Illinois Environmental Protection Agency
Bureau of Water, Permit Section
(IEPA)

1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276, 217/782-3362

The IEPA has issued a Public Notice of a request for a Clean Water Act Section 401 water quality certification that would allow the issuance of a federal permit for the discharge of pollutants to waters of the State.

Public Notice Beginning Date:	**Public Notice Ending Date:**
Friday, February 7, 2025	Thursday, February 27, 2025

Agency Log No.: C-0021-24

Federal Permit Information: Federal permit/license no. LRC-2020-0071 is under the jurisdiction of Chicago District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: David Moore - Lakefront at 261 and 255 N. Mayflower Road, Lake Forest, IL 60045

Discharge Location: In Section 34 of Township 44-North and Range 12-East of the East 3rd Principal Meridian in Lake County. Additional project location information includes the following: Lakefront at 261 and 255 N. Mayflower Road, Lake Forest, IL 60045

Name of Receiving Water: Lake Michigan

Project Name/Description: Breakwater - Protected Beach and Sand Nourishment - proposed shore protection and to help reduce deepening of the lakebed near shore

Construction Schedule: Immediate (Duration: 6 months)

The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters must provide their name and address along with comments on the certification request. The IEPA Log number must appear on each comment page. Commenters may include a request for public hearing. Only hearing requests and comments that pertain to Clean Water Act Section 401 authority will be considered. This authority provides consideration of whether the permit or license would be consistent with Sections 301, 302, 303, 306, or 307 of the CWA, as well as "any other appropriate requirement of State [or tribal] law". Requests for additional comment period must provide a demonstration of need. The final day of comment acceptance will be on the Public Notice Ending date shown above, unless the IEPA grants an extended notice period. The attached Fact Sheet provides a detailed description of the project and the findings of the IEPA's antidegradation assessment.

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 see the contact information below.

Name: Oyetunde Tinuoye Email: Oyetunde.Tinuoye@illinois.gov Phone: 217/782-3362

Post Document. No. C-0021-24-02072025-PublicNoticeAndFactSheet.pdf

401 Water Quality Certification Fact Sheet for David Moore/Breakwater Protected Beach and Sand Nourishment
IEPA Log No. C-0021-24
Contact: Angie Sutton 217-782-9864

David Moore "Applicant" has applied for a 401 Water Quality Certification modification for impacts associated with the enhancement of an existing shoreline protection and stabilization system with sand nourishment in Lake Michigan at 261 and 255 North Mayflower Lane in Lake Forest, Lake County, Illinois. The project site can be found in Township 44 North, Range 12 East, Section 34. The proposed project would allow for construction to extend/expand the existing northern breakwater, reconstruct and extend the gumball into a breakwater, construct a steel pier on the existing steel groin between the 2 properties, place stone on the south side of the existing southern groin, and to install a steel cap on the short groin second from the south to provide stability. Clean, quarried sand would be placed within the breakwater system. The existing breakwaters have not functioned as well as anticipated likely due to the water depth immediately offshore. When originally constructed, the offshore water depth was not surveyed with the level of detail that has more recently been obtained. The water depth allows larger stormwaves to impact the site and erode the sand. A new revetment was previously permitted and now that the bluff toe has adequate protection, the project will be completed to protect the lakebed from further deepening close to shore by breaking waves farther offshore and holding more sand in the bays. The project purpose is to protect the shoreline from erosion and help reduce deepening of the lakebed near shore. The proposed system is designed to help retain a sandy beach, move the wave energy focus further offshore, help reduce lakebed downcutting, reduce erosion of the bluff toe landward of the seawall, and help provide safe access for pedestrians and swimmers to and from Lake Michigan.

Beginning at the north end of 261 North Mayflower, a 55' long breakwater spur to the south will be constructed. After a 40' gap, the gum ball will be reconstructed and extended into a 140' long quarrystone breakwater extending 100' north of the existing steel groin and 40' south. The breakwaters will have a crest elevation of 586' with an 11' wide crest and slopes of 1:1.5. A steel pier on piles will be constructed over the existing steel groin that is on the property line between 255 and 261. The pier will have a width of 6 feet and a crest of 585'. Once the pier intersects with the breakwater crest there will be a pier deck on open piles over the crest that is 20' long with an extension lakeward to the toe of the breakwater stone for fishing and boat access. There will be stone wave attenuators (serving as toe protection) along the north side of the pier/groin and on the south side of the southernmost groin with a crest of 586'(N) and 585" (S) and slopes of 1:1. Maintenance will be done in the form of filling voids on the existing south breakwaters. A total of 1765 cubic yards (CY) of clean quarried stone is expected to be placed in 0.17 Ac. Finally, a steel cap will be installed on the short groin second from the south to groin stability.

2,536 CY of clean quarried mitigational sand will be placed within the designated sandfill areas. New stone, sand fill, and steel will cover 0.73 acres (Ac) below the visual Ordinary High-Water Mark (OHWM) of Lake Michigan.

The amount of sand is equal to the amount that the structure would be expected to trap plus an additional 20% overfill. The application is also requesting a 10-year sand nourishment allowance (up to 1,500 tons) that would permit the applicant to place more sand within the breakwater system as necessitated by storm activity and water level.

This project will be completed using a barge and tugboat to deliver materials and equipment to the site. Work will be done using a backhoe that will work from the beach to place materials unless the lake level prohibits this method of construction.

This project is expected to improve the lakebed and water quality with the quarrystone breakwaters and sandy beaches improving native species habitat. Because of this, no additional mitigation is proposed for the project. Additionally, the project will not negatively impact the littoral drift system.

Information used in this review was obtained from the application documents dated January 9, 2025, February 12, 2024, and March 21, 2024.

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 IL_QLM-01, is listed on the 2024 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aesthetic quality with a potential cause given as total phosphorus, and fish consumption use with potential causes given as aldrin, dieldrin, endrin, heptachlor, mercury, mirex, polychlorinated biphenyls and toxaphene. Aquatic life use, primary contact use, and public and food processing water supply uses are fully supported.

Lake Forest Beach, Waterbody Segment IL_QI-10, is listed on the 2024 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 (PCBs) and for primary contact recreation use with a potential cause given as E-coli.

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 May 15, 2013, report "Shoreline Segments in Suburban Lake County, Illinois" as a Beach Protection Area and is therefore subject to this 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 are a normal and unavoidable result of the placement of the quarrystone breakwaters and quarry sand beach fill. The fill material will consist of clean quarried stone and sand that will be placed using a combination of marine and land-based access. Breakwater construction includes 1765 CY (4700) of stone in 0.17 Ac and sand fill includes 2536 CY (3170 tons) for placement in 0.73 Ac.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in total suspended solids would be local and temporary, and existing aquatic life use in the shallow, nearshore zone will be temporarily disturbed, but will recover over time. This project will provide an enhancement to the project area by providing aquatic habitat with the placement of stone in high energy areas of the water and creating low energy areas and spawning/hiding areas within the rocks.
Stone revetments and breakwaters do not diminish but in fact improve aquatic habitats by replacing eroding clay bluffs and eroding clay lakebed with stone and sand.

The amount of sand is equal to the amount that the structure would be expected to trap plus an additional 20% overfill. The application is also requesting a 10-year sand nourishment allowance (up to 1,500 tons) that would permit the applicant to place more sand within the breakwater system as necessitated by storm activity and water level.

The quantity of sand is intended to fill the beach area up to the capacity that could be held by the structures plus an additional 20% overfill. The overfill is intended to reduce the potential that sand flowing along the shoreline from north to south would be captured within the enclosed beach area. The proposed fill will improve the quality of the lakebed and water with the quarrystone breakwaters creating habitat for fish. This system will be monitored at the 1- and 5-year intervals as well as require pre- and post-construction surveys per IDNR regulations. This requirement will help assure that a sand equilibrium is met and that the new project is gaining and losing sand at a similar rate to neighboring properties. Additionally, this permit calls for up to 1500 tons of sand to be placed annually or as needed for beach nourishment.

This project will not negatively impact the local terrestrial and aquatic flora and fauna. The breakwater and beach will improve habitat and will not negatively impact the littoral drift stream. This project will help reduce colloidal fines in Lake Michigan water by reducing lakebed downcutting which is a reduction in pollutant load. Additionally, surface water flow quality to Lake Michigan is improved by providing filtration for non-point source runoff. Based on this information, no additional mitigation is proposed.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the proposed activity is to provide a higher level of shore protection for the bluff and lakebed by breaking waves further offshore and retaining more lakebed sand cover within the system.

This project will help reduce colloidal fines in Lake Michigan water by reducing lakebed downcutting which is a reduction in pollutant load. By creating more beach area, surface water flow quality to Lake Michigan is improved.

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

The applicant evaluated the following alternatives:

No Action Option – This option leaves the north property vulnerable to wave overtopping and erosion as well as lakebed downcutting steepening and deepening the near shore lakebed allowing larger waves to impact the revetment and shoreline.

The lakebed and eroding areas west of the seawall increase pollutants in Lake Michigan as well as do not increase or improve habitat.

Option 2 - Maintenance Only to the Structures. This option would reduce wave overtopping. This would not retard lakebed downcutting and its related issues.
Option 3 - Previous Plan submitted in 2022 attached. This plan called for a breakwater extension to the south that extended approximately 160' offshore. This plan was rejected by the IDNR.

Option 4 - The Current Plan: This plan is to construct 2 breakwaters in the north bay with a short breakwater extension into the central bay. The plan keeps the structures at 125' offshore from the existing seawall. Keeping the breakwater this close to shore in this deeper water environment, requires the breakwaters to be larger with narrower gaps to retain sand.

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

On January 9, 2025, the IDNR EcoCAT review was initiated for the project area (Project #2508351). The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 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 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 Lake Michigan and the nearshore area of the project location by providing shoreline stabilization and sand nourishment to eroding beach areas as well as establish habitat for fish species. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.