

IEPA Log No.: **C-0426-16**  
CoE appl. #: **LRC-2014-877**

Public Notice Beginning Date: **March 26, 2018**  
Public Notice Ending Date: **April 16, 2018**

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:** City of Evanston - Public Works Agency – 2100 Ridge Avenue,  
Evanston, IL 60201

**Discharge Location:** Near Evanston in Section 18 of Township 41N, Range 14E of the 3rd P.M. in Cook County.

**Name of Receiving Water:** Lake Michigan

**Project Description:** Proposed encapsulation and reconstruction of existing south breakwater using new sheet pile perimeter, engineered backfill with a concrete cap, and riprap scour protection.

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 call Darren Gove at 217/782-3362.

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Fact Sheet for Antidegradation Assessment  
For City of Evanston - Public Works Agency  
IEPA Log No. C-0426-16  
COE Log No. LRC-2014-877  
Contact: Abby Brokaw 217/558-2012  
Public Notice Start Date: March 26, 2018

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City of Evanston (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with encapsulating the existing deteriorated breakwater crib with a steelpile groin at Church Street Harbor in Lake Michigan. The project site is in Evanston, Cook County, Illinois (Section 18, Township 41N, Range 14E).

The existing south breakwater is dilapidated and no longer functions as designed. Sediment and wave agitation enter the harbor basin reducing the functionality of the new boat launch and user safety.

The project proposes to drive the sheetpile groin structure of 17 ft. 9 in. (outer edge) by 163 ft. around the existing breakwater completely encapsulating the existing south breakwater crib. The sheetpile groin would consist of AZ12-700 sections with C12x15 whalers. The entire structure would be filled with clean engineered fill materials with a proposed 5 in. concrete walking surface and 1 ft. concrete caps. This project would encapsulate the existing concrete cribs and steel beams to the extent possible. The project footprint would be a few feet larger than the existing structure requiring very little dredging for installation. Riprap will be temporarily placed on the shoreline to be reused onsite for structure protection to minimize imported aggregate stone fill.

The purpose of the shoreline project is to provide a stable shoreline and beach system capable of withstanding wave attack during all lake levels and protecting residential and recreational structures immediately upland. Information used in this review was obtained from the *Church Street Harbor Renovations Project – Antidegradation Report*, dated May 22, 2017; *Environmental Dredge Sample and Analysis – Church Street Harbor, Church Street, Evanston, Cook County, Illinois*, dated April 25, 2017; letter regarding change in joint permit application submittal, dated February 23, 2018; and subsequent submittals.

### **Identification and Characterization of the Affected Water Body**

Lake Michigan is classified as a Lake Michigan Basin Use Water and has zero 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 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*, nor is it given an integrity rating in that document. A Total Maximum Daily Load (TMDL) Report has been prepared and approved by the USEPA for 51 beaches along Illinois’ Lake Michigan shoreline to address Primary Contact Use Recreation impairments due to excess bacteria. The proposed activity does occur within an area identified by the May 15, 2013 report

“Shoreline Segments in Suburban Lake County, Illinois” as a Beach Protection Area and therefore is subject to this TMDL.

### **Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses**

The pollutant load increases would include possible increases in total suspended solids. These increases, a normal and unavoidable result of the sheetpile groin installation, may occur in the lake at the point of construction activity. Benthic habitat will be disturbed in the construction area, but localized impacts to aquatic life uses are not anticipated. By minimizing sediment accretion and reducing wave agitation caused by higher lake levels, the project may provide an improved habitat for aquatic species. The proposed activities are expected to meet the assumptions and requirements of the Lake Michigan shoreline bacteria TMDL.

The sheetpile groin alternative is the less environmentally impactful option. Although, the project area may be larger than the current structure, the minimal dredging required for construction will reduce disturbance to the surrounding waters and lakebed. The structure will be filled with clean engineered fill material. The lakebed sediment was analyzed for particle size via the *Illinois EPA Material Analysis for Dredge and Fill Activities* and asbestos via transmission electron microscopy (TEM), per *Environmental Dredge Sample and Analysis – Church Street Harbor, Church Street, Evanston, Cook County, Illinois*, dated April 25, 2017. Sampling was conducted at three locations to the depth of the affected harbor area, as well as one background water sample. The collected samples were analyzed for grain sizes, asbestos and other contaminants. Samples were also collected and analyzed for the Supernatant Test. The results of the testing indicate the sediment is primarily sand with a very low fines content. Additionally, no asbestos was detected.

Turbidity barriers will be installed to prevent sediment flow into Lake Michigan. Silt fence will be installed along the outer edge of the project to prevent sediments from entering into Lake Michigan. Construction fence will also be erected at the site perimeter to ensure construction traffic remains within the dedicated construction zone. The dredge material will consist of riprap to be stored onshore during construction and the fill material anticipated is 5,000 – 7,000 ft.<sup>3</sup>.

### **Fate and Effect of Parameters Proposed for Increased Loading**

The increase in suspended solids will be local and temporary. Although the benthic habitat will be disturbed by the construction activities, it is anticipated to recover and improve over time due to the new scour protection over the fill material. The sheetpile groin will also better control sediment loading than the existing concrete crib. Mitigation is not proposed for this project as total impact to waters of the U.S. totals 0.067 acres, which is less than the 0.1 acres mitigation requirement threshold.

### **Purpose and Social & Economic Benefits of the Proposed Activity**

The sheetpile groin will increase the harbor basin's functionality and safety for recreational use by reducing sediment and wave agitation. Failure to protect the shoreline could lead to the loss of land, infrastructure, recreational use and continued downcutting of the lakebed.

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

#### Option 1: Do nothing

- Continued sediment and wave agitation
- Restricts use of nearby boat launch and impairs recreational opportunities

#### Option 2:

Encapsulate structure with sheetpile groin:

- Encapsulates the existing concrete cribs and steel beams
- Project footprint is larger than existing structure requiring little dredging (reduces environmental impact)

#### Option 3:

Steel binwall structure at 12 ft. x 160 ft.:

- Replaces the footprint of the existing structure in both width and length
- 12' wide binwall requires engineered fill and larger disturbed area due to dredging (higher environmental impact)

#### Option 4:

Steel binwall structure at 7 ft. 7 in. x 160 ft.:

- Replaces a portion of existing groin crib footprint with smaller lakebed footprint
- Uses clean engineered fill material with a concrete cap of 1 ft.
- Riprap and lakebed material could be salvaged and scour stone would be used to provide scour protection

#### Conclusion:

Per the letter dated February 23, 2018, regarding the joint permit application submittal, the Applicant had selected Option 2 (encapsulate structure with sheetpile groin) for implementation. The Applicant will follow conditions set forth by the Agency and USACE. Completion of the proposed project will allow for protection of the harbor basin and community recreation along Lake Michigan.

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

On February 2, 2017, IDNR's Division of Ecosystems and Environment issued notification under Project #1704600 that an EcoCAT endangered species consultation determined that adverse effects from the proposed activities are unlikely and consultation has been terminated.

## **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 (Option 2 - sheetpile groin) 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 benefit the Lake Michigan shoreline by providing a stable shoreline system that reduces the impacts of wave energy, protects benthic habitats by reducing sediment accretion, prevents the further destabilization which could lead to the loss of land and infrastructure, and provides access for landowners and their watercraft to the lake. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.