IEPA Log No.: **C-0381-17**
CoE appl. #: **2016-00603**

Public Notice Beginning Date: **May 4, 2018**
Public Notice Ending Date: **June 4, 2018**

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
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Mr. Terry Rozdolsky, 595 Circle Lane, Lake Forest, IL 60045

Discharge Location: Section 3, T43N, R12E of the 3rd P.M. in Lake County within Lake Forest

Name of Receiving Water: Lake Michigan.

Project Description: Shoreline stabilization and beach nourishment.

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 Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
Terry Rozdolsky – Lake Michigan – Lake County
IEPA Log No. C-0381-17
COE Log No. LRC-2016-00603
Contact: Abby Brokaw 217/782-3362
May 4, 2018

Terry Rozdolsky ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with the construction of a shoreline protection system along Lake Michigan at 595 Circle Lane, Lake Forest, in Lake County, Illinois. A USACE regional permit was previously issued for this site to repair the existing revetment and construct a new revetment. However, the permitted design could not resolve the site's slope issues. The design was modified and a new permit application was submitted.

The property contains two adjoining land parcels (north and south) spanning approximately 520 feet of shoreline along Lake Michigan. The north 190 feet of lakefront contains an existing undersized revetment with vegetative cover and shows evidence of slope creep and slips. The south 330 feet of lakefront is an actively eroding bluff that has eroded 30-50 feet over the last several years.

The proposed project would include reestablishing a stable bluff slope in the south parcel, installation of a revetment along the entire shoreline, the construction of a breakwater protected beach cell in the northern parcel, and accommodating access to the water by an access ramp and beach. The work would preserve the existing slope in the north parcel without alteration. The southern parcel's eroding bluff would be reestablished at a slope of 2.25:1 to 2:1. The proposed beach cell would allow wave energy to be absorbed by the breakwater and beach before impacting the proposed revetment, and would also deflect large waves coming from the north/northwest. The beach would be prefilled with 1800 cubic yards of sand, which includes 20% overfill, to reduce potential losses from littoral drift. The total fill below the ordinary high water mark (OHWM) would be 0.76 acres.

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. The proposed activity does not occur in a Beach Protection Area subject to the Illinois Lake Michigan shoreline TMDL.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses

Pollutant load increases of total suspended solids may occur at the point of construction activity and are a normal and unavoidable result of the placement of the clean sand and crushed stone. Clean stone fill would be used to stabilize the bluff slope in the amount of 6,608 cubic yards (clean armor stone and clean bedding stone), and clean quarry sand in the amount of 1,800 cubic yards would be used for beach nourishment. Total fill for the project will be 0.76 acres, which requires mitigation.

Benthic habitat would also be disturbed in the construction area, but impacts to aquatic life uses are not anticipated. Due to the heavily eroded conditions of the project area and the exposure of lakebed clay and loss of sand, the project may improve water quality and habitat for aquatic species by minimizing erosion.

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 erosion and sedimentation of this coastline segment. Although the benthic habitat would be disturbed by construction activities, it is anticipated to recover and improve over time.

The Applicant plans compensatory mitigation for the proposed 0.76 acres of fill. Initially, local locations within the Lake Michigan watershed were considered for mitigation at a 1.5:1 ratio. If the local mitigation opportunities are unfeasible, the Applicant proposes to mitigate using a USACE pre-approved wetland bank. The wetland credits would be purchased at a 3:1 ratio, with a total credit purchase of 2.28 acres.

Purpose and Social & Economic Benefits of the Proposed Activity

Failure to protect the shoreline could lead to the loss of residential property and infrastructure. The proposed project would allow access to the lake for recreation and would protect and stabilize the shoreline.

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

Option 1: *Do nothing*

- Continued coastline erosion and sedimentation at project site and adjacent areas
- Risk of residential property damage

Option 2: *Excavate the slope to a stable slope angle without fill in Lake Michigan*

- North Parcel: enhance stone revetment at the toe of slope
- South Parcel: re-grade the slope to create a stable condition; construct a stone revetment; and construct lower portions of the slope
- Construct stone revetment at shoreline edge, requiring fill placement in the lake
- Not feasible because of grading transitions to the north and south; stable slopes cannot be constructed in transition zones; enhancement of wave energy impacts; and table land would be unsuitable for development

Option 3: *Construct a stone revetment and beach cell at the toe of slope*

- North Parcel: preserve vegetated slope and place beach cell at the front of parcel
- South Parcel: pre-nourishment of beach sand to reduce wave stress on the shoreline and enhance slope stability in front of the south parcel revetment; and reconstruct slope
- Preserve access by placing flat armor stones at the north/south property areas and an access ramp from the north side of the slope to the beach area
- Placement of 0.76 acres stone on the lakebed below the OHWM

Option 4: *Construct a stone revetment at the toe of slope and regrade the bluff to a stable slope*

- Option is the same as Option 3 except no beach cell, instead an armor stone revetment constructed the entire length of the shoreline
- Placement of 0.73 acres stone on the lakebed below the OHWM
- Not optimal, because the beach cell provides an additional buffer for wave energy; will deflect larger waves; and reduces lake bottom erosion (according to application materials)

Option 5: *Restoration option that cause the loss of more tableland than that lost under options 3 & 4*

- Reduces the amount of lakefill associated with options 3 & 4
- Not feasible, because any pulling back of the shoreline to the west would create problems with slope grading transitions

Conclusion: The Applicant has selected Option 3 (construct a stone revetment and beach cell at the toe of slope) 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 aggressive erosion, slope instability, and sedimentation at the site. Completion of the proposed project would allow for protection of the Lake Michigan shoreline and nearby residential structures.

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

On November 2, 2017, the Applicant initiated an information only EcoCAT endangered species consultation, Project #1803749, which resulted in the Illinois Natural Heritage Database indicating four INAI sites, eight threatened or endangered species and a nature preserve in the vicinity of the project site. On April 4, 2018, IDNR responded by terminating the consultation with the recommendation that a qualified biologist flag plant species to be avoided. If avoidance is not possible, conservation measures such as seed collection and planting, translocation, and surface soil preservation are recommended. IDNR also noted that express written permission from the landowner should be obtained from construction companies/crews to “take” listed plants.

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 would 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 would benefit the Lake Michigan shoreline by providing a stable shoreline system that reduces the impacts of wave energy, protects benthic habitats, prevents bluff destabilization, 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.