IEPA Log No.: **C-0172-17**
CoE appl. #: **LRC-2017-437**

Public Notice Beginning Date: **January 17, 2018**
Public Notice Ending Date: **February 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: Andrew Hochberg – 77 S. Deere Park Drive, Highland Park, IL 60035

Discharge Location: Near Highland Park in SW 1/4 of Section 31 of Township 43N, Range 13E of the 3rd P.M. in Lake County.

Name of Receiving Water: Lake Michigan

Project Description: Proposed installation of a shore connected quarrystone breakwater.

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 Andrew Hochberg
IEPA Log No. C-0172-17
COE Log No. LRC-2017-437
Contact: Abby Brokaw 217/558-2012
Public Notice Start Date: January 17, 2018

Andrew Hochberg ("Applicant") has applied for a 401Water Quality Certification for impacts associated with the construction of a quarrystone breakwater at the mouth of a ravine along Lake Michigan in Section 31, Township 44 North, Range 13 East, Lake County, Illinois. The project site is located at 77 South Deer Park Drive in Highland Park and will be shore-attached to a revetment associated with shoreline stabilization activities at 65 South Deer Park Drive (property of Joel Hirsch).

Currently the ravine mouth is naturally eroding to the north, as evidenced by continual nearshore littoral sand bars. This section of the coast has historically lost sand due to lakebed downcutting, especially during prolonged periods of low lake levels.

The proposed shore-attached breakwater will extend 53 feet northeast of the shoreline revetment on the Hirsch property and approximately 80 feet from the existing bluff toe on the south side of the ravine. The crest elevation of the breakwater ranges from 588 feet landward to 584 feet at the lakeward end. Quarrystone will be placed to form the breakwater's slopes at 1:1.5 ratio resulting in the structures toe extending approximately 105 feet east of the corresponding bluff toe. The proposed project also includes sand fill to compensate for littoral sand which may be retained by the breakwater during times of low flow through the adjoining ravine. The Applicant proposes to use approximately 720 tons of clean quarried stone for construction of the breakwater and approximately 400 tons of clean sand as required by IDNR. A total area of fill below the ordinary highwater mark is 0.04 acres.

The purpose of the ravine outfall stabilization is to provide a shoreline erosion protection system to stabilize the actively eroding bluff on the north side of the ravine and stabilize the ravine's mouth. The proposed activity is designed to retain a seasonal sandy beach to reduce downcutting and ravine erosion and will provide a shoreline system that improves access for seasonally spawning fish, pedestrians and swimmers. Information used in this review was obtained from applicant documents dated May 25, 2017, consisting of "Cover Letter," "Appendix," Joint Application Form and maps, and drawing sheets 1 through 5.

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 not 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 not subject to this TMDL.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses

The pollutant load increases to occur from this project include some possible increases in total suspended solids. These increases, a normal and unavoidable result of the placement of quarrystone breakwater and beach nourishment, may occur in the lake at the point of construction activity. Benthic habitat will also be disturbed in the area of construction, but impacts to aquatic life uses of this area are not anticipated. Due to the heavily eroded conditions of the project area and loss of sand, the project may improve water quality by minimizing erosion and may provide an improved habitat for aquatic species. All fill material will be clean (uncontaminated) quarried stone for construction of the breakwater system and clean sand will be used to restore the beach area. Improvements to a vegetated buffer strip on the adjacent tableland and bluff will prevent the pocket beach from becoming a sink for upland runoff contaminants and *E. Coli* impairments.

Fate and Effect of Parameters Proposed for Increased Loading

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

Purpose and Social & Economic Benefits of the Proposed Activity

The proposed ravine outfall stabilization will help retain the ravine, bluff, and beach and reduce the impact of storm wave energy on lakebed downcutting, which will protect benthic habitat. Failure to protect the shoreline could lead to the loss of land, recreational access, infrastructure and continued downcutting of the lakebed.

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

Five design options were considered for the proposed project.

Option 1: *Do nothing*

- Leaves currently eroding bluff, beach and ravine outfall vulnerable
- Accelerated erosion will result in a loss of fish access for spawning and human access for recreation
- Potential loss of property for local homeowners

Option 2: *Revetment only*

- Revetment placed on the north side of the ravine mouth, extending north to the property line to protect approximately 30 feet of shoreline
- Erosion of unprotected bluff to the north may cause protected land to become an island
- Potential abandonment of ravine mouth due to stream cutting of bluff and breach north of the revetment

Option 3: *Nearshore 30 foot detached breakwater north of outfall*

- Quarrystone breakwater immediately north of the ravine to protect lakefront property but not ravine mouth
- Coverage of lakebed below the OHWM would be 0.025 acres
- Option would likely jeopardize ravine mouth and/or lakefront property

Option 4: *Nearshore 60 foot detached breakwater east of outfall*

- Protects the ravine outlet and adjacent bluff
- Coverage of lakebed below the OHWM would be 0.05 acres
- Option would likely cause a sandbar to form and the proposed activities are too costly

Option 5 – Proposed Option: *Small quarrystone spur breakwater system*

- Construct a short quarrystone breakwater spur connected to the Hirsch property revetment on the south
- May aid in channelizing spring ravine flow and allow for natural breach of an ephemeral beach formed by storm waves from adjacent bluffs
- Stabilizes ravine mouth, bluff and beach

Conclusion:
Applicant has selected Option 5 for implementation. 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 need to protect the ravine and lakebed from additional erosion. Completion of the proposed project will allow for protection of the Lake Michigan shoreline, nearby residential structures, and recreational access.

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

On January 2, 2018, an IDNR Division of Ecosystems and Environment EcoCAT consultation was submitted and the immediate review results indicated that the Ravinia Bluff INAI Site and Ground Juniper (*Juniperus communis*) may be in the vicinity of the project location. While the IDNR EcoCAT tool did not terminate the consultation immediately, future termination is likely.

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 stable shoreline system that reduces the impacts of wave energy, protects benthic habitats by reducing lakebed downcutting, prevents the further ravine/bluff destabilization which could lead to the loss of land and infrastructure, retains a sandy beach area, and provides access for landowners 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.