engineering designs for these structures in the construction plans. Most of the structures would be needed temporarily during the active construction period. Other access points and restored and destabilized shoreland zones might require control treatment be used for several months to several years after construction ends. Following completion of the project, the DNR would be required to remove all temporary structures and unused materials. The DNR would also have to restore temporary sites to their original condition, using accepted standard practices for site restoration upon completion of activities.

The XIK Dock 7 site would be prepared with perimeter erosion and sediment controls. Containment berms would be placed around storage sites used for settling and dewatering materials. Temporary seeding and erosion control blanket would be placed on the berms (including side slopes) to stabilize the soils and reduce erosion and sedimentation. Chip bags and/or rock logs could be used to control areas where vegetation would not be adequate (i.e. access roads).

d. **Water Surface Use (Recreation and Navigation).** This topic was addressed in the EAW under Item 11b.

The Kingsbury Bay and Grassy Point project areas are currently inaccessible to watercraft, with the exception of canoes and kayaks, due to their shallow nature and the accumulated wood waste at Grassy Point. However, recreational boat uses are present in adjacent areas. A navigation channel lies outside Kingsbury Bay-Grassy Point project area.

Project-related activities would occur outside of the main navigation channel. To transport dredged materials during project operations, it would be necessary to site stationary equipment such as floating pipe sections and pumps along the edge of the main channel of the St. Louis River (Figures 2 and 3). The pipeline would be placed along the shoreline in open water to avoid commercial and recreational boating conflicts and damage to nearshore vegetation. The pipeline would remain buoyant and visible on the water surface, but can be sunk if necessary.

The assembly and operation of the pipeline may interfere with recreational boating. To minimize potential conflicts with boaters, the pipeline would be positioned near the shoreline. Boater safety would be ensured by clearly marking the pipeline with buoys, signage, and lighted warning of the equipment obstruction. The DNR public waters work permit authorizing the pipeline system would include a provision requiring that the pipeline not obstruct navigation or create a water safety hazard, per Minnesota Rules, part 6115.0210, subpart 3A.

Post-construction, the open water portions of the project area would consist of sheltered bay habitat. These areas would be most accessible by canoe or small boats and recreational fishing would be allowed, and would establish the opportunity for public access to aquatic resources from City of Duluth parkland. The project is not providing any facilities or resources to directly facilitate watercraft use, such as a marina or boat docks. However, increased depths and vegetation-free access channels are expected to increase recreational use within the project areas.

e. **Solid Waste**. This topic was addressed in EAW Items 6 and 12.a.

Grassy Point was the site of two 19th century sawmilling operations that dumped a total of over 500,000 CY of logs, lumber slabs, and sawdust wood waste directly into the project area. Wood wastes became scattered across Keene Creek outlet, terrestrial habitats, and wetlands, where deposits up to 16 feet deep remain across roughly 75 acres. This resulted in extensive damage and caused impairments to wetlands and shorelines due to altered site hydrodynamics, and converted open water wetlands (Type 5) to shallow marsh (Type 3) dominated by invasive species. The aquatic environment prevents the decomposition of most of the wood deposits, which continue to hamper the growth and development of vegetation and benthic organisms. Abandoned industrial infrastructure--building foundations, bricks, riprap, and railroad/pier pilings--also impair the aquatic ecosystem at Grassy Point.

The DNR proposes to remediate wood waste over approximately 50 acres. Open water wetlands approximately three to five feet deep would be created by excavating approximately 173,000 CY of wood waste and wood-sediment mixes. The excavated material would be beneficially reused on-site to create upland features. Where modifying the existing bathymetry is not part of the design, wood wastes would be left intact and covered with approximately six inches of clean fill to support growth of aquatic vegetation and other biota

The proposed project is not expected to generate significant amounts of solid waste. The contractor would be responsible for hauling any construction-generated wastes off site to appropriate solid waste management facilities. Should unanticipated materials be encountered during construction activity, they would be evaluated and the contractor would be responsible for proper disposal, including hauling off-site to an appropriate solid waste management facility if required. Large wood waste that meets specifications as a fuel source may be removed mechanically from RSU 7 and transported off-site for drying to be used at the Hibbard Power Plant. Other wood waste-sediment mixes at Grassy Point would be removed from the river bottom and isolated from aquatic areas by reusing the material in island construction.

f. **Wildlife and Habitat.** This topic was addressed in EAW Items 11b and 13.

The project is intended to restore the Kingsbury Bay wetland complex by removing accumulated sediment to create shallow open water, which would increase habitat for submerged, floating-leaf and emergent aquatic vegetation. At Grassy Point, the sheltered bay ecosystem would be restored by excavating wood waste, reusing it to create a baymouth bar feature and increasing water depths. A suitable substrate layer would be provided across the site to result in a restored bioactive zone for fish, macroinvertebrates, and healthy substrate for aquatic vegetation.

Construction disturbances would occur over a two year period. Once completed, long-term adverse effects to wildlife and habitat are not anticipated. During construction, measures have been identified, such as constructing during frozen conditions and avoiding construction during fish spawning periods, would be taken to minimize temporary adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

<u>Fish</u>

During construction, placing dredge material into prescribed areas would disrupt nearby fish activity. Fish tend to avoid disturbances such as these and would temporarily find alternative habitat within the harbor. By improving habitat quality and diversity, the project is expected to increase fish production and abundance in the project area.

Long-term outcomes of restoration of Kingsbury Bay and Grassy Point include that supports diverse flora and fauna, providing an improved food source for fish using the site. Coastal marsh wetlands created within the zone of the seiche are particularly valuable as spawning and nursery habitat for native game fish species such as Northern Pike and Muskellunge

Plants

Construction and maintenance activities associated with the slurry pipeline would result in damage to marsh vegetation located within the pipeline corridor, including impacts such as smothering of vegetation and compression of marsh soils. The pipeline corridor would be placed strategically in shallow nearshore habitats to avoid obstructing navigation. During the installation, maintenance, and disassembly of the pipeline, care would be taken to minimize disturbance of marsh habitats

Construction activities, including dredging and wood waste removal followed by placement of dredged material, would disrupt existing plant communities. Excavation of organic material from Kingsbury Bay would reduce aquatic plant abundance and diversity on a temporary basis. At Grassy Point, wood waste would be excavated to create a bathymetric profile to support desired wetland plant communities. Fine organic material would cover wood waste that remains after excavation, creating a substrate suitable for aquatic plant establishment.

Marshes currently supporting monocultures of non-native plants would be converted to either upland islands or open water wetlands (Type 5). Upland areas would be planted with native terrestrial species. In select areas of Kingsbury Bay, wild rice would be planted as part of the St. Louis River Estuary Wild Rice Restoration project. In wetland areas, it is anticipated that vegetation would recover through the natural transport of seeds and plant fragments from surrounding on-site locations that are not dredged. To the extent possible, removal and placement of fine sediment materials would be timed for fall or early spring to maximize recruitment via vegetative propagules.

When final construction design plans for the project are complete, a supplemental Habitat Restoration Plan would be developed to continue restoration efforts both within and outside of the Kingsbury Bay – Grassy Point project area. This would include collaboration with local resource management professionals to design restoration strategies, which include enhancing terrestrial (riparian) and nearshore aquatic vegetation and controlling extant and potentially new populations of exotic and invasive species. The Plan would identify focus areas and describe habitat features important for ecological priorities including Important Bird Areas, Species of Greatest Conservation Need, and Native Plant Communities. Habitat units would be delineated for coastal, emergent and forested wetlands.

Multiple strategies, such as planting, seeding, bio-medium, natural recruitment, and partial protection from wind to reduce exposure, would be used to achieve overall habitat goals at the site. Partners would initiate invasive plant control and other BMPs to reduce the risk of further exotic plant population invasion or expansion. Final planting and seeding would be completed immediately following construction activities to further reduce likelihood of undesirable plant colonization and recruitment. Initial on-the-ground invasive plant control activities are included in the Habitat Restoration Plan. Partners would set quantitative performance standards for habitat outcomes in the different management units. This would set clear thresholds for adaptive management activities.

Benthic Community

The metrics of the project area show that the existing conditions within both the Kingsbury Bay and Grassy Point sites have benthic macroinvertebrate communities of a quality that do not require additional intervention to achieve the removal of BUI 4, according to the SLRAOC QAPP. Using a model of the tri-metric index (TMI) that is based on depth, post-construction benthic communities are anticipated to be statistically similar to the pre-construction condition. However, as the model does not consider ecological factors other than water depth, it is anticipated that post-project monitoring would find net positive impacts due to other habitat improvements.

At Grassy Point, 10-acres within RSU 10.1 would receive a six-inch layer of organic amendment. This amendment would remediate multiple locations within RSU 10.1 where existing benthic communities received TMI scores categorized as poor and extremely poor. Also at Grassy Point, benthic communities in 8-acres within RSU 3 would be removed due to baymouth bar construction. Loss of these communities via restoration activities would be offset by the creation of open water wetlands elsewhere in the project area. By creating approximately 10 acres of open water wetlands at Grassy Point and 16 acres at Kingsbury Bay, areas previously categorized as "zero" for benthic macroinvertebrates would be capable of supporting new communities.

In other RSUs, dredged material removal and placement may result in incidental mortality of benthic invertebrates. However, dredge material placed in the restoration areas would provide a more complex habitat structure than existing conditions, and literature suggests benthic invertebrates would typically re-colonize within weeks or months of disturbance. Natural macroinvertebrate recolonizations by local populations, in conjunction with improved aquatic vegetation, are expected to result in a more robust benthic community post-restoration.

The project area is included in the state-proposed monitoring programs to accompany the AOC delisting activities, including the evaluation benthic community health and vegetation establishment during a five-year period after project construction is completed.

Wildlife Community

Construction would likely temporarily reduce bird use of the project area when large equipment is working. However, long term objectives to increase submergent and floating-leaf aquatic vegetation would provide habitat for a variety of bird species, such as Black Terns, swallows, Pied-billed Grebes, Wood Ducks, Blue-winged Teal, Mallards, and American Black Ducks. Emergent vegetation would provide habitat for species such as the Marsh Wren, Sora, American Bittern, Virginia Rails, Least Bittern, and Yellow-headed Blackbird.

Establishing emergent vegetation would support flying aquatic insects (dragonflies, mayflies, midges, craneflies, etc.), which feed migrating and breeding birds and bats. Designing the project for abundant and diverse emergent aquatic vegetation increases habitat diversity which benefits aquatic wildlife likely to inhabit the project area, including mammals and herpitiles.

Rare Features and Ecosystems

Multiple rare species or other significant natural features were identified within a one-mile radius of the proposed project Area as part of a 2017 search of the Minnesota Natural Heritage Information System (NHIS). The NHIS report identified possible impacts to a Site of Moderate Biodiversity Significance, lake sturgeon, American eel and lake chub, mussels, and the northern long-eared bat.

Implementation of this restoration project is anticipated to improve site biodiversity and increase the potential for rare species occurrences, so negative impacts to the Site of Moderate Biodiversity Significance would be minor and temporary. Lake sturgeon, American eel and lake chub can be adversely impacted by actions that alter stream hydrology or decrease water quality, including sedimentation, dredging and filling, stream dewatering, impoundment, eutrophication, channelization, and pollution/contamination. This project would employ dredging and filling to achieve goals, including improved stream hydrology and decreased sedimentation that would improve habitat for juvenile sturgeon. The project proposer would continue to coordinate with DNR fisheries to implement any recommended measures to avoid/minimize disturbance to these fish species.

The placement of the dredged material has the potential to bury the elliptio mussel, creek heel splitter mussel, and other mussel species. As the distribution, diversity, and abundance of mussels within the project area are unknown, an undetermined number of mussels may be impacted. Given that there are no known occurrences of state-listed threatened or endangered mussels in the area, a permit to take mussels would not be needed. Following project construction, habitat for mussels is expected to improve in the project area.

The project would not cause the types of disturbances associated with impacts to northern long-eared bats, such as wind farm operation, disturbance to hibernacula, or destruction/degradation of habitat, although some small statured trees might be removed. The number of trees removed during site clearing would be minimized and any tree removal would require prior engineer approval.

As the St. Louis River Estuary has been designated a Site of Outstanding Biological Significance, the NHIS recommends minimizing of disturbance to the extent feasible during construction, operation, and maintenance activities. NHIS recommendations that would be incorporated into the project include inspecting and cleaning all equipment to help prevent introduction and spread of invasive species; minimizing/diverting surface runoff; implementing stringent and redundant erosion prevention and sediment control practices; using sediment control barriers; and revegetating disturbed soil with native seed mix appropriate for the shoreline conditions and approved by a plant ecologist.

As part of the Minnesota NHIS Detailed Report, the Piping Plover (MN – Endangered), the Common Tern (MN – Threatened), and Beach Heather (MN – Threatened) were identified as known to occur within an approximate one-mile radius of the Kingsbury Bay and Grassy Point project areas. However, since the species identified not known to occur within the project area, impacts to these species due to project activities are not anticipated.

The recent federal review of rare species potentially affected by the proposed project was included in the Draft NEPA Restoration Plan and Environmental Assessment for the St. Louis River Interlake/Duluth Tar Site (IEC 2017). As reported,

> "(h)abitat in this area provides important services for both migratory and breeding bird populations. Breeding birds, such as common terns (*Sterna hirundo*, conservation concern [FWS 2017]) and other colonial nesting birds, use sandy areas of the estuary for nesting, while sedge wren (*Cistothorus platensis*), marsh wren (*Cistothorus platensis*), Virginia rail (*Rallus limicola*), golden-winged warbler (*Vermivora chrysoptera*, conservation concern [FWS 2017]), wood thrush (*Hylocichla mustelina*, conservation concern [FWS 2017]), and sora (*Porzana carolina*) nest in the emergent marsh areas and adjacent forest.

However, some bird species that once used the estuary for breeding have disappeared over the years (potentially due to recreational activities in the area, as noted in SLRCAC 2002), such as piping plover (*Charadrius melodus*, federally endangered [FWS 2017]), black tern (*Chlidonias niger*, conservation concern [FWS 2017]), American bittern (*Botaurus lentiginosus*, conservation concern [FWS 2017]), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*). Individuals of some of these species are occasionally observed in the area which increases the chances of recolonization under appropriate conditions (e.g., restored suitable habitat). Bald eagles (*Haliaeetus leucocephalus*, conservation concern [FWS 2017]) are also year-round residents in the area and hunt in the estuary. Migratory bird guilds include songbirds, raptors, shorebirds, waterbirds (waders and waterfowl), gulls, and terns (some of which are conservation concerns [FWS 2017]). Federally-listed birds identified in the general vicinity of the Lower St. Louis River include the piping plover (endangered), red knot (*Calidris canutus rufa*, threatened), and Kirtland's warbler (*Setophaga kirtlandii* [= Dendroica kirtlandii], endangered) (FWS 2017). The piping plover and red knot both utilize sandy beach areas; Kirtland's warbler utilizes young jack pine stands in pine barrens distant from potential wild rice restoration locations in the estuary. Accordingly, all three listed bird species are unlikely to be in the project area.

Federally-listed mammals identified in the Lower St. Louis River area include the Canada lynx (*Lynx canadensis*, threatened), gray wolf (*Canis lupus*, threatened in Minnesota]), and the northern long-eared bat (*Myotis septentrionalis*, threatened [FWS 2017]).The gray wolf and Canada lynx require a relatively large extent of northern forest, and are unlikely to be present in the project area. Northern long-eared bats typically roost during summer months underneath bark or in cavities of live trees and snags (standing, dead, or dying trees); in the winter they typically hibernate in caves or mines."

Invasive Species

According to DNR sampling results in the St. Louis River, a variety of invasive fish species have entered the harbor over the last several decades, including alewife, common carp, Eurasian ruffe, freshwater drum, round goby, three-spine stickleback, white perch, spiny water flea, snails, and zebra and quagga mussel. The DNR is managing native predator fish species, in part, to control exotic animals. The zebra mussel has not reached densities documented in other Minnesota lakes it has infested. Reproductive success and recruitment seems to be somewhat limited.

Existing terrestrial invasive species have some presence within the project Area. Purple loosestrife (*Lythrum salicaria*) currently grows in the harbor among the native vegetation and has the potential to negatively impact native populations of fish, waterfowl and marsh birds. At Kingsbury Bay, purple loosestrife has been identified in one plot and near two additional plots. Purple loosestrife was observed growing near one plot at Grassy Point. Non-native phragmites (*Phragmites australis*) has not been documented at Kingsbury Bay, though a well-established population is present west of Grassy Point near Lesure Street. However, it is at a pioneer stage in the U.S. portion of the Lake Superior watershed and represents a rare opportunity to eradicate (within the Lake Superior basin) an invasive species in its early stages. Several large non-native narrow-leaved cattail stands (*Typha angustifolia*) have been mapped at both Kingsbury Bay and Grassy Point in areas planned for dredging.

Impacts from accidental introduction or harboring of invasive species, related to the project's removal, transport, and placement of dredge material, is expected to be minimal. An invasive species management plan would be developed describing ways to minimize risks associated with

invasive species during all project phases. DNR might include additional mitigation techniques as conditions of a Prohibited Invasive Species Permit the project would be required to obtain.

A supplemental Habitat Restoration Plan is currently in development that would address invasive and exotic plant species both within and outside of the project area. The Plan would be finalized following the completion of final construction design plans for Kingsbury Bay and Grassy Point. Habitat Restoration Plan Partners would initiate invasive plant control and other BMPs to reduce the risk of further exotic plant population invasion or expansion. Final planting and seeding would be completed following construction activities to further reduce likelihood of undesirable plant colonization and recruitment. Initial, on-the-ground invasive plant control activities are included in this proposal. Partners would set quantitative performance standards for habitat type outcomes for management units to set clear thresholds for adaptive management activities.

The project area is included in the state-proposed monitoring programs to inform the AOC delisting decisions. This would include invasive species monitoring that would track whether invasive species begin to proliferate. It is anticipated that restoring open water wetlands in the three to six foot depth range would reduce the distribution and abundance of invasive species, as they do not thrive at these water depths, where native submergent, floating-leaf, and emergent aquatic plants are better acclimated. A long-term maintenance plan for the control of invasive species would be developed for the site.

g. **Archaeological and Historic Resources. This topic was addressed in EAW Item 14.**

A 2015 Phase I terrestrial and underwater remote sensing archaeological survey of the Kingsbury Bay project area was conducted to identify potentially significant archaeological sites within the Area of Potential Effect (APE), define the approximate boundaries of any archaeological sites encountered, and determine if any potentially significant archaeological resources would be adversely affected by the proposed federal action. Based on historic mapping, a 6.4-acre terrestrial area owned by Midwest Communications, Inc. has a high potential to contain intact, significant historic archaeological resources dating to the mid-nineteenth century. Per the surveyor's recommendation, ground-disturbing activities would be avoided in this area and the area would remain undisturbed.

The terrestrial survey identified three archaeological sites representing a mid- or late- 20th century trash dump and remains of late 19th or 20th century discard activities. The surveyor recommended all sites as not eligible for inclusion in the National Register of Historic Places (NRHP), and no additional work is recommended. The underwater assessment area included 64.79 acres, of which approximately 54.7 acres were navigable for remote sensing purposes. In total, six targets were identified in the underwater survey area, the majority of which consisted of isolated debris and timber scatters. Other objects encountered include old pier stanchion pipes and adjacent boat moorings. None of the other identified targets represent significant cultural resources.

During summer 2013, an underwater Phase I survey was conducted at the Grassy Point project area, identifying five cultural materials locations, including two sawmills and three shipwrecks (Shipwreck A, B and C). In 2015, a Phase II underwater archaeological evaluation was conducted on these five sites. The two sawmills are the remains of the St. Louis Lumber Company sawmill and ancillary dock structure, and the remains of the Lesure Lumber Company sawmill and ancillary dock structure. Remote sensing data revealed details of the structures and indicated no potential for additional significant data at either site beyond what has been collected during the Phase I and II surveys and these sites are recommended as not eligible for listing in the NRHP. Shipwreck A and Shipwreck B were both determined to not represent the remains of sunken vessels. Diver

investigation of Shipwreck C documented the remains of wooden flat top barge abandoned sometime between 1924 and 1939, based on historic maps and aerial photographs. Given the fragmentary condition of the hull and the overall lack of site integrity, these sites are also recommended to be not eligible for the NRHP.

h. **Visual Impacts.**

Scenery at the project areas includes views of wetland ecosystems and wildlife and the St. Louis River. Such views occur in many areas of the harbor. Construction operations may temporarily obscure vistas and prohibit access to portions of the St. Louis River. Views of construction activity would cause some visual impact. Project construction would be visually similar to existing harbor industrial and shipping activities.

While the closest residential property is approximately 2,000 feet from the Grassy Point project area, a residential neighborhood borders the Kingsbury Bay project area to the north and east, with homes less than 200 feet from potential dredging. Visual impacts would be short-term and minimal, and be further minimized in areas where mature trees located between the site and housing would help screen the area. Significant vapor plumes are not anticipated. Twenty-four hour construction activities requiring the use of nighttime lighting are not anticipated. Equipment would operate only during daylight hours. The DNR has notified adjacent residents about the intent of the project, duration, expected visual impacts, and complaint procedures and would continue the relationship with these landowners throughout the duration of the project.

i. **Noise, air emissions, odors, and dust.** This topic was addressed in EAW Items 16 and 17.

Noise: Noise would be generated during proposed construction activities. Noise would be generated from machinery operation, back-up beepers, and off-site hauling. Other activities on the site would include mechanical excavation, material handling and hauling, and ancillary work needed to restore the project site, which would occur in accordance with the City of Duluth's noise ordinance. Construction would take place at various levels for 2 years, but seasonal downtime is expected. Mufflers and manifolds would be required on all vehicles and machinery in order to reduce noise. Other than hydraulic dredging operations, all other work would take place during the designated times under the City of Duluth's noise ordinance.

Noise at Grassy Point is not expected to cause negative effects on the quality of life for nearby residential property owners because the closest residence is 2,000 feet from the nearest proposed excavation point. At Kingsbury Bay, the nearest residential properties are approximately 200 feet from the closest point of proposed excavation, but most excavation would occur more than 400 feet from residences. Approximately 15 residents live within 400 feet of the closest construction activity. The DNR is in the process of contacting all the nearest residents along the shoreline to inform them of the project and potential for noise levels exceeding NAC Level 1 standards. Upon completion of the project, no new ongoing or new permanent noise is expected.

Air Emissions: During construction, pumps and excavation equipment would be anticipated to have negligible emissions from their operation. All equipment would have legally required emissions controls. The level of emissions from the equipment when in full operation is expected to be minimal.

Construction-related emissions would meet the conformity requirements under Section 176 (c) of the Clean Air Act, and 40 CFR 93.153, and therefore be exempt as *de minimus*. Equipment that would be used includes excavators, loaders, trucks, boats, tugs and pumps. Pollutants generated

from fuel combustion include carbon monoxide, nitrogen oxides, reactive organic gases, sulfur dioxide, and suspended particulate matter, all of which carry some associated health risks. In addition, combustion would produce carbon dioxide, a greenhouse gas (GHG). Incremental GHG emissions related to construction include engine exhaust from these vehicles amd are anticipated to be short-term and minor. Dredged material transport impacts would last approximately four months during each open-water dredge season and three months during each winter season. Modernized equipment produces fewer emissions as Environmental Protection Agency emission levels are more stringent on newer engines. The efficiency of integrating the Kingsbury Bay excavation with the placement of clean fill at Grassy Point prevents the need for expensive hauling to and disposal at a landfill or to a more distant location for beneficial use. BMPs for air quality would also minimize emissions of GHGs. Wetlands are particularly good at drawing GHG from the atmosphere and storing it over the long term. Estuarine marshes are particularly productive and likely demonstrate a proportionately larger capability in sequestering GHG emissions.

Dust and Odors: The proposed project may create some temporary dust during open-water season construction activities. Fugitive dust could arise from light vehicle traffic at both project sites in association with maintenance operations of equipment and stockpile locations. There may be odor impacts from the excavation and dredging of organic material. However, any odors that are generated are expected to be minor and short term in duration. If windy conditions are present, the odor is expected to disburse readily. No long-term or persistent odor impacts are anticipated.

The contractor would be required to follow BMPs to reduce dust during construction, such as covering loads during transport in the open-water season; watering access routes and exposed soils if fugitive dust becomes an issue; placing mulch, temporary cover and erosion control mats on exposed areas and stockpiles; and requiring any fill materials sourced offsite and transported onto the project site to be clean and free of dirt and debris.

j. **Traffic.** This topic was addressed in EAW Item 18.

Kingsbury Bay is accessed over public land from and across the Western Waterfront Trail (WWFT) and the Indian Point Campground. The WWFT has a twenty-six space parking area off Pulaski Street. Pulaski Street also services Indian Point Campground. Excavation of the Kingsbury Creek delta would occur during the winter, when trucks hauling material would cross the WWFT, to Grand Avenue, and ultimately to Grassy Point. The exact route has yet to be determined. Access routes and staging areas would be established off the WWFT at a designated location along the shoreline of Kingsbury Bay. Location of these areas would minimize impact to the WWFT and the surrounding natural landscape. Winter excavation of the delta would likely result in WWFT and parking lot closure during construction months. No additional parking spaces are proposed as part of the project. During peak construction periods, a maximum of 20 trucks per hour would be hauling material off-site. This traffic would occur during a seven-day work week over a three month period. Other project related traffic is considered to be minimal. Summer work at Kingsbury Bay would involve water-based hydraulic dredging, that would not impact land-based traffic.

Grassy Point is accessed by the public from a twenty-two space parking lot located at the end of Lesure Street and across a walkway maintained by the City of Duluth. The project does not propose additional parking spaces in this area. Similar to Kingsbury Bay, excavation and placement of some material would be accomplished during the winter. During this time, access routes and staging areas would be established off Waseca Industrial Avenue and Lesure Street and the parking lot at a designated location adjacent to Grassy Point wetlands. Location of these areas would minimize impact to the surrounding natural landscape. Trucks would be travelling loaded with material from Kingsbury Bay for placement at Grassy Point. Trucks might also be transporting wood waste away

from Grassy Point to the temporary storage site at XIK Dock #7, before returning to Kingsbury Bay for more material. The access to Dock #7 is located adjacent to the west of the Grassy Point parking lot off Lesure Street. Access routes and staging areas along Grassy Point would be established away from the existing parking lot to minimize damage. During peak operations, a maximum of 20 trucks per hour would be hauling material on and off-site. This traffic would occur during a seven day work week for approximately three months. Summer work at Grassy Point would involve water-based mechanical and hydraulic dredging, which would not impact upland traffic.

Impacts to traffic as a result of post-project conditions resulting from the proposed restoration are considered to be minimal. However, future plans by the City of Duluth to provide increased and improved recreational opportunities along the shoreline of Kingsbury Bay have the potential to increase traffic. Upon completion of the project, the maximum peak hour traffic is expected to be less than 250 vehicles per hour, with the total daily traffic less than 2,500 vehicles per day for both sites. Congestion of local roads and the regional transportation system would not be expected since traffic volumes are anticipated to be minimal.

The DNR is working closely with the City of Duluth to determine routes that would result in the least impact to the surrounding communities during construction. Negligible effects on the transportation system are expected as a result of the proposed project and mitigation is not proposed. DNR and Contractors would coordinate with MnDOT and City of Duluth transportation authorities. Spillage along roads and other public areas would be cleaned up immediately. Landowners and businesses would be notified about the intent of the project, duration, expected transportation schedules, and complaint procedures.

k. **Cumulative Potential Effects.** This topic was addressed in EAW Item 19. The potential environmental effects related to this project could combine with environmental effects from other past, present, or reasonably foreseeable future projects for which a basis of expectation has been laid. The environmental effects of Kingsbury Bay and Grassy Point were considered in total in the EAW under Item 19. The EAW identified the potential for physical effects on surface waters, including the conversion of habitats, and water quality due to this project.

There are several AOC projects near the proposed project that have been recently completed, are currently being designed, or are in construction. These include Knowlton Creek on upstream side of the project, and 40th Avenue West, Ponds behind Erie Pier, and 21st Avenue West on the downstream side. Kingsbury Creek and Keene Creek flow into the project wetlands. As described in the restoration design and as mentioned in the EAW, in addition to Grassy Point, surplus organic material from Kingsbury Bay would be transported and placed in the 40th Avenue West and 21st Ave West SLRAOC restoration sites. It is anticipated this would occur in 2019. As such, these activities would directly interact with this Grassy Point-Kingsbury Bay project, and they would have temporary environmental effects within the geographic scales and timeframes identified above. These AOC projects could contribute temporary environmental effects such as disturbance to wildlife and rare features, increase in sedimentation, and effects to surface waters and water quality of the St. Louis River environment. All of the proposed projects are anticipated to be beneficial to the restoration of St. Louis River AOC, contribute towards the delisting of the area, and have negative effects that would be temporary and reversible.

Project actions along with other proposed actions listed above are cumulative in nature. The specific outcomes identified above might result in some temporary negative environmental effects that may require consideration in the permitting phase of the project. Cumulatively, the projects proposed in the AOC are expected to improve the ecological function of the estuary and

positively impact critical fish and wildlife resources. Positive impacts include: long-term reduction in sedimentation; removing or containing accumulated sediment; removing legacy wood waste; improving overall condition of the benthos; increasing density and distribution of aquatic macrophytes; softening hardened shorelines; increasing acreage of shallow sheltered bay habitat; reducing the distribution and abundance of non-native invasive species; and generally increasing quality of habitat for native fish and wildlife populations. These projects have similar habitat improvement goals with short-term impacts similar to those listed for the project in this EAW. The general intent is that the cumulative effects associated with completion of these projects would have a positive effect on the St. Louis River Estuary, helping achieve the AOC goal of delisting by 2025.

Project actions should result in limited change to the floodplain, an overall increase in estuarine marsh acreage and temporary total suspended solids and other water quality effects during construction. The adverse cumulative potential effects on the physical nature of the St. Louis Bay Estuary due to conversion of wetland type and changes in the floodplain are generally minor and have a minor contribution to cumulative potential effects. Cumulative potential effects on water quality in the generation of total suspended solids and other effects would be controlled by permits and approvals required before commencing construction and effective monitoring during construction. The conditions for these permits require the use of BMPs to achieve a minimal environmental effect.

34. The following permits and approvals are needed for the project:

Unit of government	Type of application	Status
DNR	Public Waters Work Permit	To be submitted
DNR	Water Appropriations Permit - Temporary	To be submitted
DNR	Prohibited Invasive Species Permit	To be submitted
DNR	Lake Superior Coastal Zone Federal Consistency Letter	To be 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
MPCA	Solid Waste	To be submitted
MPCA	Compost Facility	To be submitted
USACE	CWA Section 404 Permit	To be submitted
USACE	Section 10 Permit – Rivers and Harbors Act	To be submitted
USACE	Section 106 Consultation – National Historic Preservation Act	To be submitted
LGU	Wetland Conservation Act - MN	To be submitted
WLSSD	Wastewater Discharge Permit	To be submitted
MN-SHPO	Section 106 Consultation – National Historic Preservation Act	To be submitted
DULUTH	Grading and Erosion Control	To be submitted
DULUTH	MS4 Compliance Statement	To be submitted
DULUTH	Temporary Access Agreement	To be submitted, if required
DULUTH	Special Use Permit for Construction	To be submitted, if required
DULUTH, DNR, FEMA	No Rise Certification and/or LOMR	compliance
USFWS	Migratory Bird Treaty Act	Under consultation

CONCLUSIONS

1. The Minnesota Environmental Review Program Rules, *Minnesota Rules*, chapter 4410.1700, subparts 6 and 7 set forth the following standards and criteria, to which the effects of a project are to be compared, to determine whether it has the potential for significant environmental effects.

   In deciding whether a project has the potential for significant environmental effects, the following factors shall be considered:

   a. type, extent, and reversibility of environmental effects;
   b. cumulative potential effects of related or anticipated future projects;
   c. extent to which the environmental effects are subject to mitigation by on-going regulatory authority; and
   d. *the extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by agencies or the project proposer, including other EISs.*

2. *Type, extent, and reversibility of environmental effects*

   Based on the Findings of Fact above, the DNR concludes that the following potential environmental effects, as described in Finding 33, would be limited in extent, temporary, or reversible:

   a. Physical Impacts to Public Waters and Wetlands

b. Soils and Sediment Quality
c. Wastewater and Water Quality
d. Water Surface Use (Recreation and Navigation)
e. Solid Waste
f. Wildlife Impacts and Habitat
g. Archaeological and Historical Resources
h. Visual Impacts
i. Noise, air emissions, odors, and dust
j. Traffic
k. Cumulative Potential Effects

Based on the Findings of Fact above, the DNR concludes the following potential environmental effects of the project, as described in Finding 33 would be beneficial:

a. Restores the historic bathymetry of Kingsbury Bay and Grassy Point.
b. Restores the habitat for a rare plant community of Minnesota (estuarine marsh).
c. Restores aquatic habitat for wildlife and fish resources.
d. Physically removes invasive species and creates habitat less conducive to their establishment.
e. Improves surface water recreation potential in Kingsbury Bay – Grassy Point

The proposed project would yield several environmental benefits, as listed previously, and less tangible broad scale benefits to the public in general and individuals that directly use and depend on the St. Louis River because of the improvements to water quality, aquatic habitats, and biota.

3. *Cumulative potential effects of related or anticipated future projects.*

The effects of all past projects comprise the existing conditions of the project area. The cumulative environmental effects of the proposed project and future projects add to existing conditions. Cumulative environmental effects for future projects are assessed by evaluating the effect on the environment resulting from the incremental effects of the project under review plus similar effects from certain future projects that overlap spatially or temporally with the proposed project.

Based on the Findings of Fact above, the DNR concludes that cumulative potential effects from disturbance to wildlife and rare features, increase in sedimentation, and effects on surface waters and water quality of the St. Louis River environment are as described in Finding 33k. Other AOC projects near the proposed project have been recently completed, are currently being designed, or are in construction and have similar habitat improvement goals with temporary, minor, and reversible environmental effects similar to those listed for the project in this EAW. Based on the Findings of Fact above, the DNR concludes that the cumulative potential environmental effects of this project are not significant when viewed in connection with the listed ongoing AOC projects being designed and implemented.

The general intent is that the cumulative effects associated with completion of these projects would have a positive effect on the St. Louis River Estuary, helping achieve the AOC goal of delisting by 2025. Positive impacts include: long-term reduction in sedimentation; removing or containing accumulated sediments; removing legacy wood waste; improving overall condition of the benthos; increasing density and distribution of aquatic macrophytes; softening hardened shorelines; increasing acreage of shallow sheltered bay habitat; reducing the diversity and abundance of non-native invasive species; and generally increasing quality of habitat for native fish and wildlife populations.

4. *Extent to which environmental effects are subject to mitigation by on-going public regulatory authority.*

Based on the information in the EAW and Findings of Fact above, the DNR has determined that the following environmental effects, as described in Findings 33a through 33k, are subject to mitigation by ongoing public regulatory authority:

Physical Impacts to Public Waters and Wetlands: DNR Public Waters Work Permit requires mitigation, development of a least adverse alternatives analysis, and a natural hydrological condition improvement. USACE Section 404 permit authorizes stream and wetland restoration activities, including mitigation and sequencing, equipment restrictions, preventative measures, and spill contingency. USACE Section 10 authorities provide general conditions regarding equipment operation, and mitigation. MPCA Section 401 Water Quality Certification can require compensatory mitigation for wetland impacts.

Wastewater and Water Quality: USACE Section 404 permit, in coordination with the MPCA Section 401 Water Quality Certification can include protective conditions to ensure facility discharges meets state and federal water quality standards.

Wildlife and Habitat: DNR Public Waters Work Permit requires plans that show the nature and degree of habitat to be benefited, that the project not exceed more than the minimum damage to the environment, and that the project must achieve the beneficial purpose of restoring fish and wildlife habitat.

Water Surface Use: DNR Public Waters Work Permit, and the USACE Section 404 and Section 10 Permits can include conditions that a project needs to demonstrate that it would not obstruct navigation or create a water safety hazard, etc.

Erosion and Sedimentation: DNR Public Waters Work Permit, and the USACE Section 404 and USACE Section 10 permits include conditions for soil erosion and sediment controls, such as silt curtain, silt fence, and other measures). MPCA NPDES/SDS Construction Stormwater General Permit includes conditions such as the application of BMPs and preparation of SWPPP.

Solid Waste: MPCA Dredged Material Permit includes conditions for the management of solid waste according to specified contamination thresholds for beneficial reuse or disposal in landfill.

Noise: *Minnesota Rules*, part 7030.0030 Noise Control Requirement is administered through MPCA which sets receiver-based standards, and construction site controls are set Occupational Safety and Health Administration (OSHA), which sets levels that protects against hearing loss in the workplace.

Archaeological and Historic Resources: Minnesota Historic Sites Act and Section 106 NHPA are applicable to projects funded or acted upon by federal agencies, including the USACE Section 404 and Section 10 Permits, through which the SHPO has review and concurrence responsibilities.

5. *Extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, or other EISs.*

Breneman, Dan, C. Richards, and S. Lozano. 2000. "Environmental influences on benthic community structure in a Great Lakes Embayment." Journal of Great Lakes Research 26(3):287-304.

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

Crane, J. L., D. D. McDonald, C. G. Ingersoll, D. E. Smorong, R. A. Lindskoog, C. G. Severn, and T. A. Berger. 2000. "Development of a framework for evaluating numerical sediment quality targets and

sediment contamination in the St. Louis River Area of Concern."

Glick, P., J. Hoffman, M. Koslow, A. Kane, and D. Inkley. 2011. Restoring the Great Lakes' Coastal Future: Technical Guidance for the Design and Implementation of Climate-smart Restoration projects. Ann Arbor, MI: National Wildlife Federation.

DNR. Best Practices for Meeting DNR General Public Waters Work Permit (GP2004-0001).

DNR. 2014b. Permitting Policies for the Management of Narrow-leaved and Hybrid Cattail in a Range of Basin Types. Report to the 2015 Minnesota Legislature. Submitted December 15, 2014. Minnesota Department of Natural Resources.

6. The DNR has fulfilled all the procedural requirements of law and rule applicable to determining the need for an environmental impact statement on the proposed Kingsbury Bay – Grassy Point Habitat Restoration project.

7. Based on considerations of the criteria and factors specified in the Minnesota Environmental Review Program Rules (*Minnesota Rules*, chapter 4410.1700, subpart 6 and 7) to determine whether a project has the potential for significant environmental effects, and on the Findings and Record in this matter, the DNR determines that the proposed Kingsbury Bay – Grassy Point Habitat Restoration project does not have the potential for significant environmental effects.

ORDER

Based on the above Findings of Fact and Conclusions:

The Minnesota Department of Natural Resources determines that an Environmental Impact Statement is not required for the Kingsbury Bay – Grassy Point Habitat Restoration project in St. Louis County, Minnesota.

Any Findings that might properly be termed Conclusions and any Conclusions that might properly be termed Findings are hereby adopted as such.

Dated this 30th day of May, 2018.

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Barb Naramore

Barb Naramore
Assistant Commissioner