IEPA Log No.: **C-0150-14**
CoE appl. #: **LRC-2013-726**

Public Notice Beginning Date: **March 25, 2015**
Public Notice Ending Date: **April 24, 2015**

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

Section 401 Water Quality Certification to Discharge into Waters of the State

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: Chicago Park District – 541 N. Fairbanks, Chicago, IL 60611

Discharge Location: Near Chicago in NE 1/4 of Section 24 of Township 38N, Range 14E of the 3rd P.M. in Cook County.

Name of Receiving Water: Lake Michigan

Project Description: Proposed construction of a 1000 foot long, stone and steel groin at the mouth of Jackson Harbor.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge 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 Chicago Park District
IEPA Log No. C-0150-14
COE Log No. LRC-2013-726
Contact: Diane Shasteen (217) 558-2012
Public Notice Start Date: March 25, 2015

Chicago Park District ("Applicant") has applied for a 401Water Quality Certification for impacts associated with the construction of a steel and stone groin breakwater system along the Lake Michigan shoreline in Section 24, Township 38 North, Range 14 East, Cook County, Illinois. The project site is located at 6400 South Coast Guard Drive in Chicago at Jackson Harbor. The proposed breakwater system will include a 300' steel groin attached to the land mass adjacent to the harbor entrance. A 700' stone groin will attach to the steel groin, project lakeward, and run nearly parallel with the 63rd Street Beach breakwater. The stone breakwater structure will be constructed of armor stone approximately 5' in diameter and will provide void space for fish foraging and sheltering. A 5' submerged shelf barrier reef will be constructed on the south side of the groin to enhance the habitat characteristics of the stone structure. A core stone submerged reef comprised of smaller stones is proposed at the toe on both sides of the stone breakwater. The breakwater structure will have a lakeward crest height of 581.5' IGLD-85 (International Great Lakes Datum – 1985 adjusted). Due to the large stone size and significant lake water depth, stones will be floated via barge to the construction site and placed one at a time using a crane or large backhoe located on another barge. The steel sheet pile groin will be driven by a crane mounted driving device from a barge and possibly from land at the west end of the project dependent upon the Contractor's operation. The purpose of the proposed groin breakwater system is to deflect sand and other sediment from the harbor entrance, reduce the need for future dredging, and improve the navigation conditions by managing wave action at the mouth of the harbor. The Applicant will use approximately 19,528 cubic yards of clean quarried stone for construction of the breakwater which will cover approximately 0.48 acres.

Information used in this review was obtained from the applicant in a document entitled; Permit Application Report: IDNR Part 3700 Waterway Construction Permit, Clean Water Act Section 404 Permit, Section 10 of the Rivers and Harbors Act, and CWA Section 401 Water Quality Certification, Jackson Harbor Navigation Improvement Project, Chicago Park District, dated March 17, 2014.

Identification and Characterization of the Affected Water Body.

Lake Michigan is a large oligotrophic lake subject to the Lake Michigan Basin water quality standards of 35 Ill. Adm. Code 302 Subpart E. Lake Michigan Nearshore (QLM-01) is listed as not supporting for Fish Consumption and Aesthetic Quality uses according to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List. The causes listed for impairment are Mercury and Polychlorinated biphenyls for Fish Consumption and Phosphorus (Total) for Aesthetic Quality use. Lake Michigan Nearshore is listed as fully supporting Aquatic Life, Public and Food Processing Water Supplies, Primary Contact Recreational, and Secondary Contact uses.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some possible increases in total suspended solids. These increases, a normal and unavoidable result of the placement of the quarrystone breakwater, may occur in the lake at the point of construction activity. Benthic habitat will be disturbed in the vicinity of the construction area. Breakwater stones will be clean and come from inland quarries.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary. The majority of the breakwater construction will be completed using a barge-based crane to place the stones and steel in the lake. Although the benthic habitat will be disturbed by the construction activities, it is anticipated to recover and improve over time due to the additional habitat provided by the breakwater structures.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed breakwater system will increase protection for Jackson Harbor, reduce the impacts of wave energy on the 63rd Street Beach breakwater, deflect sand/sediment from the harbor entrance, reduce the need for future dredging, reduce sand losses from neighboring beaches, provide additional aquatic species' habitat, and improve the navigation conditions for the public boating community by managing wave action at the mouth of the harbor.

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

The Applicant has consulted with AECOM to devise a project plan that would protect Jackson Harbor and reduce the amount of dredging needed to maintain a navigational route into and out of the harbor. The design alternatives listed below were developed and the selection process included consideration of the following issues:

- Environmental impact avoidance and minimization
- Environmental enhancement opportunities
- Construction cost and economic viability
- Stakeholder and navigation issues
- Sustainable design opportunities
- Enhancement to the public experience in Jackson Harbor
- Public space impacts and access to the water
- Public safety

<u>No Action Alternative</u>

- Existing condition threatens to overwhelm the harbor with sediment
- Removal of sediment has become cost prohibitive
- Jeopardizes access to Jackson Harbor

- Neighboring beaches will continue to lose sand from currents pushing it into the harbor

Alternative Harbor Mouth Improvement Designs

Option1:

400' Stone Groin

- Groin would be directed at the 63rd Street Beach breakwater
- Would not extend far enough out into deeper water nor provide any noticeable improvement in sediment management
- Could worsen sedimentation conditions in Jackson Harbor

Option 2:

Dual Stone Groin Cell

- Includes stone groin pair that forms harbor mouth reconfiguration
- 200' stone groin directed at the 63rd Street Beach breakwater
- 300' stone groin extending out from the 63rd Street Beach breakwater
- Pair recessed significantly landward of the littoral drift pattern
- Would encourage significant deposition of sediment at harbor mouth and inside the harbor

Option 3:

Dual Stone Groin Cell

- Variation of Option 2 -includes stone groin pair that forms harbor mouth reconfiguration
- 600' stone groin directed at the 63rd Street Beach breakwater
- 100' stone groin extending out from the 63rd Street Beach breakwater
- Pair recessed significantly landward of the littoral drift pattern
- Would encourage significant deposition of sediment at harbor mouth and inside the harbor
- Difficult harbor entrance configuration for the boating community

Preferred Option

1000' Steel and Stone Groin Breakwater System

- 300' Steel and 700' Stone Groin Breakwater
- Placed nearly parallel to 63rd Street Beach Breakwater
- Meets project goals of minimizing environmental impacts
- Provides a significant reduction in the amount of wave and littoral current energy
- Manages sediment deposition in the harbor mouth and inner harbor and reduces the need for dredging
- Allows neighboring beaches to retain sand deposits

Conclusion:

The construction of the proposed project will 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 increasing costs of dredging the mouth of Jackson Harbor and the need to provide safe access to the harbor. Completion of the proposed project will provide additional habitat for aquatic species by creating a submerged reef (0.15 acres) and 0.65 acres of sloped submerged armor stone that will enhance foraging, resting, and hiding habitats. The

stones located above water will provide avian habitat devoid of human disturbance. Wave and littoral current energy and sand loss due to dredging will be reduced allowing nearby beaches to retain their current conditions. Safe harbor and boat access will significantly improve public safety and harbor conditions for the public boating community.

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

An EcoCAT endangered species consultation submitted on September 4, 2014 to the Illinois Department of Natural Resources resulted in no record of State-listed threatened or endangered species or protected areas in the vicinity of the project and consultation for IDNR Project #1503364 was immediately 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 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 breakwater system that reduces wave and littoral current energy, reduces sand losses due to dredging, which in turn, allows nearby beaches to retain their sand deposits, provides additional aquatic and avian habitat, improves harbor conditions, and provides safe harbor access for the public boating community. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.