

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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October 5, 2023

IP-SE-2023-41-01653

City of Milwaukee
c/o: Brian Kasprzyk
2323 S. Lincoln Memorial Dr.
Milwaukee, WI 53207
[sent electronically: bkaspr@milwaukee.gov]

Dear Mr. Kasprzyk,

The Wisconsin Department of Natural Resources received a water quality certification request pursuant to 40 CFR Part 121, by Brian Kasprzyk, on behalf of Port Milwaukee – City of Milwaukee (City), 2323 S. Lincoln Memorial Drive, Milwaukee, WI 53207. The City has applied to the Department of Natural Resources for a non-wetland water quality certification (WQC) to implement a water quality conservation project on a portion of submerged lands in Lake Michigan legislatively granted to the City of Milwaukee, located in QQ: SW 1/4, Q: NW 1/4 of Section 3, QQ: NW 1/4, Q: SW 1/4 of Section 3, QQ: SE 1/4, Q: NE 1/4 of Section 4, and QQ: NE 1/4, Q: SE 1/4 of Section 4, Township 6 North, Range 22 East, City of Milwaukee, Milwaukee County.

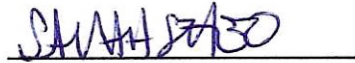
The Wisconsin Department of Natural Resources (WDNR, Department) has determined that there is reasonable assurance that the proposed activity will be conducted in a manner which will comply with the standards enumerated in s. NR 299.04, Wis. Adm. Code and grants water quality certification with conditions. The following conditions for the United States Army Corps of Engineers (USACE) permit number 2019-02093-SPK are required to ensure compliance with state water quality standards enumerated in s. NR 299.04, Wis. Adm. Code.

The Department will publish this notice on its Internet website and as a class I notice under ch. 985, Wis. Stats., in the Milwaukee Journal Sentinel. Unless a written request for hearing is filed with the Department within 30 days after publication of the notice of decision as a class I notice in the Milwaukee Journal Sentinel, the Department's decision will become final without public hearing at the end of the 30-day period.

Please be aware that Section 401 Certification does not release the permittee from obtaining all other necessary federal, state, and local permits, licenses, certificates, approvals, registrations, charters, or similar forms of permission required by law. It does not limit any other state permit, license, certificate, approval, registration, charter, or similar form of permission required by law that imposes more restrictive requirements.

The Department appreciates your willingness to incorporate these WQC conditions into USACE permitting decisions. Please contact me at Sarah.Szabo@wisconsin.gov or (715) 416-3827 if you have any questions or concerns about this certification.

Sincerely,



Sarah Szabo
Water Management Specialist

Enclosed:

Public Notice_IP-SE-2023-41-01653

Email CC:

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Waterway/Wetland File

WATER QUALITY CERTIFICATION CONDITIONS

1. Notification of Commencing Discharge. At least 10 business days prior to the beginning of the discharge, the applicant shall notify the Department of its intent to commence the discharge.

Justification: Necessary in order to allow the Department ensure compliance with state water quality standards in ch. NR 102, Wis. Adm. Code, and to impose necessary monitoring requirements, pursuant to s. NR 299.05(3)(d)2, Wis. Adm. Code.

2. Notification of Completing Discharge. Within 5 business days after the completion of the discharge, the applicant shall notify the Department of the completion of the discharge.

Justification: Necessary in order to allow the Department to ensure compliance with state water quality standards in ch. NR 102, Wis. Adm. Code, and to impose necessary monitoring requirements, pursuant to s. NR 299.05(3)(d)2.b., Wis. Adm. Code.

3. Reasonable entry and access. The applicant shall allow the Department reasonable entry and access to the discharge site in order to inspect the discharge for compliance with the certification and applicable laws.

Justification: Necessary in order to allow the Department to ensure compliance with state water quality standards in ch. NR 102, Wis. Adm. Code, and to impose necessary monitoring requirements, pursuant to s. NR 299.05(3)(d)2.c., Wis. Adm. Code.

4. Construction Timing. Once waterway work below the Ordinary High Water Mark (OHWM) commences for the construction of the Dredged Material Management Facility (DMMF), all construction activities in those waterways must be continuous until the work is completed and the site is stabilized. During periods of inactivity, the site must be made stable until the work is resumed and completed.

Justification: Pursuant to ss. NR 102.04(1) and NR 102.06, Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Reducing the timing of waterway projects helps ensure excessive sedimentation, total suspended solids (TSS), and nutrient loadings will not result in a violation of state water quality standards under ch. NR 102, Wis. Adm. Code.

5. Construction. No other area of the waterway may be disturbed except the area designated in the submitted plans.

Justification: Pursuant to ss. NR 102.04(1)(a) and (b) Wis. Adm. Code, objectionable deposits or debris shall not be present in amounts that interfere with public rights and interests in waterways. Waterways not evaluated in this decision will require additional analysis to ensure that these standards are met through separate s. 401 water quality certification actions.

6. Erosion and Sediment Control Practices. The project site must implement erosion and sediment control measures that adequately control or prevent erosion and prevent damage to waterways outlined in Wis. Admin. Code s. NR 151.11(6m). These standards can be found at the following website:

http://dnr.wi.gov/topic/Stormwater/standards/const_standards.html. Any area where topsoil is exposed during the project should be immediately seeded and mulched to stabilize disturbed areas and prevent soils from being eroded and washed into the waterway.

- a) Granular fill material used for the DMMF construction will either be contained in marine vessels or stockpiled in upland areas prior to placement. If stockpiled upland, storm water control practices will be utilized around stockpile perimeters to control erosion.
- b) Geotechnically unsuitable material between the outboard double pile wall system of the DMMF will be removed to achieve stability of the system. This unsuitable material will be removed and placed on a dewatering pad and comply with Wisconsin Pollutant Discharge Elimination Systems (WPDES) permitting.

Justification: Pursuant to ss. NR 102.04(1) and NR 102.06, Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. In-water and upland best management practices (BMPs) in alignment with ch. NR 151, Wis. Adm. Code, help ensure excessive sedimentation, TSS, and nutrient loadings will not result in a violation of state water quality standards under ch. NR 102, Wis. Adm. Code.

7. Equipment Use. All equipment used for the project will be designed and properly sized to minimize the amount of disturbance to the waterway.

Justification: Pursuant to ss. NR 102.04(1) and NR 102.06, Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Ensuring proper equipment sizing and use will help achieve compliance with ch. NR 151, Wis. Adm. Code, standards and help ensure excessive sedimentation, TSS, and nutrient loadings will not result in a violation of state water quality standards under ch. NR 102, Wis. Adm. Code.

8. Fish spawning. No discharges of dredged or fill material below the OHWM of any navigable waters as defined by s. 30.01(4m), Wis. Stats., may take place during fish spawning periods or times when nursery areas would be adversely impacted. These periods are: March 1 through June 15. An in-water work restriction waiver is issued for this project so that the DMMF can be constructed during the in-water work restriction period. Any future in-water work unrelated to the initial construction of the DMMF shall be done either outside of the in-water work restriction window or with an in-water work restriction waiver.

Justification: Pursuant to s. NR 102.04(3), Wis. Adm. Code, aquatic life designations include spawning areas for cold water and warm water fish and aquatic life habitat. Water quality criteria are derived to ensure spawning activities in Wisconsin are protected.

9. DMMF contractor shall notify the Department at least two weeks prior to fully enclosing the DMMF basin to coordinate with the Department on the relocation or management of fish that may be trapped in the basin as a result of the closure.

10. **Justification:** Fisheries impacts and takings threaten the “protection and propagation of a balanced fish and other aquatic life community” under the “Fish and other aquatic life” designated use in s. NR 102.04(3), Wis. Adm. Code.

11. Fish observed at the surface of the water shall be netted and relocated outside of the project area.

Justification: Fisheries impacts and takings threaten the “protection and propagation of a balanced fish and other aquatic life community” under the “Fish and other aquatic life” designated use in s. NR 102.04(3), Wis. Adm. Code.

12. Invasive Species. To stop the spread of invasive species and viruses from one navigable waterway to another navigable waterway, all equipment or portions of equipment used for constructing, operating, or maintaining the project, including tracked vehicles, barges, boats, silt or turbidity curtains, hoses, sheet piles, and pumps, must be decontaminated for invasive species and viruses before and after use or prior to use within another navigable waterway. Follow the most recent Department approved washing and disinfection protocols and Department approved best management practices to avoid the spread of invasive species. These protocols and practices can be found on the Department website at <http://dnr.wi.gov/topic/Invasives/bmp.html>, Keyword: “equipment operator” or “invasive bmp” and at <http://dnr.wi.gov/topic/Invasives/documents/EquipOper.pdf>.

Justification: Invasive species threaten the “protection and propagation of a balanced fish and other aquatic life community” under the “Fish and other aquatic life” designated use in s. NR 102.04(3), Wis. Adm. Code. This condition also ensures compliance with ch. NR 40, Wis. Adm. Code, which prohibits the transportation and introduction of listed invasive species.

13. Preventive Measures. Measures must be adopted to prevent potential pollutants from entering a waterbody. Construction materials and debris, including fuels, oil, and other liquid substances, may not be stored in the construction work area in a manner that would allow them to enter a waterbody as a result of spillage, natural runoff, or flooding. In addition, biodegradable hydraulic fluid shall be used in equipment that is operated below the OHWM or a boom kept on site. If a spill of any potential pollutant should occur, it is the responsibility of the applicant to remove such material, minimize any contamination resulting from this spill, and immediately notify the State Duty Officer at 1-800-943-0003.

Justification: Pursuant to ss. NR 102.04(1)(a) and (b), Wis. Adm. Code, objectionable deposits or debris shall not be present in amounts that interfere with public rights and interests in waterways. Pursuant to s. NR 102.04(1)(d), substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.

14. Suitable Fill Material for the construction of the DMMF. All fill authorized for the construction of the DMMF shall be free from hazardous substances as defined by s. 289.01(11), Wis. Stats., free from solid waste as defined by s. 289.01 (33), Wis. Stats., and must consist of clean, suitable soil as defined by s. NR 500.03(214), Wis. Adm. Code, or otherwise approved.

- a) Dredged material and soil not consistent with the contaminant characteristics that have been reported to the Department shall be segregated and disposed of in accordance with state and federal laws and regulations.

Justification: Pursuant to ss. NR 102.04(1)(a) and (b), Wis. Adm. Code, objectionable deposits or debris shall not be present in amounts that interfere with public rights and interests in waterways.

15. Sediment Sampling. Whenever sediment sampling and analysis is being conducted, and before disposal of materials from any dredging project into the DMMF, proper sampling and quality assurance methods shall be implemented pursuant to ch. NR 347, Wis. Adm. Code. The applicant shall ensure that preliminary application and analytical requirements pursuant to s. NR 347.05, Wis. Adm. Code, to inform sediment sampling

and sediment placement will occur for every dredging project with proposed placement in the DMMF.

Justification: In order to protect the public rights and interests in the waters of the state and water quality standards enumerated in s. NR 299.04(1)(b) Wis. Adm. Code, and to ensure that data quality is representative of site conditions to make informed water quality certification decisions, all data gathering, sampling, monitoring, data analysis and disposal shall be completed using proper sampling and quality assurance methods pursuant to ch. NR 347, Wis. Adm. Code.

16. The DMMF shall only accept the following material from the Milwaukee, Menomonee, and Kinnickinnic Rivers and Milwaukee Bay by the United States Environmental Protection Agency (USEPA) from Great Lakes Legacy Act (GLLA) dredging projects in the Milwaukee Estuary Area of Concern (AOC), Port Milwaukee commercial navigation, and Milwaukee Metropolitan Sewerage District (MMSD) watercourse projects with prior approval of the Department:

- a) Sediment
- b) Soil
- c) Debris that is part of the sediments or soil (e.g., rock, concrete, timber, utility materials) and that is not defined as construction or demolition waste.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Pursuant to ss. NR 102.04(1) and (3), Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Pursuant to s. NR 102.04(1)(d) Wis. Adm. Code, substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.

17. The DMMF shall not accept the following materials for disposal:

- a) Dredged material containing non-aqueous phase liquid (NAPL).
- b) Dredged material containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 milligrams per kilogram dry weight.
- c) Municipal solid waste as defined in s. NR 500.03(150), Wis. Adm. Code.
- d) Hazardous waste as defined in s. NR 660.10(52), Wis. Adm. Code.

- e) Characteristic Hazardous Wastes described in Subchapter C of ch. NR 661, ss. NR 661.0020 - 661.0024, Wis. Adm. Code.
- f) Listed Hazardous Waste described in Subchapter D of ch. NR 661, ss. NR 661.0030 – 661.0035, Wis. Adm. Code.
- g) Infectious waste as defined in s. NR 287.07(7)(c)1.c., Wis. Adm. Code.
- h) Household Waste as defined in s. NR 500.03(105), Wis. Adm. Code.
- i) Commercial solid waste as defined in s. NR 500.03(41), Wis. Adm. Code.
- j) Medical waste as defined in s. NR 287.07(7)(c)1.cg., Wis. Adm. Code.
- k) Construction and Demolition waste as defined in s. NR 500.03(50), Wis. Adm. Code.
- l) Waste tires, as defined in s. 289.55(1)(c), Wis. Stats.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Pursuant to ss. NR 102.04(1) and (3), Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Pursuant to s. NR 102.04(1)(d) Wis. Adm. Code, substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.

18. Turbidity Monitoring. Turbidity monitoring shall be conducted for the following construction activities: pile driving, excavation of geotechnically unsuitable material between facility walls, and placement of granular fill between facility walls. Turbidity monitoring will not be required if these activities take place in the interior of the facility after the outboard walls have been constructed. Turbidity monitoring must be conducted using a hand-held turbidimeter or automated turbidity monitoring buoy(s). All measurements must be taken at the approximate mid-depth of the water column. Background readings must be taken at least once per day near the work area before construction activities begin and/or at a location approximately 300-feet from the active work area. A minimum of four measurements per day must be taken in the vicinity of the active construction activities requiring monitoring. The respective Alert and Action Levels are 50 and 100 nephelometric turbidity units (NTUs) above background. If the Alert Level (50 NTU) is reached or exceeded, the contractor must be notified, monitoring frequency shall increase, and modifications to construction activities to reduce turbidity must be considered. If the Action Level (100 NTU) is reached or exceeded, the contractor must

be notified, monitoring frequency shall increase, and modifications to construction activities to reduce turbidity below the Action Level must be implemented. If turbidity remains above the Action Level, turbidity controls must be deployed. These controls may include deployment of full-depth curtain(s) or air (bubble) curtains. If turbidity controls are deployed, turbidity monitoring outside of the controls must be performed to confirm turbidity is below the Action Level. If turbidity returns to below the Action Level in the work area, the use of turbidity controls may be ceased.

Justification: Pursuant to ss. NR 102.04(1) and (3) Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Reducing the timing of waterway-based construction helps ensure excessive sedimentation, TSS, and nutrient loadings will not result in a violation of state water quality standards under s. NR 102.04, Wis. Adm. Code. Given that in-water work will be done during typical in-water work restriction windows to protect fish, it is especially important that turbidity be monitored and that turbidity controls are used as specified. Monitoring requirements that the Department determines to be necessary may be imposed under s. NR 299.05(3)(d)2., Wis. Adm. Code.

19. The City shall install and measure water levels at each piezometer. Frequency of monitoring shall initially be monthly. During the first year of monitoring, the variability in water levels observed in the piezometers will be compared against other parameters such as lake level, precipitation, perimeter drainage system flow rates and other parameters that may be deemed relevant through experience operating and maintaining the DMMF. If consistent piezometer readings are recorded during the first year of monitoring or fluctuations in piezometer readings are reliably correlated with other parameters, the frequency of piezometer monitoring may be reduced to quarterly per written approval from the Department.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Monitoring requirements that the Department determines to be necessary may be imposed under s. NR 299.05(3)(d)2., Wis. Adm. Code.

20. Prior to dewatering activities, the applicant shall obtain and comply with a WPDES permit. The water treatment systems shall not discharge water with contaminant concentrations higher than calculated effluent limits as applied to the facility by the Department through WPDES permitting.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code, through other applicable permitting requirements related to water quality standards under state law, including ch. 283, Wis. Stats.

21. Inspection, Maintenance, and Monitoring. During the DMMF construction phase, MMSD/the City shall be responsible for ensuring that the conditions of this WQC are adhered to. The following inspection, maintenance and monitoring requirements shall be met:

- a) During Phase 1: Transition from construction completion of DMMF to GLLA filling by USEPA (assumed from 2025 – 2026), MMSD/the City shall be responsible for structure inspection and maintenance.
- b) During Phase 2: USEPA’s GLLA filling (assumed from 2026 – 2028), USEPA GLLA shall be responsible for material placement, water management, and water level monitoring and the City shall be responsible for structure inspection and maintenance.
- c) During Phase 3: Transition from GLLA filling to MMSD/City filling (assumed 2029 – 2030), USEPA GLLA shall be responsible for water management and water level monitoring, and the City shall be responsible for structure inspection and maintenance.
- d) During Phase 4: MMSD/the City filling to facility wall heights (assumed 2030 – 2035), MMSD/the City shall be responsible for material placement, and the City shall be responsible for water management, water level monitoring, and structure inspection and maintenance.
- e) During Phase 5: MMSD/the City filling above facility wall heights through completion of final cover construction (assumed from 2035 – 2050), MMSD/the City shall be responsible for material placement and the City shall be responsible for water management, water level monitoring, and structure inspection and maintenance.
- f) During Phase 6: Long-term Care and Maintenance, the City and Port Milwaukee shall be responsible for long term care and maintenance activities.

Justification: Necessary in order to allow the Department to ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Monitoring requirements that the Department determines to be necessary may be imposed under s. NR 299.05(3)(d)2., Wis. Adm. Code.

22. The DMMF shall be constructed to maintain an inward gradient, a minimum six inches of hydraulic head differential, across the cutoff wall by operating the perimeter drainage system shall be maintained. The water level differential shall be maintained by the pump station hydraulically connected to the drainage pipe. The City shall maintain a maximum water level in the basin at or below 584 feet NAVD88, corresponding with the elevation

of the top cutoff wall. Water discharged from operation of the perimeter drainage system shall be treated and in compliance with WPDES permitting.

Justification: Necessary to ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Pursuant to ss. NR 102.04(1) and (3), Wis. Adm. Code, objectionable deposits and nutrients may not be present in amounts that interfere with public rights and interests or exceed water quality standards for surface water. Pursuant to s. NR 102.04(1)(d) Wis. Adm. Code, substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.

23. The City shall continue inspection and maintenance of the DMMF following closure. The inspection and maintenance requirements shall remain in place until the long-term care and maintenance plan is modified, withdrawn, or superseded by written approval from the Department. The City shall conduct annual visual inspections of the above-water components of the DMMF. The final cover system shall be inspected to document overall integrity and identify any areas that may be damaged due to cover system settling, weather exposure, or general wear from routine traffic activities. The City shall also conduct structural inspections every six years to assess and rate the overall condition of the DMMF structures, determine what future maintenance activities may be necessary, estimate the remaining useful life of the structures, and be used as a screening mechanism to determine if and when other inspections may need to be conducted. The Department may increase inspection frequency as necessary based on deterioration of the structures over time. The design life of the DMMF structure is 100 years.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Monitoring requirements that the Department determines to be necessary may be imposed under s. NR 299.05(3)(d)2., Wis. Adm. Code

24. The end use of the DMMF shall be determined by the City, consistent with the terms of the submerged lands grant and the public interest in navigable waters pursuant to the public trust doctrine and water quality standards.

Justification: To ensure compliance with state water quality standards in chs. NR 102 and NR 299, Wis. Adm. Code. Pursuant to s. NR 299.04(1)(b)6., Wis. Adm. Code, the proposed activity must comply with public interest and public rights standards related to water quality.

FINDINGS OF FACT

1. Brian Kasprzyk, on behalf of Port Milwaukee – City of Milwaukee, 2323 S. Lincoln Memorial Drive, Milwaukee, WI 53207, has applied to the Department for a WQC to implement a water quality conservation project on a lakebed grant in Lake Michigan and located in QQ: SW 1/4, Q: NW 1/4 of Section 03, QQ: NW 1/4, Q: SW 1/4 of Section 03, QQ: SE 1/4, Q: NE 1/4 of Section 04, and QQ: NE 1/4, Q: SE 1/4 of Section 04, Township 06 North, Range 22 East, City of Milwaukee, Milwaukee County.
2. The Department has examined this application as it relates to Clean Water Act Section 401 and Wis. Adm. Code chapters NR 102-105 and 299.
3. There is an existing and established lakebed grant along the Lake Michigan project location. The State of Wisconsin legislature conveyed title to the submerged lands under Lake Michigan to the City of Milwaukee for harbor purposes via Chapter 358 of the Laws of 1909, Chapter 285 of the Laws of 1923, and Chapter 381 of the Laws of 1931.
4. The Department completed an *Analysis of Dredged Material Management Alternatives for the Milwaukee Estuary Area of Concern Great Lakes Legacy Act Project(s)* (Alternatives Analysis) on November 5, 2019. In this analysis three alternative options were reviewed – No Action, Landfill Disposal, and DMMF – using the evaluation criteria specified in s. NR 722.07(4), Wis. Adm. Code, and the National Contingency Plan (40 CFR 300.430(e)(9)), which includes the same criteria used in the Superfund process. Community input regarding the DMMF was considered through a 45-day public comment period from Fall 2019 – Winter 2020 after the publication of the Alternatives Analysis. Project stakeholders decided to advance the design of a DMMF at the proposed location, utilizing the lakebed grant.
5. The project consists of building a DMMF by MMSD on the lakebed of Lake Michigan for the purpose of safely managing material dredged from the Milwaukee Estuary AOC within an established lakebed grant area. The DMMF is designed to manage impacted sediments from the AOC. The DMMF will have a design capacity of approximately 1.6 million cubic yards with provisions for increasing the capacity to approximately 1.9 million cubic yards. The DMMF helps satisfy the lakebed grant by expanding the City's land area at Port Milwaukee by approximately 42 acres.
 - a. 1.4 – 1.5 million cubic yards of impacted sediments from the Milwaukee Estuary AOC. This volume is anticipated to be placed in the facility by the EPA and measured at the time of placement in the DMMF.

- b. 2/5 of the remaining 1.9 million cubic yards, equivalent to approximately 200,000 cubic yards, for City of Milwaukee commercial navigation purposes.
 - c. 3/5 of the remaining 1.9 million cubic yards, equivalent to approximately 300,000 cubic yards, for MMSD watercourse projects.
 - d. Any remaining capacity will be split evenly between the City of Milwaukee and MMSD.
6. Department fisheries staff will net and relocate fish within the facility prior to dewatering activities.
7. Dredged material from GLLA dredging projects in the Milwaukee, Menomonee, and Kinnickinnic Rivers and Milwaukee Bay will be placed in the DMMF by USEPA. These projects are planned to support improvement of the Beneficial Use Impairments (BUIs) of the AOC. Removing BUIs from the AOC is key to eventually delisting the AOC from the 1987 designation by USEPA.
8. Conditions of this certification specifying the allowable materials for disposal and prohibiting various dredged materials and waste will ensure the project does not result in a violation of water quality standards or become an infringement on the public interest in navigable waters.
9. The water quality certification is for the DMMF: Lake Michigan shoreline will serve as the western boundary and the existing USACE dredged material disposal facility (DMDF) will serve as the southern boundary. The double combi-wall system on the northern and eastern boundaries of the DMMF will consist of two parallel combi-walls spaced approximately 50 feet apart (i.e., approximately 45.5 feet on-center, and an approximately 50-foot total width of the double combi-wall system). The space between the interior and exterior combi-walls will be filled with specified granular fill. A low-permeability cutoff wall with a minimum thickness of 30 inches (2.5 feet) will be installed in the granular fill, approximately 12 feet off the midpoint of the double combi-wall system, towards the interior wall. A single combi-wall system will be installed offset from the existing DMDF (south) and existing Lake Michigan shoreline (west) and the space between the single combi-wall system and existing features will be filled with the specified granular fill. The continuous low-permeability cutoff wall will be installed in the granular fill material exterior to the single combi-wall system on the western and southern boundaries of the DMMF. The cutoff wall will extend through the granular fill into the underlying native clay till soil. The cutoff wall will be continuous and approximately 5,500 feet in length, including all four sides around the perimeter of the DMMF, to establish a low-permeability barrier and provide

hydraulic containment for the 100-year design service life of the facility. The design service life of the outboard double combi-wall system was established as 100 years. The design life of the inboard combi-wall system is 25 years. Once the DMMF is filled, the function provided by the inboard combi-wall system is no longer needed to support operation of the DMMF.

- a. Containment for the DMMF provided by double combi-wall system with cutoff wall.
 - i. Includes rigorous construction QA/QC requirements.
 - ii. Requires minimal maintenance over the facility service life.
 - iii. Provides ability to achieve the operational goal of maintaining an inward gradient which reduces transport of contaminants outward from the DMMF.

10. The DMMF design will consist of the following components:

- a. Outboard double combi-wall system (north and east sides of facility).
 - i. Interior and exterior walls (comprised of pipe piles and Z-section sheet piles) spaced approximately 50 feet apart. Top elevations at approximately 589.5 feet NAVD88. Interior and exterior walls connected with tie-rods at elevation of approximately 585 feet NAVD88. A 2-foot modular wall extension on the interior wall of the double combi-wall system to elevation 591.5 feet NAVD88 may be utilized to temporarily increase the facility capacity during GLLA filling and would be removed after GLLA filling is complete.
 - ii. Compacted granular fill between the interior and exterior walls finished with an approximately 2-foot-thick driving surface of coarser aggregate to 589.5 feet NAVD88. The minimum width of the driving surface is approximately 41 feet.
- b. Inboard combi-wall system (west and south sides of facility).
 - i. Combi-walls (comprised of pipe piles and Z-section sheet piles) running parallel to, and approximately 54 feet north of, the crest of the existing DMDF trapezoidal rubble mound structure on the southern extent of the DMMF and running parallel to, and 27.5 feet east of, the existing shoreline sheet pile bulkhead wall on the western extent of the DMMF. Top elevations of the combi-walls are approximately 589.5 feet NAVD88. A 2-foot modular wall extension on the inboard combi-wall system to

elevation 591.5 feet NAVD88 may be utilized to temporarily increase the facility capacity during GLLA filling and would be removed after GLLA filling is complete.

- ii. Compacted granular fill between the southern inboard combi-wall and existing DMDF trapezoidal rubble mound structure, as well as between the western inboard combi-wall and existing shoreline sheet pile bulkhead wall. An approximately 2-foot-thick driving surface of coarser aggregate placed atop the compacted granular fill to elevation of approximately 588 feet NAVD88 on the west side of the DMMF and ranging from approximately 588 to 589.5 feet NAVD88 on the south side of the DMMF. The minimum width of the driving surface is approximately 49.5 feet on the south side and approximately 23.0 feet on the west side (i.e., adjacent to the 4.5-foot diameter pipe piles of the inboard combi-wall system).
- c. Continuous low-permeability cutoff wall (30-inch (2.5-foot) thick).
- i. Cutoff wall installed between the outboard interior and exterior walls, as well as between the inboard combi-walls and inboard “exterior walls”. The cutoff wall is keyed into the clay till underlying the facility and the top of the wall is at an elevation of approximately 584 feet NAVD88.
- d. Water management system.
- i. Perimeter drainage system consisting of 12-inch diameter corrugated high-density polyethylene (HDPE) perforated drainage pipe, wrapped in geotextile, and installed within the area between the interior walls of outboard double combi-wall system and the cutoff wall on north and east sides of facility, and the area between the inboard combi-walls and the cutoff wall on the south and west sides of facility. The drainage pipe is mounted to the interior walls with brackets, with pipe inverts set at elevations ranging from approximately 576 feet NAVD88 at the northeastern corner of the facility sloped to approximately 573 feet NAVD88 at the pump station at the southwestern corner of the facility.
 - ii. 12-inch diameter corrugated HDPE riser pipes connected from the drainage piping to the constructed ground surface elevation for perimeter drainage system inspection, maintenance, and cleanout.
 - iii. Drainage piping connected to a pump station to maintain the water level between interior walls and cutoff wall at least six inches below lake level.
 - iv. Piezometer pairs installed along each wall segment to monitor water elevation on both sides of cutoff wall. These piezometers may also be

equipped with transducers to provide real-time data remotely (10 pairs, 20 piezometers in total).

- v. Water levels equal to lake level (assumed approximately 580 NAVD88) within the interior walls (basin), between the interior walls and the cutoff wall, and between the cutoff wall and the exterior walls following construction. Following construction but prior to the start of dredged material being placed in the facility, a pump will be installed, and operation of the perimeter drainage system will begin. Water will be removed from the perimeter drainage system to maintain the water level between the interior walls and cutoff wall at a minimum of six inches below lake level. This will continue throughout the life of the facility to maintain an inward gradient across the cutoff wall.
- vi. Lakebed sediment surface within the interior walls (basin) ranging from approximately 550 to 570 NAVD88 (10 to 30-foot water depth).

11. A primary objective of the cutoff wall is to restrict the dissolved and adsorbed phase transport of the contained sediment constituents of concern for the service life of the facility (and beyond the service life, as estimated through supplemental chemical transport evaluations performed to support design of the cutoff wall). Attainment of this objective is accomplished if sediment constituents of concern within the DMMF do not migrate through the facility walls and discharge from the facility at concentrations greater than applicable standards.

- a. Chemical transport was evaluated using both bulk sediment data and elutriate data from material anticipated to be dredged from the AOC and placed in the DMMF. Additionally, chemical transport was evaluated under both short-term potential upset conditions and long-term planned conditions (inward gradient maintained across the cutoff wall). The evaluation, considering both data sets and various operational scenarios, determined that a cutoff wall thickness of 2.5 feet (30-inches) with a hydraulic conductivity of less than or equal to 1×10^{-6} cm/s (expected geometric mean of test values less than or equal to 5×10^{-7} cm/s)) provides adequate protection of Lake Michigan and groundwater.
- b. Contaminant containment following construction will be confirmed by demonstrating an inward gradient across the cutoff wall. The operational goal is to maintain an inward gradient and corrective actions will be implemented to reestablish an inward gradient should an outward gradient be observed through water level monitoring. Modeling demonstrates that the cutoff wall can be subjected to outward gradient for an extended period of time without exceeding water quality standards.

- c. The water treatment systems will not discharge water with contaminant concentrations higher than calculated effluent limits as applied to the facility by WDNR through WPDES permitting.

12. A Low Hazard Exemption (LHE) was submitted and issued for this project: FID#: 341362340. The applicant's LHE submittal included reports, documents, and additional information, as summarized in the department's Conditional Low-Hazard Waste Grant of Exemption, dated July 31, 2023.

13. Following the completion of placement of AOC material, MMSD and the City are committed to executing projects benefitting the quality of, and providing greater community access to, Milwaukee waterways so that the DMMF reaches full capacity in an expeditious manner. Sediment and soil removed to complete these projects will be placed in the DMMF to fill residual capacity, as agreed to by MMSD, the City and the Department. Residual capacity following USEPA GLLA placement is anticipated to be approximately 280,000 cubic yards. Provisions are in place to create capacity for placement of an additional 250,000 cubic yards of material in a bermed area above the final facility wall heights.

14. This facility shall have a final cover system to protect water runoff and water quality post filling. A final cover system will be constructed atop the DMMF by the City once the following criteria have been met:
 - a. The sediment surface can support heavy construction equipment, as determined by the City in consultation with a qualified professional.
 - b. Surface elevation of sediment along all interior walls reaches a maximum elevation of 587.5 feet NAVD88, 2 feet below the interior wall height of 589.5 feet.

15. The final cover system design will consist of the follow components:
 - a. Geomembrane placed atop sediment.
 - b. Geocomposite drainage layer placed atop geomembrane.
 - c. 2-foot-thick combined rooting zone and topsoil layer with established vegetation atop the geocomposite.
 - d. Passive landfill gas venting systems at high points in the cover system if necessary.

16. The final cover will be sloped with higher elevation near the center of the facility, sloping downwards towards the interior walls to promote drainage of stormwater to the perimeter of the DMMF. The vehicle driving surface constructed between the interior and exterior perimeter walls will be sloped to promote drainage of stormwater towards the outside perimeter of the DMMF, outside of the low-permeability cutoff wall.
 - a. The City will submit to the Department construction documentation in accordance with s. NR 516.06, Wis. Adm. Code prior to closure of the DMMF. The City will fulfill its responsibilities for closure of the DMMF according to the LHE and applicable facility management plans.
17. City is responsible for maintaining an inward gradient, a minimum six inches of hydraulic head differential, across the cutoff wall by operating the perimeter drainage system. The water level differential will be maintained by the pump station hydraulically connected to the drainage pipe. The City is also responsible for maintaining a maximum water level in the basin at or below 584 feet NAVD88, corresponding with the elevation of the top of the cutoff wall. Water discharged from operation of the perimeter drainage system will require treatment and WPDES permitting.
18. The applicant has submitted to the Department all associated information for associated permits for the construction of the DMMF.
19. The Department received and reviewed the necessary information for a complete application package enumerated in ch. NR 299.03(1) Wis. Adm. Code.
20. An Endangered Resources Preliminary Assessment was performed by the applicant on March 7, 2023, using the Department's Natural Heritage Inventory Public Portal. This preliminary assessment indicated that an Endangered Resources Review is needed to ensure compliance with Wisconsin's endangered Species law, s. 29.604, Wis. Stats., and the Federal Endangered Species Act, 16 USC 1531 – 43. This Endangered Resources Preliminary Assessment was included in the joint 401/404 permit/certification application submitted to the Department's Waterways program of the Division of External Services and to the USACE. USACE is responsible for conducting the Endangered Resources Review and must complete the review before it issues the Section 404 Permit.
21. A review was conducted and provided by the applicant to determine if the proposed disposal area would impact or is located in an area of a known historic or archeological

site. The review concluded that the proposed disposal area would not impact or be located in an area of a known historic or archeological site.

22. A review of the Department's Surface Water Data Viewer was conducted to determine if the proposed project location would impact wetlands or is located in an area of known wetlands. The review concluded that the area of the proposed project location is not within known wetland or potential wetlands as indicated by wetland indicators.
23. A public meeting was held on May 20, 2021, at Port Milwaukee offices located at 2323 South Lincoln Memorial Drive, Milwaukee, WI, regarding the placement of contaminated sediments from the Milwaukee Estuary AOC in the DMMF.
24. Additional public meetings have been held by the Milwaukee Water Restoration Partnership regarding the DMMF and Milwaukee Estuary AOC.

CONCLUSION OF LAW:

1. The Department has authority under ch. NR 299, Wis. Adm. Code, to grant or conditionally grant WQC for any activity where the Department has reasonable assurance that any discharge will comply with effluent limitations, water quality related concerns or any other appropriate requirements of state law as outlined in s. NR 299.04, Wis. Adm. Code.
2. Pursuant to s. NR 150.20(2)(b), Wis. Adm. Code, the Department has determined that granting a WQC for the proposed DMMF meets the definition of an "integrated analysis action," which means a department action for which department programmatic procedures provide for public disclosure and include an environmental analysis that provides sufficient information to establish that an environmental impact statement is not required (s. NR 150.03(12m), Wis. Adm. Code). The environmental analysis conducted for the proposed DMMF includes the information, analysis, documents, and reviews referenced in the foregoing findings of fact.
3. The Department determines, under s. NR 150.35, Wis. Adm. Code, that it has complied with the requirements of s. NR 150, Wis. Adm. Code, s. 1.11. Wis. Stats., and the Wisconsin Environmental Policy Act.

4. The Department has reasonable assurance that if conditions set forth by this WQC, LHE, and WPDES permitting are complied with, the construction of the DMMF, as proposed, will be conducted in a manner which will comply with the standards enumerated in s. NR 299.04, Wis. Adm. Code.

5. The Department has reasonable assurance if conditions set forth by this WQC, LHE, and WPDES permitting are complied with, the placement of dredged materials in the DMMF from USEPA GLLA dredging projects in the Milwaukee Estuary AOC, Port Milwaukee commercial navigation dredging, and MMSD watercourse projects, as proposed, will comply with the standards enumerated in s. 299.04, Wis. Adm. Code.

6. The Department has reasonable assurance that if conditions set forth by this WQC, LHE, WPDES permitting, and applicable long term maintenance plans are complied with, the maintenance of the DMMF, as proposed, will comply with the standards enumerated in s. 299.04, Wis. Adm. Code.

7. The Department has reasonable assurance that if conditions set forth by this WQC, LHE, and WPDES permitting are complied with, the construction, operation, and maintenance of the DMMF, including placement of dredged materials in the DMMF from USEPA GLLA dredging projects in the Milwaukee Estuary AOC, Port Milwaukee commercial navigation dredging, and MMSD watercourse projects, as proposed, will not result in environmental pollution as defined in s. 289.01(8), Wis. Stats.

8. The discharge from the proposed activity will comply with water quality requirements, including water quality standards under ch. NR 102, Wis. Adm. Code.

9. The Department determines that the standards under ch. NR 102 and 299, Wis. Adm. Code, for conditionally granting WQC for the construction, operation, and maintenance of the DMMF have been met.

NOTICE

Brain Kasprzyk, 2323 S. Lincoln Memorial Drive, Milwaukee, WI 53207, on behalf of Port Milwaukee – City of Milwaukee, has applied to the Department of Natural Resources for a non-wetland Water Quality Certification. The project is located north and adjacent to the existing Milwaukee Harbor dredged material disposal facility that is operated by the U.S. Army Corps of Engineers and owned by Port Milwaukee, in Section 3 and 4, Township 6 North, Range 22 East, in the City of Milwaukee, Milwaukee County.

The project consists of constructing a dredged material management facility to contain 1.9 million cubic yards of sediment from within the Milwaukee Estuary Area of Concern, Port Milwaukee commercial navigation dredging, and Milwaukee Metropolitan Sewerage District watercourse projects on approximately 42-acres of Lake Michigan lakebed to meet the goal of delisting the Milwaukee Estuary as an Area of Concern.

The Department has reviewed the proposal provided by the applicant and any information from public comments provided at the public meeting held on May 20, 2021 at Port Milwaukee offices. The Department has determined the proposal has complied with the procedural requirements of s. 1.11, Wis. Stats., and chs. NR 150 and 299, Wis. Adm. Code.

The Department has reviewed the proposed activity pursuant to state water quality standards enumerated in s. NR 299.04, Wis. Adm. Code, and conditionally grants the water quality certification. All conditions set forth by the certification are necessary to comply with state water quality standards.

If you would like to know more about this project or would like to see the application and plans, please visit the Department's permit, contract, and certification tracking website at <https://permits.dnr.wi.gov/water/SitePages/Permit%20Search.aspx> and search for IP-SE-2023-41-01653.

Reasonable accommodation, including the provision of informational material in an alternative format, will be provided for qualified individuals with disabilities upon request.

Any person whose substantial interests may be affected by the Department's determination may, within 30 days after publication of this notice, request in writing a contested case hearing on the matter under ch. 227, Wis. Stats. A request for a contested case hearing shall include a written statement giving specific reasons why the proposed activity violates the standards under s. NR 299.04(1)(b), Wis. Adm. Code, and provide specific information explaining why the petitioner's interests are adversely affected by the Department's determination. The request for hearing shall also include a written statement specifying that the petitioner will appear and present information supporting the petitioner's objections in a contested case hearing.

Unless a written request for a hearing is filed with the Department within 30 days after publication of the notice in the newspaper, the Department's decision will become final without public hearing at the end of the 30-day period.