PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT
NORTH BREAKWATER REPAIR AT
LEXINGTON HARBOR, VILLAGE OF LEXINGTON, SANILAC COUNTY, MICHIGAN

November 2025

U.S. Army Engineer District, Detroit
Corps of Engineers, CELRE-PDL-E
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Preliminary Finding of No Significant Impact
North Breakwater Repair at Lexington Harbor, Village of Lexington, Sanilac County, Michigan

The U.S. Army Corps of Engineers (USACE), Detroit District, has completed an environmental analysis in accordance with the Department of Defense National Environmental Policy Act Implementing Procedures. The Environmental Assessment (EA) and a Public Notice (dated November 2025) address the environmental consequences of repair of the north breakwater at Lexington Harbor, Village of Lexington, Sanilac County, Michigan. This project is authorized under the USACE operations and maintenance authority.

The EA analysis, incorporated herein by reference, evaluated various project alternatives for the north breakwater repair: Alternative 1, “No Action”, Alterative 2 Steel Cutoff Wall, Alternative 3, Reconstruction, and Alternative 4, Grout Curtain wall with dredging and dredged material placement at an unrestricted upland site located in the village. The preliminary selected alternative and tentatively recommended plan is Alternative 4, which is the least impacting alternative meeting the project design criteria as discussed in the EA which minimizes intrusion into the waters and costs associated with Alternatives 2 and 3. All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the preliminary selected alternative and tentatively 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 tentatively recommended plan. A summary of potential effects of implementing the tentatively recommended plan is listed in Table 1.

Table 1: Summary of Potential Effects of Implementing the Tentatively Recommended Plan	Minimal and Insignificant effects	Insignificant effects with mitigation	Resource unaffected by action
Air quality	☒	☐	☐
Aquatic Habitat, Fisheries	☐	☐	☒
Changing Conditions	☐	☐	☒
Clean Water Act Evaluation	☒	☐	☐
Coastal Zone Management Act	☒	☐	☐
Contaminant Consideration	☐	☐	☒
Cultural Resources	☐	☐	☒
Exotic/Invasive/Species	☐	☐	☒

Table 1: Summary of Potential Effects of Implementing the Tentatively Recommended Plan	Minimal and Insignificant effects	Insignificant effects with mitigation	Resource unaffected by action
Farmland	☐	☐	☒
Federally Listed Species (T&E)	☒	☐	☐
Floodplains	☐	☐	☒
Groundwater Drinking Water	☐	☐	☒
Health and Safety	☐	☐	☒
Traffic, Noise and Aesthetics	☒	☐	☐
Physical Setting	☐	☐	☒
Recreation and Socioeconomic Conditions	☒	☐	☐
Water Quality	☒	☐	☐
Wetlands	☐	☐	☒
Wildlife/Habitat	☒	☐	☐

Public review of the Finding of No Significant Impact (FONSI) and EA was initiated on November 2025. All comments submitted during the public review period will be considered and responded to, as appropriate.

Pursuant to Section 7 of the Endangered Species Act of 1973, the USACE determined that implementing the tentatively recommended plan will have no effect on the monarch butterfly, piping plover and rufa red knot. The project may affect but is not likely to adversely affect (NLAA) the Indiana bat and the eastern massasauga rattlesnake. The U.S. Fish and Wildlife Service had 30 days to review and concur or object to this determination; the USACE received no comments.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the USACE has determined that there will be no historic properties affected by the proposed breakwater repair undertaking. The USACE's determination was submitted to federally recognized Tribes that have expressed interest in undertakings occurring in Sanilac County on April 8, 2025, and the State Historic Preservation Office (SHPO) on May 28, 2025. SHPO concurred with the USACE's determination on June 27, 2025. No comments were received from the Tribes. The upland dredged material placement site was previously disturbed and placement of dredged material at the site will have no impacts to historic properties. The USACE determination was provided to SHPO and tribes on October 29, 2025, for their review and response.

Pursuant to the Coastal Zone Management Act (CZMA) of 1972, a determination of consistency with the State of Michigan's Coastal Management Program (CMP) was

obtained on August 20, 2025. All conditions of the consistency determination shall be implemented in order to minimize adverse impacts to the coastal zone. The project will not impact lands designated under the Coastal Barrier Resources Act (CBRA PL97-348).

A Clean Water Act (CWA) Section 404(b)(1) Guidelines evaluation (40 CFR 230) was not developed for the proposed breakwater repair activities as there will be no fill or discharge into waters of the U.S.

A water quality certification pursuant to Section 401 of the CWA was obtained from the State of Michigan, Department of Environment, Great Lakes and Energy on September 19, 2025, for the proposed breakwater repair project. All conditions of the water quality certification shall be implemented in order to minimize adverse impacts to water quality.

The proposed project complies with the Federal Executive Order on Flood Plain Management (E.O. 11988) because there is no practicable alternative to implementing the proposed project in the lake floodplain. Implementing the project would not cause a harmful interference on adjacent properties, nor increase the risk of flooding or related flood damage, nor encourage floodplain development.

All applicable environmental laws, executive orders, and regulations were considered in evaluation of alternatives and coordination with appropriate agencies undertaken. Implementing the tentatively recommended plan would not result in significant cumulative or long term adverse environmental effects. The project would cause no or insignificant effects to, water quality, cultural/historic/tribal resources, would not adversely impact navigation, water quality, 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 during project implementation activities.

Based on this EA and coordination with other Federal agencies, state agencies and Tribes, and review by my staff, it is my preliminary determination that implementing the tentatively recommended plan would not significantly affect the quality of the human environment. Therefore, preparation of an Environmental Impact Statement (EIS) does not appear to be 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.

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Date Signed

Wallace W. Bandeff
Lieutenant Colonel, U.S. Army
District Engineer

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Environmental Assessment
North Breakwater Repair at Lexington Harbor, Village of Lexington, Sanilac County, Michigan

1.0 INTRODUCTION

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) address the environmental consequences of repair of the North Breakwater in Lexington Harbor, Village of Lexington, Sanilac County, Michigan (Appendix A, Figures 1-2).

2.0 PROJECT AUTHORITY AND HISTORY

The proposed breakwater repair project is being completed pursuant to USACE operations and maintenance authority. The Lexington Harbor Federal Navigation Project was authorized by the Rivers & Harbors Act of 27 October 1965.

The existing navigation project provides for the construction of two offshore breakwaters (north and south), totaling approximately 2,400 feet in length, with provisions for recreational fishing facilities on the main breakwater; an anchorage and maneuver area of approximately 5 acres 8 feet deep; and a flared approach channel 10 feet deep, decreasing to 160 feet in width through the breakwaters (See Appendix A, Figure 2). The harbor services primarily recreational navigation interests.

3.0 PROJECT PURPOSE AND NEED

The north breakwater is permeable and is allowing sand shoaling within the federal navigation channel and waters adjacent the structure (See Appendix A, Figure 3). Voids in the North breakwater are exacerbating sediment infiltration and rate of shoaling within the harbor which are limiting the access to the marina. The scope of this project is to develop an engineeringly feasible, economically viable, and ecologically sound solution to make the existing permeable North breakwater impermeable and eliminate sand infiltration.

4.0 ALTERNATIVES

Various repair alternatives were evaluated by the project design team (PDT) to address the project's purpose and need

4.1 Alternative 1 – No Action (Future Without Project)

The "No Action" alternative assumes that the proposed project would not involve the reconstruction of the authorized federal navigation breakwater and thus no requirement for maintenance to the permeable north breakwater. The "No Action" alternative is not carried forward in this evaluation as maintenance is necessary to reduce future maintenance dredging costs associated with in-filling of the harbor.

4.2 Alternative 2 – Steel Cutoff Wall

The second alternative considered a steel king pile wall on the harbor side of the breakwater. The cutoff wall was proposed between the existing Federal channel and the breakwater structure. The steel king pile cutoff wall was selected as the preferred alternative upon completion of the 35 percent design. However, this option was not pursued due to the negative aesthetic aspects of the steel wall reported by the Village of Lexington. Additionally, project constraints including costs would shorten the length of the cutoff wall alignment so that the entire length of the breakwater would not be protected resulting in continued in-filling but at a reduced rate not meeting project alternatives.

4.3 Alternative 3 – Reconstruction

Reconstructing the existing permeable breakwater with an impermeable center was considered. However, due to the lack of a safe harbor of refuge for floating plants necessary for reconstruction and the cost to transport new structure material to the project site, reconstruction of the existing breakwater is not a viable alternative.

4.4 Alternative 4 – Grout Curtain Wall

The fourth alternative creates a grout curtain wall within the center of the existing breakwater structure along with dredging in areas of the harbor to facilitate the project implementation and future operations and maintenance needs.

5.0 ALTERNATIVE SELECTION AND TENTATIVELY RECOMMENDED PLAN

Alternative 4 was determined to be the least impacting alternative meeting the project's design criteria and therefore is the preliminary selected alternative and tentatively recommended plan, i.e., the proposed action/project. All construction activities will be conducted in accordance with Federal, State, and local regulations and ordinances.

5.1 Cementitious and Solution Grout Overview: Alternative 4 involves altering the existing permeable rubble mound breakwater structure to an impermeable structure. In conjunction with altering the existing structure, the project includes removing and reinstalling the existing structure railing, and demolition and replacement of the structure concrete walkway. The proposed scope of work includes constructing a grout curtain wall within the structure utilizing two grout products. A solution grout is placed within the existing sand layer within the breakwater structure generally below water level. A cementitious grout is then placed above the grouted sand layer within the existing breakwater structure generally above the water line. Grout pipes will be drilled from the top of the breakwater along the walkway on approximately 6 foot spacing. The drilling mixture is contained in a closed system and does not reach the open waters of Lake Huron. The proposed grout curtain wall is composed of solution grout and a cementitious grout material pumped through the drilled grout pipes. The intent of the grout curtain wall is to prevent sand from infiltrating through the breakwater structure. Solution grouting is the process of injecting a reactive solution that behaves as a fluid but reacts after a predetermined time to form a solid, semisolid, or gel. Solution grouting

requires proportioning reacting liquids in an on-line continuous manner.[1] Cementitious grouting involves the suspension of particles in a fluid medium. The distinction between solution and cementitious grouts is arbitrary in that some particulate grouts are made up of suspension of microfine cement with particles generally less than 10 micrometers in diameter, with solution grout particles with diameters of 10 to 15 nanometers. See Appendix A, Figures 5-7 to view the design plans of the proposed grout curtain cutoff wall and associated call outs. For more detailed information on the grouting, see Appendix B.

5.2 Dredging: Dredging may be required in front of existing or future proposed access / transfer area(s) to gain access to work areas. Dredging may be required within areas of the harbor to allow for safe operability/navigation. One possible harbor access /transfer site is the State of Michigan Department of Natural Resources (DNR) boat launch (Appendix A, Figure 4). One possible dredged material placement site is an upland site within the Village at the wastewater treatment plant (WWTP) lagoons (Appendix A, Figure 4).

The environmental impacts associated with maintenance dredging have been previously addressed.[2] The dredged material would be removed from the harbor using mechanical means and methods. Dredged material will be disposed of in accordance with federal and state laws and regulations. The dredged material would be offloaded from barges into watertight trucks at the proposed access / transfer site (Appendix A, Figure 4). The Village-owned WWTP placement site is approximately 2 acres in size and located approximately 1.3 miles northwest of the harbor. The haul route to the WWTP site would likely be west on Boynton Street, north on Michigan 25 (Lake Huron Circle Tour), west on Michigan 90 (Huron Avenue), north on Union Street, and west on Denissen Street (Appendix A, Figure 4). Truck traffic to and from the harbor and placement site will adhere to applicable federal, state, and local laws and ordinances.

The dredged sediments can be placed within the WWTP site as directed by the Village's Department of Public Works staff. The site could also be used for future dredged material placement provided there is sufficient storage capacity at the site. The Village may choose to beneficial re-use the placed dredge material in accordance with applicable permitting requirements. If required, the dredged materials may be dewatered with discharge to the WWTP.

A temporary right of entry for use of the placement site and access / transfer sites will be acquired before project implementation. The Village will be responsible for future operations and maintenance of the proposed placement site. No surface water discharge is anticipated from the placement site.

5.3 Miscellaneous Project Details. Project implementation may require temporary access, staging areas, and / or construction of one or more temporary structures,

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[1] EM 1110-1-3500, "Chemical Grouting", 31 January 1995

[2] Environmental Assessment *Maintenance Dredging and Open Water Disposal for Lexington Harbor, Sanilac County, MI* dated June 1987.

upland or in-water. The type and location of temporary roads, structures, pilings and/or staging areas would be incidental to the work being performed. Examples include turnarounds, work and storage areas, access roads, and office facilities. Temporary roads, structures or staging sites would be at the USACE 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 or eligible for listing on the National Register of Historic Places.

Work activities would include appropriate precautionary measures to prevent erosion and sedimentation or other undesirable environmental effects including cleanup of spilled dredged sediment should it occur. The contractor shall prepare and/or obtain any required erosion and sediment control plans and permits. Erosion control measures such as the use of silt fencing, geo-fabrics, hydroseeding, or various other immediate re-vegetation tactics would be developed and implemented prior to, during and after construction, as needed. Any disturbed areas (with exception of the proposed placement site) or temporary construction sites would be re-vegetated to similar conditions for long-term erosion control or restored as applicable upon project completion unless other arrangements are made with the village.

Some variation from the project 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. It is anticipated that such variations would not result in significant changes to either the overall project design or environmental effects determination of this NEPA document.

6.0 AFFECTED ENVIRONMENT AND ENVIRONMENAL CONSEQUENCES

Impact Summary. Preliminary environmental review indicates that project implementation would not result in any significant cumulative or long-term adverse environmental effects. Adverse effects would be minor, including short-term noise and air emissions from equipment operation. The overall project impacts are summarized in Table 1.

6.1 Physical Setting

Lexington Harbor is located in the Village of Lexington, Sanilac County, Michigan (Appendix A, Figure 1). The recreational harbor has a 108-slip marina operated by the Michigan State Waterways Commission and is located on Lake Huron approximately 20 miles north of Port Huron, Michigan. According to the U.S. Census Bureau, the county has a total area of 1,590 square miles. Implementing the proposed project would not impact the physical setting of the village.

6.2 Weather

According to the U.S. Department of Agriculture (USDA), Lexington falls within the Hardness Zone 6a, which is characterized by an average minimum winter temperature

range of -10°F to -5°F.[3] Lake Huron influences Lexington's weather patterns, causing lake-effect winter snowstorms and summer rainfall. Lexington experiences an annual average precipitation, high temperature, and low temperature of 33.94 inches, 55ºF, and 38ºF, respectively.[4] Implementing the proposed project would not impact the areas weather.

6.3 Land Use

Sanilac County has 963 square miles of land and 627 square miles of water. A significant portion of Sanilac County's land is used for agricultural purposes, with 436,511 acres classified as "land in farms". Of the "land in farms", 92 percent is cropland, 1 percent is pastureland, 4 percent is woodland, and 3 percent is classified as other. The county also has approximately 42 miles of Lake Huron shoreline; consequently, much of the land close to the Lake Huron shoreline is residential. Implementing the proposed project would not impact land use of the county nor village.

6.4 Topography and Soils

The topography in Sanilac County is generally flat, with the highest elevation being 320 meters and the lowest elevation around 178 meters closer to the waters of Lake Huron. Sanilac County soils were formed after the glaciers melted (8,000-20,000 years ago). Organic (Bog) soils can be found within the county and make up about 7 percent of the soils in the area. Besides organic soils, there are several other soil types that are found in Sanilac County, including Adrian soil, loamy sands, and Kalkaska soil. Implementing the proposed project would not impact topography and or soils.

6.5 Air Quality

Under 42 USC 7418(a), the proposed federal activity shall comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of air pollution in the same manner, and to the same extent as any nongovernmental entity. Implementation of the tentatively recommend plan will involve the use of heavy equipment, barges and tugs to move and place materials. Sanilac County meets the National Ambient Air Quality Standards (NAAQS). The diesel construction equipment that may be used to complete the project will produce diesel exhaust but would be required to meet emission standards. The minimal amount of exhaust produced during construction, even considering the duration of the work, will not measurably impact the air quality within Sanilac County. Therefore, based on the emissions discharges, exhaust emissions from the proposed construction activity are exempted as de minimis and therefore meet the General Conformity Criteria pursuant to Section 107 of the Clean Air Act, as amended. The county air quality will not appreciably change with project implementation.

6.6 Aquatic Habitat and Fish

The harbor work area is protected by the breakwater from the open waters of Lake Huron. Breakwater work from the water may use a barge, which would cause a minor

[3] 2023 USDA Plant Hardness Zone Map - https://planthardiness.ars.usda.gov/
[4] U.S. Climate Data Lexington, MI - https://www.usclimatedata.com/climate/lexington/michigan/united-states/usmi1031

temporary impact to fish through barge traffic and noise from construction activities. Any dredging activities associated with the breakwater repair would cause a minor temporary impact to fish and benthic organisms. Fish would tend to avoid the area during construction activities and return after the disturbance is gone. Benthic organisms would repopulate the areas after work disturbances have ended.

Due to presence of an active harbor with boat traffic, fish and aquatic organisms in this area would be typically exposed to disturbances. Fish and other mobile organisms would be capable of leaving the work area and would be expected to do so. Bottom dwelling organisms would be expected in and among shoaled material. Although these habitats would likely be destroyed and / or altered during dredging, no significant or unique fish or aquatic habitat is known to occur at the site of these temporary effects. Benthic organisms such as arthropods, phytoplankton and various insects would largely be disturbed or destroyed in the immediate work area but would re-colonize the site upon completion of the project. The proposed upland placement site has no aquatic organisms nor their habitat that would be disturbed. No significant effects to the fish or aquatic organisms would be expected from project implementation.

6.7 Clean Water and Water Quality

The water quality of Lake Huron is excellent and has sufficient cold water to provide suitable habitat for both cold water and warm water fish species. Several river tributaries are classified as cold-water streams by the Michigan Department of Natural Resources. Dissolved oxygen is near saturation levels based on temperature.

Various natural and human activities create disturbances to the lake bottom, generating turbidity (suspension of fine-grained sediments into the water column) from agitation of bottom sediments. Natural disturbances occur through storm generated wave action which can erode shorelines and cause considerable agitation of the bottom sediments, particularly in shallow areas. Typically, during and for some time after a storm, the water will be cloudy with turbidity. Human generated activities that generate turbidity include construction activities in the water or on the shoreline, including maintenance dredging of navigation channels, and by propeller wash of passing boats. The shoaled material is mostly sand and would produce minimal turbidity. Based on recent sediment sample events and the analysis of the laboratory data, the shoal material within the harbor is suitable for unrestricted upland placement.

The proposed breakwater repair does not discharge dredged or fill material into waters of the U.S.; therefore, a Clean Water Act Section 404(b)(1) evaluation is not warranted. A water quality certification pursuant to Section 401 of the CWA was obtained from the State of Michigan, Department of Environment, Great Lakes and Energy on September 19, 2025, for the proposed breakwater repair project. All conditions of the water quality certification shall be implemented in order to minimize adverse impacts to water quality. No significant adverse impacts on water quality are anticipated from implementing the proposed project breakwater repair.

6.8 Changing Conditions

Global atmospheric 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. The proposed work will not have any measurable effect on the global atmosphere.

Although the actual effects that may occur at any given project site are largely uncertain, some general assumptions can be made based on long-term global trends, which vary between warming and cooling over periods typically measurable in hundreds of years. As we are currently in a warming trend, effects of large-scale warming on weather patterns can be anticipated in general. Modeling of global atmospheric circulation patterns indicate that under a continuing global warming trend, air mass differences would become greater in the Great Lakes and upper Midwest regions during the fall and spring (transition) seasons, with stronger resultant atmospheric disturbances. This suggests future precipitation events in the project region would be more frequent and more intense. As such, there is a possibility that river and stream systems in the Great Lakes region could experience more frequent events of intense rain falling during a short time, which would increase the potential for stream bank erosion, stream sediment loading, and flashiness of flood flows. The summer seasons are anticipated to be hotter and drier in this region over the years to come; less arctic air in the region would mean less winter snowfall

Implementing the proposed project, in conjunction with long-term changing conditions, would not result in adverse effects such as induced flooding or erosion. The impacts from conducting the proposed work are considered minimal and insignificant to changing conditions.

6.9 Coastal Zone Management

The proposed breakwater repair work area is located within the Coastal Zone Management Boundary as indicated by the Michigan Department of Environment, Great Lakes and Energy (EGLE) Coastal Zone Boundary Map for Sanilac County. The USACE reviewed the enforceable polices from the State of Michigan’s Coastal Management Program (CMP) and provided EGLE a list of the policies that appear to be applicable to the proposed project via email June 12, 2025. EGLE concurred with the USACE on June 12, 2025, that three enforceable policies applicable to the proposed project are Parts 31, Water Resources Protection, Part 303 Wetlands Protection, and Part 325, Great Lakes Submerged Lands of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended. The USACE has determined that the proposed project would be undertaken in a manner which is consistent to the maximum extent practicable (as defined in 16 U.S.C. 1456, Coastal Zone Management Act) with the enforceable policies of the approved State of Michigan Coastal

Management Program. The USACE's determination was emailed to the State Federal Consistency Coordinator for review on June 27, 2025. A determination of consistency with the State of Michigan's CMP was obtained on August 20, 2025. All conditions of the consistency determination shall be implemented in order to minimize adverse impacts to the coastal zone. The project will not impact lands designated under the Coastal Barrier Resources Act (CBRA PL97-348).

6.10 Contaminant Consideration

Solution grout and cementitious grout contain substances that are harmful if not administered correctly during project implementation. The construction design and containment measures in the plans and specifications ensure that the grout remains confined with in the breakwater structure and will not pose a risk to the waters of harbor or Lake Huron. Appendix B provides further details on the grouting operations.

A water quality certification pursuant to Section 401 of the CWA was obtained from the State of Michigan, Department of Environment, Great Lakes and Energy on September 19, 2025, for the proposed breakwater repair project. All conditions of the water quality certification shall be implemented in order to minimize adverse impacts to water quality.

It is anticipated that the discharge from the application of the solution grout and cementitious grout shall not have any unnatural physical properties in quantities that are, or may become, injurious to any designated uses of Lake Huron. Any unusual characteristics of the discharge affecting waters of Lake Huron beyond the immediate area of the project site, including turbidity, color, oil film, floating solids, foams, settleable solids, or deposits, shall be reported within 24 hours to the EGLE Bay City District Office, Water Resources Unit Supervisor and investigated, followed by a written report within 10 days detailing the findings of the investigation and steps taken to correct the condition(s).

Based on recent sediment sampling events, the dredged material has been tested in accordance with the Great Lakes Testing Manual and is found to be suitable for unrestricted upland placement.

6.11 Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, USACE has determined that there will be no historic properties affected by the proposed undertaking. The construction of the breakwaters at Lexington Harbor was completed in 1976, thus dating the structures to under 50 years of age. As impacts to above ground structures surrounding the Lexington Harbor will be limited to temporary visual and auditory impacts as a result of construction, the undertaking as proposed will not impact such a property's eligibility for the National Register of Historic Places (NRHP), if one were to exist. Therefore, the USACE has determined that there are no eligible above ground structures within the APE of the proposed undertaking. Similarly, work and storage areas proposed to be used for this project are within areas along the shoreline that have a low potential to contain any archeological or culturally significant items. The USACE's determination of no historic properties affected was submitted to federally recognized Tribes that have expressed interest Undertakings occurring in

Sanilac County on April 8, 2025, and the State Historic Preservation Office (SHPO) on May 28, 2025. The SHPO concurred with the USACE determination on June 27, 2025, and no comments were received from the tribes.

The upland dredged material placement site was previously disturbed and placement of dredged material at the site will have no impacts to historic properties. The USACE determination was provided to SHPO and tribes on October 29, 2025, for their review and response.

6.12 Demographics

Lexington, Michigan has a total population of 1,119 people over 1.4 square miles. The median age in the city is 62, and 52% of the demographic are 18 to 64 years old. The population is 52% female and predominantly white, with 92% of the population being white, 5% being more than one race and ethnicity, and 3% being Hispanic.[5] Project implementation will not impact demographics.

6.13 Exotic and Invasive Species

A variety of invasive exotic plant and animal species have entered the Great Lakes basin and have become established along the Lake Huron shoreline, in some cases displacing native plant species, resulting in diminished wildlife habitat values. Some of the more aggressive invasive plant species include giant reed grass, reed canary grass, purple loosestrife, Eurasian milfoil, and glossy buckthorn. Rock revetments, piers, and breakwaters provide habitat for the invasive exotic animal species including zebra and quagga mussels, round goby, Eurasian ruffe and the spiny water flea. The nearshore waters of Lake Huron provide very limited suitable habitat for exotic plant or animal species with the shifting sandy environment. Exotic species have not been identified as significant species of concern on federal navigation structures. The proposed project will have little short-term, long-term or cumulative effects on exotic or invasive species.

6.14 Farmlands

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The work 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 of Planning and Consultation (IPaC) program online data base on July 17, 2025. Based on the species list for Lexington, five (5) federally listed species were identified as potentially being within the project area. The USACE determined that implementing the tentatively recommended plan will have no effect on the monarch butterfly, piping plover and rufa red knot. The project may affect but is not likely to adversely affect (NLAA) the Indiana bat and the eastern massasauga rattlesnake. No comments were received from the USFWS in the 30-day comment period. No further consultation with the USFWS is

[5] Census Report - https://censusreporter.org/profiles/16000US2647280-lexington-mi/

required unless there are significant changes to the project proposal, site conditions, or Federal listings for the project area.

6.16 Floodplain and Hydrology

The proposed project complies with the Federal Executive Order on Flood Plain Management (E.O. 11988) because there is no practicable alternative to implementing the proposed project in the lake floodplain. Implementing the project would not cause a harmful interference on adjacent properties, nor increase the risk of flooding or related flood damage, nor encourage floodplain development.

6.17 Groundwater and Drinking Water Supply

The Village of Lexington operates and maintains the drinking water system, including the source (Lake Huron), treatment and distribution. No drinking water intakes are in the immediate area of the breakwater or proposed dredging areas. The project will have no effect on the groundwater or on drinking water intakes or supply.

6.18 Healthy and Safety

Project implementation will be conducted consistent with federal and state health and safety requirements. The project will not impact the health and safety of the surrounding area.

6.19 Noise, Traffic, and Aesthetics

Downtown Lexington is located 2 blocks north of the harbor. The vicinity immediately surrounding the harbor is mainly residential and commercial. Noise and aesthetics within the vicinity of the proposed project area is typical of that found in a small to medium sized downtown.

The dredged material would be removed from the harbor using mechanical means and methods. The dredged material would be offloaded from barges into watertight trucks at the proposed access / transfer site (Appendix A, Figure 4). The Village-owned WWTP placement site is approximately 2 acres in size and located approximately 1.3 miles northwest of the harbor.

Approved hauling route(s) would be used and the contractor would abide by local, state, and federal requirements. One such haul route to the WWTP site would likely be west on Boynton Street, north on Michigan 25 (Lake Huron Circle Tour), west on Michigan 90 (Huron Avenue), north on Union Street, and west on Denissen Street (Appendix A, Figure 4). The contractor would be required to coordinate with the local authorities regarding use of access routes and obtain the appropriate permit(s), if necessary.

Use of the proposed upland placement site would result in temporary short-term noise and traffic impacts. The contractor would be required to maintain construction equipment in accordance with manufacturer’s specifications to keep unnecessary noise impacts to a minimum. The contractor will need to obey all local, county, state, and federal traffic laws, regulations, and ordinances.

Breakwater repair, dredging and placement activities would have some short-term effect

on local traffic, but would not have significant effects. Boat traffic in the project area is mostly made up of leisure and recreational crafts. Boat traffic would be restricted in the immediate area of the dredging activities with temporary closure of one or all boat launches in the harbor during heavy construction periods. The temporary truck traffic transporting dredged material from the transfer site to the proposed placement site would cause general traffic in the area to be heavier than normal but would have no long-term effect.

Project implementation would cause temporary and minor noise and vessel disturbances from the presence and operation of heavy equipment from the barge(s) and truck transport. The disturbances would not be significant or long-term. Temporary construction related noise and traffic impacts would end once construction is complete.

6.20 Recreation

Implementing the project may result in the temporary closure/blockage of the opening to Lexington Harbor and associated boat launches, but the expected closure will have minimal appreciable effects on recreational users in the area. Furthermore, if the breakwater construction does not occur, sand will continue to collect inside the harbor, eventually blocking recreational users from entering or exiting the harbor. Sequencing of work may be needed to minimize the temporary disruption of recreational vessel traffic in and out of the harbor. For those viewing the lake from the shoreline, the view from the harbor entrance could be temporarily obstructed during construction activities. Project implementation would not result in significant long-term adverse impacts to the recreational use of the immediate area.

6.21 Socioeconomic Conditions

The Lexington North breakwater structure is located within Lake Huron. No residential structures will be removed or compromised by completion of the proposed work. The structure repairs will increase harbor safety during certain wind events for small craft. The work will have minimal to no long-term impacts to individuals or families. Placement of the dredged material at the upland placement site will have minimal effect on the adjacent property owners.

6.22 Wetlands

The USACE Regulatory staff conducted a wetland assessment around the North breakwater on June 11, 2025. Based on their observations, the determination concluded that no regulated wetland is onsite or in the project vicinity. The USACE wetlands delineation report was forwarded to EGLE on July 17, 2025. No response from EGLE was obtained. Project implementation would not impact wetlands.

6.23 Wildlife Habitat and Wildlife

The breakwater extends into Lake Huron above the ordinary high-water mark (OHWM). On occasion, gulls and waterfowl roost on the breakwater but a resting surface will remain. Any birds using the area will move to adjacent undisturbed lands. Construction would disrupt the limited bird usage on the concrete cap of the structure, as birds would avoid the area because of the noise and activity. The upland placement site is a disturbed land area containing no unique or critical habitats. The impacts to wildlife from

project implementation are considered temporary, minor and insignificant.

6.24 Environmental Effects Summary

The current condition within Lake Huron at Lexington Harbor is a result from past activities and practices and no measurable changes to the overall condition of either of these systems is expected due to project implementation. Since the proposed action provides for safer small craft use within the harbor for ingress/egress, the overall effects are minimal and beneficial to the Lexington Harbor area. There are no reasonably foreseeable future actions within the project area that would result in effects that differ from those already identified within this EA or that would increase the magnitude of the environmental effects. The anticipated specific project impacts associated with implementing the tentatively recommend plan are found in Table 1.

Table 1: Summary of Potential Effects of Implementing the Tentatively Recommended Plan	Minimal and Insignificant effects	Insignificant effects with mitigation	Resource unaffected by action
Air quality	☒	☐	☐
Aquatic Habitat, Fisheries	☐	☐	☒
Changing Conditions	☐	☐	☒
Clean Water Act Evaluation	☒	☐	☐
Coastal Zone Management Act	☒	☐	☐
Contaminant Consideration	☐	☐	☒
Cultural Resources	☐	☐	☒
Exotic/Invasive/Species	☐	☐	☒
Farmland	☐	☐	☒
Federally Listed Species (T&E)	☒	☐	☐
Floodplains	☐	☐	☒
Groundwater Drinking Water	☐	☐	☒
Health and Safety	☐	☐	☒
Traffic, Noise and Aesthetics	☒	☐	☐
Physical Setting	☐	☐	☒
Recreation and Socioeconomic Conditions	☒	☐	☐
Water Quality	☒	☐	☐
Wetlands	☐	☐	☒
Wildlife/Habitat	☒	☐	☐

7.0 STATE AND FEDERAL AGENCY COORDINATION

Coordination occurred with SHPO and the tribes regarding specific details of the breakwater reconstruction and dredged material placement (see paragraph 6.11). Discussions have occurred with EGLE regarding the proposed project (see paragraphs 6.7 and 6.9).

8.0 MAJOR FINDINGS

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; DoD National Environmental Policy Act Implementing Procedures (2025); Clean Air Act of 1970; Farmland Protection Policy Act of 1981; 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, and Wetland Protection, May 1977.

All applicable laws, executive orders, and regulations were considered in evaluation of alternatives and coordination with appropriate agencies undertaken. Implementing the tentatively recommended plan would cause no or insignificant minor adverse impacts to navigation, water quality, federally listed threatened or endangered species and their habitat, nor be injurious to the public interest. The project would not result in significant cumulative or long term adverse environmental effects. Adverse effects would be temporary and minor, limited primarily to short term noise and air emissions from equipment operations during breakwater repair and dredging and placement activities; minor turbidity generated from the dredging operation; temporary displacement of or disturbance to fish at the breakwater and dredging site and wildlife at or near the placement site; destruction of bottom-dwelling organisms within the shoal material to be dredged; and irreversible use of fossil fuels, human labor, and construction materials. Fish and wildlife would return upon completion of the activities and the harbor sediment are expected to be re-colonized by bottom-dwelling organisms to the degree it provides suitable habitat. The proposed action would allow for continued, safer navigation of the Lexington Harbor navigation project.

9.0 PUBLIC REVIEW

Electronic copies of this EA are made available to the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, the State of Michigan, tribes, local agencies, stakeholders, and interested groups and individuals 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. Please provide all comments by email to: LRE-OPMAINT@usace.army.mil. Refer to file 2023-005 LBW.

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

Following the comment period and a review of the comments received by the USACE, the District Engineer (Detroit District, USACE) 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 EIS will not be required; therefore, a preliminary Finding of No Significant Impact has been included in the EA.

Appendix A

Figures and Photographs

FIGURE 1. PROJECT SITE LOCATION

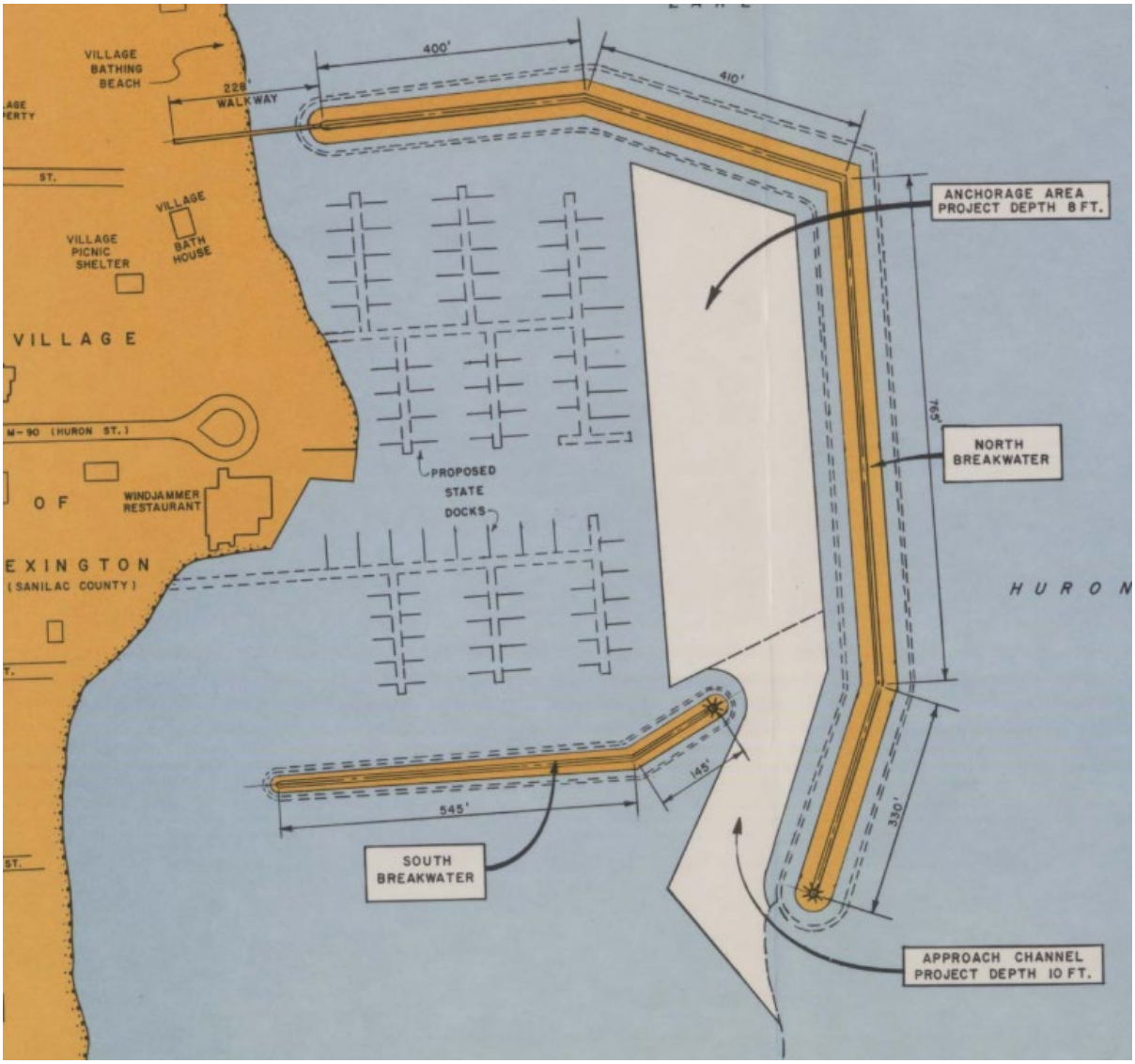
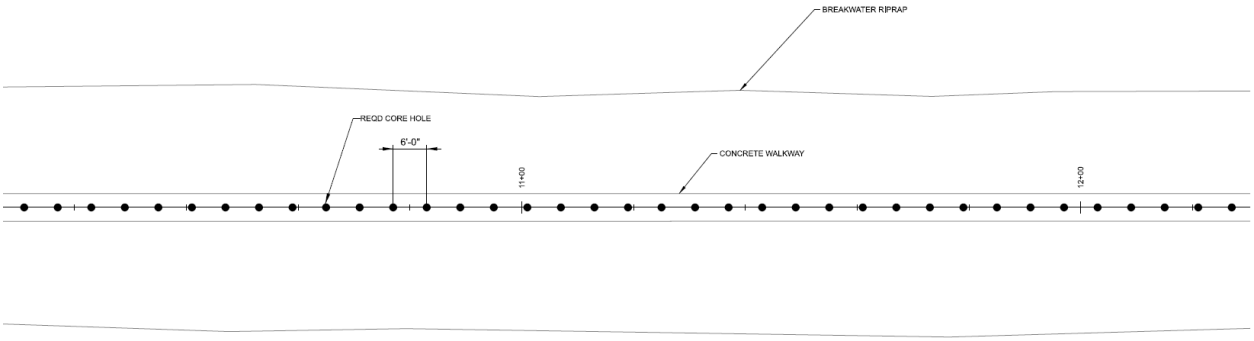


FIGURE 2. LEXINGTON HARBOR PROJECT MAP

FIGURE 3. SEDIMENT INFILTRATION THROUGH LEXINGTON NORTH BREAKWATER

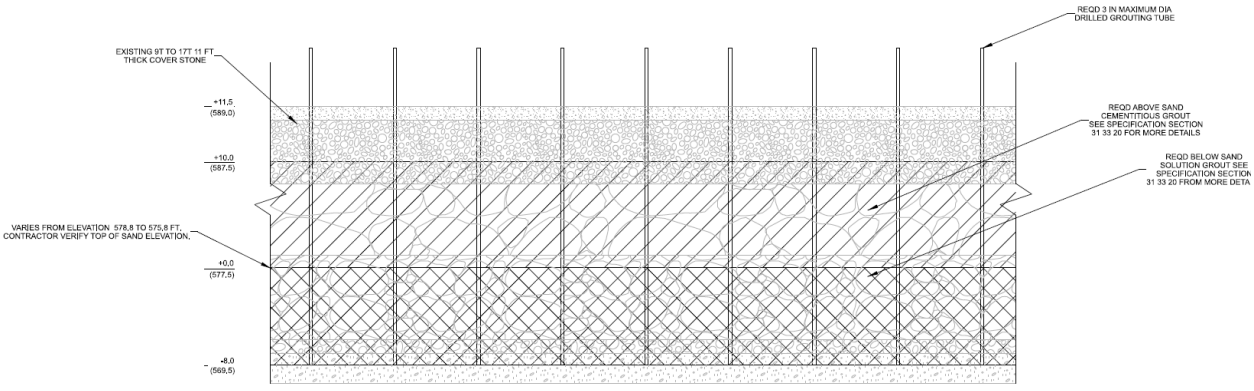
FIGURE 4. LEXINGTON HARBOR: DNR BOAT LAUNCH TRANSFER/ACCESS SITE, PARKING/STAGING AREAS, HAUL ROUTE TO THE UPLAND DREDGED MATERIAL PLACEMENT SITE AT THE WWTP (LAGOON) SITE.



REQUIRED GROUTING ALIGNMENT

SCALE: 1" = 10'

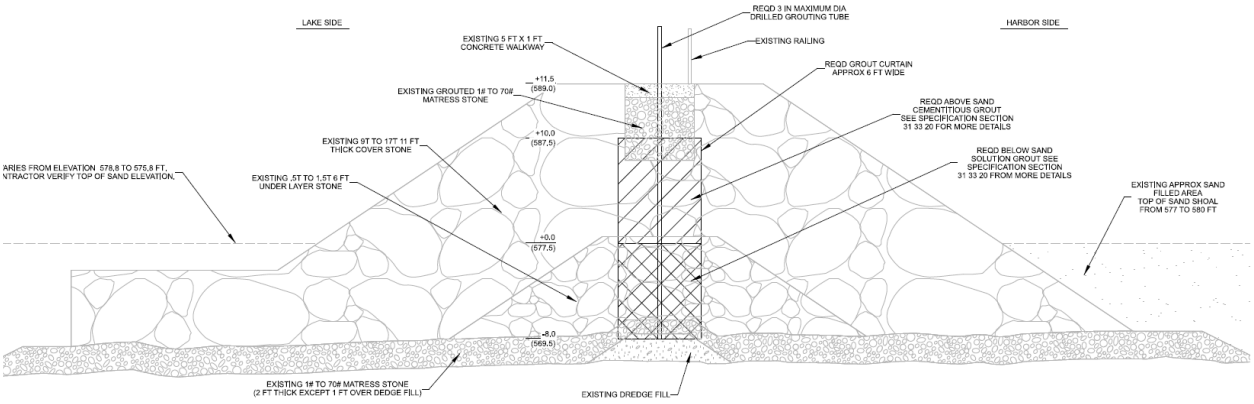
FIGURE 5. PROJECT PLAN – REQUIRED GROUTING ALIGNMENT



REQUIRED NORTH BREAKWATER PROFILE STA 9+00 TO STA 17+50

SCALE: 1/4" = 1'

FIGURE 6. PROJECT PLANS – NORTH BREAKWATER PROFILE



REQUIRED NORTH BREAKWATER CROSS SECTION STA 17+50 TO STA 19+05

SCALE: 1/4" = 1'

FIGURE 7. PROJECT PLANS – NORTH BREAKWATER CROSS SECTION

Appendix B

Grouting Details

Grout Tube Drilling Operations

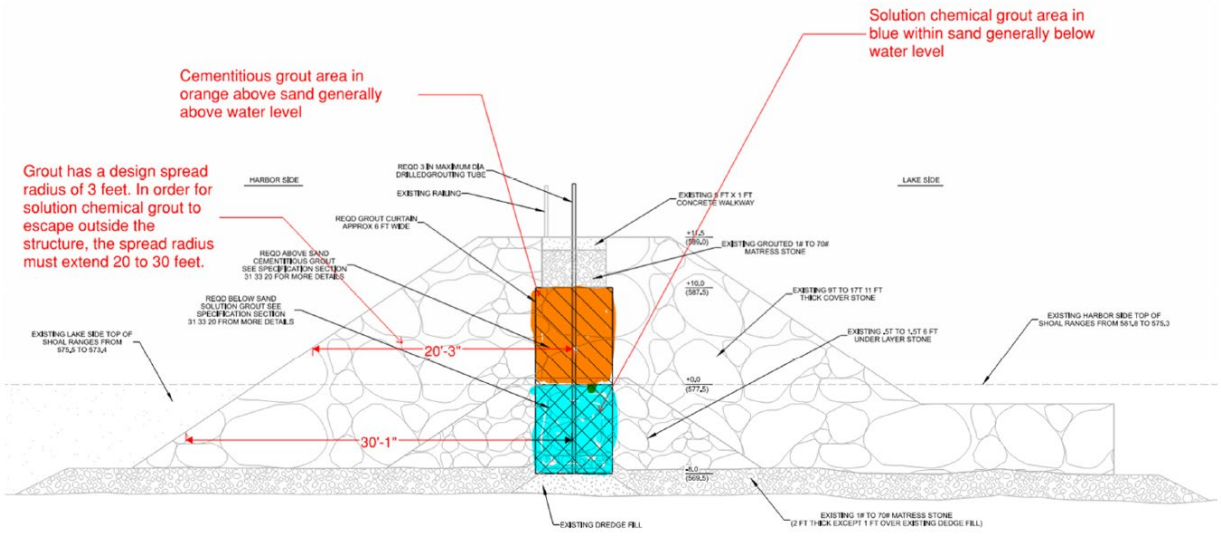
Drilling within the existing breakwater structure is composed of the following operations:

• The circulated water during drilling operations carries the rock cuttings (small pieces of rock ground by the drill bit) up the annulus.
• The continuous circulated water in a closed system prevents the borehole from clogging and ensures continuous drilling progress.
• Circulated water will be collected and disposed of no water will be released into the harbor or the lake.

Solution Grout Performance

Performance of the solution grout will be influenced by site conditions, primarily site temperatures. If site temperatures are low, the product will be heated to a recommended operating temperature range of 60°F – 100°F (16°C – 38°C). A demonstration section will be used to confirm appropriate gel times are achieved. Besides temperature, decreasing pH and high minerals/metals content can adversely affect gel time, but neither of these are a concern for the waters of Lake Huron, which tend to be slightly alkaline (generally pH of 8.0 to 8.5) and are low in dissolved minerals and metals.

The grout would cure and stop spreading approximately at the edges of the 6-foot-wide design width of the grout curtain. As shown below, the width of the breakwater provides a significant margin of safety, that would prevent grout from entering the waterway.



Solution Grout Material Selection

Polyacrylamide is the more suitable application based on the site and soil conditions. Polyurethane is typically used to fill larger voids due to its expansive nature. Polyacrylamide can be more resistant to freeze/thaw cycling.

Solution Grout Proportion Testing

The contractor will use the manufacturer's test results to establish the recommended mix ratio for the needed working times/gel times of the mix.

Field Test: Before grouting, a "cup test" will be performed. A cup tests consists of using two (2) disposable cups, filling one cup 25% full of acrylamide and catalyst solution, and the other cup 25% full of water and catalyst solution. Using a watch with a second hand or stopwatch, track the time required for the solutions to gel – or cure - as you mix the water catalyst solution into the acrylamide catalyst, gently stirring the mixed solution. The normal gel time at 72°F should be approximately 30-40 seconds for a standard batch at a ~10% grout concentration. Higher concentrations will cure marginally faster.

Monitor the grout performance as it is applied and make adjustments, if needed. Given that the water temperature will not vary much throughout the construction period, we do not anticipate the need for adjustment, but periodic evaluations by the cup test will ensure the mix remains optimized over the duration of the construction period.

Cementitious Grout Performance

As a minimum, place MDOT 6A gravel, 4 inches thick stone protection, to a depth of 0.0 feet LWD, or to the top of sand on the harbor and lake side, whichever is greater, along the slope of the structure in the area to be grouted and be prepared to deploy an approved turbidity curtain, if needed, as minimum containment barrier. Containment measures above the sand shoal consist of choking stone placed in the open voids. This containment measure was successfully deployed at the Chicago, Illinois Harbor Breakwater during grouting operations conducted in May 2018.

Project Construction Timeline

Drilling/Grouting approximately 3 months. Concrete walkway replacement, approximately 2 weeks.