

IEPA Log No.: **C-0126-17**
CoE appl. #: **LRC-2017-00338**

Public Notice Beginning Date: **August 19, 2019**
Public Notice Ending Date: **September 9, 2019**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification for Discharge of Dredged or Fill Material

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Bill Jackson – 771 Sheridan Road, Winnetka, IL 60093

Discharge Location: Near Winnetka in SW 1/4 of Section 16 of Township 42-North, Range 13-East of the East 3rd P.M. in Cook County.

Name of Receiving Water: Lake Michigan

Project Description: Proposed shore-connected quarystone breakwater from the property's south property line and extending northeastward.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge dredged or fill material into the waters of the State associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please contact Darren Gove at email darren.gove@illinois.gov or phone no. 217/782-3362.

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Bill Jackson (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with the construction of a new quarystone breakwater in Lake Michigan at 771 Sheridan Road in Winnetka, Cook County, Illinois.

The project site is within a fully-engineered section of urban lakeshore and beaches typically protected with steel sheetpile groins, revetments, and breakwaters. Municipal littoral barriers constructed over the last 100 years have starved the coast of sand and structures constructed to hold beach sand have deteriorated. More recently, larger-than-normal storm waves have impacted the shoreline of Lake Michigan. The shoreline at 771 Sheridan Road has been impacted by the recent extreme increase in water level evidenced by a much narrower beach. The Applicant proposes to construct a quarystone breakwater to help provide a higher level of shore protection, as well as reducing incident wave energy from eroding the sand and clay lakebed; holding a higher sand profile to allow access to the boathouse; and improving water quality caused by colloidal fines from the eroding clay being suspended in the water during storms.

The proposed shoreline stabilization project includes construction of a new quarystone breakwater extending around 120 ft. offshore, nominal length 150 ft., and required sand refill. The breakwater crest would begin at 588 ft. tapering to 584 ft. (east) with a slope of 1:1.5 at the lakeward end and 1:1 for the shore-connecting trunk of the breakwater. Approximately 1,500 cubic yards of new clean quarried stone would be placed to construct the breakwater and 1,200 tons of clean sand would be used to create a larger beach. The total fill area below the Ordinary High Water Mark (OHWM) is 0.09 acres.

The purpose of the project is to protect the Lake Michigan coastline and property (including the boat house) at 771 Sheridan Road, Winnetka, IL. This project would be completed by land with a timeline of approximately 9 weeks. Information used in this review was obtained from the USACE Public Notice dated February 19, 2019; Joint Application Form signed November 30, 2018; and “Design of Shoreline Erosion Protection Report” and cover letter dated January 25, 2019.

Identification and Characterization of the Affected Water Body

Lake Michigan is classified as a Lake Michigan Basin Use Water and has 0 cfs of flow during critical 7Q10 low-flow conditions. Lake Michigan, Waterbody Segment IL_QLM-01, is listed on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as mercury and polychlorinated biphenyls and aesthetic quality use with a potential cause given as phosphorus. Aquatic life, public and food processing water supply, primary recreational contact, and secondary contact uses are fully supported. Lake Michigan is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System* or given an integrity rating in that document. A Total Maximum Daily Load (TMDL) Report was prepared and approved by USEPA for 51 beaches along the Illinois Lake Michigan shoreline to address Primary Contact Use Recreation impairments due to excess bacteria. The proposed activity occurs within those areas identified by the report “Shoreline Segments in Suburban Cook County, Illinois” dated May 15, 2013, as Beach Protection Areas subject to that TMDL.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses

Loading of suspended solids would increase in the lake at the point of construction activity. Benthic habitat would also be disturbed in the area of construction but impact to aquatic life use is not anticipated. Due to the heavily eroded conditions of the project area, the reduction of wave energy impacts may improve water quality and may enhance habitat for aquatic species.

Approximately 1,500 cubic yards of new clean quarried stone and 1,200 tons of clean sand would be used for the construction of the shoreline system. The area of fill to be placed below the OHWM is 0.09 acres. Mitigation for impact is not required.

Supplemental information provided by the Applicant regarding strategies to reduce E. Coli loading from beach modification indicates the project would comply with the TMDL's water quality concentration limit load allocation of 126 cfu/100ml. At this site, the existing coastal environment, a low and ephemeral wet beach, would be greatly improved with a higher, more robust (and dryer) new sand beach system. To prevent the beach from becoming a sink for contaminants from the upland, surface runoff directly to the beach would be minimized by improvements to a vegetated buffer strip on the adjacent bluff.

Fate and Effect of Parameters Proposed for Increased Loading

The increase in suspended solids would be local and temporary. Historic shoreline modifications and lakebed downcutting has resulted in severe erosion and loss of sand in this section of the coastline. Although the benthic habitat would be disturbed by the construction activities, it is anticipated to recover and improve over time.

Purpose and Social & Economic Benefits of the Proposed Activity

The proposed system is designed to protect the bluff toe and beach from further erosion, move the focus of wave energy further offshore, help reduce lakebed downcutting in the nearshore, and provide safe access for pedestrians and swimmers to and from Lake Michigan.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation

The site at 771 Sheridan Road, Winnetka, has been inspected and options for shore protection were determined using desktop coastal engineering, bathymetric surveys, and more than 3 decades of observations of the shoreline conditions at this site.

Alternative 1 - Do nothing: The first option of "do nothing" results in leaving the eroding beach in its existing state. Continued downcutting of the lakebed would allow larger stormwaves to impact and overtop the existing revetment and would cause increased vulnerability of the existing boathouse and bluff toe in the near future.

Alternative 2 - Revetment Only: The quarystone revetment would not provide enough protection for the toe of the bluff within the current water depths. This option also does not allow access to the boathouse for boats during the higher lake levels.

Alternative 3 – Revetment and Steel Boat Launch Ramp: This option was withdrawn due to public concerns for walking the beach.

Alternative 4 – Quarystone Breakwater Beach System (Proposed Alternative): The shoreline stabilization would be comprised of the installation of a 150 ft. (nominal length) quarystone breakwater

that extends east and curves north not to exceed 120 ft. east of the bluff toe and sandfill as necessary. The proposed plan would help protect the glacial clay lakebed, as well as the beach and bluff, while allowing the safe access to Lake Michigan for pedestrian and boats.

The Applicant has selected Alternative 4 (Quarrystone Breakwater Beach System) for implementation. The construction of the proposed project would follow conditions set forth by the Agency and USACE. The least intrusive alternative would be to not complete the project. This is not an acceptable alternative given the need to protect the shoreline from additional erosion during storm surges. Completion of the proposed project would allow for protection of the Lake Michigan shoreline and nearby residential structure.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities

The IDNR Impact Assessment Section identified protected resources that may be in the vicinity of the proposed action. The Department evaluated this information and concluded that adverse effects are unlikely. Therefore, the consultation was terminated on April 18, 2019.

Agency Conclusion

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will provide a stable shoreline system that reduces the impacts of wave energy, protects benthic habitats, prevents the further shoreline destabilization, and retains a sandy beach area. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.