IEPA Log No.: **C-0238-15**
CoE appl. #: **LRC-2015-00361**

Public Notice Beginning Date: **June 28, 2017**
Public Notice Ending Date: **July 19, 2017**

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: Muneer Satter – 419 Sheridan Road, Winnetka, IL 60093

Discharge Location: Near Winnetka in NW 1/4 of Section 21 of Township 42N, Range 13E of the 3rd P.M. in Cook County.

Name of Receiving Water: Lake Michigan

Project Description: Proposed construction of a quarry stone breakwater protected beach, after-the-fact authorization of two constructed infiltration basins, and pre-mitigational sand fill.

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 Muneer Satter
IEPA Log No. C-0238-15
COE Log No. LRC-2015-00361
Contact: Brian Koch 217/558-2012
Public Notice Start Date: June 28, 2017

The Applicant (Muneer Satter) is proposing to construct a breakwater protected beach along Lake Michigan located at 419 and 429 Sheridan Road in Winnetka.

The two adjacent properties share a continuous section of beach shoreline that is contained both on the north and the south by existing steel groins. The shoreline stabilization project will consist of softening the two existing steel groins with stone. No work will be done further than 125 feet east of the existing concrete seawall. The existing north groin at 429 Sheridan Road will be lined with stone along the south side of the groin only with a spur breakwater extending to the southeast. North of the 419 Sheridan Road south property line, a similar breakwater mirroring the north will be constructed over the existing steel groin. South of the site at 411 Sheridan Road, a separate permit has been granted to the land owner to construct a small breakwater spur oriented south-east of the proposed south breakwater. The existing steel groin at this breakwater would be cut so that it will not be present lakeward of the stone breakwater. The proposed breakwaters would have a crest elevation of 589' landward tapering to 583' at their lakeward ends. The stone breakwaters would be sloped at 1:1 where they are shore perpendicular and 1:1.5 where the breakwaters curve inward toward each other at the lakeward extent. A toe to toe gap of 77 feet between the breakwaters would exist at the lakeward extent of the proposed breakwaters. Pedestrian access along the shoreline would be accommodated through the construction of quarrystone stairs on both stone breakwater structures. The total area of lakebed that would be permanently filled with quarrystone is 0.14 acres. The proposed activity would also include the deposit of 2,150 tons of clean quarried sand within the proposed bay beach and at the north-adjacent property at 435 Sheridan Road. The purpose of this pre-mitigational sand fill is to offset the amount of sand that the constructed breakwaters would be expected to capture from Lake Michigan's littoral drift.

In addition to the creation of the bay beach system described above, the applicant is seeking after-the-fact authorization for two already constructed stormwater outfall structures that discharge upland runoff primarily from the residential structures and surrounding property. The north outfall is located near the north property line of 429 Sheridan Road and has a man hole rim elevation of 586.5 ft. The south outfall is located near the south property line of 419 Sheridan Road and has a man hole rim elevation of 589 ft. Both outfalls consist of a precast reinforced concrete catch basin modified to provide infiltration of the stormwater. The purpose of the outfalls is to reroute stormwater flow previously sent to Lake Michigan by multiple pipes that discharged at multiple locations along the seawall and the bluff.

Identification and Characterization of the Affected Water Body.

Lake Michigan has 0 cfs of flow during critical 7Q10 low-flow conditions. Lake Michigan is classified as a Lake Michigan Basin Use Water. 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. Lake Michigan, Waterbody Segment, 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. 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 occurs within an area identified by the report "Shoreline Segments in Suburban Cook County, Illinois" May 15, 2013 as a Beach Protection Area subject to that TMDL.

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 also be disturbed at the construction area. The proposed activity would permanently fill 0.14 acres of Lake Michigan's lakebed area. According to the Lake Michigan beach bacteria TMDL, bacteria within the water and sand at embayed beaches may be found at elevated levels. The small pocket beach such as the one proposed may exhibit similar characteristics due to its general orientation with respect to lake currents. Possible increases in E. coli may also be found in the stormwater outfall discharges occurring during precipitation events.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids from the construction of the quarrystone breakwater and placement of pre-mitigational sand will be local and temporary. Loss of existing uses resulting from the permanent fills will be mitigated by the purchase of wetland mitigation credits. The applicant has proposed the purchase of 0.42 acres of wetland mitigation bank credits from the Sauk Trail Wetland Mitigation Bank to offset the 0.14 acres filled by the quarried stone breakwaters. Although the benthic habitat will be disturbed by the construction activities, it is anticipated to recover and improve over time due to the addition of stable quarry stone that will enhance the diversity of the aquatic habitat. The proposed pocket beach created with clean sand fill will feature greater slope and a smaller swash zone. Additional improvements include a buffer strip, dune plantings and beach grooming. These improvements are expected to improve the water quality impairments related to excess bacteria as well as meet the TMDL's goals. Water quality testing for bacteria in the discharges from the stormwater outfalls has been conducted in concert with repairs and cleaning of existing drainage conveyances. Ten surface water samples from the project location were analyzed for *E. coli*, all of which resulted in non-detectable amounts of this bacteria. Test results indicate that the stormwater discharges will meet requirements established by the TMDL and would not cause or contribute to violations of water quality standards.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the proposed breakwater protected beach cells is to establish a more stable layer of sand to reduce downcutting of the clay lakebed. According to the Applicant, a previously sunken barge had been removed from the nearshore area of their property in 2009 which left a lakebed scar that continues to exacerbate beach and lakebed erosion. Erosion of the clay lakebed, if not prevented, could result in additional beach erosion and undermine the existing seawall. The proposed stone breakwaters will utilize the existing steel groins to dissipate wave energy to help maintain a stable sand beach. The application documents indicate the following benefits of creating stable sand beaches: stable beaches filter pollutants from non-point runoff, they reduce suspend solids from the erosion of lakebed clay, they support endangered species such as sea rocket, marram grass, and seaside spurge and provide better wildlife habitat, they protect the lakebed from large storm waves, and the associated stone breakwaters provide improved fish habitat.

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

In addition to the proposed plan, three following alternative plans were provided in the Applicant's May 22, 2015 joint application. Each alternative was rejected due to the potential for continued erosion and degradation of the aquatic habitat within the project area.

Option 1 – Do Nothing: This option would result in leaving the currently eroding beach in its existing state, which would only further deteriorate due to the removal of the barge. Further deterioration of the shoreline and associated water quality make this an unacceptable alternative.

Option 2 – Encapsulate the Groins Only: This option would result in inadequate protection of the bluff from erosion. Additionally, the deeper lakebed clay in the previous barge location would allow for larger storm wave impact and the deeper lakebed clay would continue to erode immediately west of the scar until the lakebed reaches a deeper equilibrium. The potential for further deterioration of the project area makes this an unacceptable alternative.

Option 3 – Close the Gap Only: This option would help hold a beach in the littoral cell, but the deeper water in the location of the barge scar, along with lakebed downcutting, would reduce the effectiveness and design-life of the structures due to the bigger waves overtopping and erosion of the lakebed at the structure toe. The potential for further deterioration of the project area makes this an unacceptable alternative.

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

On May 23, 2016, the IDNR EcoCAT web-based tool was used and indicated that there were no endangered/threatened species present in the vicinity of the project area. The IDNR EcoCAT web-based tool terminated the consultation.

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 draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards and TMDL load allocations; that all existing uses of the receiving waterbody 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 erosion control to the Lake Michigan shoreline. Comments received during the Section 401 public notice period will be evaluated before a final decision is made by the Agency.