



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/782-3362

SEP 29 2020

U. S. Army Corps of Engineers  
Chicago District  
Regulatory Branch  
231 South LaSalle Street, Suite 1500  
Chicago, Illinois 60604

Re: U.S. Army Corps of Engineers, Chicago District Regional General Permit for Lake Michigan  
Log No. C-0063-20  
401 Water Quality Certification with Conditions

Dear Sir or Madam:

This Agency has reviewed the proposed Regional General Permit public noticed for Cook and Lake County by the Chicago District on March 31, 2020. Based on the information included in the public notice and on the Agency's record, it is our engineering judgment that the activities proposed for coverage under the General Permit may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

Section 401 water quality certification is hereby issued for the following activities listed under the Regional General Permit: (1) Installation, repair and modification of permanent and seasonal piers/docks, (2) Navigational and mooring aids, (3) Temporary recreational structures, (4) Installation, repair, and modification of shore protection, (5) Beach nourishment, (6) Maintenance of existing public harbor, public access facilities, and navigational features required for maintaining existing function, (7) In-water placement of dredged material including beneficial use of dredged material for beach nourishment, shore protection, or ecosystem restoration and (8) Temporary structures and minor discharges of dredged or fill material necessary for the removal of vessels or for the removal of man-made obstructions to navigation; subject to the following General Conditions and subject to the attached Special Conditions for items (4) and (7) of the above listed activities.

**General Condition 1:** Pursuant to 35 Ill. Admin. Code Section 395.401(a), the applicant shall not cause:

- a. a violation of applicable water quality standards of the Illinois Pollution Control Board Title 35, Subtitle C: Water Pollution Rules and Regulation;
- b. water pollution defined and prohibited by the Illinois Environmental Protection Act;
- c. interference with water use practices near public recreation areas or water supply intakes;
- d. a violation of applicable provisions of the Illinois Environmental Protection Act.

**General Condition 2:** Pursuant to 35 Ill. Admin. Code Sections 302.515 and 395.401(b), the applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.

**General Condition 3:** Pursuant to 35 Ill. Admin. Code Section 395.402(b)(2) and the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)], the applicant is advised that the following permit(s) must be obtained from the Illinois EPA: The permittee shall obtain a Section 39 Final Determination by submitting a Joint Application to IDNR and IEPA prior to commencement of proposed

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construction. The applicant must obtain permits to construct sanitary sewers, water mains, and related facilities prior to construction.

**General Condition 4:** Pursuant to 35 Ill. Admin. Code Section 302.105(f)(1)(F), prior to proceeding with any work in accordance with this Regional Permit, potential impacts to State threatened or endangered species and Natural Areas shall be determined in accordance with applicable consultation procedures established under 17 Ill. Admin Code Part 1075. The Department of Natural Resources (IDNR) Ecological Compliance Assessment Tool (EcoCAT) is available to complete consultation at <http://dnr.illinois.gov/EcoPublic/>. If IDNR determines that adverse impacts to protected natural resources are likely, the applicant shall address those identified concerns with IDNR through the consultation process. Please contact IDNR, Impact Assessment Section at 217-785-5500 if you have any questions regarding consultation.

**General Condition 5:** Pursuant to 35 Ill. Admin. Code Sections 302.105(a), 302.105(c)(2)(B) and 395.401(a), for any project that involves a waterbody with a USEPA approved Total Maximum Daily Load (TMDL) allocation for a pollutant parameter that is reasonably expected to exist within the resulting discharge, additional measures which ensure consistency with the assumptions and requirements of the TMDL must be developed and incorporated with the construction plan. TMDL program information and water listings are available at <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Pages/reports.aspx>.

**General Condition 6:** Pursuant to 35 Ill. Admin. Code Section 302.515, in-water construction including mechanical dredging operations shall be conducted in a manner to minimize resuspension of materials in the water column using techniques such as careful equipment use, use of equipment modifications such as closed clamshell buckets, use of turbidity curtains during dredging and use of sealed barges and transportation trucks. Turbidity curtains shall be used in accordance with the current version of the "Illinois Urban Manual" <https://illinoisurbanmanual.org/> Practice Standard for Floating Silt Curtain (no. 917).

**General Condition 7:** Except for placement of dredged material covered under the Regional General Permit, pursuant to 35 Ill. Admin. Code Sections 302.515 and 395.401, any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area that is in compliance with all State statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by the Illinois EPA pursuant to 35 Ill. Admin. Code 395.203 and Section 12(b) and 39(n) of the Illinois Environmental Protection Act. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

**General Condition 8:** Pursuant to the Illinois Environmental Protection Act Section 39(a)[415 ILCS 5/39(a)] and 35 Ill. Admin. Code Sections 395.402(b)(2) and 309.102, the applicant shall be responsible for obtaining an NPDES Storm Water Permit required by the federal Clean Water Act prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit must be applied for at <https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx>.

**General Condition 9:** Pursuant to 35 Ill. Admin. Code Section 302.515, the applicant shall implement all necessary sedimentation and erosion control measures consistent with the current version of the “Illinois Urban Manual” found at <https://illinoisurbanmanual.org/>.

**General Condition 10:** Pursuant to 35 Ill. Admin. Code Section 302.515, asphalt, bituminous material and concrete with protruding material such as reinforcing bar or mesh shall not be 1) used for backfill, 2) placed on shorelines/streambanks, or 3) placed in waters of the State.

**General Condition 11:** Pursuant to 35 Ill. Admin. Code Sections 395.401 and 395.205, the fill material used in Lake Michigan shall be predominantly sand or larger size material, with <20% passing a #230 U. S. sieve.

**General Condition 12:** Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.515 and 302.504, all construction equipment and material that enters Lake Michigan shall be free of contaminants of any kind including, but not limited to: sludge, clay, dirt, oil, grease, organic matter, or any other pollutant that would produce offensive conditions or otherwise violate water quality standards.

**General Condition 13:** Pursuant to 35 Ill. Admin. Code Section 302.515, all hydraulic machinery used for this activity and deployed in or immediately adjacent to Lake Michigan shall utilize biodegradable or bio-based hydraulic fluids to minimize pollution in the case of broken or leaking hydraulic equipment.

**General Condition 14:** Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.515 and 302.504, the applicant shall ensure that a spill avoidance and response plan has been developed and implemented for management of accidental releases of petroleum, oil, and lubricant products to the aquatic environment during construction and for emergency notification of applicable downstream water supply operators. Absorbent pads, containment booms and skimmers shall be available to facilitate the cleanup of petroleum spills. If floating hydrocarbon (oil and gas) products are observed, the applicant or his designated individual will be responsible for directing that work be halted so that appropriate corrective measures are taken in accordance with the plan prior to resuming work.

Page No. 4

Cook and Lake County Regional General Permit Lake Michigan Activities 401 Water Quality Certification

Log # C-0063-20

Should you have any questions or comments regarding the content of this letter, please contact Francisco J. Herrera at 217-782-3362.

Sincerely,



Darin E. LeCrone, P. E.  
Manager, Industrial Unit, Permit Section  
Division of Water Pollution Control

DEL:FJH:C-0063-20 PN and FS.docx

Attachment (Special Conditions for Section 401 water quality certification of the Lake Michigan Special Conditions)

cc: Records Unit  
IDNR, OWR, DWRM, Bartlett  
USEPA, Region 5  
USFWS, Chicago

Illinois Environmental Protection Agency  
September 29, 2020

Section 401 Special Conditions applicable to activities 4 & 7 of the Regional General Permit for Lake Michigan

- 1) Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.105(a), and 302.105(c)(2)(B)(ii), an individual Section 401 certification shall be required for shoreline construction activities that may reasonably be expected to cause or contribute to violation of the USEPA approved Total Maximum Daily Loads for pathogenic bacteria. Specifically, this case-specific 401 requirement applies to 1) projects that include the installation or relocation of any municipal stormwater drainage conveyance to Lake Michigan or 2) projects that meet all the following criteria:
  - a. the project or any component of the project is located within 500 meters of a public beach;
  - b. the project includes the installation or enlargement of shoreline features that create or enlarge an embayment. For purposes of this condition an embayment shall be considered any fixed feature(s) which encloses waters of Lake Michigan and has the potential to limit the exchange of freshwater between the enclosed waters and Lake Michigan by means of inhibiting both shore-parallel currents and shore-perpendicular currents; and
  - c. there is an existing or proposed natural or man-made stormwater drainage feature that would discharge concentrated stormwater runoff to the waters enclosed by the proposed embayment. For purposes of this condition, concentrated runoff shall be considered runoff from a land area that exceeds a single residential unit and associated grounds.
- 2) Pursuant to 35 Ill. Admin. Code Sections 395.401 and 302.105(c)(2)(B)(ii), for any shoreline construction activity that meets items (a) and (b) of the above condition but does not meet item (c), a case specific 401 certification will not be required provided the applicant implements appropriate Best Management Practices consistent with Table 5-1 of Illinois EPA's TMDL report titled "Total Maximum Daily Load, Shoreline Segments in Suburban Cook County, Illinois" dated May 15, 2013 to the extent necessary to address bacterial loading from constructed embayment structures and to ensure compliance with applicable fecal coliform water quality standards under 35 Ill. Adm. Code 302.505 and the geometric mean of 126 cfu/100mL load allocation requirement under the above mentioned USEPA approved TMDL.
- 3) Pursuant to 35 Ill. Admin. Code Section 395.401, an individual Section 401 certification shall be required for discharges of dredged material originating from areas outside of Lake Michigan Basin waters under Illinois jurisdiction. Lake Michigan Basin is defined under 35 Ill. Admin. Code 303.443.
- 4) Pursuant to 35 Ill. Admin. Code Sections 395.401, 302.105(c)(2)(B)(ii), 302.515, and 302.504, an individual Section 401 certification shall be required for the discharge of hydraulically dredged materials.
- 5) Pursuant to 35 Ill. Admin. Code Sections 395.205, 395.401, 302.105(c)(2)(B)(ii), 302.515, and 302.504, for discharges resulting from open water disposal or beneficial use of mechanically dredged materials obtained from Lake Michigan the permittee shall comply with the following requirements:
  - a. Physical and/or chemical analysis shall be conducted prior to discharge of dredged materials to evaluate the suitability of the dredged material for discharge and to determine the necessity of additional pollution control measures. For a recurring dredging operation, the sampling and testing frequency shall be considered consistent with 35 Ill. Admin. Code 395.205 if:

- i. Sampling and analyses are conducted prior to each yearly dredge event, or
  - ii. Sampling and analyses are conducted on a "once-per-permit" basis in accordance with written approval by the Illinois EPA. Such approval will be requested in writing to the Bureau of Water by the applicant and will specify the reduced sampling and analysis requirements. The Agency's approval of reduced sampling and analysis will be based on the applicant's demonstration of compliance with permit conditions and water quality standards over a period of time consisting of no less than the ten (10) most recent annual dredge events. A request shall consist of the following items:
    1. An evaluation of the results of all the particle size analyses, 4 hour supernatant analyses and surface water monitoring sample analyses conducted over the ten (10) most recent annual dredge events.
    2. A detailed description of the collection and testing procedures of collected samples with a topographical map showing sampling locations.
    3. An evaluation of the results of all the Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) over the ten (10) most recent annual dredge events.
- b. The following sampling and analysis shall be conducted on a representative number of samples from the dredge cut (minimum of 3 samples analyzed separately):
- i. A particle size distribution using a No. 230 U.S. sieve.
  - ii. Analysis of asbestos by the following methods:
    1. PLM and TEM methods shall be used for asbestos testing. All samples shall be analyzed by each asbestos test method.
    2. For new dredge cuts, the modified Superfund method as described in Special Condition 5(f) shall be conducted at least one time where dredged material is to be placed on a beach or in nearshore waters for beach nourishment. After the initial modified Superfund testing is conducted on a particular dredge cut and the results are determined to fall below the asbestos concentrations provided in Special Condition 5(d)(iv), the modified Superfund method testing is not required for subsequent dredge events.
  - iii. Resuspension analysis:
    1. For open water placement of dredged material, a supernatant test, based on settling periods of at least zero (0) and four (4) hours, shall be conducted on each representative sample and the receiving water. Supernatant analysis will be conducted in mass per volume for the following parameters: total suspended solids (TSS), total volatile solids (TVS), ammonia-nitrogen (as N), phosphorus (as P), total dissolved solids (TDS), sulfate, chloride, lead (total), and zinc (total).
    2. For beach placement of dredged material, an elutriate test shall be conducted on each representative sample and the receiving water. Elutriate analysis will be conducted in mass per volume for the following parameters: total suspended solids (TSS), total volatile solids (TVS), ammonia-nitrogen (as N), phosphorus (as P), total dissolved solids (TDS), sulfate, chloride, lead (total), and zinc (total).
    3. Parameters shall not exceed Lake Michigan Basin water quality standards, 35 Ill. Admin. Code 302, Subpart E. If water quality standards are not met, then the applicant shall conduct water quality monitoring at the dredged disposal site to ensure water quality standards are met at the boundary of the mixing zone, as

determined using models described in the Inland Testing Manual, Appendix C, if applicable. If models show water quality standards will not be met at the boundary of the mixing zone, then dredged material shall be govern by condition 5(e).

c. Water quality monitoring shall be conducted during open water placement activities if the 4 hour supernatant test results of the dredge material exceed the following concentrations: 0.02 mg/L ammonia-nitrogen (as N), 12 mg/L chloride, 0.007 mg/L phosphorus and 15 mg/L of total suspended solids (TSS). The following parameters shall be monitored on a twice weekly basis in the first week of the dredging event and weekly thereafter and reported in mg/L: total suspended solids (TSS), ammonia-nitrogen (as N), phosphorus (as P), and chloride. The mean 4 hour supernatant test result may only be used to make this determination provided the mean value is based on a minimum of 10 samples. The water quality sampling shall be conducted in accordance with the following:

- i. A sample of the water quality at the placement site shall be collected prior to the start of dredging activities, at surface and mid-depth elevations consisting of water hardness, water pH, and water temperature in addition to the above listed parameters.
- ii. Water quality samples shall be collected at surface and mid-depth elevations at two locations representative of the prevailing water current direction, one at approximately 100 feet from the discharge point and the other at approximately 500 feet from the discharge point.
- iii. Water quality samples shall be taken at approximately one (1) hour and four (4) hours after the discharge of dredge material commences.
- iv. Sample laboratory analysis results, drawings depicting the location of each collected sample point, the volume of dredge material discharged, method of dredged material placement and the dredge disposal location shall be recorded and compiled into a monitoring report. The monitoring report shall also provide the following information: method of determining downstream sample locations; date, time, location, and individual(s) who performed the sampling; the laboratory analysis sheets; date and time that discharge begins and ends.

d. All parameters tested in accordance with condition 5 shall be tested by methods in accordance with 40 CFR 136 with reporting limits that do not exceed the following values:

Ammonia-Nitrogen (as N)	0.02 mg/L
Chloride	12 mg/L
Lead (total)	0.05 mg/L
Phosphorus (as P)	0.007 mg/L
Sulfate	24 mg/L
Total Dissolved Solids (TDS)	180 mg/L
Zinc (total)	0.159 mg/L
Polarized Light Microscopy (PLM)	1% ACM
Transmission Electron Microscopy (TEM)	1% ACM
Asbestos Superfund Method	2 Ms/g PM <sub>10</sub>
ACM (Asbestos containing material)	
Ms/g PM10 (Million structures per gram of particulate matter)	

e. Should any of the results obtained from special condition 5(b) meet the following, the applicant shall submit the results to the Agency for written approval 90 days prior to proposed dredging.

- i. Material with any separate particle size analysis equal to or greater than 20% passing a No. 230 U.S. sieve.
  - ii. Material with 4 hour supernatant or elutriate results which exceed twice the reporting limit concentrations.
  - iii. Material with greater than 1% ACM reported from the PLM or TEM test.
  - iv. Material tested for asbestos using the Superfund method that exceeds a mean value of 6.23 Ms/g PM<sub>10</sub> and a 95% upper confidence limits (UCL) of 12.58 Ms/g PM<sub>10</sub> for the 12 or more samples using the sum of the Protocol and NIOSH 7402 test methods.
  
- f. The dredged material shall be placed in the water in a manner to minimize resuspension of sediment material and contaminants by utilizing techniques including careful placement methods, release of material near the bottom of the water body, disposal during favorable weather conditions that minimize turbulence and transport of suspended contaminants and other methods such as turbidity curtains should be used as necessary to minimize re-suspension of sediment material. Turbidity curtains shall be used in accordance with the current version of the "Illinois Urban Manual" <https://illinoisurbanmanual.org/> Practice Standard for Floating Silt Curtain (no. 917).
  
- g. Modified Superfund method testing shall be conducted on a minimum of twelve (12) representative sediment samples from the source material. Samples shall be prepared and analyzed in accordance with the most current version of the Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials(U.S. EPA 540-R-97-028, 1997) and modified in the Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material (Berman and Kolk, May 2000) and additional modifications necessary to obtain the necessary sampling and analysis of PM<sub>10</sub> in accordance with the Illinois Attorney General's Task Force Report. Sampling shall utilize a grid sampling system with equally spaced samples. Samples analyzed for asbestos shall be analyzed by Transmission Electron Microscopy (TEM) and for both the NIOSH 7402 (PCME) method and Protocol Structures method. The aforementioned sampling and analysis shall be conducted in accordance with the recommendations specified in the document entitled Illinois Beach State Park (IBSP): Determination of Asbestos Contamination in Sand Used for Beach Nourishment, Final Recommendations, dated December 29, 2003, prepared by the University of Illinois at Chicago, Center of Excellence in Environmental Health, Health Hazard Evaluation Program for the Illinois Attorney General's Task Force that was formed to address asbestos contamination at Illinois Beach State Park (IBSP). Sampling results shall be used to conduct a screening risk assessment to evaluate the potential harm to human health. Results of the screening risk assessment shall be compared to the results in Table 7 of the Illinois Attorney General's Task Force Report.
  
- h. The permittee shall monitor in accordance with special condition 5(c). The permittee shall operate the dredge and disposal such that the surface water at 500 feet from the discharge point does not exceed 0.02 mg/L ammonia-nitrogen (as N), 12 mg/L chloride, 0.05 mg/L lead (total), 0.007 mg/L phosphorus, 24 mg/L sulfate, 180 mg/L total dissolved solids (TDS), 0.159 mg/L zinc (total), or does not exceed the background concentrations measured under condition 5(b) and otherwise complies with the water quality standards of 35 III. Admin. Code, Subtitle C.