



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, DETROIT DISTRICT
477 MICHIGAN AVENUE
DETROIT MI 48226-2550

February 2, 2022

TO ALL INTERESTED AGENCIES, PUBLIC GROUPS, AND CITIZENS

The U.S. Army Corps of Engineers (USACE), Detroit District, has prepared a Preliminary Finding of No Significant Impact and Environmental Assessment (EA) for a project proposed by the City of Grand Marais, Cook County, MN. The USACE will provide cost reimbursement up to 75% pursuant to Section 569 of the Water Resources Development Act of 1999, Public Law 106-53, as amended. The project proposal has four (4) main components being: 1) expansion in size of the existing basin by 0.6 acre-feet (AF) from 0.7 AF to 1.3 AF with emergency overflow from 10,500 square feet (ft²) to 12,000 ft² with a permanent pool of 3,850 ft²; 2) installation of a sediment settling forebay of 3,600 ft² at the control berm top elevation; 3) construction of an armored emergency overflow weir; and 4) removal of bank material to create about 710 feet of two stage channel in selected areas of the downstream tributary and outlet channel to decrease velocity and placing riprap on selected tight bends to stabilize banks. The purpose of the proposed project is to provide additional storage capacity to increase settling time and slow discharge velocities in the outlet stream channel to reduce sediment erosion.

The USACE's preliminary environmental analysis indicates that implementing the proposed project would not be injurious to the public interest nor constitute a major Federal action that significantly affects the quality of the human environment. No significant short term, long term, or cumulative environmental effects would result from constructing the proposed project. Adverse effects would be minor, limited primarily to short-term noise and air emission.

The EA may be viewed online at the following web address:

<https://www.lre.usace.army.mil/Missions/Environmental-Services/Other-Public-Notices/>

Electronic copies of this Public Notice and EA are being sent to federal, state, and local agencies, Tribes, interested groups, and individuals. The USACE is soliciting comments from the public to consider and evaluate the impacts of the proposed activity. Any person who has a concern/interest or has historical or cultural interests that may be affected by the proposed project may submit written comments within the comment period of this notice. Comments must clearly set forth what interest may be affected by the proposed activity and how the action significantly affects the quality of the human environment. If no comments are received by the end of the thirty (30) day review period, it will be assumed that no comments are forthcoming. Because of the COVID-19 virus, please provide all comments by email to:

LRE-GrandMarais-MN@usace.army.mil. All comments received will be taken under consideration.

Following the comment period and a review of the comments received, the USACE Detroit District Engineer will make a final decision regarding the necessity of preparing an Environmental Impact Statement (EIS) for the proposed project. Based on the preliminary conclusions of the EA, it appears that preparation of an Environmental Impact Statement will not be required. Therefore, a preliminary Finding of No Significant Impact is included in the EA.

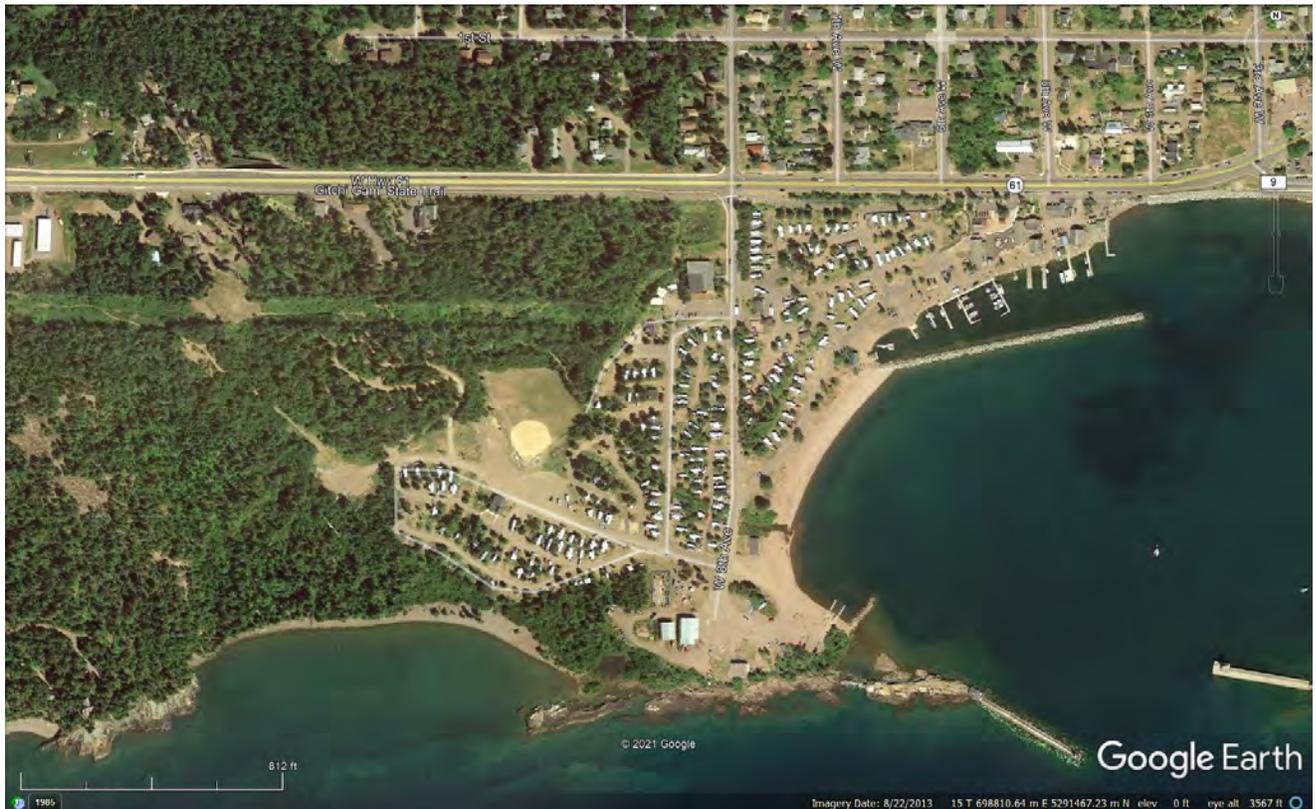
Sincerely,

Charles A. Uhlarik

Charles A. Uhlarik
Chief, Environmental Analysis Section

ENVIRONMENTAL ASSESSMENT

8th Avenue West Storm Water Detention Basin Cook County, Grand Marais, Minnesota



February 2022
U.S. Army Engineer District, Detroit
Corps of Engineers, CELRE-PLE
477 Michigan Ave.
Detroit, Michigan 48226-2550



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, DETROIT DISTRICT
477 MICHIGAN AVENUE
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Preliminary Finding of No Significant Impact

8th Avenue West
Storm Water Detention Basin
Cook County, Grand Marais, Minnesota

The U.S. Army Corps of Engineers (USACE), Detroit District, has completed an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The Environmental Assessment (EA), Section 404(b)(1) Evaluation for excavation and placement of fill in waters of the United States, and a Public Notice (dated February 2, 2022) addresses the environmental consequences of the excavation for expansion of the existing stormwater detention basin and discharge outlet in Grand Marais, Cook County, Minnesota, on Lake Superior. The proposed expansion of the stormwater detention basin is to provide additional storage capacity to increase settling time and widening the downstream floodplain to slow discharge velocities in the outlet stream channel to reduce sediment erosion during discharge events. The expansion of the stormwater detention basin is to meet stormwater retention times for stormwater management consistent with the Clean Water Act requirements. The USACE will provide cost reimbursement up to 75% pursuant to Section 569 of the Water Resources Development Act of 1999, Public Law 106-53, as amended.

The EA analysis, incorporated herein by reference, evaluated various project alternatives: Alternative 1, "No Action" plan, Alternative 2, construction of a larger footprint basin by excavation of a new sediment forebay and surface area of the settling basin and conducting downstream armoring work on the outlet; Alternative 3, raising the perimeter berm height for additional storage capacity, installation of the sediment forebay within the basin, deepening the basin and conducting downstream work on the outlet to create a two stage channel and Alternative 4, excavate to deepen the existing basin, increase the berm height around the existing stormwater detention, install sediment settling forebay, install riser pipe and armored outlet, constructed armored emergency overflow weir, create a two stage outlet channel floodplain in selected areas and armor downstream outlet channel stream bend. The tentatively selected alternative and recommended plan is Alternative 4, which is the least impacting alternative meeting the project design criteria as discussed in the EA and is a combination of the best components of all the alternatives considered.

All applicable environmental laws were considered in the evaluation of alternatives and coordination with appropriate agencies undertaken. Implementing the recommended plan would not result in significant cumulative or long-term adverse environmental effects. The project would cause no or insignificant minor adverse environmental effects. The project would cause no or insignificant minor adverse impacts to natural resources, would not adversely impact navigation, water quality, cultural/historic resources, federally listed endangered or threatened species and their habitat, nor be injurious to the public interest. Adverse effects would be minor, limited

primarily to short-term noise and air emissions from equipment operation, minor disruption of local aquatic species, and loss of some existing bank vegetation. All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the selected alternative and recommended plan. Best management practices (BMPs) as detailed in the EA will be implemented, if appropriate, to minimize impacts. No compensatory mitigation is required as part of the recommended plan. A summary assessment of the potential effects of the recommended plan are listed in Table 1.

Table 1: Summary of Potential Effects of the Recommended Plan

	Minimal and Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic Habitat, Fisheries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Water Act Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Zone Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contaminant Consideration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Exotic/Invasive/Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Federally Listed Species (T&E)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater/Drinking Water	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Health and Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic, Noise and Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Social Setting/ Environmental Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife/Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Public review of the EA and Preliminary FONSI was initiated by Public Notice on February 2, 2022. All comments submitted during the public review period will be considered and responded to by email.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the USACE requested a species list through the US Fish and Wildlife Service Information for Planning and Consultation (IPaC) program online database. Based on the species

list for the specific work area in Cook County, MN, dated December 2021, three (3) federally listed species are located in the county. The USACE determined that the recommended plan will have “no effect” on the Canadian lynx or Canada lynx critical habitat nor affect the piping plover. Under Rule 4(d) the USACE determined that the project “may affect but not likely to adversely affect” the northern long eared bat. Approximately 50 trees greater than 3 inches dbh will be removed for expansion of the basin and outlet channel work but all trees will be cut outside of the June/July time frame and the proposed work consistent with Rule 4(d). On December 2, 2021, the USFWS responded in an email and concluded the project may affect but is not likely to adversely affect the Canada lynx and the piping plover and will have no effect on Canada lynx critical habitat. The project is consistent with Rule 4(d) and may affect but not likely to adversely affect the northern long eared bat.

Pursuant to Section 106 of the National Historic Preservation Act, as amended, the USACE has preliminarily determined that no above-ground cultural resources that are eligible for or listed on the National Register of Historic Places would be affected by this project. Because the immediate project area for the extension of the basin is unlikely to contain intact soils there is low potential that the extension will impact archeological resources. However, USACE is requiring that the city conduct a Phase I Archeological Survey of the proposed excavation areas adjacent to the outlet drain where the bank will be cut back to determine whether these areas have potential to contain archeological material. Following the conclusion of the survey, both SHPO and Tribes with known interest in the area will be consulted under Section 106 of the National Historic Preservation Act.

Pursuant to the Clean Water Act of 1972, as amended, the recommended plan has been found to be compliant with Section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) evaluation is found in the EA.

A water quality certification (WQC) pursuant to Section 401 of the Clean Water Act is required from the State of Minnesota. The USACE preliminarily determined the project complies with Minnesota water quality standards. In water work will not commence until the State certifies, or waives, compliance with State water quality standards. The non-Federal sponsor is applying for the appropriate certifications and permits.

Pursuant to the Coastal Zone Management Act of 1972, the USACE determined that the project would be undertaken consistent to the maximum extent practicable with the enforceable policies of the approved State of Minnesota Coastal Zone Management Program. The USACE early coordination for the consistency determination was sent to the coastal program manager on April 9, 2021. No response to the determination has been received to date. The project will not impact lands designated under the Coastal Barrier Resources Act (CBRA PL97-348) located in Minnesota.

The proposed project complies with the Federal Executive Order on Flood Plain Management (E.O. 11988) because there is no practicable alternative to construction in

the floodplain. The project would not cause a harmful interference on adjacent property, nor increase the risk of flooding or related flood damage, nor encourage floodplain development.

Based on this EA, the 404(b)(1) Evaluation, coordination with Federal and state agencies and Tribes, and review by my staff, it is my preliminary determination that implementing the recommended plan would not significantly affect the quality of the human environment. Therefore, preparation of an Environmental Impact Statement (EIS) is not required. Following the 30-day agency/public review period and consideration of the comments received, a final decision will be made regarding the necessity of preparing an EIS for the proposed action.

Date Signed

Scott M. Katalenich
Lieutenant Colonel, U.S. Army
District Commander

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Appendix A. Figures

- Figure 1. Project Location
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Appendix B. Section 404(b)(1) Evaluation

1.0 INTRODUCTION

1.1 The City of Grand Marais, Cook County, Minnesota owns the lands upon which the existing stormwater detention basin and outlet channel is located. The basin is located southwest of town and the collected stormwater discharges by way of an open intermittent stream to Lake Superior. Grand Marais is located 110 miles northeast of Duluth and 38 miles southwest of the Canada-U.S. border on the Lake Superior shoreline.

1.2 PROPOSED ACTION, PROJECT NEED AND PURPOSE

1.3 The U.S. Army Corps of Engineers, Detroit District (USACE), Environmental Assessment (EA) evaluates the environmental impacts of the proposed expansion of the stormwater detention basin to provide additional storage capacity to increase settling time and widening the floodplain to slow discharge velocities in the outlet stream channel to reduce sediment erosion during discharge events. The expansion of the stormwater detention basin is to increase stormwater retention times for stormwater management consistent with the Clean Water Act requirements.

2.0 PROJECT AUTHORITY

The USACE will provide cost reimbursement up to 75% pursuant to Section 569 of the Water Resources Development Act of 1999, Public Law 106-53, as amended.

3.0 PROJECT HISTORY

The area was inhabited by the Anishinaabe indigenous people known as Ojibwe prior to settlement by French Canadians. The area was a bustling fur trading station in the 1700s. Grand Marais may also mean “sheltered water area” referring to the natural breakwater rock outcroppings providing two small natural safe harbors for early explorers. Grand Marais is the county seat of Cook County and the only municipality in the county. Grand Marais is a gateway to the Boundary Waters Canoe Area Wilderness via the Gunflint Trail, historically a footpath for travelers and fur traders from inland lakes to Lake Superior.

4.0 ALTERNATIVES

4.1 Various project alternatives were considered as depicted below.

4.2 Alternative 1 – No Action (Future Without Project)

The “No Action” alternative is the baseline for evaluation of environmental impacts. The “No Action” alternative assumes that the proposed project/recommend plan would not be implemented. The “No Action” alternative is not carried forward in this evaluation as the existing system does not provide needed storage capacity within the detention basin nor methods to reduce erosive discharge velocities in the outlet channel.

4.3 Alternative 2 – Excavate larger surfaced area detention basin and armor the outlet channel: This alternative includes: excavation of a larger detention area to create additional storage capacity, provides area for the settling basin forebay and armoring of the outlet channel to provide erosion protection. Placement of armor stone for erosion protection of the entire outlet channel is not cost effective. Excavation of additional surface area to increase storage capacity results in the destruction of additional existing habitats with more environmental impacts and is more costly.

4.4 Alternative 3 – Excavate to deepen the existing basin, increase the berm height around the existing stormwater detention basin to create additional storage capacity, install sediment forebay and armored outlet, create a two stage outlet channel floodplain and armor selected locations, as needed.

4.5 Alternative 4 – Excavate to deepen the existing basin, increase the berm height around the existing stormwater detention, install sediment settling forebay, install riser pipe and armored outlet, constructed armored emergency overflow weir, create a two stage outlet channel floodplain in selected areas, armor downstream outlet channel stream bend,

5.0 ALTERNATIVE SELECTION AND RECOMMENDED PLAN

5.1 City of Grand Marais determined a combination of alternatives considered is the best approach for the reconstruction of the detention basin to increase storage capacity to provide additional settling time and increase the floodplain of the outlet channel to reduce discharge velocity and scour. The tentatively selected alternative is Alternative 4, a combination of alternatives that resulted from using the most efficient or best restoration components from all the alternatives considered both within the basin and in the outlet channel to increase the basin retention time and minimize downstream channel erosion resulting in the discharge of suspended solids. The proposed work will be completed under city contract with USACE cost reimbursement.

5.2 The recommended plan (Alternative 4) has four (4) main components being: 1) expansion in size of the existing basin by 0.6 acre-feet (AF) from 0.7 AF to 1.3 AF through the raising of berms around the 10,500 square foot (ft²) existing basin to increase the basin size to 12,000 ft², with emergency overflow at 637.6' NGVD 88; 2) installation of a 2,180 ft² sediment settling forebay at the lowest elevation with a total area of 3,600 ft² at control berm top elevation 3) construction of an armored emergency overflow weir and 4) create a two stage flood control channel by removing some of the old spoil berms from about 710 feet of tributary and outlet channel to increase the floodplain in the outlet channels to decrease velocity, placing erosion control blankets on reconstructed or graded banks and placing riprap on selected tight bends in the outlet stream. Construction activities within the basin result in the creation of a permanent pool within the stormwater basin of approximately 3,850 ft² at the invert drop

pipe elevation of 631.5' NGVD 88. Expansion of the basin requires approximately 400 CYD cut and 140 CYD fill, the berm and overflow work involves 360 CYD fill and 60 CYD cut, installation of the outlet pipe requires 550 CYD cut and 520 CYD for trench backfill, placement of 50 CYD riprap, and the outlet channel bank work requires 300 CYD cut and 15 CYD fill along the western tributary and 60 CYD cut and 40 CYD fill for the remaining channel.

5.3 The proposed activities may require temporary access, staging areas, and/or construction of one or more temporary structures, upland or in-water. The type and location of temporary structures and/or staging sites cannot be determined at this time, since they would be incidental to the work being performed. Examples include turnarounds, work and storage areas, access roads, and office facilities. Temporary structures/staging sites would be at approved locations within project boundaries or rights-of-way, and would be located outside of any wetlands, areas containing federally protected species and their critical habitat, and properties listed on or eligible for listing on the National Register of Historic Places. Some variation from the project as described may occur with respect to the sequence of activities, method of operation, or design details as a result of unanticipated design improvements, site conditions, or cost-saving measures. Such variations would not result in significant changes to either the overall project design or environmental effect, without further evaluation under the National Environmental Policy Act (NEPA).

6.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

6.1 The environmental evaluation identifies and analyzes the type and magnitude of anticipated impacts associated with implementing the proposed project/recommended plan. The biological discussion is broadened to include a characterization of the existing basin and the outlet channel discharging to Lake Superior. The anticipated impacts are outlined in Table 1.

6.2 Physical Setting: Grand Marais is a city in Cook County, Minnesota (Figure 1). The city has a total area of 2.90 square miles (7.51 km²), all of it land. Grand Marais is located on the northwestern shore of Lake Superior in northeastern Minnesota and is well known as an entry point for the Boundary Waters Canoe Area Wilderness (BWCAW). The land surrounding Grand Marais slopes up to form the Sawtooth Bluff, a dramatic rock face visible from nearly any vantage point in the city. Adjacent to the bluff is Pincushion Mountain, a large bald monolith with dramatic views of Lake Superior and the inland wilderness. Grand Marais Harbor is protected by Artist's Point, a barrier island formed by lava that was connected to the mainland by gravel deposited by lake currents, forming a tombolo.

Visitors and locals alike enjoy some of the finest hiking, canoeing and skiing in the nation. It is surrounded by millions of acres of lush forests graced with rocky cliffs, serene inland lakes, streams and thundering waterfalls that empty into Lake Superior.

Wildlife abounds in the forest; the lakes and streams are alive with fish. The project will not significantly affect the city or surrounding uses.

6.3 Weather – In Grand Marais, the summers are comfortable; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from 8°F to 69°F and is rarely below -13°F or above 78°F. The warm season lasts for 3 months, from mid-June to mid-September with an average daily high temperature above 60°F. The cold season lasts for the months from December to mid-March. Average temperatures during the winter range from zero to the low 20°Fs with many days below zero depending on wind chill. In Grand Marais, the average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year in Grand Marais begins around mid-June and lasts for about 4 months, ending around mid-October. The cloudier part of the year begins in November and ends mid-June. Grand Marais experiences significant seasonal variation in monthly rainfall. The wetter season lasts 6.0 months, from April through October. Average snowfall is around 100 inches a year.

Lake Superior is renowned for its cold temperatures, rough seas, fog, and sudden squalls. Average water temperatures in May and June are only in the 40s. Even in late summer, surface temperatures rarely exceed 60 degrees, except in protected bays. Average summer winds blow from 5 to 20 knots with waves of one to four feet. Winds of 30 to 40 knots and 6 to 12-foot seas are possible. Weather does not appreciably change with project implementation. The project will not affect weather.

6.4 Land Use –Grand Marais is adjacent the Superior National Forest. Minnesota Land Cover Grid (MNGEO) classifies Cook County as 50% mixed forest, 11% deciduous forest, 11% coniferous forests, water 10%, bogs, marshes and fens at 6% and all other uses at 1% or less. Grand Marais is active with tourists and locals viewing Lake Superior from Artist's Point and the large rock formations and the harbor light house. Implementing the project will not significantly affect land use in Grand Marais.

6.5 Topography and Soils: The landscape of Cook County is rugged and heavily dotted with lakes, ponds and streams. The county contains Eagle Mountain, the highest point in Minnesota at 2,301 feet above sea level (ASL) and Lake Superior being at about 600 feet ASL. Soils are generally grouped into three categories. The first is loamy soils generally located inland with many coarse fragments (gravel, cobble stone) with many having a restrictive layer that perches water and affects drainage. The second group is clayey soils located generally from the Lake Superior shoreline inland up to 10 miles with limited percolation rates. The third is shallow soils on top of bedrock that result in limited uses related to the bedrock restriction. The land surrounding Grand Marais slopes up to form the Sawtooth Bluff, a rock face visible from most any location in Grand Marais. Adjacent the bluff is Pincushion Mountain, a large bald rock area. The project will not significantly affect topography or soils.

6.6 Air Quality: There are several air quality monitoring stations in Cook County, Minnesota, including Grand Marais. Monitoring revealed the county air quality met National Ambient Air Quality Standards (NAAQS). The proposed project will have minor short-term impacts from diesel exhaust during construction but no long-term impacts that would affect air quality.

6.7 Aquatic Habitat and Fish: The impacts from modifications to the existing stormwater detention basin will provide longer settling time for the collected stormwater and reduce sediment input from erosion in the intermittent outlet stream channel by reducing discharge velocity. The outlet streams are intermittent and do not maintain a fishery. For any armor stone that remains permanently inundated, the rock will provide aquatic habitat for invertebrate species. Approximately 100 feet of the outlet channel downstream of the detention basin will have work conducted in the streambed. The impacts to the aquatic environment are considered minimal.

6.8 Clean Water and Water Quality: Lake Superior generally has excellent water quality. With Grand Marais being remote from large urban and industrial developments, its water quality is good. Excavation of the outlet streambanks to construct the two-stage outlet stream channel to increase the floodplain will reduce discharge velocity and minimize erosion of the streambank sediments where the water discharges to Lake Superior. Placement of armor stone in the basin discharge outlet will also provide for erosion protection. Expansion of the size of the basin to increase retention time will allow for more settling time and assist in the improvement in the quality of the discharge waters. The in-water work will require state and any applicable federal permits which are being applied for by the city. No work will commence in the water until all necessary approvals have been received.

6.9 Climate Change: Global climate change is expected to lead to six major types of (physical) changes in the Great Lakes basin: (1) increased annual averages in air and surface water temperatures (with greater extremes in hottest temperatures), (2) increased duration of the stratified (thermocline) period, (3) changes in the direction and strength of wind and water currents, (4) flashier precipitation (increases in the intensity of storms and drier periods in between) and river flows, (5) greater variation in annual ice cover/greater water surface evaporation/larger lake effect snow events, and (6) greater variations in lake levels. Reconstruction of the detention basin and the outlet stream work does not affect climate change. The impacts from conducting the proposed work on any measurable climate change criteria are considered minimal and insignificant.

6.10 Coastal Resources: Pursuant to the Coastal Zone Management Act of 1972, the USACE determined that the project would be undertaken consistent to the maximum extent practicable with the enforceable policies of the approved State of Minnesota Coastal Zone Management Program. Early coordination was sent to the coastal program manager on April 9, 2021. No response has been received to date. The project

will not impact lands designated under the Coastal Barrier Resources Act (CBRA PL 97-348) located in Minnesota.

6.11 Contaminants: The work at the detention basin will require excavation for berm height expansion, armor stone placement and excavation in the floodplain. The excavated material that is not used for berm construction will be piled on city property away from the lake, analyzed according to ASTM standards and be disposed consistent with state and federal requirements. The proposed work will not have any impact or effect on contaminated sediments. The excavated sediment pile will be managed to minimize dust, if required. Therefore, the reconstruction of the detention basin and outlet channel does not cause substantial changes or significant new circumstances in relation to contaminants, or hazardous, toxic, or radioactive waste (HTRW).

6.12 Cultural Resources: The USACE has preliminarily determined that no above-ground cultural resources that are eligible for or listed on the National Register of Historic Places would be affected by this project. Because the immediate project area for the extension of the basin is unlikely to contain intact soils there is low potential that the extension will impact archeological resources. However, USACE is requiring that the city conduct a Phase I Archeological Survey of the proposed excavation areas adjacent to the outlet drain where the bank will be cut back to determine whether these areas have potential to contain archeological material. Following the conclusion of the survey, both SHPO and Tribes with known interest in the area will be consulted under Section 106 of the National Historic Preservation Act.

6.13 Exotic and Invasive Species: Presently, over 180 species of non-native plants, animals, and other organisms exist in the Lake Superior watershed. Only about 15% of them are invasive in the technical sense. Some non-natives can persist without becoming invasive simply living among native species almost unnoticed. The concern is with those non-natives that overwhelm native species. Boaters moving from the coastal waters of the Great Lakes to inland lakes, rivers and wetlands increase the risk of transferring aquatic invasive species. Some of the more aggressive invasive species include giant reed grass, reed canary grass, purple loosestrife, Eurasian milfoil, and glossy buckthorn. Rock revetments and riprap provide habitat for the invasive exotic zebra and quagga mussels. The round goby, Eurasian ruffe and the spiny water flea are also exotic species of concern. Reseeding of disturbed earth areas will minimize establishment of invasive plants. Rock riprap provides little habitat for the invasive species. The proposed work would have little, short-term, long-term or cumulative effects on exotic or invasive species and is considered insignificant.

6.14 Farmlands: The site contains no farmlands and therefore the project would have no effect on farmlands.

6.15 Federally Listed Threatened and Endangered Species: Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the USACE requested a species list through the US Fish and Wildlife Service Information for Planning and Consultation

(IPaC) program online database. Based on the species list for the specific work area in Cook County, MN, dated December 2021, three (3) federally listed species are located in the county. The USACE determined that the recommended plan will have “no effect” on the Canadian lynx or Canada lynx critical habitat nor affect the piping plover. Under Rule 4(d) the USACE determined that the project “may affect but not likely to adversely affect” the northern long eared bat. Approximately 50 trees greater than 3 inches dbh will be removed for expansion of the basin and outlet channel work but all trees will be cut outside of the June/July time frame and the proposed work consistent with Rule 4(d). On December 2, 2021, the USFWS responded in an email and concluded the project may affect but is not likely to adversely affect the Canada lynx and the piping plover and will have no effect on Canada lynx critical habitat. The project is consistent with Rule 4(d) and may affect but not likely to adversely affect the northern long eared bat.

6.16 Floodplain and Hydrology: The proposed action complies with the Federal Executive Order on Flood Plain Management (E.O. 11988) because there is no practicable alternative to construction in the floodplain. The proposed project would not impact flood stages, would not encourage floodplain development, nor have an effect on the floodplain. Construction of the proposed project expands the floodplain and has no measurable impacts to the area’s hydrology.

6.17 Groundwater and Drinking Water Supply: Grand Marais residents receive their water from Lake Superior. No drinking water intakes are in the immediate work area. The project will have no effect on the groundwater or on drinking water intakes or supply.

6.18 Health and Safety: Construction will be conducted consistent with state health and safety requirement. The project will not impact the health and safety of the surrounding neighboring area.

6.19 Noise and Traffic: Temporary and minor noise would occur from the presence and operation of heavy machinery on land and from the trucks hauling materials to and from the construction site. The disturbances would not be significant or long-term. Construction activities will comply with local noise requirements. Any traffic disruptions, if required near the campgrounds and adjacent marina, would be temporary and short-term. Construction work hours are regulated by the city and the work will be under city contract. Impacts from construction are considered minimal and insignificant.

6.20 Recreation: Grand Marais exists as a coastal city at the northeastern tip of Minnesota. Many people come to the area for view of the rock outcroppings or seeking the adventure of exploring the nearby national forest area by hiking, biking, kayaking and in the winter for cross country skiing, snowmobiling and dog sledding on miles of trails. The stream outlet channel to Lake Superior travels through a campground located at the shoreline. Some channel stream work will take place in the campgrounds to stabilize small sections, remove invasive species and minor stabilization work at the road crossings. The reconstruction of the detention basin will not result in impacts to

recreational activities in the area during construction.

6.21 Social Setting/Environmental Justice: The City of Grand Marais owns the lands where the work will occur. No residents will require relocation as a result of the project. The project would have very minor short-term and minimal effects in the long term.

6.22 Wetlands: The man-made detention basin maintains a permanent pool that may develop into a wetland, further assisting in the removal of nutrients and sediments from aquatic plant uptake. The site is not located within a wetland complex. The project would have no effect on any nearby wetlands.

6.23 Wildlife Habitat and Wildlife: The detention basin located in an urban area provides little wildlife habitat for other than small mammals and birds. The proposed construction will temporarily displace urban birds, but the impacts are considered short-term, minimal, and insignificant.

6.24 Cumulative Impacts: The proposed work and upgrades will have minimal measurable impact on the environment. Implementation of this project is not anticipated to cause significant cumulative impacts to Grand Marais or the surrounding vicinity.

6.25 The summary of potential effects are found in Table 1.

Table 1: Summary of Potential Effects of the Recommended Plan

	Minimal and Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic Habitat, Fisheries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean Water Act Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate Change	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Coastal Zone Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contaminant Consideration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Exotic/Invasive/Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Federally Listed Species (T&E)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Groundwater Drinking Water	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Minimal and Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Health and Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic, Noise and Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Social Setting/ Environmental Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wildlife/Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7.0 STATE AND FEDERAL AGENCY COORDINATION

7.1 During early coordination, the USEPA responded that the reconstruction of a stormwater detention basin was a modest project and they would not be responding. No other comments were received in response to early coordination.

8.0 MAJOR FINDINGS AND CONCLUSIONS

8.1 The proposed project has been reviewed pursuant to the following Acts and Executive Orders: Fish and Wildlife Act of 1956; Fish and Wildlife Coordination Act of 1958; National Historic Preservation Act of 1966; National Environmental Policy Act of 1969; the Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508); the Corps of Engineers, Policy and Procedure for Implementing NEPA (33 CFR Part 230), Clean Air Act of 1970; Executive Order 11593, Protection and Enhancement of the Cultural Environment, May 1971; Coastal Zone Management Act of 1972; Endangered Species Act of 1973; Clean Water Act of 1977; Coastal Barrier Resources Act (CBRA) of 1982; Executive Order 11988, Flood Plain Management, May 1977; Executive Order 11990, Wetland Protection, May 1977, Executive Order 12898 Environmental Justice, February 1994; Executive Order 13653, Preparing the United States for the Impacts of Climate Change, November 2013.

8.2 This Environmental Assessment (EA) and Section 404(b)(1) evaluation concludes that the proposed project is in compliance with the acts and executive orders listed above. The USACE's preliminary environmental analysis indicates that implementing the recommended plan would not result in significant cumulative or long-term adverse environmental effects. The project would cause no or insignificant minor adverse impacts to natural resources, would not adversely impact navigation, water quality, cultural/historic resources, federally listed endangered or threatened species and their habitat, nor be injurious to the public interest. Adverse effects would be minor, limited

primarily to short-term noise and air emissions from construction equipment operation.

9.0 PUBLIC REVIEW

9.1 Electronic copies of this EA and Section 401(b)(1) evaluation are being made available to federal, state, and local agencies, Tribes, stakeholders, interested groups, and individuals. The USACE is soliciting comments from the public to consider and evaluate the impacts of the proposed activity for a 30-day review and comment period. Any person who has a concern/interest or has historical/cultural interests that may be affected by the proposed project may submit written comments within the comment period of this notice. Comments must clearly set forth what interest may be affected by the proposed activity and how the action significantly affects the quality of the human environment. If no comments are received by the end of the thirty (30) day review period, it will be assumed that no comments are forthcoming. Because of the COVID-19 virus, comments need to be submitted by email to:

LRE-GrandMarais-MN@usace.army.mil.

All comments received will be taken under consideration, as applicable.

9.2 Following the comment period and a review of the comments received, the USACE Detroit District Engineer will make a final decision regarding the necessity of preparing an Environmental Impact Statement (EIS) for the proposed project. Based on the preliminary conclusions of the EA and 404(b)(1) Evaluation, early coordination with other Federal and State agencies and Tribes, it appears that implementing the recommended plan would not significantly affect the quality of the human environment. Therefore, preparation of an EIS is tentatively not required. As such, a preliminary Finding of No Significant Impact is included in the EA.

APPENDIX A
FIGURES AND PLANS

APPLICABLE SPECIFICATIONS

APPLICABLE AND NOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2013 EDITION, GOVERN THIS PROJECT

**TECHNICAL SERVICE AREA III
IN COOPERATION WITH
COOK SWCD
SOIL AND WATER CONSERVATION DISTRICT
8TH AVENUE WEST STORMWATER
COOK COUNTY, MINNESOTA**

DRAWING NOTES

COORDINATES ARE IN UTM ZONE 19N COORDINATE SYSTEM, AND ELEVATIONS ARE IN NAVD 83 DATUM.

ALL EARTHWORK QUANTITIES ARE CALCULATED AS IN PLACE QUANTITIES. ANY CONSTRUCTION RELATED EXPANSION OR CONTRACTION IN EARTH WORK QUANTITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

EXISTING UTILITIES SHOWN ON THE PLANS ARE UTILITY QUALITY LEVEL 0.

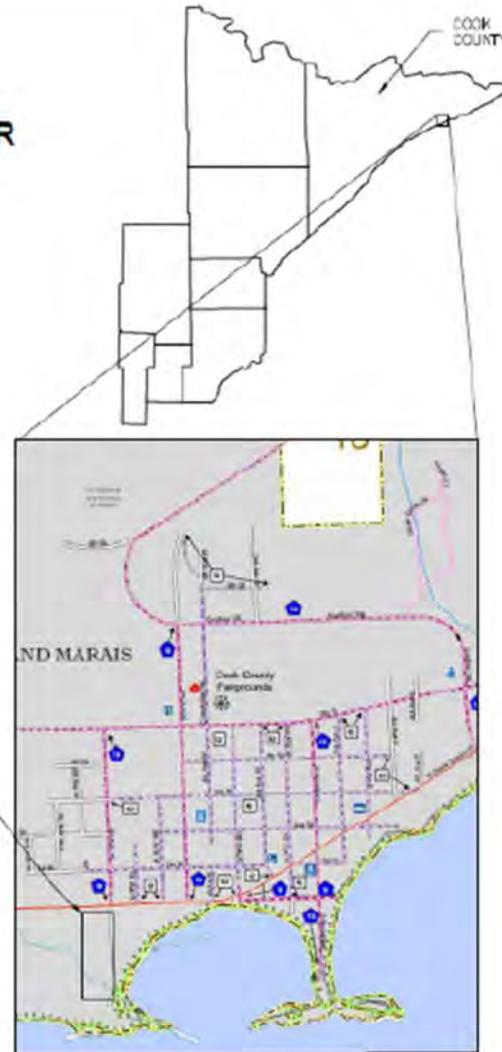
BEFORE THE START OF CONSTRUCTION THE OWNERS OF ANY UTILITIES MUST BE NOTIFIED. THE EXCAVATOR IS RESPONSIBLE FOR GIVING THIS NOTICE BY CALLING "Gopher State One Call" AT (800) 251-1861 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

CHANGES IN THE DRAWINGS OR SPECIFICATIONS MUST BE AUTHORIZED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING LOCAL, STATE, AND FEDERAL PERMITS OR OTHER PERMISSION NECESSARY TO PERFORM THE WORK. HAVE BEEN OBTAINED.

DRAWING INDEX

- 1 - TITLE
- 2 - OVERVIEW
- 3 - PLAN + PROFILE VIEWS
- 4 - FORESBAY DETAILS
- 5 - MAIN POND DETAILS
- 6 - RISER DETAILS
- 7 - EMERGENCY OVERFLOW
- 8 - MAINTENANCE ACCESS
- 9 - BERM RAISE DETAILS
- 10 - OUTLET PROTECTION PLAN
- 11 - OUTLET PROTECTION DETAIL



PROJECT
LOCATION
8TH AVENUE WEST
STORMWATER

LOCATION MAP

NOT TO SCALE
8TH AVE W, GRAND
MARAIS, MN 55604
COOK COUNTY
UTM: E: 2293482.3230'
N: 12361166.7460'

Figure 1. City of Grand Marais on Lake Superior and Project Location

(8th Ave) Stormwater Conveyance System Reconstruction

Project Specific Map Area Expansion- Grand Marais, Minnesota - Lake Superior

Updated 05/06/2021

Legend

- Project area for redesign
 - Current stormwater pond to be redesigned
 - Stream line - larger stream
 - Stream line - smaller stream
 - Project area for redesign 1st expansion
 - Project area for redesign 2nd expansion
- North ↑

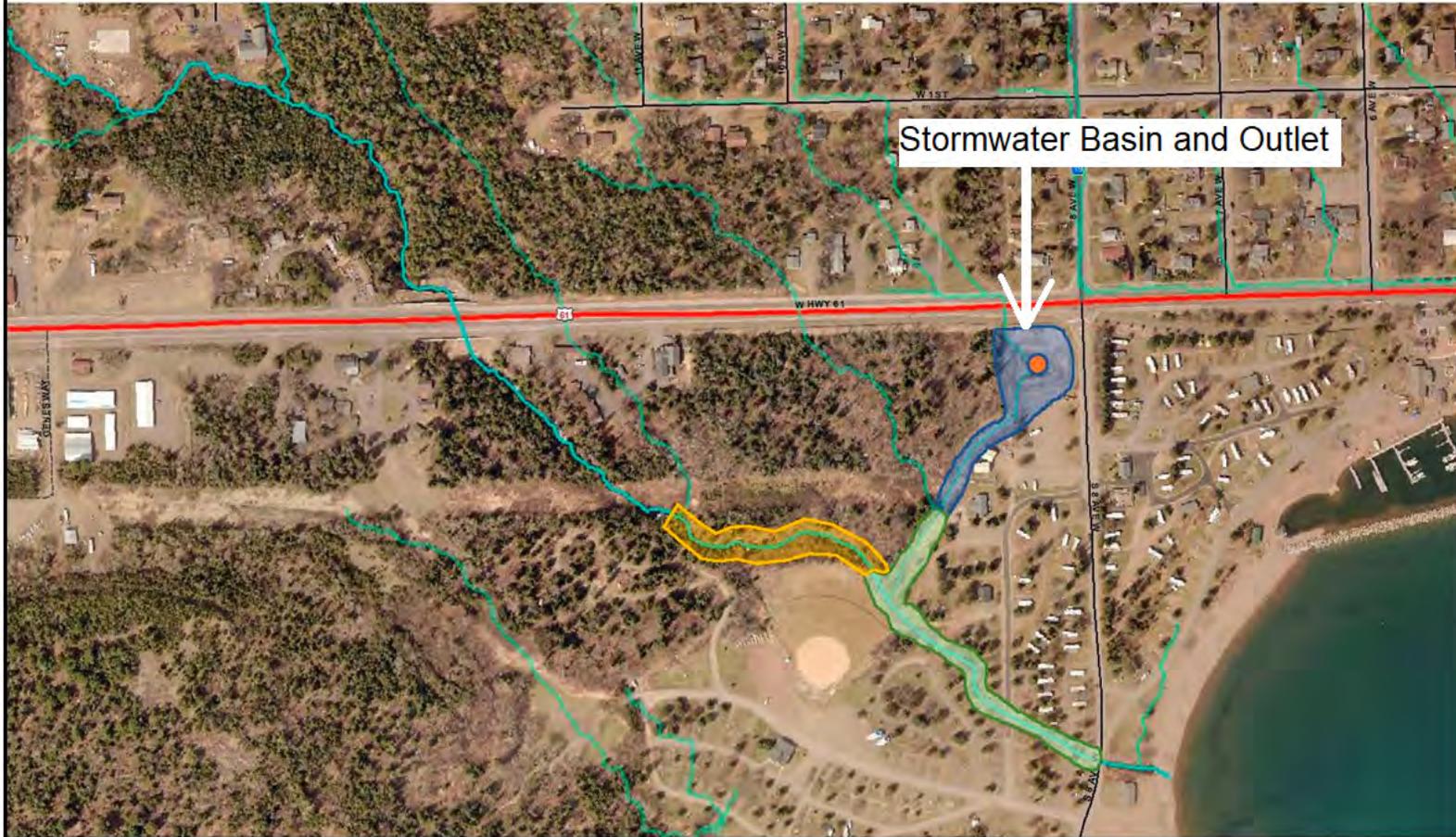


Figure 2. Stormwater Detention Basin and Outlet Channels

APPENDIX B

SECTION 404(b)(1) EVALUATION

CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION
Of the Effects of Placing Fill Material
into the Waters of the United States

I. PROJECT DESCRIPTION:

a. Project Location, Description, and Authority: Grand Marais is located in northern Minnesota, Cook County, on the shoreline of Lake Superior south of the Canadian/U.S. border east of the Superior National Forest. Outside of town, the surrounding area is mainly forest with miles of trails (Superior and Pincushion Mountain) for enjoyment for both summer and winter sports.

The recommended plan has four (4) main components being: 1) expansion in size of the existing basin by 0.6 acre-feet (AF) from 0.7 AF to 1.3 AF through the raising of berms around the 10,500 square foot (ft²) existing basin to increase the basin size to 12,000 ft², with emergency overflow at 637.6' NGVD 88; 2) installation of a 2,180 ft² sediment settling forebay at the lowest elevation with a total area of 3,600 ft² at control berm top elevation 3) construction of an armored emergency overflow weir and 4) create a two stage flood control channel by removing some of the old spoil berms from about 710 feet of tributary and outlet channel to increase the floodplain in the outlet channels to decrease velocity, placing erosion control blankets on reconstructed or graded banks and placing riprap on selected tight bends in the outlet stream. Construction activities within the basin result in the creation of a permanent pool within the stormwater basin of approximately 3,850 ft² at the invert drop pipe elevation of 631.5' NGVD 88. Expansion of the basin requires approximately 400 CYD cut and 140 CYD fill, the berm and overflow work involves 360 CYD fill and 60 CYD cut, installation of the outlet pipe requires 550 CYD cut and 520 CYD for trench backfill, placement of 50 CYD riprap, and the outlet channel bank work requires 300 CYD cut and 15 CYD fill along the western tributary and 60 CYD cut and 40 CYD fill for the remaining channel.

The proposed expansion of the stormwater detention basin is to provide additional storage capacity to increase settling time and widening the floodplain to slow discharge velocities in the outlet stream channel to reduce sediment erosion during discharge events. The expansion of the stormwater detention basin is to meet stormwater retention times for stormwater management consistent with the Clean Water Act requirements.

The USACE will provide cost reimbursement up to 75% pursuant to Section 569 of the Water Resources Development Act of 1999, Public Law 106-53, as amended.

b. Description of Disposal Methods: The construction sequence consists of excavation of the detention basin pond, installation of the armored sediment forebay, raising the berm around the detention basin, installation of the outlet pipe and streambank

excavation to increase the floodplain. All excavated materials will be stockpiled on site, tested according to ASTM standards and disposed according to federal and state regulations. Concurrent with the basin excavation, the outlet channel floodplain will be excavated with some of the excavated materials leveled adjacent the drain and seeded. Any soil (non-rock) material excavated that does not remain on site will be added to the stockpiled materials.

c. Description of Habitat: The 10,000 ft² basin contains a small permanent standing water pool which will be excavated to create a larger 3,850 ft² permanent pool at design height. Any aquatic invertebrates or plant material in the existing basin will be removed. After reconstruction, the newly created and larger aquatic habitat will be re-colonized by invertebrates and aquatic plants in the permanent water area of the basin. Trees surrounding the basin will be cut, the stumps removed and the berm increased in height to provide additional storage capacity. The berm will be stabilized. The rock in the forebay that has permanent inundation will provide hard substrate for colonization by invertebrate species. The excavation adjacent the outlet channel will remove some open field habitat but the excavated area will be stabilized and provide small mammal habitat. The outlet stream channels will be excavated to create a two stage outlet channel in selected areas providing additional floodplain. The existing stream outlet is intermittent in flow and the bed in the outlet channel contains grasses and some gravel and cobble. The new outlet channel will retain the streambed characteristics.

II. FACTUAL DETERMINATION

a. Physical Substrate Determinations: Cook County has a diversity of parent materials, mainly as a result of the repeated glaciations in the region. Within the existing basin, a sediment forebay will be installed to assist in the removal of larger sediment particles in the stormwater. The berm surrounding the basin will be raised resulting in an increase of storage volume from approximately 0.6 acre feet (AF) to 1.3 AF and an expansion in the size of the basin from 10,000 ft² to 12,000 ft². The outlet channel floodplain will be increased in selected areas by removing about 360 CYD of soils from the streambank to create a two stage outlet channel and the placement of about 55 CYD fill in about 710 feet of outlet channel areas and minor streambed excavation within 100 feet of the 710 foot work area. The outlet stream is intermittent and has grassed streambed with some areas of gravel and rock

b. Water Circulation, Fluctuation, and Salinity Determinations: No adverse effects. The Lake Superior littoral drift is not affected by the reconstruction of the sediment basin.

c. Suspended Particulate/Turbidity Determinations: The project will result in the capture of additional sediments and nutrients within the detention basin and the construction of the two-stage outlet channel will result in reduced discharge velocity and reduce erosion and scour. Raw earth areas resulting from construction activities will be stabilized. Any turbidity effects would dissipate over a short time and distance from the work area and would not have significant short-term or long-term effects to the receiving

waters.

d. Contaminant Determinations: Clean rock will be used for armor stone. Any soil material excavated in the basin will be stockpiled and tested according to ASTM standards and disposed according to federal and state regulations. Some of the floodplain material excavated to create the two-stage floodplain will be side cast, leveled and stabilized into the existing ditch berm.

e. Aquatic Ecosystem and Organism Determinations: Reconstruction of the detention basin and the outlet channel outlined in the EA would temporarily disrupt existing aquatic habitat in the detention basin and outlet channel where excavation will take place and where the placement of the armor stone is proposed for the forebay and outlet. Public interest factors of environmental benefits, and fish and wildlife are found in 33 CFR 320.4 (a) *Public Interest Review*. The probable impacts have been identified, and the intended use on the public interest. The benefits which reasonably may be expected to accrue from the proposal must be balanced against the reasonably foreseeable detriments. Further, since fill is proposed into waters of the U.S., the project must comply with the U.S. EPA 404(b)(1) guidelines. There is a public interest in the reconstruction of stormwater detention basin as determined by Congress and the USACE to maintain water quality of discharged stormwater consistent with the CWA.

f. Federally Listed Species: The northern long eared bat is a Federally-listed “threatened” species that may be present in the immediate work area. Tree cutting may affect but is not likely to adversely affect the northern long-eared bat as actions will be consistent with USFWS Rule 4(d). The USFWS concluded reconstruction may affect but not likely to adversely affect the Canada lynx or the piping plover and will have “no effect” on the Federally listed Canada lynx critical habitat as the urban nature of the area minimizes the likelihood of suitable habitat for the Canada lynx.

g. Proposed Disposal Site Determinations: No significant adverse impacts on municipal or private water supplies, recreational or commercial fisheries, water related recreation, aesthetics, parks, monuments, wilderness areas, research sites, or similar preserves are expected.

h. Determination of Cumulative and Secondary Effects on the Aquatic Ecosystem: No significant cumulative or secondary impacts are expected to occur from the reconstruction project.

III. FINDING OF COMPLIANCE

No significant adaptations of the guidelines were made relative to this evaluation. The proposed work would not violate applicable water quality standards; nor would it result in significant adverse effects on human health and welfare, aquatic life, or other wildlife dependent on the aquatic ecosystem, nor on the diversity, productivity, and stability of the aquatic ecosystem. No significant adverse effects are likely to Federally listed threatened or endangered or candidate species are known to be present in the

immediate work area. Therefore, implementing the proposed construction will have minimal and insignificant effect on the Federally-listed T&E species.

The stone/rock to armor the basin and outlet will be clean and debris free. Raw earth areas will be seeded or blanketed to minimize erosion once excavation has been completed. Use of these materials would not violate the Toxic Effluent Standards of Section 307 of the CWA. The proposed project would be in compliance with the Marine Protection Restoration and Sanctuary Act of 1972 as no designated sanctuaries exist within the project vicinity. The excavated materials not re-used on site will be stockpiled and tested to determine contaminant status for appropriate placement consistent with federal and state requirements,

Appropriate steps taken to minimize adverse effects on the aquatic ecosystem include soil erosion control on the uplands to ensure protection of natural resources, use of suitable fill materials, and coordination with the State of Minnesota for compliance with state water quality standards and for consistency with state coastal policies. In-water construction would not commence until the state certifies, or waives, compliance with state water quality standards and all applicable state and federal authorizations have been obtained.

On the basis of the *Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (40 CFR part 230), it has been determined that the proposed action is in compliance with Section 404 of the Clean Water Act. No mitigation or compensation for loss of the aquatic habitat is anticipated from the state and Federal regulatory agencies.