

Fact Sheet for Antidegradation Assessment

RE: Eric Jansen

County: Cook County

IEPA Log #C-0155-11

COE Log #2011-162

Contact: Mark T. Books at 217/558-2012

November 9, 2011

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Mr. Eric Janssen (“Applicant”) has applied for 401 water quality certification for work necessary to construct a small breakwater bay beach system along the Lake Michigan shoreline. The Applicant proposes to construct a quarrystone & steel sheet pile breakwater on their south property line. The proposed breakwater will extend 115 feet lakeward from the toe of the existing revetment.

Approximately 1,800 tons of clean quarried stone and about 22 feet of steel sheet pile will be used to construct the breakwater. As part of the proposed project the Applicant will also place 1,406 tons of clean sand onto the existing beach, as beach nourishment, as required by IDNR. In addition to this sand placement the Applicant will randomly place approximately 30 tons of 1-5 ton size armor stone on the lakebed in the sand fill area to satisfy a requirement from the City of Evanston’s Parks, Recreation & Community Services Department. The project is located in Cook County, Section 20, Township 42 North, Range 13 East. The address is 707 Sheridan Road, Evanston. The purpose of the project is to help break storm wave energy and provide shore protection. The site lies within a fully engineered section of urban lakeshore that is typically protected with quarrystone breakwaters, revetments, seawalls, and steel sheetpile groins, as well as large municipal breakwaters to support public beaches.

**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. The open waters are listed in the Illinois Integrated Water Quality Report and Section 303(d) List – 2010 as impaired for fish consumption with a cause given as PCBs and mercury. The open waters of Lake Michigan are fully supportive of aquatic life, primary contact (swimming), secondary contact (recreation), and public water supply use.

According the IDNR WIRT System Seaside Spurge and Sea Rocket were identified as threatened or endangered species residing within the project site.

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

The construction activities will cause a temporary increase in suspended solids. Habitat will be disturbed in the vicinity of the construction area. All sand and armor stone placed onto the beach will be clean and from inland quarries.

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

The increase in suspended solids will be local and temporary. The benthic habitat disturbed by the construction activities is anticipated to recover to pre-construction conditions over time.

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

This project will provide shoreline protection. The Applicant has stated the following;

“The current revetment is broken concrete that has deflated and the toe has migrated lakeward.

Under current low lake levels, stormwaves are overtopping the revetment causing erosion of the tableland.”

The Applicant has provided pictures which show severe erosion behind the existing concrete revetment.

“While the existing concrete revetment at this site continues to provide minimal shore protection during low to average lake levels, it has outlived its design life and is deflating and deteriorating.

When the lake rises, stormwaves may cause severe icing problems and impacts to the property, as well as cause deeper water in the near shore.”

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

The construction of the proposed project will follow guidelines set forth by the Agency and USACE.

Erosion control measures need to be implemented to prevent additional impacts. It is anticipated that the materials and machinery will be delivered to the site via road access with trucks.

The least intrusive alternative would be to not complete the project. This is not an acceptable alternative given that this is a useful project and will minimize the excessive scouring and erosion from storm events and thus reduce suspended solids load into the lake.

The Applicant also looked at only repairing the existing revetment.

“This option would reduce landward erosion, but lakebed erosion would continue ...thus leading to probable deflation and/or failure of the new revetment.”

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

In a letter from Karen Miller dated October 18, 2011, IDNR stated that an initial report submitted through the EcoCAT website indicated the potential presence of protected resources in the vicinity of the project location. The letter further states that the IDNR has evaluated this information and concluded that adverse impacts to the protected resources are unlikely; therefore, consultation is 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 the assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; 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 community at large by providing a stabilized shoreline along Lake Michigan and reducing suspended solids discharges into 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.