

City of Fond du Lac Fisherman’s Pier Dredging Low Hazard Grant of Exemption Technical Report

December 18, 2025

Revised January 2, 2026

Introduction

The City of Fond du Lac would like to obtain a low-hazard grant of exemption for the reuse and for the disposal of dredge spoils from the dredging of Fisherman’s Pier under permit IP-NE-2024-20-03511. The initial dredging took place in February and June through September of 2025 with additional potential future dredging events until the expiration of the permit on January 28, 2030.

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Contact Information

Use the following individuals as the contacts for the project.

Owner and generator contact:

John Redmond

City of Fond du Lac

530 Doty Street, Fond du Lac, WI 54935

920-322-3590

jredmond@fdl.wi.gov

Disposal or reuse site contact:

John Redmond

City of Fond du Lac
530 Doty Street, Fond du Lac, WI 54935
920-322-3590
jredmond@fdl.wi.gov

Project contact person:
Nick Waldschmidt
Civil Engineer II
City of Fond du Lac
P.O. Box 150, Fond du Lac, WI 54936-0150
920-322-3482
nwaldschmidt@fdl.wi.gov

Project Description

The City of Fond du Lac obtained a permit to dredge a channel leading to Lake Winnebago in Fond du Lac, Wisconsin. A copy of the 2024 Fisherman's Pier Dredging plans with erosion control detail drawings removed can be found in Appendix A. Site photographs of the Fisherman's Pier dredge site, dewatering area, and Lakeside Park West disposal area can be found in Appendix B. The permit number for the project is IP-NE-2024-20-03511 for dredging and IP-NE-2024-20-03512 for grading. The permits are valid until January 28, 2030. A copy of the project permits can be found in Appendix C. This permit allows maintenance dredging to allow continued access to Lake Winnebago from a public boat launch site and boat docks. The city typically dredges this area every two or three years and the dredge material could be as much as 5,000 cubic yards per dredge event. The total permitted removal is 16,150 cubic yards. The permit also allows grading on the bank of a waterway.

Fisherman's Pier is located in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of section 3, township 15 north, range 17 east in the City of Fond du Lac, Fond du Lac County. The dewatering area is located in the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of section 3, township 15 north, range 17 east in the City of Fond du Lac, Fond du Lac County.

The city completed the first dredging in February and summer 2025. Approximately 6,150 cubic yards of material was removed. The dredged material was taken to a site located at the southeast corner of Doty Street and W. Harbor View Drive for dewatering and to wait for sediment sampling results. Fisherman's Pier has also been dredged in past years including 2006, 2007, 2008, 2010, 2012, 2014, 2017, 2020, 2023 and an unknown number of times prior to 2006.

The city is requesting a low-hazard grant of exemption to use material dredged under IP-NE-2024-20-03511 in two ways. The first request is to blend the material with topsoil. The mixture would have 50% or greater topsoil. The resulting mixture would be resampled for PAHs to determine if the material now meets the non-industrial soil residual contaminant level standards. If the sample now meets the standards, it would be used by city staff on municipal construction projects. The material could be used anywhere in the city as needs arise. Examples of uses include repairing lawn areas after utility excavations or pavement, curb and gutter, or sidewalk replacements. These areas would then be reseeded, mulched or covered with other landscaping. The topsoil blend will not be placed within 3 feet of the high groundwater elevation. If the sample did not meet the standards we would either reblend and resample or permanently dispose at Lakeside Park West as noted below. The city would use existing topsoil stockpiles as the source of the blending material. This material has come off of previous construction projects. The material would be blended either at the current location of the dredged

material or across the street at the Municipal Service Center. The total amount of dredged material planned to be used in general landscaping projects is less than 100 cubic yards.

The second requested use of the dredged material is as fill at a city-owned park known as Lakeside Park West. The proposed facility is located on the south shoreline of Lake Winnebago approximately 2,800 feet west of where the Fond du Lac River enters Lake Winnebago. The site is located adjacent to both Lake Winnebago and Supple's Marsh. The dredged material will be used as fill in areas which were used for dewatering during the 2013-2014 Lakeside Park Channel Restoration project. Most of the material from the previous dredging projects is located directly west of the dog park and south of a gravel road. The remaining material was added farther west. There is a channel separating the two areas. These areas have been regraded and reseeded. The disposal of the material from the Fisherman's Pier project will be limited to the previously disturbed areas. The material may be used to fill areas of the previous disposal area which have settled. Future disposals are planned in the area west of the channel. After placing the fill material the site will be covered with at least 6 inches of topsoil. The topsoil will either consist of clean topsoil or blended topsoil which has been tested for PAHs. The city has created some landscape features such as hills and created walking trails in this area. Additional landscape features may be created in the future. The material taken to the areas west of the channel may be temporarily stockpiled between dredging events to accumulate enough material to create the landscape features. In these areas untested blended topsoil may be used. When final grading occurs, either clean topsoil or tested blended topsoil will be used as final cover.

The low-hazard grant of exemption request is for both the material previously dredged in 2025 as well as any future material dredged pursuant to IP-NE-2024-20-03511.

The proposed disposal area is located in the following PLSS quarter-quarter sections, all located in township 15 north, range 17 east in the City of Fond du Lac, Fond du Lac County, Wisconsin.

SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of section 3.

NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of section 3.

NE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of section 4.

The proposed disposal area is located at the distances indicated to the following areas:

- The site is mostly located within floodplain zone AE with a base flood elevation of 749.0. A portion of the site is located within floodplain zone X for areas outside of the 0.2% annual flood hazard. Note that the both the existing site and the site prior to the adding dredged material from previous projects is significantly higher than the base flood elevation. The eastern portion of the site is currently located between the elevations 753.0 and 765.0. The western portion of the site is currently located between the elevations 754.0 and 777.0.
- The disposal area is located approximately 25 feet from a wetland. The site is adjacent to Supple's Marsh. A wetland delineation has not been performed or previously required. The existing elevation of Supple's Marsh is approximately 747 to 748. The proposed disposal areas are within areas previously disturbed under previously permitted dredging projects. Erosion and sediment control practices will be installed as necessary.
- The disposal area is located approximately 40 feet from Lake Winnebago.
- The site is located greater than 100 feet from an on-site water supply well and greater than 300 feet from an off-site water supply well. The closest identified private well is located 2,000+ feet away northwest of the proposed disposal area in the Town of Friendship. The closest identified public well is located 3,200 feet away southeast of the proposed disposal area.

- The soil disposal will take place greater than 3 feet above the high groundwater level. The elevation of Lake Winnebago adjacent to the site varies from approximately 745.2 to 747.5.

The proposed fill is not expected to adversely affect the floodplain since the floodplain map and base flood elevations at this location do not match the existing ground conditions which are significantly above the base flood elevation. No loss of flood storage will occur. The fill will be covered with topsoil and remain vegetated which will help protect the adjacent wetlands and Lake Winnebago. Due to the site elevations it is easy to identify where Supple's Marsh begins and to keep fill out of this area.

A map showing the proposed disposal location in Lakeside Park West and a map showing the proximity of the disposal location to various natural and constructed features can be found in Appendix D.

A copy of an endangered resources preliminary assessment report can be found in Appendix E.

Historically, the site was used as a municipal landfill beginning in the 1950s until closure in the 1960s or 1970s. After closure of the landfill, cover material was added and the site revegetated. There are no known records indicating the landfill liner, cover material, or other design features or the exact volume of waste disposal. There are no routine regulatory, enforcement, or inspection activities conducted by the DNR or other agency at the disposal area.

The proposed disposal of dredged materials comes from the dredging of Fisherman's Pier during time period of the approved DNR permits and there is no anticipated rejects, off-specification waste, or off-season wastes. Therefore, there should not be any disposal of wastes not included in the exemption.

The site has been used as a disposal location of dredged material from several dredging projects in recent years including: the 2005-2006 Fond du Lac Navigational Dredging project, the 2013-2014 Lakeside Park Channel Restoration project and past Fisherman's Pier Dredging projects. The City of Fond du Lac has received several past low-hazard grants of exemption to dispose dredged material. The past low hazard grants of exemption include:

- May 28, 2008: On May 6, 2008 the City of Fond du Lac received a permit to perform multiple dredging's of Fisherman's Pier valid until May 6, 2013. The low hazard grant of exemption was valid for the length of the dredging permit. A public meeting was held on May 15, 2008 for the low hazard grant of exemption.
- August 30, 2017: On November 15, 2016 the City of Fond du Lac received a permit to perform multiple dredging's of Fisherman's Pier valid until November 15, 2021. The low hazard grant of exemption was valid for the length of the dredging permit. A public meeting was held on August 8, 2017 for the low hazard grant of exemption.
- April 24, 2024: On November 29, 2022 the City of Fond du Lac received a permit to perform dredging of Fisherman's Pier valid until September 29, 2027. The low hazard grant of exemption was valid for the length of the dredging permit.

Most of the dredged material that has been previously disposed at the site was generated from either the 2005-2006 Fond du Lac Navigational Dredging project or the 2013-2014 Lakeside Park Channel Restoration project. The dewatering and disposal of dredged material was approved under NR 500.08(3) and various permits obtained. The City of Fond du Lac did obtain a low hazard grant of exemption on March 29, 2007 to mix dredge sediment and topsoil from material generated during the 2005-2006 Fond du Lac Navigational Dredging project.

A copy of the low hazard grants of exemption from 2008, 2017, and 2024 can be found in Appendix F.

Since 2006, the site has been used many times for the disposal of sediment from dredging adjacent waterways including the Fond du Lac River, Lighthouse Harbor, Fisherman's Pier, and the Lakeside Park Lagoons. In addition to the dredging which occurred in 2025, past dredging of Fisherman's Pier occurred in 2006, 2007, 2008, 2010, 2012, 2014, 2017, 2020, and 2023. The dredging that occurred in 2014 was done with the 2013-2014 Lakeside Park Channel Restoration project. All of the dredged material that was placed on the site from 2006 to 2012 was placed in the eastern portion of the proposed disposal area. During the 2013-2014 Lakeside Park Channel Restoration project this material was used to make berms to dewater the sediment in both the eastern and western portion of the proposed disposal area. All of the sediment from that project was blended with material from previous projects. In 2017, 2020, and 2024 the site was used as requested in this request with material either added to low spots on the east side of the site or added as fill in the western side of the site.

Waste Description

Prior to dredging two in-situ samples were collected at the dredge site. The sample results have shown that both of the sites exceeded the non-industrial direct contact standards and groundwater standards for several contaminants. The first sample exceeded the non-industrial standard for benzo(a)pyrene and the groundwater standards for arsenic, chromium, and chrysene. The second sample exceeded the non-industrial standard for benzo(a)pyrene (result below LOD) and dibenz[a,h]anthracene (result below LOD) and the groundwater standards for arsenic, cadmium, chromium, lead, and nickel.

A copy of the sediment sampling results, a summary of the test parameters that exceeded the residual contaminant level, and spreadsheets of the residual contaminant levels for groundwater quality and direct contact for non-industrial locations for each sample can be found in Appendix G. A map of the approximate sediment sample locations can be found in Appendix H.

Comparative Justification

The proposed disposal of dredged material at Lakeside Park West is consistent with the long-term use of the property. The site was used as an unlicensed landfill facility and it is likely that many contaminants were placed at the site. The proposed disposal will only occur at the same locations that have been used in the past for the disposal of similar dredged material.

In 2023, the City of Fond du Lac hired a consultant to analyze the sediment sampling results and the environmental risks associated with the proposed disposal of the sediment. The laboratory results were evaluated for direct contact for industrial use and potential leaching to groundwater. A technical memo describing the findings can be found in Appendix I. After analyzing the laboratory results, the proposed disposal method, DNR administrative code and publications, and disposal site conditions, the use of the dredged sediment as proposed will not result in an adverse impact to human health or the environment. The City of Fond du Lac did not hire a consultant again but the results of the sampling are fairly similar with some of the contaminants exceeding standards.

Positive Impacts

The City of Fond du Lac is requesting a low-hazard exemption to use the dewatered sediment from the Fisherman's Pier dredging project as described above as landscaping material and to permanently

dispose the material at Lakeside Park West. Approval of the first option will allow for a beneficial reuse of the sediment. Blending the dredged material with topsoil will provide a nutrient rich soil mixture which is beneficial for plant growth. This will reduce the amount of topsoil which the city is required to purchase or obtain from other sources and will provide a cost savings to the city.

Conclusion

The City of Fond du Lac is requesting that the DNR approve the Low Hazard Grant of Exemption request based on the information document in this report and appendices.

Appendix A
Dredging plans

2024 FISHERMAN'S PIER DREDGING PERMIT CITY OF FOND DU LAC, WISCONSIN

SEPTEMBER 4, 2024

– UTILITIES –

WISCONSIN STATUTE 182.0175 REQUIRES YOU TO OBTAIN THE LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 3 WORK DAYS BEFORE DIGGING

CALL DIGGERS HOTLINE:
811 OR (800) 242-8511
HTTP://WWW.DIGGERSHOTLINE.COM/



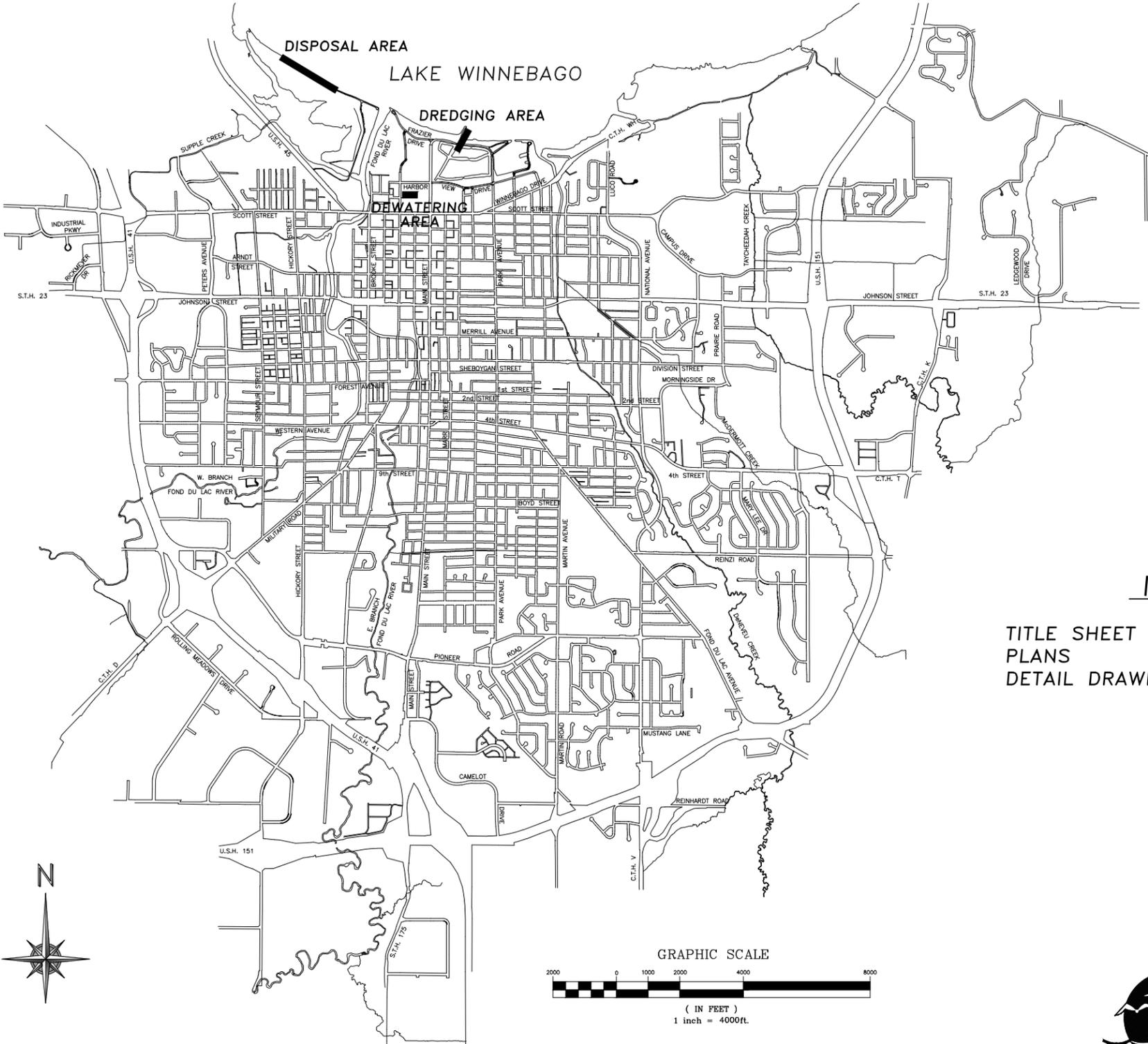
ALLIANT UTILITY
883 WEST SCOTT STREET, P.O. BOX 1217
FOND DU LAC, WI. 54935-1217 1-800-255-4268

AT&T
70 EAST DIVISION STREET
FOND DU LAC, WI. 54935 (920) 929-1013 OR 1-800-242-8335

CHARTER COMMUNICATIONS
165 KNIGHTS WAY
FOND DU LAC, WI. 54935 (920) 457-1720 OR (920) 263-0428 OR 1-800-581-0081

CITY OF FOND DU LAC, DEPARTMENT OF PUBLIC WORKS
PAUL DEVERES, P.E. - DIRECTOR OF PUBLIC WORKS
160 SOUTH MACY STREET, P.O. BOX 150
FOND DU LAC, WI. 54936-0150 (920) 322-3470

CITY OF FOND DU LAC, ELECTRICAL DIVISION
530 DOTY STREET
FOND DU LAC, WI. 54935 (920) 322-3554

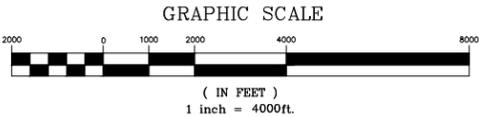


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TITLE SHEET
PLANS
DETAIL DRAWINGS

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Fond du Lac
First on the Lake

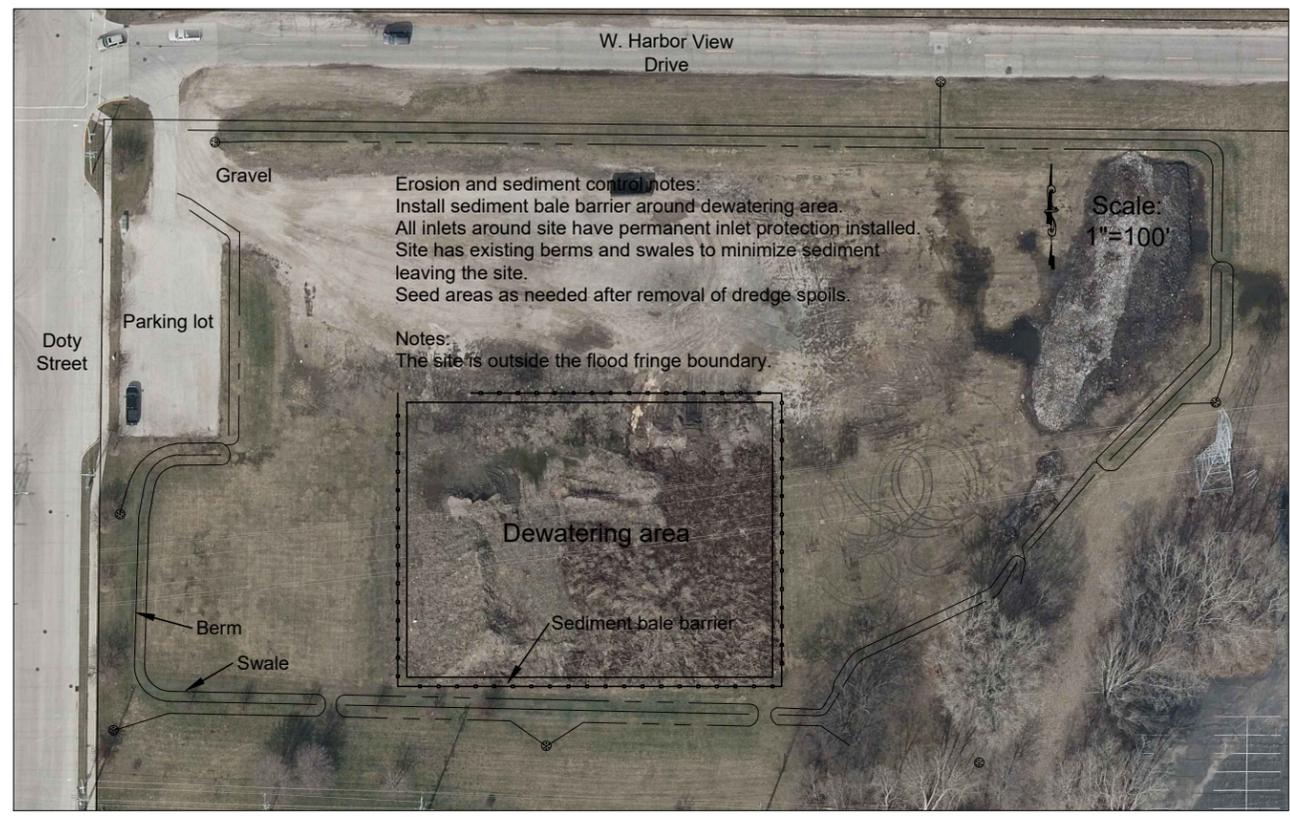
ENGINEERING AND TRAFFIC DIVISION
P.O. Box 150 160 S. Macy Street
Fond du Lac, WI. 54936-0150
Phone: (920) 322-3470
Fax: (920) 322-3471

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ACAD File Path: J:\Projects\2024 Projects\2024 Fisherman's Pier Dredging Permit.dwg
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 Layout: P\PR 11X17
 Plotted By: mwaldschmidt

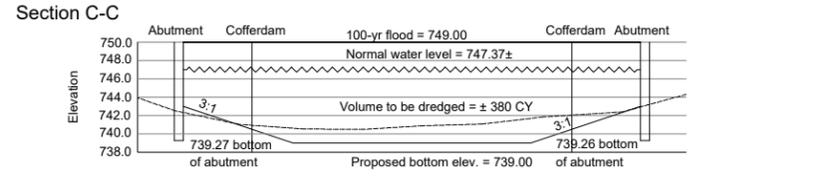
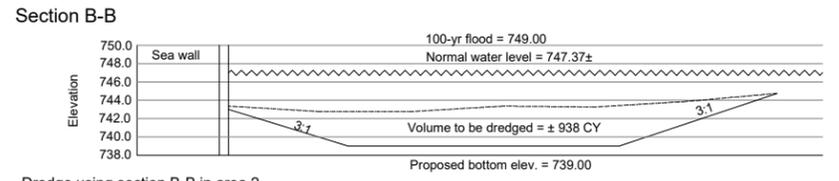
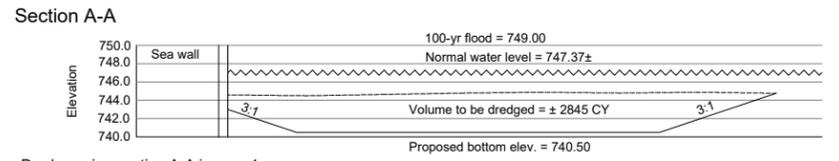


FISHERMAN'S PIER DREDGING



No fill to be placed in flood fringe.
Benchmark (NAVD88): FDL N GPS ELEV. 750.51
Dredge volumes based on sediment depths in 2024. Future volumes to vary.

Soft sediment
Proposed cross-section



Proposed bottom elevation of 739.00 in area 4. Use 3:1 slopes from sides.
Volume to be dredged = ± 1986 CY

DEPARTMENT OF PUBLIC WORKS
 ENGINEERING & TRAFFIC DIVISION
 CITY OF FOND DU LAC, WISCONSIN
 Phone: 920.322.5470
 Fax: 920.322.5071

Fond du Lac
 First on the Lake

PROJECT
 FISHERMAN'S PIER
 DREDGING & GRADING PERMIT

BENCH MARKS

DATE:	DATE:
DESIGNED BY:	DATE:
SCALE: HORIZ.:	DATE:
SCALE: VERT.:	DATE:
ACAD FILE:	DATE:

REVISIONS:
 BY: DATE: BY: DATE: BY: DATE: BY: DATE:

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Appendix B
Site photos

2024 Fisherman's Pier Dredging Permit
All photos taken 8/14/2024.



Area to be dredged looking north from Promen Drive bridge.



Area to be dredged south of Promen Drive bridge.



Dewatering area.



Disposal area.

Appendix C
Project permits

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
N7725 Hwy 28
Horicon, WI, 53032

Tony Evers, Governor

Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



January 28, 2025

City of Fond du Lac
Attn: Nick Waldschmidt
P.O. Box 150
Fond du Lac, WI 54936
[sent electronically]

IP-NE-2024-20-03511

RE: Permit for dredging of an unnamed waterway (WBIC 5562445) and a portion of Lake Winnebago in the City of Fond Du Lac, Fond Du Lac County

Dear Mr. Waldschmidt,

The Department of Natural Resources has completed its review of your application for a permit to dredge materials from an unnamed waterway (WBIC 5562445) and a portion of Lake Winnebago, located in the NE 1/4, SE 1/4, Section 03, Township 15, Range 17E, in the City of Fond Du Lac, Fond Du Lac County. You will be pleased to know your application is approved. I am attaching a copy of your permit, which lists the many important conditions that must be followed to protect water quality and habitat. A copy of the permit must be posted for reference at the project site. **Please read your permit conditions carefully so that you are fully aware of what is expected of you.**

Please note one of the conditions requires that you submit photographs of the completed project within 7 days after you've finished construction. This helps both of us to document the completion of the project and compliance with the permit conditions. Your next step will be to notify me of the date on which you plan to start construction and again your project is complete.

If you have any questions about your permit, please call me at (414) 531-0305 or you can reach me by email at francesca.sanchez@wisconsin.gov.

Sincerely,

Francesca Sanchez
Water Management Specialist

Email CC:
Jessica Kempke, USACE Project Manager
William Hanke, WDNR Conservation Warden
Dan Hanks, Fond Du Lac County Code and Zoning Coordinator

**STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES**

**DREDGING PERMIT
IP-NE-2024-20-03511**

Application of Nick Waldschmidt is hereby granted under Section 30.20(2), Wisconsin Statutes, a permit to dredge materials from an unnamed waterway (WBIC 5562445) and a portion of Lake Winnebago, located in the NE 1/4, SE 1/4, Section 03, Township 15, Range 17E, in the City of Fond Du Lac, Fond Du Lac County, subject to the following conditions:

PERMIT

1. You must notify Francesca Sanchez by phone at (414) 531-0305 or by email at francesca.sanchez@wisconsin.gov before starting construction and again not more than 5 days after the project is complete.
2. You must complete the project as described **on or before January 28, 2030**. If you will not complete the project by this date, you must submit a written request for an extension **prior** to expiration of the initial time limit specified in the permit. Your request must identify the requested extension date. The Department shall extend the time limit for an individual permit or contract for no longer than an additional 5 years if you request the extension before the initial time limit expires. You may not begin or continue construction after the original permit expiration date unless the Department extends the permit in writing or grants a new permit.
3. This permit does not authorize any work other than what you specifically describe in your application and plans, and as modified by the conditions of this permit. If you wish to alter the project or permit conditions, you must first obtain written approval of the Department.
4. Before you start your project, you must first obtain any permit or approval that may be required for your project by local zoning ordinances and/or by the U.S. Army Corps of Engineers. You are responsible for contacting these local and federal authorities to determine if they require permits or approvals for your project. These local and federal authorities are responsible for determining if your project complies with their requirements.
5. Upon reasonable notice, you shall allow access to your project site during reasonable hours to any Department employee who is investigating the project's construction, operation, maintenance, or permit compliance.
6. The Department may modify or revoke this permit for good cause, including if the project is not completed according to the terms of the permit or if the Department determines the activity is detrimental to the public interest.
7. **You must post a copy of this permit at a conspicuous location on the project site**, visible from the waterway, for at least five days prior to construction, and remaining at least five days after construction. You must also have a copy of the permit and approved plan available at the project site at all times until the project is complete.
8. Your acceptance of this permit and efforts to begin work on this project signify that you have read, understood, and agreed to follow all conditions of this permit.
9. You must **submit a series of photographs** to the Department, within one week of completing work on the site. The photographs must be taken from different vantage points and depict all work authorized by this permit.
10. You, your agent, and any involved contractors or consultants may be considered a party to the violation pursuant to Section 30.292, Wis. Stats., for any violations of Chapter 30, Wisconsin Statutes, or this permit.
11. Construction shall be accomplished in such a manner as to minimize erosion and siltation into surface waters. Erosion control measures (such as silt fence and straw bales) must meet or exceed the technical standards of ch. NR 151, Wis. Adm. Code. The technical standards are found at: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
12. All equipment used for the project including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps shall be de-contaminated for invasive and exotic viruses and species prior to use and after use. The following

steps must be taken every time you move your equipment to avoid transporting invasive and exotic viruses and species. To the extent practicable, equipment and gear used on infested waters shall not be used on other non-infested waters.

1. **Inspect and remove** aquatic plants, animals, and mud from your equipment.
2. **Drain all water** from your equipment that comes in contact with infested waters, including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps.
3. **Dispose** of aquatic plants, animals in the trash. Never release or transfer aquatic plants, animals, or water from one waterbody to another.
4. **Wash your equipment** with hot (>140° F) and/or high-pressure water,
- OR -
Allow your equipment to **dry thoroughly for 5 days.**

SPECIFIC STREAM DREDGING CONDITIONS

13. You are not allowed to do in-water construction during periods of high-water levels or between March 15th and June 15th of any calendar year to protect sensitive time periods of fish spawning, fish movement, and egg incubation.
14. All of the removed materials must be placed in the location shown on applicant's plan dated 09/2024 and approved by the Department.
15. This permit complies with the substantive requirements of s. 23.24, Stats. and NR 109, Adm. Code.
16. Bottom materials must be removed by equipment, which is designed to minimize the amount of sediment that can escape into the water. Equipment must be properly sized so that excavation conforms to the plans submitted and allows the work to be done from the banks rather than in the waterway.
17. During excavation, earth must be stockpiled in an upland area separated from the stream by a protective, vegetated buffer strip not less than 30 feet in width or a silt screen.
18. Removal must not exceed 16,150 cubic yards as specified in the application and plans dated 10/11/24.
19. The water discharged from the disposal site cannot have a concentration exceeding the conditions listed within the Wisconsin Pollutant Discharge Elimination System (WPDES) program. This permit would be needed for any water discharged from the disposal site.
20. You are required to follow water quality best management practices, BMP's, (for example, installing silt curtain, turbidity barrier, etc.) in the waterway during dredging as shown on your plans dated 09/2024 and approved by this permit.
21. You must dredge to the dimensions and elevations shown on your approved plans dated 09/2024.
22. You must not deposit or store any of the removed materials in any wetland or below the ordinary high watermark of any waterway. All removed materials must be placed out of the floodway.
23. A copy of the plans and permit must be provided to every contractor working on the project.

FINDINGS OF FACT

1. Nick Waldschmidt, P.O. Box 150, Fond du Lac, WI 54936, filed an application with this Department on 10/11/2024, under sections 30.20(2) and 30.208, Wisconsin Statutes, to dredge an unnamed waterway (WBIC 5562445) and a portion of Lake Winnebago, located in the NE 1/4, SE 1/4, Sec. 03, T. 15, R. 17E, City of Fond Du Lac, Fond Du Lac County.
2. The applicant proposes to dredge portions of an unnamed (WBIC 5562445) tributary and Lake Winnebago near the City of Fond Du Lac's Lakeside Park and grade over 10,000 square feet of the banks of a waterway. The purpose of the project is to remove built up sediment to improve navigation. The applicant proposes to dredge 16,150 cubic yards of material from the waterways over a five-year period. The first dredge will remove 6,150 cubic yards, and smaller amounts will be dredged during years 2-5. The first phase will occur in February of 2025, additional dredging will occur in late June

or July in conjunction with planned replacement of bridge on Promen Drive, and future dredging will occur in November or February. No work will occur between March 15th and June 15th. Additionally, the dredging will not be performed from the time period beginning two weeks prior to the start of the annual sturgeon spearing season until the season has concluded. Turbidity barriers will be installed around the perimeter of the area to be dredged prior to the start of dredging operations and will remain in place until the disturbed area has been stabilized.

Dredged material will be hauled to a nearby location where it will be dewatered before taking it to the designated disposal location. The perimeter of the dewatering area will have a sediment bale barrier installed to reduce sediment leaving the site. The dewatering area also has a permanent system of swales and berms installed and inlet protection installed in downstream inlets to reduce sediment leaving the site.

3. The Department has evaluated the project as described in the application and plans.
4. The unnamed waterway (WBIC 5562445) and Lake Winnebago are navigable waters.
5. The proposed project, if constructed in accordance with this permit will not adversely affect water quality, will not increase water pollution in surface waters and will not cause environmental pollution as defined in s. 283.01(6m), Wis. Stats.
6. The proposed project will not impact wetlands if constructed in accordance with this permit.
7. The Department of Natural Resources has determined that the agency's review of the proposed project constitutes an integrated analysis action under s. NR 150.20(2), Wis. Adm. Code. The Department has considered the impacts on the human environment, alternatives to the proposed projects and has provided opportunities for public disclosure and comment. The Department has completed all procedural requirements of s. 1.11(2)(c), Wis. Stats., and NR 150, Wis. Adm. Code for this project.
8. The Department of Natural Resources has completed all procedural requirements and the project as permitted will comply with all applicable requirements of Sections 30.20 and 30.208, Wis. Stats., and Chapters NR 102, 103, and 345, Wis. Adm. Codes.

The applicant was responsible for fulfilling the procedural requirements for publication of notices under s. 30.208(5)(c)1m., Wis. Stats., and was responsible for publication of the notice of pending application under s.30.208(3)(a), Wis. Stats. or the notice of public informational hearing under s.30.208(3)(c), Wis. Stats., or both. S. 30.208(3)(e), Wis. Stats., provides that if no public hearing is held, the Department must issue its decision within 30 days of the 30-day public comment period, and if a public hearing is held, the Department must issue its decision within 20 days after the 10-day period for public comment after the public hearing. S. 30.208(5)(bm), Wis. Stats., requires the Department to consider the date on which the department publishes a notice on its web site as the date of notice.

9. The dredging will not be detrimental to the public interest. Resource managers for fisheries, water quality, wildlife, and law enforcement were initially asked to provide feedback no later than 11/6/2024 for the dredging and grading proposal. Resource managers from water quality, wildlife, and law enforcement recommended granting the permit with usual conditions. A fisheries resource manager recommended granting with special conditions. Their provided feedback stated that the proposed time out periods and turbidity control methods were sufficient, but they had questions surrounding the disposal of materials. The applicant is working with the DNR's Waste and Materials Management Program to address disposal and related permitting. There will also be erosion control measures in place at the dewatering and disposal sites to prevent the material from reentering the waterways.
10. The activity will not cause environmental pollution as defined in s. 299.01(4), Wis. Stats.
11. No material injury will result to the riparian rights of any riparian owners of real property that abuts any water body that is affected by the activity.

CONCLUSIONS OF LAW

1. The Department has authority under the above indicated Statutes and Administrative Codes to issue a permit for the construction and maintenance of this project.

2. The Department has complied with s. 1.11, Wis. Stats.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions shall be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing of any individual permit decision pursuant to section 30.209, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources, P.O. Box 7921, Madison, WI, 53707-7921. The petition shall be in writing, shall be dated and signed by the petitioner, and shall include as an attachment a copy of the decision for which administrative review is sought. If you are not the applicant, you must simultaneously provide a copy of the petition to the applicant. If you wish to request a stay of the project, you must provide information, as outlined below, to show that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment. If you are not the permit applicant, you must provide a copy of the petition to the permit applicant at the same time that you serve the petition on the Department.

The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

A request for contested case hearing must meet the requirements of section 30.209, Wis. Stats., and sections NR 2.03, 2.05, and 300.09(5), Wis. Admin. Code, and if the petitioner is not the applicant the petition must include the following information:

1. A description of the objection that is sufficiently specific to allow the department to determine which provisions of this section may be violated if the proposed permit or contract is allowed to proceed.
2. A description of the facts supporting the petition that is sufficiently specific to determine how the petitioner believes the project, as proposed, may result in a violation of Chapter 30, Wis. Stats.
3. A commitment by the petitioner to appear at the administrative hearing and present information supporting the petitioner's objection.

If the petition contains a request for a stay of the project, the petition must also include information showing that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment.

Dated at the Horicon Service Center, Wisconsin on January 28, 2025.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By:



Francesca Sanchez
Water Management Specialist

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
N7725 Hwy 28
Horicon, WI, 53032

Tony Evers, Governor

Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



January 28, 2025

Nick Waldschmidt
P.O. Box 150
Fond du Lac, WI 54936
[sent electronically]

IP-NE-2024-20-03512

RE: Permit for grading on the bank of Lake Winnebago in the City of Fond Du Lac, Fond Du Lac County

Dear Mr. Waldschmidt,

The Department of Natural Resources has completed its review of your application for a permit to disturb over 10,000 square feet within the bank of Lake Winnebago, located in the NE 1/4, SE 1/4, Section 03, Township 15, Range 17E, City of Fond Du Lac, Fond Du Lac County. You will be pleased to know your application is approved.

I am attaching a copy of your permit, which lists the many important conditions that must be followed to protect water quality and habitat. **A copy of the permit must be posted for reference at the project site.** Please read your permit conditions carefully so that you are fully aware of what is expected of you.

Please note you are required to submit photographs of the completed project within 7 days after you've finished construction. This helps both of us to document the completion of the project and compliance with the permit conditions.

Your next step will be to notify me of the date on which you plan to start construction and again after your project is complete.

If you have any questions about your permit, please call me at (414) 531-0305 or you can reach me by email at francesca.sanchez@wisconsin.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Francesca Sanchez'.

Francesca Sanchez
Water Management Specialist

Email CC:

Jessica Kempke, USACE Project Manager
William Hanke, WDNR Conservation Warden
Dan Hanks, Fond Du Lac County Code and Zoning Coordinator

**STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES**

**GRADING PERMIT
IP-NE-2024-20-03512**

Application of Nick Waldschmidt is hereby granted under Section 30.19, Wisconsin Statutes, a permit to disturb more than 10,000 square feet within the bank of Lake Winnebago, located in the SE 1/4, NE 1/4, Sec. 03, T. 15, R. 17E, City of Fond Du Lac, Fond Du Lac County, subject to the following conditions:

PERMIT

1. You must notify Francesca Sanchez at phone (414) 531-0305 or email francesca.sanchez@wisconsin.gov before starting construction and again not more than 5 days after the project is complete.
2. You must complete the project as described **on or before January 28, 2030**. If you will not complete the project by this date, you must submit a written request for an extension prior to expiration of the initial time limit specified in the permit. Your request must identify the requested extension date. The Department shall extend the time limit for an individual permit or contract for no longer than an additional 5 years if you request the extension before the initial time limit expires. You may not begin or continue construction after the original permit expiration date unless the Department extends the permit in writing or grants a new permit.
3. This permit does not authorize any work other than what you specifically describe in your application and plans, and as modified by the conditions of this permit. If you wish to alter the project or permit conditions, you must first obtain written approval of the Department.
4. Before you start your project, you must first obtain any permit or approval that may be required for your project by local zoning ordinances and by the U.S. Army Corps of Engineers. You are responsible for contacting these local and federal authorities to determine if they require permits or approvals for your project. These local and federal authorities are responsible for determining if your project complies with their requirements.
5. Upon reasonable notice, you shall allow access to your project site during reasonable hours to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance.
6. The Department may modify or revoke this permit for good cause, including if the project is not completed according to the terms of the permit or if the Department determines the activity is detrimental to the public interest.
7. **You must post a copy of this permit at a conspicuous location on the project site, visible from the waterway**, for at least five days prior to construction, and remaining at least five days after construction. You must also have a copy of the permit and approved plan available at the project site at all times until the project is complete.
8. Your acceptance of this permit and efforts to begin work on this project signify that you have read, understood and agreed to follow all conditions of this permit.
9. **You must submit a series of photographs to the Department, within one week of completing work on the site.** The photographs must be taken from different vantage points and depict all work authorized by this permit.
10. You, your agent, and any involved contractors or consultants may be considered a party to the violation pursuant to Section 30.292, Wis. Stats., for any violations of Chapter 30, Wisconsin Statutes, or this permit.
11. Construction shall be accomplished in such a manner as to minimize erosion and siltation into surface waters. Erosion control measures (such as silt fence and straw bales) must meet or exceed the technical standards of ch. NR 151, Wis. Adm. Code. The technical standards are found at: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
12. All equipment used for the project including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps shall be de-contaminated for invasive and exotic viruses and species prior to use and after use.

The following steps must be taken every time you move your equipment to avoid transporting invasive and exotic viruses and species. To the extent practicable, equipment and gear used on infested waters shall not be used on other non-infested waters.

1. **Inspect and remove** aquatic plants, animals, and mud from your equipment.
2. **Drain all water** from your equipment that comes in contact with infested waters, including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps.
3. **Dispose** of aquatic plants, animals in the trash. Never release or transfer aquatic plants, animals or water from one waterbody to another.
4. **Wash your equipment** with hot (>140° F) and/or high-pressure water,
- OR -
Allow your equipment to **dry thoroughly for 5 days**.

SPECIFIC CONDITIONS FOR GRADING

13. A minimum of a 15 foot wide buffer strip of existing vegetation must remain between the perimeter of excavation site and the waterway. The buffer strip must not be graded, excavated, used for roads, or disturbed in any manner.
14. After the site is 80% stabilized, or prior to at the direction of the Department, all temporary erosion control measures must be removed and disposed of properly. Any remaining temporary erosion control devices after this point constitute littering and may be enforced as determined necessary by the department.
15. Any area where topsoil is exposed during construction must be immediately seeded and mulched or riprapped to prevent soil from being eroded and washed into the waterway.
16. Appropriate erosion control measures must be in-place and effective during every phase of this project and at the end of each working day.
17. Construction shall be accomplished in such a manner as to minimize erosion and siltation into surface waters and as specified in the plans and procedures that are part of or approved pursuant to this permit. All erosion control measures must meet or exceed the approved Stormwater Construction Technical Standards found on the Department's Runoff Management Website <http://dnr.wi.gov/org/water/wm/nps/stormwater/techstds.htm#Construction> developed by the Department under Wis. Admin. Code Ch. NR 151.31.
18. Each stage must be at least 80% stabilized before beginning work on the next stage.
19. Erosion control measures must be inspected, and any necessary repairs or maintenance performed, after every rainfall exceeding 1/2 inch and at least once per week.
20. Erosion control measures such as silt fence and straw bales must meet or exceed the standards in the Wisconsin Construction Site Best Management Practices Handbook.
21. No portion of the bank or upland which is altered or disturbed and, as a result, unstable may remain unprotected for more than 7 days.
22. Sediment basins and stormwater ponds must be constructed to prevent the interaction of stormwater and groundwater.
23. Site stabilization between October 1 and April 15 requires sodding or seeding and mulching (with a non-toxic tackifier).
24. The bank slopes must be no steeper than three feet horizontal to one-foot vertical after construction.
25. The de-watering plan must be approved by the Department in writing before any on-site de-watering may take place.
26. The removal of vegetative cover and exposure of bare ground must be restricted to the minimum amount necessary for construction. Areas where soil is exposed must be protected from erosion by seeding and mulching, sodding, diversion of surface runoff, installation of straw bales or silt screens, construction of settling basins, or similar methods as soon as possible after removal of the original ground cover as described in the Wisconsin Construction Site Handbook (BMP's).

27. This permit has been issued with the understanding that any construction equipment used is the right size to do the job and can be brought to and removed from the project's site without unreasonable harm to vegetative cover or fish or wildlife habitat.
28. You and your agent are not allowed to remove the existing vegetative cover or operate construction equipment within 15 feet of the waterway.
29. You are not allowed to do in-water construction during periods of high-water levels or between March 15th and June 15th of any calendar year to protect sensitive time periods of fish spawning, fish movement, and egg incubation.
30. You are required to install a silt curtain in the lake next to your project as shown in the provided plan set.
31. You may not remove vegetative cover earlier than 24 hours before grading commences.
32. You must maintain a log of the erosion control inspections, repairs made, and rain events. This must be made available to Department personal upon request and must remain on the project site at all times work is being performed.
33. You must not deposit or store any of the graded materials in any wetland or below the ordinary high-water mark of any waterway. All graded materials must be placed out of the floodway of any stream.
34. You must not operate any construction equipment below the ordinary high water-mark of any waterway.
35. You must restrict the removal of vegetative cover and exposure of bare ground to the minimum amount necessary for construction.
36. You must submit an erosion control plan to the Department which meets or exceeds the standards found in the Wisconsin Construction Site Best Management Practices for written approval at least 15 days before you intend to begin work. You must not begin any work until this plan has been approved in writing by the Department.
37. You must supply a copy of this permit to every contractor associated with this project.

FINDINGS OF FACT

1. Nick Waldschmidt, P.O. Box 150, Fond du Lac, WI 54936, filed an application with this Department on 10/11/2024, under section 30.19, Wisconsin Statutes, to disturb over 10,000 sq ft within the bank of Lake Winnebago located in the NE 1/4, SE 1/4, Sec. 03, T. 15, R. 17E, City of Fond Du Lac, Fond Du Lac County.
2. The applicant proposes to dredge portions of an unnamed (WBIC 5562445) tributary and Lake Winnebago near the City of Fond Du Lac's Lakeside Park. As part of the dredging project, the dredged materials will be hauled to a designated site near Lake Winnebago where spoils from previous dredging projects have been deposited. To facilitate the disposal of spoils from this dredging project, the applicant will need to grade over 10,000 square feet of the banks of Lake Winnebago with a final slope of 3:1. Erosion control measures include installing a tracking pad at all construction entrances and installing silt fencing around perimeter of disposal area. The dredge spoils will be seeded after the site has been graded. A 30-foot buffer between disposal area and riprap along Lake Winnebago shoreline and a 15-foot buffer between disposal area and tree line along Supple's Marsh will be maintained. Dredged material may be spread out to make landscaping features in previously graded areas.
3. Lake Winnebago is a navigable water.
4. The proposed project, if constructed in accordance with this permit will not adversely affect water quality, will not increase water pollution in surface waters and will not cause environmental pollution as defined in s. 283.01(6m), Wis. Stats.
5. The proposed project will not impact wetlands if constructed in accordance with this permit.

6. The Department of Natural Resources has determined that the agency's review of the proposed project constitutes an integrated analysis action under s. NR 150.20(2), Wis. Adm. Code. The Department has considered the impacts on the human environment, alternatives to the proposed projects and has provided opportunities for public disclosure and comment. The Department has completed all procedural requirements of s. 1.11(2)(c), Wis. Stats., and NR 150, Wis. Adm. Code for this project.
7. The Department of Natural Resources has completed all procedural requirements and the project as permitted will comply with all applicable requirements of Sections 30.19 and 30.208, Wisconsin Statutes and Chapters NR 102, 103, and 341 of the Wisconsin Administrative Code.

The applicant was responsible for fulfilling the procedural requirements for publication of notices under s. 30.208(5)(c)1m., Stats., and was responsible for publication of the notice of pending application under s.30.208(3)(a), Stats. or the notice of public informational hearing under s.30.208(3)(c), Stats., or both. S. 30.208(3)(e), Stats., provides that if no public hearing is held, the Department must issue its decision within 30 days of the 30-day public comment period, and if a public hearing is held, the Department must issue its decision within 20 days after the 10-day period for public comment after the public hearing. S. 30.208(5)(bm), Stats., requires the Department to consider the date on which the department publishes a notice on its web site as the date of notice.

8. The grading will not be detrimental to the public interest. Resource managers for fisheries, water quality, wildlife, and law enforcement were initially asked to provide feedback no later than 11/6/2024 for the dredging and grading proposal. Resource managers from water quality, wildlife, and law enforcement recommended granting the permit with usual conditions. A fisheries resource manager recommended granting with special conditions. Their provided feedback stated that the proposed time out periods and turbidity control methods were sufficient, but they had questions surrounding the disposal of materials. The applicant is working with the DNR's Waste and Materials Management Program to address disposal and related permitting. There will also be erosion control measures in place at the dewatering and disposal sites to prevent the material from reentering the waterways.
9. The activity will not cause environmental pollution as defined in s. 299.01(4).
10. No material injury will result to the riparian rights of any riparian owners of real property that abuts any water body that is affected by the activity.

CONCLUSIONS OF LAW

1. The Department has authority under the above indicated Statutes and Administrative Codes, to issue a permit for the construction and maintenance of this project.
2. The Department has complied with s. 1.11, Wis. Stats.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions shall be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing of any individual permit decision pursuant to section 30.209, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources, P.O. Box 7921, Madison, WI, 53707-7921. The petition shall be in writing, shall be dated and signed by the petitioner, and shall include as an attachment a copy of the decision for which administrative review is sought. If you are not the applicant, you must simultaneously provide a copy of the petition to the applicant. If you wish to request a stay of the project, you must provide information, as outlined below, to show that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment. If you are not the permit applicant, you must provide a copy of the petition to the permit applicant at the same time that you serve the petition on the Department.

The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

A request for contested case hearing must meet the requirements of section 30.209, Wis. Stats., and sections NR 2.03, 2.05, and 300.09(5), Wis. Admin. Code, and if the petitioner is not the applicant the petition must include the following information:

1. A description of the objection that is sufficiently specific to allow the department to determine which provisions of this section may be violated if the proposed permit or contract is allowed to proceed.
2. A description of the facts supporting the petition that is sufficiently specific to determine how the petitioner believes the project, as proposed, may result in a violation of Chapter 30, Wis. Stats.
3. A commitment by the petitioner to appear at the administrative hearing and present information supporting the petitioner's objection.

If the petition contains a request for a stay of the project, the petition must also include information showing that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment.

Dated at the Horicon Service Center, Wisconsin on January 28, 2025

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By:

A handwritten signature in black ink, appearing to read "Francesca Sanchez", with a long, sweeping underline.

Francesca Sanchez

Water Management Specialist

Appendix D

Maps

Lakeside Park West
Proximity map

1 inch = 300 feet



Disposal Areas

Dog Park

LAKESIDE
PARK WEST

45

LAKESHORE DR

HOWARD LITSCHER DR

HOWARD LITSCHER DR

LAKESIDE
PARK EAST



FISHERMAN'S PIER DREDGING DISPOSAL PROXIMITY MAP

ACAD File Path: J:\Projects\2022 Projects\2022 Fisherman's Pier Dredging Permit\2022 Fisherman's Pier Dredging Permit.dwg
 Plot Date: Oct 04, 2023 - 4:22pm
 Layout: Proximity Map 1
 Plotted By: nwaldschmidt



NOTES:

1. Most of the site is within a floodplain.
2. The disposal area is located approximately 25 feet from a wetland.
3. The disposal area is located approximately 40 feet from Lake Winnebago.
4. The disposal area is located greater than 100 feet from an on-site water supply well.
5. The disposal area is located greater than 300 feet from an off-site water supply well.
6. The disposal area is located greater than 3 feet above the high groundwater level.

DEPARTMENT OF PUBLIC WORKS
 ENGINEERING & TRAFFIC DIVISION
 CITY OF FOND DU LAC, WISCONSIN
 PHONE: 920-322-5470
 FAX: 920-322-5071



PROJECT
FISHERMAN'S PIER
LOW HAZARD GRANT OF EXEMPTION MAP

BENCH MARKS

SURVEYED BY: _____ DATE: _____
 DRAWN BY: _____ DATE: _____
 DESIGNED BY: _____ DATE: _____
 SCALES: HORIZ. _____ VERT. _____
 ACAD FILE: 2022 Fisherman's Pier Dredging Permit.dwg

REVISIONS:
 BY: _____ DATE: _____
 BY: _____ DATE: _____
 BY: _____ DATE: _____

FISHERMAN'S PIER DREDGING DISPOSAL PROXIMITY MAP



NOTES:

1. Most of the site is within a floodplain.
2. The disposal area is located approximately 25 feet from a wetland.
3. The disposal area is located approximately 40 feet from Lake Winnebago.
4. The disposal area is located greater than 100 feet from an on-site water supply well.
5. The disposal area is located greater than 300 feet from an off-site water supply well.
6. The disposal area is located greater than 3 feet above the high groundwater level.

ACAD File Path: J:\Projects\2022 Projects\2022 Fisherman's Pier Dredging Permit.dwg Plot Date: Oct 04, 2023 - 4:24pm Layout: Proximity Map 2 Plotted By: mvaldschmidt

REVISIONS:	DATE:	DATE:	DATE:
BY:	DATE:	DATE:	DATE:
BY:	DATE:	DATE:	DATE:
BY:	DATE:	DATE:	DATE:

SURVEYED BY:	DATE:
DRAWN BY:	DATE:
DESIGNED BY:	DATE:
SCALE: HORIZ.	VERT.
ACAD FILE:	2022 Fisherman's Pier Dredging Permit.dwg

BENCH MARKS

PROJECT

FISHERMAN'S PIER

LOW HAZARD GRANT OF EXEMPTION MAP

Fond du Lac

First on the Lake

DEPARTMENT OF PUBLIC WORKS
ENGINEERING & TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN
PHONE: 920-322-5470
FAX: 920-322-5471

Appendix E
Endangered resources preliminary assessment



Endangered Resources Preliminary Assessment

Created on **9/3/2024**. This report is good for one year after the created date.

DNR staff will be reviewing the ER Preliminary Assessments to verify the results provided by the Public Portal. ER Preliminary Assessments are only valid if the project habitat and waterway-related questions are answered accurately based on current site conditions. If an assessment is deemed invalid, a full ER review may be required even if the assessment indicated otherwise.

Results

A search was conducted of the NHI Portal within a 1-mile buffer (for terrestrial and wetland species) and a 2-mile buffer (for aquatic species) of the project area. Based on these search results, below are your follow-up actions.

Actions strongly recommended to help conserve Wisconsin's Endangered Resources (these actions are voluntary, not legally required):

Further actions are strongly recommended—one or more natural communities (<https://apps.dnr.wi.gov/biodiversity/Home/index/communities>) overlaps the project site. You are encouraged to request a full Endangered Resources Review (<https://dnr.wi.gov/topic/ERReview/Review.html>), although it is not required. The ER review letter will contain voluntary follow-up actions that can be implemented to avoid impacts to these natural communities.

A copy of this document can be kept on file and submitted with any other necessary DNR permit applications to show that the need for an ER Review has been met. This notice only addresses endangered resources issues. This notice does not constitute DNR authorization of the proposed project and does not exempt the project from securing necessary permits and approvals from the DNR and/or other permitting authorities.

Project Information

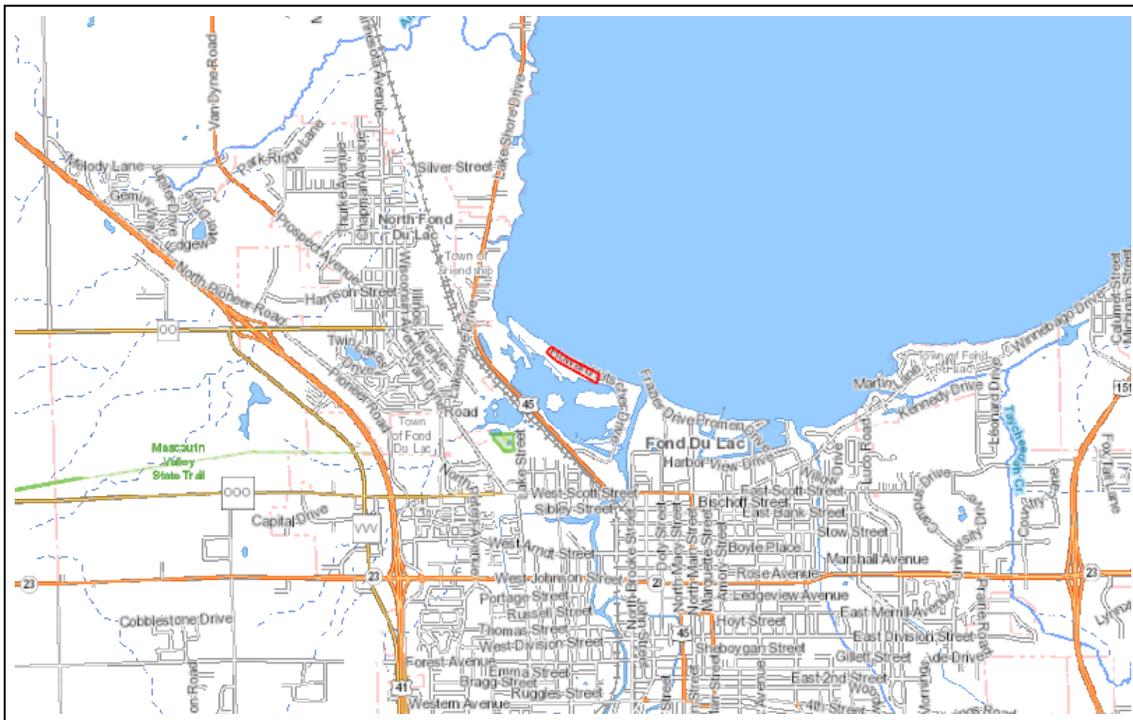
Landowner name	City of Fond du Lac
Project address	Lakeside West
Project description	Fisherman's Pier Dredging

Project Questions

Does the project involve a public property?	Yes
Is there any federal involvement with the project?	No
Is the project a utility, agricultural, forestry or bulk sampling (associated with mining) project?	No
Is the project property in Managed Forest Law or Managed Forest Tax Law?	No
Project involves tree or shrub removal?	No
Is project near (within 300 ft) a waterbody or a shoreline?	Yes
Is project within a waterbody or along the shoreline?	No

Does the project area (including access routes, staging areas, laydown yards, select sites, source/fill sites, etc.) occur **entirely within** one or more of the following habitats?

Urban/residential	No
Manicured lawn	No
Artificial/paved surface	No
Agricultural land	No



The information shown on these maps has been obtained from various sources, and is of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. Users of these maps should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>.

<https://dnrx.wisconsin.gov/nhiportal/public>

101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921

Appendix F

Low hazard grant of exemption approvals

May 28, 2008.

August 30, 2017.

April 24, 2024.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
2984 Shawano Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-662-5100
FAX 920-662-5413
TTY Access via relay - 711

May 28, 2008

Mr. Nick Waldschmidt
City of Fond du Lac
Engineering Department
160 South Macy Street
P.O. Box 150
Fond du Lac, WI 54936-0150

FILE REF: IP-NE-2006-0907UF,
IP-NE-2007-0364
Fond du Lac CO
SW
APPR

SUBJECT: Low-Hazard Grant of Exemption to Dispose of or Mix Dredge Sediment and Topsoil,
City Fond du Lac, Wisconsin

Dear Mr. Waldschmidt:

The Department has reviewed your request for a low-hazard grant of exemption to reuse sediment to mix with topsoil for the City of Fond du Lac landscaping and general fill projects or for disposal at the Lakeside West abandoned landfill. The dredged sediments come from the navigational dredging of the Fisherman's Pier in the City of Fond du Lac, Wisconsin. This grant of exemption is being issued based on future review of the dewatered sediment sample results. This grant of exemption allows the mixed dredge sediments and topsoil to be used only in City of Fond du Lac municipal projects after review and approval by the Department. Part of our review will include a comparison to the compost requirements for fecal coliform. If the Department approval is not granted, the sediment must be disposed of at the Lakeside West abandoned landfill and segregated from other sediments stored at the site. This exemption does not allow use by any person that is not a City of Fond du Lac employee performing officially approved City of Fond du Lac projects.

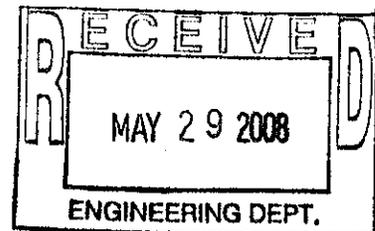
Based on our review of the initial sediment sampling reports of in-situ sediment we have determined that the proposed activity is not likely to cause increased environmental contamination or endanger human health and welfare, provided that the project is done in accordance with the conditions of the attached exemption.

You are reminded that approval by the Bureau of Waste & Materials Management does not relieve you of obligations to meet all other applicable federal, state, and local permits, zoning and regulatory requirements.

If you have questions regarding this letter, please contact Leland Archiquette at (608) 267-0542 or by email at Leland.Archiquette@wisconsin.gov.

Sincerely,

Len Polczinski
Waste Management Team Supervisor
Northeast Region



Mr. Nick Waldschmidt - City of Fond du Lac

2

CC: Kristy Rogers - NER
Crystal Schiefelbein - NER, Oshkosh
Leland Archiquette/File - WA



BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL GRANT OF EXEMPTION
FOR THE REUSE OR DISPOSAL OF DREDGED SEDIMENTS
FROM THE FISHERMAN'S PIER
FOND DU LAC, WISCONSIN
CHAPTER 30 PERMIT #IP-NE06-0907UF AND IP-NE-07-0364UF

FINDINGS OF FACT

The Department finds that:

1. On May 6, 2008, the Department's Division of Water issued the City of Fond du Lac a permit to grade on the bank and remove materials from the bed of Lake Winnebago, located at the Fisherman's Pier in the City of Fond Du Lac, Fond Du Lac County, also described as Sec. 3, T15N, R17E. The permit was issued in accordance with Section 30.19 and 30.20(2), Wis. Stats. The Chapter 30 Permit number is IP-NE06-0907UF and IP-NE-07-0364UF. The permit is valid until May 6, 2013. A permit extension may be granted, for good cause, by the Department.
2. On March 7, 2008, the Department received a low-hazard grant of exemption request to either reuse the dewatered sediment in municipal projects as general fill or landscaping or for disposal on top of the abandoned Lakeside West landfill. If used in municipal projects, the sediments will be mixed with topsoil at a 50:50 mix prior to use.
3. On March 31, 2008, the Department received the \$550.00 review fee.
4. On May 15, 2008 a public meeting was held at the Lakeside Park Pavilion in the City of Fond du Lac, Wisconsin in accordance with the requirements of s. 289.54(2), Stats. No comments were received at the meeting.
5. The City of Fond du Lac proposes to perform navigational dredging at the Fisherman's Pier, in the City of Fond du Lac, Wisconsin, which will produce approximately 3,000 cubic yards of sediment per year. The sediments will be dewatered across from the Municipal Service Center on Doty Street in the City of Fond du Lac, Wisconsin. The dewatered sediments will be stored at the abandoned landfill in Lakeside Park West in the City of Fond du Lac.
6. The city of Fond du Lac has proposed testing of the dewatered sediment in accordance with s. NR 347.06(6), Table 1, Wis. Adm. Code. The testing of the dewatered sediment is to determine its suitability for reuse or disposal. Fecal coliform is being added to the analysis.
7. The laboratory test results for the sediment must indicate the following:
 - a. The sediment is not hazardous;
 - b. The pH is neutral; and,
 - c. The pathogens, fecal coliform, are present below the modified limits that are set for compost material (Fecal coliform maximum. 1000 MPN/g of total solids based on geometric mean of at least 5 separate samples).

8. The special conditions set forth below are needed to assure that the dredged sediment is used or disposed of in an environmentally sound fashion and will not inhibit compliance with the standards set forth in the applicable provisions of chs. NR 500-538, Wis. Adm. Code.

CONCLUSIONS OF LAW

1. The Department has the authority under s. 289.43(8)(b)3., Stats., and s. NR 500.08(4), Wis. Adm. Code to issue a grant of exemption if the exemption does not create a hazard to public health or the environment.
2. The Department has the authority under s. 289.43(8)(c), Stats., to impose conditions on a grant of exemption for the beneficial use of a low-hazard waste.
3. In accordance with the foregoing, the Department has the authority under s. 289.43(8), Stats., and s. NR 500.08(4), Wis. Adm. Code to issue the following conditional grant of exemption.

CONDITIONAL LOW HAZARD GRANT OF EXEMPTION

The Department of Natural Resources hereby grants an exemption to the City of Fond du Lac to use or dispose of the sediments that are dredged under Ch. 30 Permit No. IP-NE06-0907UF and IP-NE-07-0364UF subject to the following conditions:

1. This grant of exemption is valid for the length of the Ch. 30 Permit.
2. Samples shall be collected from the dewatered sediments from at least 5 different locations. The samples shall be collected from varying elevations within dewatered sediment pile.
3. The dewatered sediments shall be tested in accordance with the requirements of s. NR 347.06(6), Table 1, Wis. Adm. Code. Fecal coliform shall be included in the analysis.
4. The sediment bale barrier for the dewatering area shall be installed and maintained in accordance with the Wisconsin Department of Natural Resources Conservation Practice Standard 1055.
5. Prior to removal of the dewatered sediments from the dewatering area, the sample results shall be submitted to the Department's Solid Waste Engineer assigned to the site for review and approval for reuse or disposal.
6. Tracking of the sediments off-site shall be minimized. Any sediment that is deposited onto the roadway shall be cleaned up at the end of each working day.
7. The dredged sediments that are approved for reuse shall be mixed with topsoil prior to use in the City of Fond du Lac municipal projects.
8. Mixing of the dredge sediments and topsoil shall be conducted at the abandoned landfill where the sediment is stored.
9. The mixing ratio of sediment to topsoil shall be as close to 50:50 as possible.

10. The sediment/topsoil mix may only be used by City of Fond du Lac employees conducting approved municipal projects.
11. Sediment that is approved for disposal shall be kept separate from the sediment approved for reuse and graded and seeded as soon as practical.

The Department reserves the right to require the submittal of additional information and to modify this approval at any time, if in the Department's opinion, modifications are necessary. Unless specifically noted, the conditions of this approval do not supersede or replace any previous conditions of approval for this facility.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision made by the department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to section 227.48(2), Stats.

Dated: May 28, 2008

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Len Polczynski
Len Polczynski
Waste Management Team Supervisor
Northeast Region

Leland D. Archiquette
Leland D. Archiquette, P.E.
Waste Management Engineer
Northeast Region

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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Scott Walker, Governor
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August 30, 2017

Mr. Nick Waldschmidt
City of Fond du Lac
P.O. Box 150
Fond du Lac, WI 54936

FID#: 420152810
420010910
420006950
420153030
BRRTS# 02-20-364233
Fond du Lac County
SW/Approvals

Subject: Low-Hazard Waste Grant of Exemption for the Reuse of Dredge Material from Fisherman's Pier,
City of Fond du Lac, Fond du Lac County, Wisconsin

Dear Mr. Waldschmidt:

The department has completed our review of your low-hazard waste grant of exemption request dated and received by the department on July 7, 2017, for the above referenced project. The information submitted in your request and additional documentation reviewed, provided sufficient justification for this low-hazard waste grant of exemption under s. 289.43(8), Stats. This exemption is limited to the reuse of dredge material from Fisherman's Pier as proposed in your request.

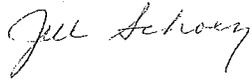
It is the department's opinion that the proposed reuse of dredge material in the request will not cause environmental pollution provided that it is conducted in accordance with the proposed plan that was submitted and the conditions of this exemption.

Also, note this approval has been extended to apply to material that will be dredged in the future for maintenance of Fisherman's Pier under your current dredging permit (IP-NE-2016-20-03626/03885), until the permit expires in 2021. Therefore, this approval is not limited to the 2,000 cubic yards dredged in 2017 and will allow for the city to use material dredged in the future as a 50:50 mixture with topsoil for repairing lawns after municipal projects, as fill at Lakeside Park West, and as fill to construct berms at the Fox Ridge Business Park, provided you follow the conditions of this approval. The department anticipates use for fill beneath baseball fields at the former Vulcan Manufacturing Facility will no longer be required once the baseball fields are constructed. Dredging that occurs after the expiration of the city's dredging permit (November 15, 2021) may require sampling, and disposal of that material will require a new low-hazard waste grant of exemption.

Please keep in mind that this exemption does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements. If placement of the dredge material will involve the disturbance of more than one acre of land, you may need a stormwater permit. If land disturbance is less than one acre, you will need to follow erosion control practices as required by NR 151.105. For more information on stormwater permits and control please contact Tony Fischer by phone at 920-787-3017 or e-mail at Anthony.Fischer@wisconsin.gov. Also, you are reminded that per the case closure for the former Vulcan Manufacturing Facility (BRRTS # 02-20-364233) dated May 4, 2006, you are required to conduct annual inspections of the cap at the former facility and keep up-to-date inspection records on file. If you have questions regarding this requirement, please contact Keld Lauridsen by phone at 920-662-5420 or e-mail at keld.lauridsen@wisconsin.gov.

If you have any questions regarding this grant of exemption, please contact Jackie Marciulionis at 920-662-5433 or by e-mail at Jacqueline.Marciulionis@wisconsin.gov.

Sincerely,

A handwritten signature in cursive script that reads "Jill Schoen".

Jill Schoen, CHMM
Waste and Materials Management Program Manager

CC: John Morris – WDNR, Waste and Materials Management Program, Green Bay (via e-mail)
Jackie Marciulionis – WDNR, Waste and Materials Management Program, Green Bay (via e-mail)
Keld Lauridsen – WDNR, Remediation and Redevelopment Program, Green Bay (via e-mail)

PROJECT SUMMARY

Fisherman's Pier is a channel leading to Lake Winnebago at Lakeside Park located at 555 North Park Avenue in the city of Fond du Lac. The city removed approximately 2,000 cubic yards of sediment from the channel in February and March 2017. Prior to dredging, samples were collected from in-situ cores and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. Results indicated the material contains benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Code, non-industrial direct contact residual contaminant level (RCL). Arsenic and manganese were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCL but concentrations were below background threshold levels. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in one sample but at concentrations below the groundwater pathway and direct contact RCLs. The city is proposing to reuse of the material in four ways, which include:

1. Blending the dredge material with topsoil at a 50:50 ratio to be used on municipal projects. The mixture will be used by city staff to repair lawn areas after utility excavations and pavement, curb and gutter, and sidewalk replacement. Prior to using the mixture, the blended material will be resampled for PAHs to verify the concentrations are below the ch. NR 720, Wis. Adm. Code, RCLs. If the material is not below the RCLs, additional topsoil will be added to the blended material and the mixture resampled.
2. Using the dredge material as fill beneath a baseball field planned for construction on property located on the north side of Harbor View Dr. between Main St. and Doty St. The site is the location of the former Vulcan Manufacturing Facility (BRRTS# 02-20-364233, FID 420006950), and is owned by the city. The site received case closure in 2006 and has residual soil and groundwater petroleum and PAH contamination. The site is covered with a grass and soil cap, and the city is currently required to inspect and maintain the cap. The dredge material will be placed over the cap as fill and covered with 6-inches of a 50:50 mixture of dredge material and soil, followed by 6-inches of clean topsoil. Following placement of the material, the city will submit construction documentation, an updated cap maintenance plan, and an updated maintenance log with photographs to the Wisconsin Department of Natural Resources (WDNR) Remediation and Redevelopment (R&R) program as documentation of the cap modifications.
3. Using the material as fill for screening berms at the Fox Ridge Business Park located on Fox Ridge Dr., south of U.S. Highway 151, west of Interstate 41, and east of State Highway 175. The dredge material will be covered with at least 6-inches of clean topsoil and seeded. The property where the berm will be placed is owned by the city.
4. Using the material as fill at Lakeside Park West, located on the south shoreline of Lake Winnebago. This area is a closed unlicensed landfill known as Supples Marsh (FID #420010910) and has previously been used as a disposal location for several city of Fond du Lac dredging projects, including material previously dredged from Fisherman's Pier. Disposal of the material will be limited to areas previously used for disposal. The material may be used to construct landscape features for future use of the area as a park with walking trails. The dredge material will be covered with 6-inches of clean topsoil or a blend of 50:50 dredge material and topsoil that has been tested for PAHs. Some of the dredge material may also be temporarily stockpiled at Lakeside Park West and covered with an untested 50:50 blend of topsoil and dredge material until its final placement at Lakeside Park West has been determined. This location is owned the city.

This low-hazard waste grant of exemption applies to the material dredged from Fisherman's Pier in February and March, 2017, as well as similar material that will be dredged under the city's current maintenance dredging permit (IP-NE-2016-20-03626/03885) for Fisherman's Pier, provided the material is placed in similar locations and handled in a similar manner as the original material.

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL LOW HAZARD WASTE GRANT OF EXEMPTION
FOR THE REUSE OF DREDGE MATERIAL
FROM FISHERMAN'S PIER
CITY OF FOND DU LAC, WI

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. On November 15, 2016, the Wisconsin Department of Natural Resources (department) issued the city of Fond du Lac a permit to remove material from the bed of Lake Winnebago at Fisherman's Pier in Lakeside Park, City of Fond du Lac, Fond du Lac County, Wisconsin. The description of the site using Public Land Survey System (PLSS) is the Northeast ¼ of the Southeast ¼ of Section 3, Township 15 North, Range 17 East. The coordinates for the site in the Wisconsin Transverse Mercator coordinate system of 1983 based on the 1991 adjustment to the North American Datum of 1983 (WTM91) system are: 645241.30 (X), 370632.18 (Y). The Chapter 30 Permit number is IP-NE-2016-20-03626 / 03885 and is valid until November 15, 2021; however, an extension may be granted by the department.
2. Dredging of Fisherman's Pier was completed in February and March 2017 and the material was temporarily stockpiled at the southeast corner of Doty St. and Harborview Dr. in the City of Fond du Lac for dewatering. Approximately 2,000 cubic yards of material were removed. Maintenance dredging of Fisherman's Pier is expected to occur every two to three years.
3. Samples were taken from two in-situ cores collected from the sediment and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. One sample had a concentration of benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Cod, non-industrial direct contact residual contaminant level (RCL). Arsenic and manganese were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCL, but concentrations were below background threshold levels. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in one sample but at concentrations below the groundwater pathway and direct contact RCLs.
4. On July 7, 2017, Nick Waldschmidt of the city of Fond du Lac submitted a low-hazard waste grant of exemption request for the reuse of sediment dredged from Fisherman's Pier for various purposes, including use in municipal projects, use as fill beneath a baseball field, constructing screening berms, and use as fill at Lakeside Park West.
5. The correct plan review fee of \$550 was received by the department on July 13, 2017.
6. On August 8, 2017, a public meeting was held at the Fond du Lac City County Government building in the City of Fond du Lac, Wisconsin in accordance with the requirements of s. 289.54(2), Stats.
7. Additional facts relevant to the review of the low-hazard waste grant of exemption include the following:
 - a. The 50:50 mixture of dredge material and topsoil will be sampled for PAHs prior to use in municipal projects where a 6-inch topsoil cover is not planned.

- b. Any raw dredge material or 50:50 mixture of dredge material and topsoil that is not sampled for PAHs prior to final placement will be covered with a minimum of 6-inches of clean topsoil.
 - c. The dredge material disposal area at Lakeside Park West where an untested mixture of 50:50 dredge material and topsoil will be used to cover temporary stockpiles of dredge material is currently gated at the access point. The gate limits public access.
8. Additional documents and information considered in review of the exemption request include:
 - a. The department's general files related to city of Fond du Lac dredging projects
 - b. The department's guidance document titled 'Exempting Low-Hazard Wastes from Solid Waste Regulations' (PUB WA 1645, June 2015).
 - c. GIS registry information for the former Vulcan Manufacturing Facility (BRRTS# 02-20-364233).
 - d. An e-mail dated July 10, 2017, from Tauren Beggs of the department's Remediation and Redevelopment program to Jackie Marciulionis of the department's Waste and Materials Management program providing concurrence to the July 7, 2017, low-hazard waste grant of exemption request.
 - e. An e-mail dated August 4, 2017, from Nick Waldschmidt of the city of Fond du Lac to Jackie Marciulionis of the department clarifying ownership of the Fox Ridge Business Park.
 - f. Army Corps of Engineers Nationwide Permit #35 for Maintenance Dredging issued to the city of Fond du Lac on October 28, 2016.
9. The department has considered the environmental impacts of the proposal and has complied with the requirements of ch. NR 150, Wis. Adm. Code and s. 1.11. Stats., and, consistent with social, economic, and other essential considerations, the department has adopted all practical means to avoid or minimize environmental harm.
10. The department considers this action to be a routine approval and a minor action as defined in s. NR 150.03 (15), Wis. Adm. Code.
11. If the conditions set forth below are complied with, the disposal of the materials will not result in environmental pollution as defined in s. 289.01(8), Stats.
12. The department has conducted a continuing review of the potential hazard to public health and the environment of solid waste disposal facilities in general as well as this specific proposal. Based upon this review, the department finds that regulation under s. 289, Stats., is not warranted in light of the low potential hazard to public health or the environment.

CONCLUSIONS OF LAW

1. Based upon the foregoing, the department has authority under s. 289.43(8), Stats., to grant the conditional exemption set forth below.
2. The conditions set forth below are needed to ensure that the disposal of the material as proposed, and in accordance with the conditions of this approval, will not result in environmental pollution as defined in s. 289.01(8), Stats.

3. The department has authority under s. NR 150.20(1m)(k), Wis. Adm. Code, to consider a routine approval a minor action and authority under s. NR 150.20(1m), Wis. Adm. Code, to not perform an environmental analysis under the provisions of Wisconsin Environmental Policy Act (WEPA) for minor actions.

CONDITIONAL GRANT OF EXEMPTION

The department hereby grants the city of Fond du Lac a low-hazard waste exemption, and authorizes the city of Fond du Lac to reuse dredged material from Fisherman's Pier, subject to the following conditions:

1. This grant of exemption is valid for the length of the dredging permit (IP-NE-2016-20-03626/03385) and is applicable for similar material from future maintenance dredging at Fisherman's Pier until the initial dredge permit expires (November 15, 2021), provided the material is placed as specified in this approval.
2. Dredge material mixed with topsoil for use in municipal projects shall be mixed at a minimum ratio of 50:50 and sampled for PAHs at a minimum frequency of one composite sample per 300 cubic yards material (dredge material and topsoil following mixing) composed of at least 15 aliquots selected from random locations within the stockpile. Dredge material/topsoil mixture with PAH concentrations below ch. NR 720, Wis. Adm. Code, non-industrial direct contact and groundwater pathway RCLs can be used as clean fill and does not need to be covered with clean topsoil. Blended material above non-industrial direct contact and groundwater pathway RCLs shall be blended with additional topsoil and resampled prior to use in municipal projects. Alternatively, the material may be disposed at Lakeside Park West without additional blending with topsoil and sampling as indicated condition number 4 below.
3. The sediment/topsoil mixture shall only be used on city projects and shall not be distributed to the public.
4. Any dredge material temporarily covered with 50:50 mixture of dredge material and topsoil at Lakeside Park West that has not been retested for PAHs shall be covered with 6-inches of clean topsoil prior to use of the area as a park with unlimited public access.
5. Dredge material placement at the Fox Ridge Business Park shall only be on property owned by the city of Fond du Lac. If the city receives permission to construct a berm composed of dredge material on property not own by the city, the property owner will need to be issued a separate low-hazard waste grant of exemption prior to the placement of the material.
6. A status report shall be submitted to the department's Waste and Materials Management program by March 31st of each year to document placement of Fisherman's pier dredge material. The report shall provide a brief overview of where dredge material was placed, results of sampling conducted on blended dredge material and topsoil (if applicable), and when additional dredging from Fisherman's Pier is anticipated.
7. The following shall be submitted to the R&R program within 60 days after the baseball fields at the former Vulcan Manufacturing site are constructed:
 - Construction documentation that states how much material was added over the cap and shows the location of material added
 - Updated Cap Maintenance Plan with current site map
 - Updated maintenance log with photos of cap cover
 - GIS registry update fee of \$300

This grant of exemption is based on the information available to the department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this exemption, the department may ask that further information relating to this activity be provided. Likewise, the department accepts proposals to modify exemptions, as provided for in state statutes and administrative codes. Unless specifically noted, the conditions of this grant of exemption do not supersede or replace any previous conditions of approval for this property.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review department decisions must be filed.

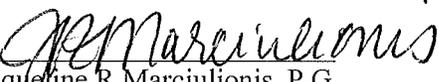
For judicial review of a decision pursuant to section 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the department, to file your petition with the appropriate circuit court and serve the petition on the department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

Dated: August 30, 2017

DEPARTMENT OF NATURAL RESOURCES
For the Secretary



Jill Schoen, CHMM
Waste and Materials Management Program Manager



Jacqueline R. Marciulionis, P.G.
Waste and Materials Management Hydrogeologist

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DEPARTMENT OF NATURAL RESOURCES
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April 24, 2024

Mr. Nick Waldschmidt
City of Fond du Lac
P.O. Box 150
Fond du Lac, WI 54936

FID#: 420010910
Fond du Lac County
SW/Exemption

Subject: Conditional Low-Hazard Waste Grant of Exemption for the Disposal of Dredge Material from Fisherman's Pier, City of Fond du Lac, Fond du Lac County, Wisconsin

Dear Mr. Waldschmidt:

The Department of Natural Resources (department) has reviewed your request for a Low-Hazard Waste Grant of Exemption (LHE) request dated November 2, 2023, for the disposal of dredged sediments from the Fisherman's Pier dredge project at the City of Fond du Lac (City) owned property located at Lakeside Park West. Lakeside Park West is a closed unlicensed landfill known as Supples Marsh (FID# 420010910) and has previously been used as a disposal location for City dredging projects, including material previously dredged from Fisherman's Pier. The department hereby grants the exemption in accordance with s. 289.43(8), Stats. This exemption is limited to the disposal of dredge sediments from Fisherman's Pier dredge project as proposed in your request.

It is the department's opinion that the proposed plans to dispose of dredge sediments at the City owned Lakeside Park West property will not cause environmental pollution provided it is conducted in accordance with the proposed plan dated November 2, 2023, and the conditions of this approval.

This exemption does not relieve you of obligations to meet all other applicable federal, state, or local permits, zoning and regulatory requirements including any remedial actions that may be necessary at the site.

If you have any questions regarding this grant of exemption, please contact Kevin Bartel at 920-883-9301 or by e-mail at kevin.bartel@wisconsin.gov.

Sincerely,

Kristin DuFresne
Waste and Materials Management Program Supervisor
Northeast Region

CC: John Redmond, City of Fond du Lac (via e-mail jredmond@fdl.wi.gov)
Kevin Bartel – WDNR/WA (via e-mail)

PROJECT SUMMARY

Fisherman's Pier is a channel leading to Lake Winnebago near the Lakeside Park Pavilion located at 71 Promen Drive in the City of Fond du Lac (City). The City removed approximately 2,335 cubic yards of sediment from the channel in February and March 2023. Prior to dredging, samples were collected from in-situ cores and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. Results indicated the material contains benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Code, non-industrial direct contact residual contaminant level (RCL). Chrysene, cadmium, mercury, and nickel were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCLs. Arsenic concentrations exceeded the industrial direct contact RCL and the background threshold value. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in the samples but at concentrations that were between the laboratories Limit of Detection (LOD) and Limit of Quantification (LOQ). The city is proposing to dispose of the material in two ways, which include:

1. Blending the dredge material with topsoil at a 50:50 ratio to be used on municipal projects. The mixture will be used by City staff to repair lawn areas after utility excavations and pavement, curb and gutter, and sidewalk replacement. Prior to using the mixture, the blended material will be resampled for PAHs to verify the concentrations are below the ch. NR 720, Wis. Adm. Code, RCLs. If the material is not below the RCLs, additional topsoil will be added to the blended material and the mixture resampled.
2. Using the material as fill at Lakeside Park West, located on the south shoreline of Lake Winnebago. This area is a closed unlicensed landfill known as Supples Marsh (FID #420010910) and has previously been used as a disposal location for several city of Fond du Lac dredging projects, including material previously dredged from Fisherman's Pier. Disposal of the material will be limited to areas previously used for disposal. The material may be used to construct landscape features for future use of the area as a park with walking trails. The dredge material will be covered with 6-inches of clean topsoil or a blend of 50:50 dredge material and topsoil that has been tested for PAHs. Some of the dredge material may also be temporarily stockpiled at Lakeside Park West and covered with a tested 50:50 blend of topsoil and dredge material until its final placement at Lakeside Park West has been determined. This location is owned the City.

This low-hazard waste grant of exemption applies solely to the material dredged from Fisherman's Pier in February and March 2023, provided the material is placed in accordance with the City's proposal and the conditions of this Low Hazard Grant of Exemption.

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL LOW HAZARD WASTE GRANT OF EXEMPTION
FOR THE DISPOSAL OF DREDGE MATERIAL
FROM FISHERMAN'S PIER
CITY OF FOND DU LAC, WI

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. On November 29, 2022, the Wisconsin Department of Natural Resources (department) issued the City of Fond du Lac (City) a permit to remove material from the bed of Lake Winnebago at Fisherman's Pier in Lakeside Park, City of Fond du Lac, Fond du Lac County, Wisconsin. The description of the site using Public Land Survey System (PLSS) is the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 3, Township 15 North, Range 17 East. The coordinates for the site in the Wisconsin Transverse Mercator coordinate system of 1983 based on the 1991 adjustment to the North American Datum of 1983 (WTM91) system are: 645241.30 (X), 370632.18 (Y). The Chapter 30 Permit number is IP-NE-2016-20-03626 / 03885 and is valid until November 15, 2021; however, an extension may be granted by the department.
2. Dredging of Fisherman's Pier was completed in February and March 2023 and the material was temporarily stockpiled at the southeast corner of Doty St. and Harborview Dr. in the City of Fond du Lac for dewatering. Approximately 2,335 cubic yards of material were removed.
3. Samples were taken from two in-situ cores collected from the sediment and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. Results indicated the material contains benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Code, non-industrial direct contact residual contaminant level (RCL). Chrysene, cadmium, mercury, and nickel were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCLs. Arsenic concentrations exceeded the industrial direct contact RCL and the background threshold value. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in the samples but at concentrations that were between the laboratories Limit of Detection (LOD) and Limit of Quantification (LOQ)
4. On June 30, 2023, Nick Waldschmidt of the City of Fond du Lac submitted an incomplete low-hazard waste grant of exemption request for the disposal of sediment dredged from Fisherman's Pier for various purposes, including use in municipal projects and use as fill at Lakeside Park West.
5. On November 2, 2023, Nick Waldschmidt of the City of Fond du Lac submitted a completed low-hazard waste grant of exemption request for the disposal of sediment dredged from Fisherman's Pier for various purposes, including use in municipal projects and use as fill at Lakeside Park West.
6. The correct plan review fee of \$550 was received by the department on July 7, 2023.
7. On May 6, 2008 and August 8, 2017, public meetings were held at the Fond du Lac City County Government building in the City of Fond du Lac, Wisconsin in accordance with the requirements of s. 289.54(2), Stats.
8. Additional facts relevant to the review of the low-hazard waste grant of exemption include the following:

- a. The 50:50 mixture of dredge material and topsoil will be sampled for PAHs prior to use in municipal projects where a 6-inch topsoil cover is not planned.
 - b. Any raw dredge material or 50:50 mixture of dredge material and topsoil that is not sampled for PAHs prior to final placement will be covered with a minimum of 6-inches of clean topsoil.
 - c. The dredge material disposal area at Lakeside Park West where an untested mixture of 50:50 dredge material and topsoil will be used to cover temporary stockpiles of dredge material is currently gated at the access point. The gate limits public access.
9. Additional documents and information considered in review of the exemption request include:
- a. The City of Fond du Lac's May 2008 LHE for the disposal of dredged material from Fisherman's Pier at Lakeside Park West and for use in a topsoil mix.
 - b. The City of Fond du Lac's August 2017 LHE for the disposal of dredged material from Fisherman's Pier Lakeside Park West and for use in a topsoil mix.
 - c. The department's guidance document titled 'Exempting Low-Hazard Wastes from Solid Waste Regulations' (PUB WA 1645, June 2015).
 - d. Army Corps of Engineers Nationwide Permit #35 for Maintenance Dredging issued to the city of Fond du Lac on October 28, 2016.
10. The department has considered the environmental impacts of the proposal and has complied with the requirements of ch. NR 150, Wis. Adm. Code and s. 1.11. Stats., and, consistent with social, economic, and other essential considerations, the department has adopted all practical means to avoid or minimize environmental harm.
11. The department considers this action to be a routine approval and a minor action as defined in s. NR 150.03 (15), Wis. Adm. Code.
12. If the conditions set forth below are complied with, the disposal of the materials will not result in environmental pollution as defined in s. 289.01(8), Stats.
13. The department has conducted a continuing review of the potential hazard to public health and the environment of solid waste disposal facilities in general as well as this specific proposal. Based upon this review, the department finds that regulation under s. 289, Stats., is not warranted in light of the low potential hazard to public health or the environment.

CONCLUSIONS OF LAW

1. Based upon the foregoing, the department has authority under s. 289.43(8), Stats., to grant the conditional exemption set forth below.
2. The conditions set forth below are needed to ensure that the disposal of the material as proposed, and in accordance with the conditions of this approval, will not result in environmental pollution as defined in s. 289.01(8), Stats.
3. The department has authority under s. NR 150.20(1m)(k), Wis. Adm. Code, to consider a routine approval a

minor action and authority under s. NR 150.20(1m), Wis. Adm. Code, to not perform an environmental analysis under the provisions of Wisconsin Environmental Policy Act (WEPA) for minor actions.

CONDITIONAL GRANT OF EXEMPTION

In accordance with the authority granted to the department under s. 289.43(8)(b)2., Wis. Stats., the department hereby grants The City of Fond Du Lac a low hazard waste exemption to allow for the disposal of approximately 2,335 cubic yards (cy) of dredged sediments to be disposed of at the Lakeside Park West site and to be used as topsoil, subject to the following conditions:

1. Failure to maintain compliance with applicable laws, rules, regulations, and terms and conditions of this exemption, for any reason, may be grounds for immediate suspension or revocation of this exemption. The department reserves the right to revoke this approval if the department discovers that one or more of the conditions are not being followed.
2. This approval does not exempt the property owner and the waste generator from any responsibility or liability for any injuries to individuals; or any responsibility under Ch. 292, Wis. Stats., Chs. NR 700-754, Wis. Adm. Code, or Ch. NR 140, Wis. Adm. Code, to take all corrective actions that the department determines would be needed to restore the environment and protections to human health and the environment if it is discovered that the contaminated material has caused environmental pollution as defined in s. 291.01 (4), Wis. Stats.
3. Material placement as proposed shall be completed within 1 year of the effective date of this letter unless a written extension of this exemption is obtained from the department.
4. Permanent covering of the dredged sediments shall be completed within 1 years of the effective date of this letter unless a written extension of this exemption is obtained from the department.
5. This grant of exemption is only applicable for material dredged from Fisherman's Pier under the dredge permit number IP-NE-2022-20-03634, provided the material is placed as specified in this approval.
6. Dredge material mixed with topsoil for use in municipal projects shall be mixed at a minimum ratio of 50:50 and sampled for PAHs at a minimum frequency of one composite sample per 300 cubic yards material (dredge material and topsoil following mixing) composed of at least 15 aliquots selected from random locations within the stockpile. Dredge material/topsoil mixture with PAH concentrations below ch. NR 720, Wis. Adm. Code, non-industrial direct contact and groundwater pathway RCLs can be used as clean fill and does not need to be covered with clean topsoil. Blended material above non-industrial direct contact and groundwater pathway RCLs shall be blended with additional topsoil and resampled prior to use in municipal projects. Alternatively, the material may be disposed at Lakeside Park West without additional blending with topsoil and sampling as indicated condition number 4 below.
7. The sediment/topsoil mixture shall only be used on city projects in accordance with the terms and conditions of the May 2008 and August 2017 Low Hazard Grant of Exemption and shall not be distributed to the public.
8. Any dredge material temporarily covered with 50:50 mixture of dredge material and topsoil at Lakeside Park West that has not been retested for PAHs shall be covered with 6-inches of clean topsoil prior to use of the area as a park with unlimited public access.
9. A status report shall be submitted to the department's Waste and Materials Management program within 90 days of placement of the dredge material. The report shall provide a brief overview of where dredge material

was placed, results of sampling conducted on blended dredge material and topsoil (if applicable), and when additional dredging from Fisherman's Pier is anticipated.

This grant of exemption is based on the information available to the department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this exemption, the department may ask that further information relating to this activity be provided. Likewise, the department accepts proposals to modify exemptions, as provided for in state statutes and administrative codes. Unless specifically noted, the conditions of this grant of exemption do not supersede or replace any previous conditions of approval for this property.

NOTICE OF APPEAL RIGHTS

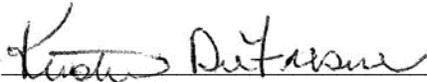
If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review department decisions must be filed.

For judicial review of a decision pursuant to section 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the department, to file your petition with the appropriate circuit court and serve the petition on the department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

Dated: April 24, 2024

DEPARTMENT OF NATURAL RESOURCES

For the Secretary



Kristin DuFrense

Waste and Materials Management Program Supervisor
Northeast Region



Kevin Bartel

Waste and Materials Management Hydrogeologist

Appendix G

Sediment sampling

Lab test results
Summary of results
RCL worksheets

FOND DU LAC, CITY OF
 160 S MACY ST
 FOND DU LAC, WI

 Project Number: 24021709
 Report Date: 12/13/2024
 Sampled By: CLIENT

Attn: NICK WALDSCHMIDT/CHRIS JOHNSON

Samples: 2

 Sample Number: 54051225
 Sample ID: #1 NORTH
 Sample Date: 11/19/2024
 Date Received: 11/19/2024

Sub Lab Qualifier Notes: PAH- The sample ran outside of the holding time due to quality control failure during the initial extraction. Results should be considered estimated. Results expressed on a dry weight basis.

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
GENERAL ANALYSIS								
MOISTURE	52.8	%	0.1	0.1		CALC	12/2/2024	
OIL AND GREASE (HEXANE)	1163	mg/kg Dry	553	553		SM5520E	12/3/2024	
SAMPLE PREP	DONE						11/20/2024	
TOTAL SOLIDS	47.2	%	0.010	0.010		SM2540B	11/25/2024	
METALS								
ARSENIC, TOTAL	4.49	mg/kg Dry	2.5	8.33	69	6010B	12/10/2024	
BARIUM, TOTAL	51	mg/kg Dry	0.044	0.148	69	6010B	12/3/2024	
CADMIUM, TOTAL	0.456	mg/kg Dry	0.059	0.197	69	6010B	12/3/2024	
CHROMIUM, TOTAL	30	mg/kg Dry	0.339	1.13	69	6010B	12/3/2024	
COPPER, TOTAL	19	mg/kg Dry	0.191	0.636	69	6010B	12/3/2024	
LEAD, TOTAL	13	mg/kg Dry	0.809	2.69	69	6010B	12/3/2024	
MERCURY, TOTAL	0.148	mg/kg Dry	0.064	0.212	172	EPA7471B	11/26/2024	
NICKEL, TOTAL	9.28	mg/kg Dry	0.220	0.733	69	6010B	12/3/2024	
SELENIUM, TOTAL	<2.20	mg/kg Dry	2.20	7.33	69	6010B	12/3/2024	
SOLIDS DIGESTION	DONE					SW846-3050B	11/30/2024	
ZINC, TOTAL	47	mg/kg Dry	0.544	1.81	69	6010B	12/10/2024	
NUTRIENTS								
AMMONIA NITROGEN	841	mg/kg Dry	14	47	47	SM4500NH3G	11/20/2024	
KJELDAHL NITROGEN	6953	mg/kg Dry	114	381	154	EPA351.2	11/25/2024	
NITRATE NITROGEN	4.24	mg/kg Dry	4.24	14	20	EPA300.0	11/20/2024	
NITRITE NITROGEN	<4.24	mg/kg Dry	4.24	14	20	EPA300.0	11/20/2024	
PHOSPHORUS, TOTAL	1199	mg/kg Dry	97	324	1542	EPA365.4	11/22/2024	
ORGANICS								
PAH	DONE							4,69
1-Methylnaphthalene	<15	µg/Kg Dry	15	50	1	SW8270E	12/6/2024	B1
2-Chloronaphthalene	<10	µg/Kg Dry	10	34	1	SW8270E	12/6/2024	B1
2-Methylnaphthalene	<17	µg/Kg Dry	17	57	1	SW8270E	12/6/2024	B1
Acenaphthene	<28	µg/Kg Dry	28	94	1	SW8270E	12/6/2024	B1
Acenaphthylene	<19	µg/Kg Dry	19	65	1	SW8270E	12/6/2024	B1
Anthracene	45	µg/Kg Dry	13	45	1	SW8270E	12/6/2024	B1
Benzo(a)anthracene	270	µg/Kg Dry	53	180	1	SW8270E	12/6/2024	B1
Benzo(a)pyrene	280	µg/Kg Dry	49	160	1	SW8270E	12/6/2024	B1
Benzo(b)fluoranthene	380	µg/Kg Dry	44	150	1	SW8270E	12/6/2024	B1
Benzo(g,h,i)perylene	230	µg/Kg Dry	33	110	1	SW8270E	12/6/2024	B1
Benzo(k)fluoranthene	130	µg/Kg Dry	11	37	1	SW8270E	12/6/2024	B1
Chrysene	290	µg/Kg Dry	48	160	1	SW8270E	12/6/2024	B1
Dibenzo(a,h)anthracene	84	µg/Kg Dry	42	140	1	SW8270E	12/6/2024	J,B1
Fluoranthene	750	µg/Kg Dry	37	120	1	SW8270E	12/6/2024	B1
Fluorene	<18	µg/Kg Dry	18	60	1	SW8270E	12/6/2024	B1
Indeno(1,2,3-cd)pyrene	260	µg/Kg Dry	51	170	1	SW8270E	12/6/2024	B1
Naphthalene	<14	µg/Kg Dry	14	46	1	SW8270E	12/6/2024	B1
Phenanthrene	140	µg/Kg Dry	15	52	1	SW8270E	12/6/2024	B1
Pyrene	510	µg/Kg Dry	47	160	1	SW8270E	12/6/2024	B1
TOTAL ORGANIC CARBON	51100	mg/kg Dry	240	790	1	SM5310C	12/2/2024	27

CERTIFICATIONS

Sample Number: 54051226
 Sample ID: #2 SOUTH
 Sample Date: 11/19/2024
 Date Received: 11/19/2024

Sub Lab Qualifier Notes: PAH- The sample ran outside of the holding time due to quality control failure during the initial extraction. Results should be considered estimated. Results expressed on a dry weight basis.

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
<u>GENERAL ANALYSIS</u>								
MOISTURE	84.4	%	0.1	0.1		CALC	12/2/2024	
OIL AND GREASE (HEXANE)	3269	mg/kg Dry	1365	1365		SM5520E	12/3/2024	
SAMPLE PREP	DONE						11/20/2024	
TOTAL SOLIDS	15.6	%	0.010	0.010		SM2540B	11/25/2024	
<u>METALS</u>								
ARSENIC, TOTAL	5.19	mg/kg Dry	2.64	8.78	24	6010B	12/10/2024	
BARIUM, TOTAL	109	mg/kg Dry	0.045	0.147	24	6010B	12/3/2024	
CADMIUM, TOTAL	1.10	mg/kg Dry	0.064	0.212	24	6010B	12/3/2024	
CHROMIUM, TOTAL	141	mg/kg Dry	0.359	1.19	24	6010B	12/3/2024	
COPPER, TOTAL	40	mg/kg Dry	0.199	0.660	24	6010B	12/3/2024	
LEAD, TOTAL	32	mg/kg Dry	0.853	2.84	24	6010B	12/3/2024	
MERCURY, TOTAL	0.192	mg/kg Dry	0.192	0.641	164	EPA7471B	11/26/2024	
NICKEL, TOTAL	19	mg/kg Dry	0.231	0.769	24	6010B	12/3/2024	
SELENIUM, TOTAL	<2.32	mg/kg Dry	2.32	7.76	24	6010B	12/3/2024	
SOLIDS DIGESTION	DONE					SW846-3050B	11/30/2024	
ZINC, TOTAL	90	mg/kg Dry	0.571	1.90	24	6010B	12/10/2024	
<u>NUTRIENTS</u>								
AMMONIA NITROGEN	1679	mg/kg Dry	0.897	3.01	50	SM4500NH3G	11/20/2024	
KJELDAHL NITROGEN	7853	mg/kg Dry	814	2712	364	EPA351.2	11/25/2024	
NITRATE NITROGEN	15	mg/kg Dry	13	43	20	EPA300.0	11/20/2024	
NITRITE NITROGEN	<13	mg/kg Dry	13	43	20	EPA300.0	11/20/2024	
PHOSPHORUS, TOTAL	981	mg/kg Dry	71	237	364	EPA365.4	11/22/2024	
<u>ORGANICS</u>								
PAH	DONE							4,69
1-Methylnaphthalene	<43	µg/Kg Dry	43	140	1	SW8270E	12/6/2024	B1
2-Chloronaphthalene	<29	µg/Kg Dry	29	98	1	SW8270E	12/6/2024	B1
2-Methylnaphthalene	<50	µg/Kg Dry	50	170	1	SW8270E	12/6/2024	B1
Acenaphthene	<81	µg/Kg Dry	81	270	1	SW8270E	12/6/2024	B1
Acenaphthylene	<56	µg/Kg Dry	56	190	1	SW8270E	12/6/2024	B1
Anthracene	<38	µg/Kg Dry	38	130	1	SW8270E	12/6/2024	B1
Benzo(a)anthracene	<150	µg/Kg Dry	150	510	1	SW8270E	12/6/2024	B1
Benzo(a)pyrene	<140	µg/Kg Dry	140	470	1	SW8270E	12/6/2024	B1
Benzo(b)fluoranthene	<130	µg/Kg Dry	130	420	1	SW8270E	12/6/2024	B1
Benzo(g,h,i)perylene	<96	µg/Kg Dry	96	320	1	SW8270E	12/6/2024	B1
Benzo(k)fluoranthene	<32	µg/Kg Dry	32	110	1	SW8270E	12/6/2024	B1
Chrysene	<140	µg/Kg Dry	140	460	1	SW8270E	12/6/2024	B1
Dibenzo(a,h)anthracene	<120	µg/Kg Dry	120	410	1	SW8270E	12/6/2024	B1
Fluoranthene	<110	µg/Kg Dry	110	350	1	SW8270E	12/6/2024	B1
Fluorene	<52	µg/Kg Dry	52	170	1	SW8270E	12/6/2024	B1
Indeno(1,2,3-cd)pyrene	<150	µg/Kg Dry	150	490	1	SW8270E	12/6/2024	B1
Naphthalene	<40	µg/Kg Dry	40	130	1	SW8270E	12/6/2024	B1
Phenanthrene	<45	µg/Kg Dry	45	150	1	SW8270E	12/6/2024	B1
Pyrene	<130	µg/Kg Dry	130	450	1	SW8270E	12/6/2024	B1
TOTAL ORGANIC CARBON	111000	mg/kg Dry	640	2100	1	SM5310C	12/2/2024	27

Quality Assurance Code(s):

- B1. Sample analyzed past holding time
- J. Analyte detected between the LOD and LOQ.
- 4. Analyzed by subcontracted lab: Certification #399084510 ALS Environmental - Holland
- 27. Analyzed by subcontracted lab: Certification# 157066030 CT Laboratories
- 69. See sub lab QA Qualifiers/Notes

All LOD/LOQs adjusted for dilution and/or solids content.

LOD = Limit of Detection LOQ = Limit of Quantitation

BADGER LABORATORIES, INC.
 WDNR Certified Lab #445023150
 Approved By:

Amanda Vordus

Sample 54051225 (#1 North)

Non-Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
Benzo[a]pyrene	0.115		0.28

Groundwater

Contaminant	RCL (mg/kg) x2	Background Threshold (mg/kg)	Test Results (mg/kg)
Arsenic	0.58		4.49
Chromium, Total	3.8		30
Chrysene (PAH)	0.144		0.29

Sample 54051226 (#2 South)

Non-Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
Benzo[a]pyrene	0.115		0.14
Dibenz[a,h]anthracene	0.115		0.12

Result below LOD.
Result below LOD.

Groundwater

Contaminant	RCL (mg/kg) x2	Background Threshold (mg/kg)	Test Results (mg/kg)
Arsenic	0.58		5.19
Cadmium	0.75		1.1
Chromium	3.8		141
Lead	27		32
Nickel	13		19

Wis. Admin. Code ch. NR 720 Non-Industrial Direct Contact RCLs derived from EPA's RSL Calculator, Residential Scenario (https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search)

Notes:

1.00E-06

1. Basis: nc = noncancer, ca = cancer, max = ceiling limit (100,000 mg/kg) exceeded, Csat = Csat exceeded; BTV = background threshold value.
2. Background Threshold Values derived from USGS soil data form Wisconsin (<http://pubs.usgs.gov/sir/2011/5202>).
3. The lead DC RCL is based on the Integrated Exposure-Uptake Biokinetic Model (IEUBK) in accordance with current EPA lead policy (<https://www.epa.gov/superfund/updated-soil-lead-guidance-cercla-sites-and-rcra-corrective-action-facilities>). If an additional source of lead is identified (e.g., air, drinking water) then a DC RCL of 100 mg/kg applies.

	HI > 1 Exceeds	CCR > 1 x 10⁻⁵ Exceeds
Hazard Index and Cumulative Cancer Risk	1.6942	3.98E-06

Site Data Comparison to RCLs	Individual Target Hazard Quotient HQ = 1	Individual Target Cancer Risk (CR) 1 x 10⁻⁶
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Chemical	CAS No.	Contaminant Type	Noncancer RCL (mg/kg)	Cancer RCL (mg/kg)	Default Non-Ind DC RCL (mg/kg)	Basis ¹	Background Threshold Value ² (mg/kg)	Input Site Data (mg/kg)	Flag E = Individual Exceedance	Site Hazard Quotient (Noncancer)	Site Cancer Risk
Acenaphthene	83-32-9	PAH	3,590.		3,590.	nc		0.028		0.	
Acetochlor	34256-82-1	Pesticide	1,260.		1,260.	nc					
Acetone	67-64-1	VOC	70,400.		70,400.	nc					
Alachlor	15972-60-8	Pesticide	632.	9.69	9.69	ca					
Aldicarb	116-06-3	Pesticide	63.2		63.2	nc					
Aluminum	7429-90-5	Inorganic	77,500.		77,500.	nc	28,721.				
Anthracene	120-12-7	PAH	17,900.		17,900.	nc		0.045		0.	
Antimony (metallic)	7440-36-0	Inorganic	31.3		31.3	nc					
Aroclor 1016	12674-11-2	PCB	4.11	6.72	4.11	nc					
Aroclor 1221	11104-28-2	PCB		0.213	0.213	ca					
Aroclor 1232	11141-16-5	PCB		0.19	0.19	ca					
Aroclor 1242	53469-21-9	PCB		0.235	0.235	ca					
Aroclor 1248	12672-29-6	PCB		0.233	0.233	ca					
Aroclor 1254	11097-69-1	PCB	1.17	0.239	0.239	ca					
Aroclor 1260	11096-82-5	PCB		0.243	0.243	ca					
Aroclor 5460	11126-42-4	PCB	35.2		35.2	nc					
Arsenic	7440-38-2	Inorganic	34.9	0.677	0.677	BTV	8.3	4.49		0.1287	
Atrazine	1912-24-9	Pesticide	190.	2.36	2.36	ca					
Barium	7440-39-3	Inorganic	15,300.		15,300.	nc	364.	51.		0.0033	
Bentazon	25057-89-0	Pesticide	1,900.		1,900.	nc					
Benz[a]anthracene	56-55-3	PAH		1.14	1.14	ca		0.27			2.37E-07
Benzene	71-43-2	VOC	106.	1.6	1.6	ca					
Benzo[a]pyrene	50-32-8	PAH	17.8	0.115	0.115	ca		0.28	E	0.0157	2.43E-06
Benzo[b]fluoranthene	205-99-2	PAH		1.15	1.15	ca		0.38			3.30E-07
Benzo[k]fluoranthene	207-08-9	PAH		11.5	11.5	ca		0.13			1.13E-08
Benzoic acid	65-85-0	SVOC	253,000.		100,000.	max					
Benzyl alcohol	100-51-6	SVOC	6,320.		6,320.	nc					
Beryllium and compounds	7440-41-7	Inorganic	156.		156.	nc					
Bis(2-chloroethyl)ether	111-44-4	VOC		0.286	0.286	ca					
Bis(2-ethylhexyl)phthalate	117-81-7	SVOC	1,260.	38.8	38.8	ca					
Boron	7440-42-8	Inorganic	15,600.		15,600.	nc					
Bromobenzene	108-86-1	VOC	342.		342.	nc					
Bromochloromethane	74-97-5	VOC	216.		216.	nc					
Bromodichloromethane	75-27-4	VOC	626.	0.418	0.418	ca					
Bromoform (Tribromomethane)	75-25-2	VOC	1,560.	25.4	25.4	ca					
Bromomethane (Methyl bromide)	74-83-9	VOC	9.6		9.6	nc					
Butyl Alcohol (Tertiary Butyl Alcohol; TBA)	75-65-0	VOC	27,300.	1,390.	1,390.	ca					
Butylate	2008-41-5	VOC	3,910.		3,910.	nc					
Butyl Benzyl Phthalate	85-68-7	SVOC	12,600.	286.	286.	ca					
Butylbenzene, n-	104-51-8	VOC	3,910.		108.	Csat					
Butylbenzene, sec-	135-98-8	VOC	7,820.		145.	Csat					
Butylbenzene, tert-	98-06-6	VOC	7,820.		183.	Csat					
Cadmium	7440-43-9	Inorganic	7.14	2,430.	7.14	nc	1.	0.456		0.0639	1.88E-10
Calcium	7440-70-2	Inorganic					14,536.				
Carbaryl	63-25-2	SVOC	6,320.		6,320.	nc					
Carbofuran	1563-66-2	SVOC	316.		316.	nc					
Carbon Disulfide	75-15-0	VOC	1,060.		738.	Csat					

Result below LOD.

Carbon Tetrachloride	56-23-5	VOC	131.	0.916	0.916	ca				
Chloramben	133-90-4	SVOC	948.		948.	nc				
Chlordane (technical mixture)	12789-03-6	Pesticide	34.9	1.74	1.74	ca				
Chlorobenzene	108-90-7	VOC	370.		370.	nc				
Chlorodifluoromethane	75-45-6	VOC	70,600.		1,680.	Csat				
Chloroform (Trichloromethane)	67-66-3	VOC	259.	0.454	0.454	ca				
Chloromethane (Methyl chloride)	74-87-3	VOC	159.		159.	nc				
Chlorotoluene, o- (2-Chlorotoluene)	95-49-8	VOC	1,560.		907.	Csat				
Chlorotoluene, p- (4-Chlorotoluene)	106-43-4	VOC	1,560.		253.	Csat				
Chlorpyrifos	2921-88-2	Pesticide	63.2		63.2	nc				
Chlorthal-dimethyl (Dacthal; DCPA)	1861-32-1	SVOC	632.		632.	nc				
Chromium III	16065-83-1	Inorganic	117,000.		100,000.	max				
Chromium VI	18540-29-9	Inorganic	234.	0.301	0.301	ca				
Chromium, Total	7440-47-3	Inorganic					44.	30.		
Chrysene	218-01-9	PAH		115.	115.	ca		0.29		2.52E-09
Cobalt	7440-48-4	Inorganic	23.4	487.	23.4	nc	22.			
Copper	7440-50-8	Inorganic	3,130.		3,130.	nc	35.	19.		0.0061
Cresol, m- (3-Methylphenol)	108-39-4	SVOC	3,160.		3,160.	nc				
Cresol, o- (2-Methylphenol)	95-48-7	SVOC	3,160.		3,160.	nc				
Cresol, p- (4-Methylphenol)	106-44-5	SVOC	1,260.		1,260.	nc				
Cumene (Isopropyl benzene)	98-82-8	VOC	2,530.		268.	Csat				
Cyanazine	21725-46-2	SVOC	126.	0.646	0.646	ca				
Cyanide (CN-)	57-12-5	Inorganic	27.1		27.1	nc				
Diazinon	333-41-5	Pesticide	44.2		44.2	nc				
Dibenz[a,h]anthracene	53-70-3	PAH		0.115	0.115	ca		0.084		7.30E-07
Dibromo-3-chloropropane, 1,2-	96-12-8	VOC	5.96	0.008	0.008	ca				
Dibromobenzene, 1,4-	106-37-6	VOC	782.		782.	nc				
Dibromochloromethane (Chlorodibromomethane)	124-48-1	VOC	1,560.	8.28	8.28	ca				
Dibromoethane, 1,2-	106-93-4	VOC	100.	0.05	0.05	ca				
Dibromomethane (Methylene Bromide)	74-95-3	VOC	34.		34.	nc				
Dibutyl Phthalate (Di-n-butyl phthalate)	84-74-2	SVOC	6,320.		6,320.	nc				
Dicamba	1918-00-9	Pesticide	1,900.		1,900.	nc				
Dichlorobenzene, 1,2-	95-50-1	VOC	2,350.		376.	Csat				
Dichlorobenzene, 1,4-	106-46-7	VOC	3,810.	3.74	3.74	ca				
Dichlorobenzidine, 3,3'-	91-94-1	SVOC		1.21	1.21	ca				
Dichlorodifluoromethane (CFC-12)	75-71-8	VOC	126.		126.	nc				
Dichlorodiphenyldichloroethane, p,p'- (DDD, 4,4-DDD)	72-54-8	Pesticide	31.6	2.26	2.26	ca				
Dichlorodiphenyldichloroethylene, p,p'- (DDE, 4,4-DDE)	72-55-9	Pesticide	39.1	2.	2.	ca				
Dichlorodiphenyltrichloroethane, p,p'- (DDT, 4,4-DDT)	50-29-3	Pesticide	36.5	1.89	1.89	ca				
Dichloroethane, 1,1-	75-34-3	VOC	15,600.	5.06	5.06	ca				
Dichloroethane, 1,2- (DCA)	107-06-2	VOC	43.7	0.652	0.652	ca				
Dichloroethylene, 1,1- (DCE)	75-35-4	VOC	320.		320.	nc				
Dichloroethylene, cis-1,2-	156-59-2	VOC	76.7		76.7	nc				
Dichloroethylene, trans-1,2-	156-60-5	VOC	98.5		98.5	nc				
Dichlorophenol, 2,4-	120-83-2	SVOC	190.		190.	nc				
Dichlorophenoxy Acetic Acid, 2,4-(2,4-D)	94-75-7	Pesticide	699.		699.	nc				
Dichloropropane, 1,2-	78-87-5	VOC	22.6	3.4	3.4	ca				
Dichloropropane, 1,3-	142-28-9	VOC	1,560.		1,490.	Csat				
Dichloropropene, 1,3-	542-75-6	VOC	102.	2.37	2.37	ca				
Diisopropyl Ether	108-20-3	VOC	3,220.		2,260.	Csat				
Dimethoate	60-51-5	Pesticide	139.		139.	nc				
Dimethylphenol, 2,4-	105-67-9	SVOC	1,260.		1,260.	nc				
Dinitrobenzene, 1,3- (1,3-DNB)	99-65-0	SVOC/Explosive	6.32		6.32	nc				
Dinitrotoluene Mixture, 2,4/2,6-	NA	SVOC/Explosive		0.798	0.798	ca				
Dinitrotoluene, 2,4- (2,4-DNT)	121-14-2	SVOC/Explosive	126.	1.74	1.74	ca				
Dinitrotoluene, 2,6- (2,6-DNT)	606-20-2	SVOC/Explosive	19.	0.363	0.363	ca				
Dinitrotoluene, 2-Amino-4,6- (2-Am-DNT)	35572-78-2	SVOC/Explosive	7.71		7.71	nc				
Dinitrotoluene, 4-Amino-2,6- (4-Am-DNT)	19406-51-0	SVOC/Explosive	7.66		7.66	nc				
Dinitrotoluene, Technical grade	25321-14-6	SVOC/Explosive	56.9	1.21	1.21	ca				
Dinoseb (DNBP)	88-85-7	Pesticide	63.2		63.2	nc				
Dioxane, 1,4-	123-91-1	VOC	1,020.	5.72	5.72	ca				
Diphenylamine	122-39-4	SVOC	6,320.		6,320.	nc				
Endrin	72-20-8	Pesticide	19.		19.	nc				
EPTC	759-94-4	VOC	3,910.		3,910.	nc				
Ethyl Chloride (Chloroethane)	75-00-3	VOC	7,800.		2,120.	Csat				
Ethyl Ether (Diethyl Ether)	60-29-7	VOC	15,600.		10,100.	Csat				
Ethylbenzene	100-41-4	VOC	2,680.	8.02	8.02	ca				
Ethylene Glycol	107-21-1	SVOC	50,600.		50,600.	nc				

Fluoranthene	206-44-0	PAH	2,390.		2,390.	nc		0.75		0.0003	
Fluorene	86-73-7	PAH	2,390.		2,390.	nc		0.018		0.	
Fluoride	7782-41-4	Inorganic	3,130.		3,130.	nc					
Formaldehyde	50-00-0	VOC	1,070.	14.	14.	ca					
Furfural	98-01-1	VOC	220.		220.	nc					
Heptachlor	76-44-8	Pesticide	7.82	0.14	0.14	ca					
Heptachlor Epoxide	1024-57-3	Pesticide	1.02	0.072	0.072	ca					
Hexachlorobenzene	118-74-1	Pesticide	0.782	0.252	0.252	ca					
Hexachlorobutadiene	87-68-3	VOC	78.2	1.63	1.63	ca					
Hexachlorocyclohexane, Alpha- (alpha-BHC or alpha-HCH)	319-84-6	Pesticide		0.086	0.086	ca					
Hexachlorocyclohexane, Beta- (beta-BHC or beta-HCH)	319-85-7	Pesticide		0.301	0.301	ca					
Hexachlorocyclohexane, Gamma- (Lindane, gamma-BHC)	58-89-9	Pesticide	21.4	0.568	0.568	ca					
Hexachlorocyclopentadiene	77-47-4	Pesticide	2.55		2.55	nc					
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	PFAS	0.235		0.235	nc					
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	SVOC/Explosive	302.	8.34	8.34	ca					
Hexane, n-	110-54-3	VOC	874.		141.	Csat		1,163.	E	1.3307	
Indeno[1,2,3-cd]pyrene	193-39-5	PAH		1.15	1.15	ca		0.26			2.26E-07
Iron	7439-89-6	Inorganic	54,800.		54,800.	nc	34,314.				
Isophorone	78-59-1	SVOC	12,600.	571.	571.	ca					
Lanthanum	7439-91-0	Inorganic	3.91		3.91	nc					
Lead and Compounds ³	7439-92-1	Inorganic	200.		200.	nc	52.	13.		0.065	
Lithium	7439-93-2	Inorganic	156.		156.	nc					
Magnesium	7439-95-4	Inorganic					8,290.				
Manganese (non-diet)	7439-96-5	Inorganic	1,830.		1,830.	BTV	2,937.				
Mercury (elemental)	7439-97-6	Inorganic	15.7		3.13	Csat		0.148		0.0094	
Methanol	67-56-1	VOC	133,000.		100,000.	max					
Methyl Ethyl Ketone (2-Butanone)	78-93-3	VOC	31,100.		28,400.	Csat					
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	VOC	47,700.		3,360.	Csat					
Methyl tert-Butyl Ether (MTBE)	1634-04-4	VOC	22,100.	63.8	63.8	ca					
Methylene Chloride (Dichloromethane)	75-09-2	VOC	379.	61.8	61.8	ca					
Methylnaphthalene, 1-	90-12-0	PAH	0.265	9.98	0.265	nc		0.015		0.0566	1.50E-09
Methylnaphthalene, 2-	91-57-6	PAH	239.		239.	nc		0.017		0.0001	
Metolachlor/s-Metolachlor	51218-45-2	SVOC	9,480.		9,480.	nc					
Metribuzin	21087-64-9	SVOC	1,580.		1,580.	nc					
Mineral Oils	8012-95-1	VOC	235,000.		0.324	Csat					
Molybdenum	7439-98-7	Inorganic	391.		391.	nc					
Naphthalene	91-20-3	PAH	178.	2.4	2.4	ca		0.014		0.0001	5.83E-09
Nickel Soluble Salts	7440-02-0	Inorganic	1,430.	16,900.	1,430.	nc	31.	9.28		0.0065	5.49E-10
Nitroso-di-N-propylamine, N-	621-64-7	SVOC		0.078	0.078	ca					
Nitrosodiphenylamine, N-	86-30-6	SVOC		111.	111.	ca					
Nitrotoluene, m- (3-Nitrotoluene, 3-NT)	99-08-1	SVOC/Explosive	6.32		6.32	nc					
Nitrotoluene, p- (4-Nitrotoluene, 4-NT)	99-99-0	SVOC/Explosive	253.	33.9	33.9	ca					
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	SVOC/Explosive	3,860.		3,860.	nc					
Octyl Phthalate, di-N-	117-84-0	SVOC	632.		632.	nc					
Pentachlorophenol (PCP)	87-86-5	Pesticide	245.	1.02	1.02	ca					
Perfluorobutanesulfonic acid (PFBS)	375-73-5	PFAS	19.		19.	nc					
Perfluorobutanoic acid (PFBA)	375-22-4	PFAS	78.2		78.2	nc					
Perfluorododecanoic acid (PFDoDA)	307-55-1	PFAS	3.16		3.16	nc					
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS	1.26		1.26	nc					
Perfluorohexanoic acid (PFHxA)	307-24-4	PFAS	31.6		31.6	nc					
Perfluorononanoic acid (PFNA)	375-95-1	PFAS	0.19		0.19	nc					
Perfluorooctadecanoic acid (PFODA)	16517-11-6	PFAS	2,530.		2,530.	nc					
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS	0.006	0.014	0.006	nc					
Perfluorooctanoic acid (PFOA)	335-67-1	PFAS	0.002	1.85E-05	1.85E-05	ca					
Perfluoropropanoic acid (PFPrA)	422-64-0	PFAS	39.1		39.1	nc					
Perfluorotetradecanoic acid (PFTetA)	376-06-7	PFAS	63.2		63.2	nc					
Perfluoroundecanoic acid (PFUDA)	2058-94-8	PFAS	19.		19.	nc					
Phenol	108-95-2	SVOC	19,000.		19,000.	nc					
Picloram	1918-02-1	SVOC	4,420.		4,420.	nc					
Polychlorinated Biphenyls (high risk); Total PCBs	1336-36-3	PCB		0.234	0.234	ca					
Prometon	1610-18-0	SVOC	948.		948.	nc					
Propazine	139-40-2	SVOC	1,260.		1,260.	nc					
Propyl benzene	103-65-1	VOC	4,490.		264.	Csat					
Pyrene	129-00-0	PAH	1,790.		1,790.	nc		0.51		0.0003	
Pyridine	110-86-1	VOC	78.2		78.2	nc					
Selenium	7782-49-2	Inorganic	391.		391.	nc		2.2		0.0056	
Silver	7440-22-4	Inorganic	391.		391.	nc					

Result below LOD.

Result below LOD.
Result below LOD.

Result below LOD.

Result below LOD.

Simazine	122-34-9	Pesticide	316.	4.52	4.52	ca				
Strontium, Stable	7440-24-6	Inorganic	46,900.		46,900.	nc	55.			
Styrene	100-42-5	VOC	7,410.		867.	Csat				
TCDD, 2,3,7,8- (2,3,7,8 TCDD equivalents (TEQ), 2,3,7,8-Tetrachlorodibenzo-p	1746-01-6	Dioxin/Furan	5.11E-05	4.82E-06	4.82E-06	ca				
Tetrachloroethane, 1,1,1,2-	630-20-6	VOC	2,350.	2.78	2.78	ca				
Tetrachloroethane, 1,1,2,2-	79-34-5	VOC	1,560.	0.81	0.81	ca				
Tetrachloroethylene (Perchloroethylene, PCE, PERC)	127-18-4	VOC	109.	33.	33.	ca				
Tetrachlorophenol, 2,3,4,6-	58-90-2	SVOC	1,900.		1,900.	nc				
Tetrahydrofuran	109-99-9	Dioxin/Furan	23,800.		23,800.	nc				
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	SVOC/Explosive	156.		156.	nc				
Thallium	7440-28-0	Inorganic	0.782		0.782	nc				
Toluene	108-88-3	VOC	5,240.		818.	Csat				
Toxaphene	8001-35-2	Pesticide	5.69	0.493	0.493	ca				
Trichlorobenzene, 1,2,3-	87-61-6	VOC	62.6		62.6	nc				
Trichlorobenzene, 1,2,4-	120-82-1	VOC	80.8	24.	24.	ca				
Trichloroethane, 1,1,1-	71-55-6	VOC	11,500.		640.	Csat				
Trichloroethane, 1,1,2-	79-00-5	VOC	2.16	1.59	1.59	ca				
Trichloroethylene (TCE)	79-01-6	VOC	5.68	1.3	1.3	ca				
Trichlorofluoromethane	75-69-4	VOC	23,500.		1,230.	Csat				
Trichlorophenol, 2,4,5-	95-95-4	SVOC	6,320.		6,320.	nc				
Trichlorophenol, 2,4,6-	88-06-2	SVOC	63.2	49.3	49.3	ca				
Trichlorophenoxypropionic acid, 2,4,5- (2,4,5-TP/Silvex)	93-72-1	Pesticide	506.		506.	nc				
Trichloropropane, 1,2,3-	96-18-4	VOC	6.94	0.005	0.005	ca				
Trifluralin	1582-09-8	VOC	587.	90.3	90.3	ca				
Trimethylbenzene, 1,2,4-	95-63-6	VOC	373.		219.	Csat				
Trimethylbenzene, 1,3,5-	108-67-8	VOC	339.		182.	Csat				
Trinitrobenzene, 1,3,5- (1,3,5-TNB)	99-35-4	SVOC/Explosive	2,250.		2,250.	nc				
Trinitrotoluene, 2,4,6- (2,4,6-TNT)	118-96-7	SVOC/Explosive	36.3	21.3	21.3	ca				
Vanadium and Compounds	7440-62-2	Inorganic	393.		393.	nc	85.			
Vinyl Chloride	75-01-4	VOC	89.2	0.067	0.067	ca				
Xylenes	1330-20-7	VOC	818.		260.	Csat				
Zinc and Compounds	7440-66-6	Inorganic	23,500.		23,500.	nc	150.	47.		0.002

Notes:

1. Groundwater pathway RCLs are calculated by modifying the EPA RSLs using the NR 140 Enforcement Standards as the target groundwater concentration.
2. WI-specific dilution attenuation factor (DAF) of 2 is applied to determine GW-RCL.

Chemical	CAS No.	Contaminant Type	NR 140 ES ¹ (µg/l)	GW-RCL ² (mg/kg)	Input Site Data (mg/kg)	Flag E = Individual Exceedance
Acetochlor	34256-82-1	SVOC	7.	0.011		
Acetone	67-64-1	VOC	9,000.	3.7		
Alachlor	15972-60-8	SVOC	2.	0.003		
Aldicarb	116-06-3	SVOC	10.	0.005		
Aluminum	7429-90-5	Inorganic	200.	600.		
Anthracene	120-12-7	PAH	3,000.	197.	0.045	
Antimony	7440-36-0	Inorganic	6.	0.54		
Arsenic	7440-38-2	Inorganic	10.	0.58	4.49	E
Atrazine, total chlorinated residues	1912-24-9	Pesticide	3.	0.004		
Barium	7440-39-3	Inorganic	2,000.	165.	51.	
Bentazon	25057-89-0	Inorganic	300.	0.13		
Benzene	71-43-2	VOC	5.	0.005		
Benzo[a]pyrene	50-32-8	PAH	0.2	0.47	0.28	
Benzo[b]fluoranthene	205-99-2	PAH	0.2	0.48	0.13	
Beryllium	7440-41-7	Inorganic	4.	6.3		
Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl)phthalate)	117-81-7	SVOC	6.	2.9		
Boron	7440-42-8	Inorganic	1,000.	6.4		
Bromodichloromethane	75-27-4	VOC	0.6	3.3E-04		
Bromoform (Tribromomethane)	75-25-2	VOC	4.4	0.002		
Bromomethane (Methyl bromide)	74-83-9	VOC	10.	0.005		
Butyl Alcohol (Tertiary Butyl Alcohol; TBA)	75-65-0	VOC	12.	0.005		
Butylate	2008-41-5	VOC	400.	0.78		
Cadmium	7440-43-9	Inorganic	5.	0.75	0.456	
Carbaryl	63-25-2	SVOC	40.	0.073		
Carbofuran	1563-66-2	SVOC	40.	0.031		
Carbon Disulfide	75-15-0	VOC	1,000.	0.59		
Carbon Tetrachloride	56-23-5	VOC	5.	0.004		
Chloramben	133-90-4	SVOC	150.	0.073		
Chlordane	57-74-9	Pesticide	2.	0.54		
Chlorodifluoromethane	75-45-6	VOC	7,000.	5.8		
Chloroform (Trichloromethane)	67-66-3	VOC	6.	0.003		
Chloromethane (Methyl chloride)	74-87-3	VOC	30.	0.016		
Chlorpyrifos	2921-88-2	Pesticide	2.	0.059		
Chlorthal-dimethyl (Dacthal; DCPA)	1861-32-1	SVOC	70.	0.17		
Chromium, Total	7440-47-3	Inorganic	100.	3.8	30.	E
Chrysene	218-01-9	PAH	0.2	0.144	0.29	E
Cobalt	7440-48-4	Inorganic	40.	3.6		
Copper	7440-50-8	Inorganic	1,300.	92.	19.	
Cyanazine	21725-46-2	SVOC	1.	9.4E-04		
Cyanide, free	57-12-5	Inorganic	200.	4.04		
Dibromo-3-chloropropane, 1,2- (DBCP)	96-12-8	VOC	0.2	1.7E-04		
Dibromochloromethane (Chlorodibromomethane)	124-48-1	VOC	60.	0.032		
Dibromoethane, 1,2-	106-93-4	VOC	0.05	2.8E-05		
Dibutyl Phthalate (Di-n-butyl phthalate)	84-74-2	SVOC	1,000.	5.		
Dicamba	1918-00-9	Pesticide	300.	0.16		
Dichlorobenzene, 1,2-	95-50-1	VOC	600.	1.2		
Dichlorobenzene, 1,4-	106-46-7	VOC	75.	0.14		

Dichlorodifluoromethane	75-71-8	VOC	1,000.	3.1		
Dichloroethane, 1,1-	75-34-3	VOC	850.	0.48		
Dichloroethane, 1,2- (DCA)	107-06-2	VOC	5.	0.003		
Dichloroethylene, 1,1- (DCE)	75-35-4	VOC	7.	0.005		
Dichloroethylene, cis-1,2-	156-59-2	VOC	70.	0.041		
Dichloroethylene, trans-1,2-	156-60-5	VOC	100.	0.063		
Dichlorophenoxy Acetic Acid, 2,4-(2,4-D)	94-75-7	Pesticide	70.	0.036		
Dichloropropane, 1,2-	78-87-5	VOC	5.	0.003		
Dichloropropene, 1,3- (Telone)	542-75-6	VOC	0.4	2.9E-04		
Dimethoate	60-51-5	Pesticide	2.	9.0E-04		
Dinitrotoluene, Technical grade (DNT mixture, 2,4- and 2,6-)	25321-14-6	SVOC-Explosive	0.05	1.4E-04		
Dinitrotolulene, 2,4- (2,4-DNT)	121-14-2	SVOC-Explosive	0.05	1.4E-04		
Dinitrotolulene, 2,6- (2,6-DNT)	606-20-2	SVOC-Explosive	0.05	1.4E-04		
Dinoseb (DNBP)	88-85-7	Pesticide	7.	0.123		
Dioxane, 1,4-	123-91-1	VOC	3.	0.001		
Dioxin (2,3,7,8-TCDD)	1746-01-6	Dioxin/Furan	3.00E-05	3.0E-05		
Endrin	72-20-8	Pesticide	2.	0.16		
EPTC	759-94-4	VOC	250.	0.26		
Ethyl Chloride (Chloroethane)	75-00-3	VOC	400.	0.23		
Ethyl Ether (Diethyl Ether)	60-29-7	VOC	1,000.	0.45		
Ethylbenzene	100-41-4	VOC	700.	1.6		
Ethylene Glycol	107-21-1	SVOC	14,000.	5.7		
Fluoranthene	206-44-0	PAH	400.	89.	0.75	
Fluorene	86-73-7	PAH	400.	15.	0.018	
Fluoride	7782-41-4	Inorganic	4,000.	1,202.		
Formaldehyde	50-00-0	VOC	1,000.	0.4		
Heptachlor	76-44-8	Pesticide	0.4	0.066		
Heptachlor Epoxide	1024-57-3	Pesticide	0.2	0.008		
Hexachlorobenzene	118-74-1	Pesticide	1.	0.025		
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	Pesticide	0.2	0.002		
Hexane, N-	110-54-3	VOC	600.	8.5		
Lead	7439-92-1	Inorganic	15.	27.	13.	
Manganese	7439-96-5	Inorganic	300.	39.		
Mercury	7439-97-6	Inorganic	2.	0.21	0.148	
Methanol	67-56-1	VOC	5,000.	2.		
Methoxychlor	72-43-5	Pesticide	40.	4.3		
Methyl Ethyl Ketone (2-Butanone)	78-93-3	VOC	4,000.	1.7		
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	VOC	500.	0.23		
Methyl tert-Butyl Ether (MTBE)	1634-04-4	VOC	60.	0.027		
Methylene Chloride	75-09-2	VOC	5.	0.003		
Metolachlor/s-Metolachlor	51218-45-2	SVOC	100.	0.24		
Metribuzin	21087-64-9	SVOC	70.	0.043		
Molybdenum	7439-98-7	Inorganic	40.	1.619		
Naphthalene	91-20-3	PAH	100.	0.66	0.014	
Nickel	7440-02-0	Inorganic	100.	13.	9.28	
Nitrosodiphenylamine, N- (NDPA)	86-30-6	SVOC	7.	0.076		
Pentachlorophenol (PCP)	87-86-5	Pesticide	1.	0.003		
Phenol	108-95-2	SVOC	2,000.	2.3		
Picloram	1918-02-1	SVOC	500.	0.28		
Polychlorinated biphenyls (PCBs)	1336-36-3	PCBs	0.03	0.009		
Prometon	1610-18-0	SVOC	100.	0.095		
Propazine	139-40-2	SVOC	10.	0.018		
Pyrene	129-00-0	PAH	250.	55	0.51	
Pyridine	110-86-1	VOC	10.	0.007		
Selenium	7782-49-2	Inorganic	50.	0.52	2.2	E

Result below LOD.

Silver	7440-22-4	Inorganic	50.	0.85	
Simazine	122-34-9	Pesticide	4.	0.004	
Styrene	100-42-5	VOC	100.	0.22	
Tetrachloroethane, 1,1,1,2-	630-20-6	VOC	70.	0.053	
Tetrachloroethane, 1,1,2,2-	79-34-5	VOC	0.2	1.6E-04	
Tetrachloroethylene (Perchloroethylene, PCE, PERC)	127-18-4	VOC	5.	0.005	
Tetrahydrofuran	109-99-9	Dioxin/Furan	50.	0.022	
Thallium	7440-28-0	Inorganic	2.	0.28	
Toluene	108-88-3	VOC	800.	1.1	
Toxaphene	8001-35-2	Pesticide	3.	0.93	
Trichlorobenzene, 1,2,4-	120-82-1	VOC	70.	0.41	
Trichloroethane, 1,1,1-	71-55-6	VOC	200.	0.14	
Trichloroethane, 1,1,2-	79-00-5	VOC	5.	0.003	
Trichloroethylene (TCE)	79-01-6	VOC	5.	0.004	
Trichlorofluoromethane (Fluorotrichloromethane)	75-69-4	VOC	3,490.	4.5	
Trichlorophenoxypropionic acid, 2,4,5- (2,4,5-TP/Silvex)	93-72-1	Pesticide	50.	0.055	
Trichloropropane, 1,2,3-	96-18-4	VOC	60.	0.052	
Trifluralin	1582-09-8	VOC	7.5	0.49	
Trimethylbenzenes (1,2,4- and 1,3,5- combined)	95-63-6 / 108-67-8	VOC	480.	1.4	
Vanadium	7440-62-2	Inorganic	30.	60.	
Vinyl chloride	75-01-4	VOC	0.2	1.4E-04	
Xylenes (m-, o-, p- combined)	1330-20-7	VOC	2,000.	4.	

Wis. Admin. Code ch. NR 720 Non-Industrial Direct Contact RCLs derived from EPA's RSL Calculator, Residential Scenario (https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search)

Notes:

1.00E-06

1. Basis: nc = noncancer, ca = cancer, max = ceiling limit (100,000 mg/kg) exceeded, Csat = Csat exceeded; BTV = background threshold value.
2. Background Threshold Values derived from USGS soil data form Wisconsin (<http://pubs.usgs.gov/sir/2011/5202>).
3. The lead DC RCL is based on the Integrated Exposure-Uptake Biokinetic Model (IEUBK) in accordance with current EPA lead policy (<https://www.epa.gov/superfund/updated-soil-lead-guidance-cercla-sites-and-rcra-corrective-action-facilities>). If an additional source of lead is identified (e.g., air, drinking water) then a DC RCL of 100 mg/kg applies.

	HI > 1 Exceeds	CCR > 1 x 10⁻⁵ Exceeds
Hazard Index and Cumulative Cancer Risk	0.6828	2.66E-06

Chemical	CAS No.	Contaminant Type	Noncancer RCL (mg/kg)	Cancer RCL (mg/kg)	Default Non-Ind DC RCL (mg/kg)	Basis ¹	Background Threshold Value ² (mg/kg)	Input Site Data (mg/kg)	Flag E = Individual Exceedance	Site Data Comparison to RCLs	Individual Target Hazard Quotient HQ = 1	Individual Target Cancer Risk (CR) 1 x 10 ⁻⁶
										Site Hazard Quotient (Noncancer)	Site Cancer Risk	
Acenaphthene	83-32-9	PAH	3,590.		3,590.	nc		0.081		0.		
Acetochlor	34256-82-1	Pesticide	1,260.		1,260.	nc						
Acetone	67-64-1	VOC	70,400.		70,400.	nc						
Alachlor	15972-60-8	Pesticide	632.	9.69	9.69	ca						
Aldicarb	116-06-3	Pesticide	63.2		63.2	nc						
Aluminum	7429-90-5	Inorganic	77,500.		77,500.	nc	28,721.					
Anthracene	120-12-7	PAH	17,900.		17,900.	nc		0.038		0.		
Antimony (metallic)	7440-36-0	Inorganic	31.3		31.3	nc						
Aroclor 1016	12674-11-2	PCB	4.11	6.72	4.11	nc						
Aroclor 1221	11104-28-2	PCB		0.213	0.213	ca						
Aroclor 1232	11141-16-5	PCB		0.19	0.19	ca						
Aroclor 1242	53469-21-9	PCB		0.235	0.235	ca						
Aroclor 1248	12672-29-6	PCB		0.233	0.233	ca						
Aroclor 1254	11097-69-1	PCB	1.17	0.239	0.239	ca						
Aroclor 1260	11096-82-5	PCB		0.243	0.243	ca						
Aroclor 5460	11126-42-4	PCB	35.2		35.2	nc						
Arsenic	7440-38-2	Inorganic	34.9	0.677	0.677	BTV	8.3	5.19		0.1487		
Atrazine	1912-24-9	Pesticide	190.	2.36	2.36	ca						
Barium	7440-39-3	Inorganic	15,300.		15,300.	nc	364.	109.		0.0071		
Bentazon	25057-89-0	Pesticide	1,900.		1,900.	nc						
Benz[a]anthracene	56-55-3	PAH		1.14	1.14	ca		0.15			1.32E-07	
Benzene	71-43-2	VOC	106.	1.6	1.6	ca						
Benzo[a]pyrene	50-32-8	PAH	17.8	0.115	0.115	ca		0.14	E	0.0079	1.22E-06	
Benzo[b]fluoranthene	205-99-2	PAH		1.15	1.15	ca		0.13			1.13E-07	
Benzo[k]fluoranthene	207-08-9	PAH		11.5	11.5	ca		0.032			2.78E-09	
Benzoic acid	65-85-0	SVOC	253,000.		100,000.	max						
Benzyl alcohol	100-51-6	SVOC	6,320.		6,320.	nc						
Beryllium and compounds	7440-41-7	Inorganic	156.		156.	nc						
Bis(2-chloroethyl)ether	111-44-4	VOC		0.286	0.286	ca						
Bis(2-ethylhexyl)phthalate	117-81-7	SVOC	1,260.	38.8	38.8	ca						
Boron	7440-42-8	Inorganic	15,600.		15,600.	nc						
Bromobenzene	108-86-1	VOC	342.		342.	nc						
Bromochloromethane	74-97-5	VOC	216.		216.	nc						
Bromodichloromethane	75-27-4	VOC	626.	0.418	0.418	ca						
Bromoform (Tribromomethane)	75-25-2	VOC	1,560.	25.4	25.4	ca						
Bromomethane (Methyl bromide)	74-83-9	VOC	9.6		9.6	nc						
Butyl Alcohol (Tertiary Butyl Alcohol; TBA)	75-65-0	VOC	27,300.	1,390.	1,390.	ca						
Butylate	2008-41-5	VOC	3,910.		3,910.	nc						
Butyl Benzyl Phthalate	85-68-7	SVOC	12,600.	286.	286.	ca						
Butylbenzene, n-	104-51-8	VOC	3,910.		108.	Csat						
Butylbenzene, sec-	135-98-8	VOC	7,820.		145.	Csat						
Butylbenzene, tert-	98-06-6	VOC	7,820.		183.	Csat						

Cadmium	7440-43-9	Inorganic	7.14	2,430.	7.14	nc	1.	1.1	0.1541	4.53E-10
Calcium	7440-70-2	Inorganic					14,536.			
Carbaryl	63-25-2	SVOC	6,320.		6,320.	nc				
Carbofuran	1563-66-2	SVOC	316.		316.	nc				
Carbon Disulfide	75-15-0	VOC	1,060.		738.	Csat				
Carbon Tetrachloride	56-23-5	VOC	131.	0.916	0.916	ca				
Chloramben	133-90-4	SVOC	948.		948.	nc				
Chlordane (technical mixture)	12789-03-6	Pesticide	34.9	1.74	1.74	ca				
Chlorobenzene	108-90-7	VOC	370.		370.	nc				
Chlorodifluoromethane	75-45-6	VOC	70,600.		1,680.	Csat				
Chloroform (Trichloromethane)	67-66-3	VOC	259.	0.454	0.454	ca				
Chloromethane (Methyl chloride)	74-87-3	VOC	159.		159.	nc				
Chlorotoluene, o- (2-Chlorotoluene)	95-49-8	VOC	1,560.		907.	Csat				
Chlorotoluene, p- (4-Chlorotoluene)	106-43-4	VOC	1,560.		253.	Csat				
Chlorpyrifos	2921-88-2	Pesticide	63.2		63.2	nc				
Chlorthal-dimethyl (Dacthal; DCPA)	1861-32-1	SVOC	632.		632.	nc				
Chromium III	16065-83-1	Inorganic	117,000.		100,000.	max				
Chromium VI	18540-29-9	Inorganic	234.	0.301	0.301	ca				
Chromium, Total	7440-47-3	Inorganic					44.	141.		
Chrysene	218-01-9	PAH		115.	115.	ca		0.14		1.22E-09
Cobalt	7440-48-4	Inorganic	23.4	487.	23.4	nc	22.			
Copper	7440-50-8	Inorganic	3,130.		3,130.	nc	35.	40.	0.0128	
Cresol, m- (3-Methylphenol)	108-39-4	SVOC	3,160.		3,160.	nc				
Cresol, o- (2-Methylphenol)	95-48-7	SVOC	3,160.		3,160.	nc				
Cresol, p- (4-Methylphenol)	106-44-5	SVOC	1,260.		1,260.	nc				
Cumene (Isopropyl benzene)	98-82-8	VOC	2,530.		268.	Csat				
Cyanazine	21725-46-2	SVOC	126.	0.646	0.646	ca				
Cyanide (CN-)	57-12-5	Inorganic	27.1		27.1	nc				
Diazinon	333-41-5	Pesticide	44.2		44.2	nc				
Dibenz[a,h]anthracene	53-70-3	PAH		0.115	0.115	ca		0.12	E	1.04E-06
Dibromo-3-chloropropane, 1,2-	96-12-8	VOC	5.96	0.008	0.008	ca				
Dibromobenzene, 1,4-	106-37-6	VOC	782.		782.	nc				
Dibromochloromethane (Chlorodibromomethane)	124-48-1	VOC	1,560.	8.28	8.28	ca				
Dibromoethane, 1,2-	106-93-4	VOC	100.	0.05	0.05	ca				
Dibromomethane (Methylene Bromide)	74-95-3	VOC	34.		34.	nc				
Dibutyl Phthalate (Di-n-butyl phthalate)	84-74-2	SVOC	6,320.		6,320.	nc				
Dicamba	1918-00-9	Pesticide	1,900.		1,900.	nc				
Dichlorobenzene, 1,2-	95-50-1	VOC	2,350.		376.	Csat				
Dichlorobenzene, 1,4-	106-46-7	VOC	3,810.	3.74	3.74	ca				
Dichlorobenzidine, 3,3'-	91-94-1	SVOC		1.21	1.21	ca				
Dichlorodifluoromethane (CFC-12)	75-71-8	VOC	126.		126.	nc				
Dichlorodiphenyldichloroethane, p,p'- (DDD, 4,4-DDD)	72-54-8	Pesticide	31.6	2.26	2.26	ca				
Dichlorodiphenyldichloroethylene, p,p'- (DDE, 4,4-DDE)	72-55-9	Pesticide	39.1	2.	2.	ca				
Dichlorodiphenyltrichloroethane, p,p'- (DDT, 4,4-DDT)	50-29-3	Pesticide	36.5	1.89	1.89	ca				
Dichloroethane, 1,1-	75-34-3	VOC	15,600.	5.06	5.06	ca				
Dichloroethane, 1,2- (DCA)	107-06-2	VOC	43.7	0.652	0.652	ca				
Dichloroethylene, 1,1- (DCE)	75-35-4	VOC	320.		320.	nc				
Dichloroethylene, cis-1,2-	156-59-2	VOC	76.7		76.7	nc				
Dichloroethylene, trans-1,2-	156-60-5	VOC	98.5		98.5	nc				
Dichlorophenol, 2,4-	120-83-2	SVOC	190.		190.	nc				
Dichlorophenoxy Acetic Acid, 2,4-(2,4-D)	94-75-7	Pesticide	699.		699.	nc				
Dichloropropane, 1,2-	78-87-5	VOC	22.6	3.4	3.4	ca				
Dichloropropane, 1,3-	142-28-9	VOC	1,560.		1,490.	Csat				
Dichloropropene, 1,3-	542-75-6	VOC	102.	2.37	2.37	ca				
Diisopropyl Ether	108-20-3	VOC	3,220.		2,260.	Csat				
Dimethoate	60-51-5	Pesticide	139.		139.	nc				
Dimethylphenol, 2,4-	105-67-9	SVOC	1,260.		1,260.	nc				
Dinitrobenzene, 1,3- (1,3-DNB)	99-65-0	SVOC/Explosive	6.32		6.32	nc				
Dinitrotoluene Mixture, 2,4/2,6-	NA	SVOC/Explosive		0.798	0.798	ca				
Dinitrotoluene, 2,4- (2,4-DNT)	121-14-2	SVOC/Explosive	126.	1.74	1.74	ca				
Dinitrotoluene, 2,6- (2,6-DNT)	606-20-2	SVOC/Explosive	19.	0.363	0.363	ca				
Dinitrotoluene, 2-Amino-4,6- (2-Am-DNT)	35572-78-2	SVOC/Explosive	7.71		7.71	nc				
Dinitrotoluene, 4-Amino-2,6- (4-Am-DNT)	19406-51-0	SVOC/Explosive	7.66		7.66	nc				

Dinitrotoluene, Technical grade	25321-14-6	SVOC/Explosive	56.9	1.21	1.21	ca					
Dinoseb (DNBP)	88-85-7	Pesticide	63.2		63.2	nc					
Dioxane, 1,4-	123-91-1	VOC	1,020.	5.72	5.72	ca					
Diphenylamine	122-39-4	SVOC	6,320.		6,320.	nc					
Endrin	72-20-8	Pesticide	19.		19.	nc					
EPTC	759-94-4	VOC	3,910.		3,910.	nc					
Ethyl Chloride (Chloroethane)	75-00-3	VOC	7,800.		2,120.	Csat					
Ethyl Ether (Diethyl Ether)	60-29-7	VOC	15,600.		10,100.	Csat					
Ethylbenzene	100-41-4	VOC	2,680.	8.02	8.02	ca					
Ethylene Glycol	107-21-1	SVOC	50,600.		50,600.	nc					
Fluoranthene	206-44-0	PAH	2,390.		2,390.	nc		0.11		0.	
Fluorene	86-73-7	PAH	2,390.		2,390.	nc		0.052		0.	
Fluoride	7782-41-4	Inorganic	3,130.		3,130.	nc					
Formaldehyde	50-00-0	VOC	1,070.	14.	14.	ca					
Furfural	98-01-1	VOC	220.		220.	nc					
Heptachlor	76-44-8	Pesticide	7.82	0.14	0.14	ca					
Heptachlor Epoxide	1024-57-3	Pesticide	1.02	0.072	0.072	ca					
Hexachlorobenzene	118-74-1	Pesticide	0.782	0.252	0.252	ca					
Hexachlorobutadiene	87-68-3	VOC	78.2	1.63	1.63	ca					
Hexachlorocyclohexane, Alpha- (alpha-BHC or alpha-HCH)	319-84-6	Pesticide		0.086	0.086	ca					
Hexachlorocyclohexane, Beta- (beta-BHC or beta-HCH)	319-85-7	Pesticide		0.301	0.301	ca					
Hexachlorocyclohexane, Gamma- (Lindane, gamma-BHC)	58-89-9	Pesticide	21.4	0.568	0.568	ca					
Hexachlorocyclopentadiene	77-47-4	Pesticide	2.55		2.55	nc					
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	PFAS	0.235		0.235	nc					
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	SVOC/Explosive	302.	8.34	8.34	ca					
Hexane, n-	110-54-3	VOC	874.		141.	Csat					
Indeno[1,2,3-cd]pyrene	193-39-5	PAH		1.15	1.15	ca		0.15			1.30E-07
Iron	7439-89-6	Inorganic	54,800.		54,800.	nc	34,314.				
Isophorone	78-59-1	SVOC	12,600.	571.	571.	ca					
Lanthanum	7439-91-0	Inorganic	3.91		3.91	nc					
Lead and Compounds ³	7439-92-1	Inorganic	200.		200.	nc	52.	32.		0.16	
Lithium	7439-93-2	Inorganic	156.		156.	nc					
Magnesium	7439-95-4	Inorganic					8,290.				
Manganese (non-diet)	7439-96-5	Inorganic	1,830.		1,830.	BTV	2,937.				
Mercury (elemental)	7439-97-6	Inorganic	15.7		3.13	Csat		0.192		0.0122	
Methanol	67-56-1	VOC	133,000.		100,000.	max					
Methyl Ethyl Ketone (2-Butanone)	78-93-3	VOC	31,100.		28,400.	Csat					
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	VOC	47,700.		3,360.	Csat					
Methyl tert-Butyl Ether (MTBE)	1634-04-4	VOC	22,100.	63.8	63.8	ca					
Methylene Chloride (Dichloromethane)	75-09-2	VOC	379.	61.8	61.8	ca					
Methylnaphthalene, 1-	90-12-0	PAH	0.265	9.98	0.265	nc		0.043		0.1623	4.31E-09
Methylnaphthalene, 2-	91-57-6	PAH	239.		239.	nc		0.05		0.0002	
Metolachlor/s-Metolachlor	51218-45-2	SVOC	9,480.		9,480.	nc					
Metribuzin	21087-64-9	SVOC	1,580.		1,580.	nc					
Mineral Oils	8012-95-1	VOC	235,000.		0.324	Csat					
Molybdenum	7439-98-7	Inorganic	391.		391.	nc					
Naphthalene	91-20-3	PAH	178.	2.4	2.4	ca		0.04		0.0002	1.67E-08
Nickel Soluble Salts	7440-02-0	Inorganic	1,430.	16,900.	1,430.	nc	31.	19.		0.0133	1.12E-09
Nitroso-di-N-propylamine, N-	621-64-7	SVOC		0.078	0.078	ca					
Nitrosodiphenylamine, N-	86-30-6	SVOC		111.	111.	ca					
Nitrotoluene, m- (3-Nitrotoluene, 3-NT)	99-08-1	SVOC/Explosive	6.32		6.32	nc					
Nitrotoluene, p- (4-Nitrotoluene, 4-NT)	99-99-0	SVOC/Explosive	253.	33.9	33.9	ca					
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	SVOC/Explosive	3,860.		3,860.	nc					
Octyl Phthalate, di-N-	117-84-0	SVOC	632.		632.	nc					
Pentachlorophenol (PCP)	87-86-5	Pesticide	245.	1.02	1.02	ca					
Perfluorobutanesulfonic acid (PFBS)	375-73-5	PFAS	19.		19.	nc					
Perfluorobutanoic acid (PFBA)	375-22-4	PFAS	78.2		78.2	nc					
Perfluorododecanoic acid (PFDoDA)	307-55-1	PFAS	3.16		3.16	nc					
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS	1.26		1.26	nc					
Perfluorohexanoic acid (PFHxA)	307-24-4	PFAS	31.6		31.6	nc					
Perfluorononanoic acid (PFNA)	375-95-1	PFAS	0.19		0.19	nc					
Perfluorooctadecanoic acid (PFODA)	16517-11-6	PFAS	2,530.		2,530.	nc					
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS	0.006	0.014	0.006	nc					

Perfluorooctanoic acid (PFOA)	335-67-1	PFAS	0.002	1.85E-05	1.85E-05	ca				
Perfluoropropanoic acid (PFPrA)	422-64-0	PFAS	39.1		39.1	nc				
Perfluorotetradecanoic acid (PFTetA)	376-06-7	PFAS	63.2		63.2	nc				
Perfluoroundecanoic acid (PFUDA)	2058-94-8	PFAS	19.		19.	nc				
Phenol	108-95-2	SVOC	19,000.		19,000.	nc				
Picloram	1918-02-1	SVOC	4,420.		4,420.	nc				
Polychlorinated Biphenyls (high risk); Total PCBs	1336-36-3	PCB		0.234	0.234	ca				
Prometon	1610-18-0	SVOC	948.		948.	nc				
Propazine	139-40-2	SVOC	1,260.		1,260.	nc				
Propyl benzene	103-65-1	VOC	4,490.		264.	Csat				
Pyrene	129-00-0	PAH	1,790.		1,790.	nc	0.13		0.0001	
Pyridine	110-86-1	VOC	78.2		78.2	nc				
Selenium	7782-49-2	Inorganic	391.		391.	nc				
Silver	7440-22-4	Inorganic	391.		391.	nc				
Simazine	122-34-9	Pesticide	316.	4.52	4.52	ca				
Strontium, Stable	7440-24-6	Inorganic	46,900.		46,900.	nc	55.			
Styrene	100-42-5	VOC	7,410.		867.	Csat				
TCDD, 2,3,7,8- (2,3,7,8 TCDD equivalents (TEQ), 2,3,7,8-Tetrachlorodibenzo-p	1746-01-6	Dioxin/Furan	5.11E-05	4.82E-06	4.82E-06	ca				
Tetrachloroethane, 1,1,1,2-	630-20-6	VOC	2,350.	2.78	2.78	ca				
Tetrachloroethane, 1,1,2,2-	79-34-5	VOC	1,560.	0.81	0.81	ca				
Tetrachloroethylene (Perchloroethylene, PCE, PERC)	127-18-4	VOC	109.	33.	33.	ca				
Tetrachlorophenol, 2,3,4,6-	58-90-2	SVOC	1,900.		1,900.	nc				
Tetrahydrofuran	109-99-9	Dioxin/Furan	23,800.		23,800.	nc				
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	SVOC/Explosive	156.		156.	nc				
Thallium	7440-28-0	Inorganic	0.782		0.782	nc				
Toluene	108-88-3	VOC	5,240.		818.	Csat				
Toxaphene	8001-35-2	Pesticide	5.69	0.493	0.493	ca				
Trichlorobenzene, 1,2,3-	87-61-6	VOC	62.6		62.6	nc				
Trichlorobenzene, 1,2,4-	120-82-1	VOC	80.8	24.	24.	ca				
Trichloroethane, 1,1,1-	71-55-6	VOC	11,500.		640.	Csat				
Trichloroethane, 1,1,2-	79-00-5	VOC	2.16	1.59	1.59	ca				
Trichloroethylene (TCE)	79-01-6	VOC	5.68	1.3	1.3	ca				
Trichlorofluoromethane	75-69-4	VOC	23,500.		1,230.	Csat				
Trichlorophenol, 2,4,5-	95-95-4	SVOC	6,320.		6,320.	nc				
Trichlorophenol, 2,4,6-	88-06-2	SVOC	63.2	49.3	49.3	ca				
Trichlorophenoxypropionic acid, 2,4,5- (2,4,5-TP/Silvex)	93-72-1	Pesticide	506.		506.	nc				
Trichloropropane, 1,2,3-	96-18-4	VOC	6.94	0.005	0.005	ca				
Trifluralin	1582-09-8	VOC	587.	90.3	90.3	ca				
Trimethylbenzene, 1,2,4-	95-63-6	VOC	373.		219.	Csat				
Trimethylbenzene, 1,3,5-	108-67-8	VOC	339.		182.	Csat				
Trinitrobenzene, 1,3,5- (1,3,5-TNB)	99-35-4	SVOC/Explosive	2,250.		2,250.	nc				
Trinitrotoluene, 2,4,6- (2,4,6-TNT)	118-96-7	SVOC/Explosive	36.3	21.3	21.3	ca				
Vanadium and Compounds	7440-62-2	Inorganic	393.		393.	nc	85.			
Vinyl Chloride	75-01-4	VOC	89.2	0.067	0.067	ca				
Xylenes	1330-20-7	VOC	818.		260.	Csat				
Zinc and Compounds	7440-66-6	Inorganic	23,500.		23,500.	nc	150.	90.		0.0038

Notes:

1. Groundwater pathway RCLs are calculated by modifying the EPA RSLs using the NR 140 Enforcement Standards as the target groundwater concentration.
2. WI-specific dilution attenuation factor (DAF) of 2 is applied to determine GW-RCL.

Chemical	CAS No.	Contaminant Type	NR 140 ES ¹ (µg/l)	GW-RCL ² (mg/kg)	Input Site Data (mg/kg)	Flag E = Individual Exceedance
Acetochlor	34256-82-1	SVOC	7.	0.011		
Acetone	67-64-1	VOC	9,000.	3.7		
Alachlor	15972-60-8	SVOC	2.	0.003		
Aldicarb	116-06-3	SVOC	10.	0.005		
Aluminum	7429-90-5	Inorganic	200.	600.		
Anthracene	120-12-7	PAH	3,000.	197.	0.038	
Antimony	7440-36-0	Inorganic	6.	0.54		
Arsenic	7440-38-2	Inorganic	10.	0.58	5.19	E
Atrazine, total chlorinated residues	1912-24-9	Pesticide	3.	0.004		
Barium	7440-39-3	Inorganic	2,000.	165.	109.	
Bentazon	25057-89-0	Inorganic	300.	0.13		
Benzene	71-43-2	VOC	5.	0.005		
Benzo[a]pyrene	50-32-8	PAH	0.2	0.47	0.14	
Benzo[b]fluoranthene	205-99-2	PAH	0.2	0.48	0.13	
Beryllium	7440-41-7	Inorganic	4.	6.3		
Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl)phthalate)	117-81-7	SVOC	6.	2.9		
Boron	7440-42-8	Inorganic	1,000.	6.4		
Bromodichloromethane	75-27-4	VOC	0.6	3.3E-04		
Bromoform (Tribromomethane)	75-25-2	VOC	4.4	0.002		
Bromomethane (Methyl bromide)	74-83-9	VOC	10.	0.005		
Butyl Alcohol (Tertiary Butyl Alcohol; TBA)	75-65-0	VOC	12.	0.005		
Butylate	2008-41-5	VOC	400.	0.78		
Cadmium	7440-43-9	Inorganic	5.	0.75	1.1	E
Carbaryl	63-25-2	SVOC	40.	0.073		
Carbofuran	1563-66-2	SVOC	40.	0.031		
Carbon Disulfide	75-15-0	VOC	1,000.	0.59		
Carbon Tetrachloride	56-23-5	VOC	5.	0.004		
Chloramben	133-90-4	SVOC	150.	0.073		
Chlordane	57-74-9	Pesticide	2.	0.54		
Chlorodifluoromethane	75-45-6	VOC	7,000.	5.8		
Chloroform (Trichloromethane)	67-66-3	VOC	6.	0.003		
Chloromethane (Methyl chloride)	74-87-3	VOC	30.	0.016		
Chlorpyrifos	2921-88-2	Pesticide	2.	0.059		
Chlorthal-dimethyl (Dacthal; DCPA)	1861-32-1	SVOC	70.	0.17		
Chromium, Total	7440-47-3	Inorganic	100.	3.8	141.	E
Chrysene	218-01-9	PAH	0.2	0.144	0.14	
Cobalt	7440-48-4	Inorganic	40.	3.6		
Copper	7440-50-8	Inorganic	1,300.	92.	40.	
Cyanazine	21725-46-2	SVOC	1.	9.4E-04		
Cyanide, free	57-12-5	Inorganic	200.	4.04		
Dibromo-3-chloropropane, 1,2- (DBCP)	96-12-8	VOC	0.2	1.7E-04		
Dibromochloromethane (Chlorodibromomethane)	124-48-1	VOC	60.	0.032		
Dibromoethane, 1,2-	106-93-4	VOC	0.05	2.8E-05		
Dibutyl Phthalate (Di-n-butyl phthalate)	84-74-2	SVOC	1,000.	5.		
Dicamba	1918-00-9	Pesticide	300.	0.16		
Dichlorobenzene, 1,2-	95-50-1	VOC	600.	1.2		

Result below LOD.

Result below LOD.
Result below LOD.

Result below LOD.

Dichlorobenzene, 1,4-	106-46-7	VOC	75.	0.14		
Dichlorodifluoromethane	75-71-8	VOC	1,000.	3.1		
Dichloroethane, 1,1-	75-34-3	VOC	850.	0.48		
Dichloroethane, 1,2- (DCA)	107-06-2	VOC	5.	0.003		
Dichloroethylene, 1,1- (DCE)	75-35-4	VOC	7.	0.005		
Dichloroethylene, cis-1,2-	156-59-2	VOC	70.	0.041		
Dichloroethylene, trans-1,2-	156-60-5	VOC	100.	0.063		
Dichlorophenoxy Acetic Acid, 2,4-(2,4-D)	94-75-7	Pesticide	70.	0.036		
Dichloropropane, 1,2-	78-87-5	VOC	5.	0.003		
Dichloropropene, 1,3- (Telone)	542-75-6	VOC	0.4	2.9E-04		
Dimethoate	60-51-5	Pesticide	2.	9.0E-04		
Dinitrotoluene, Technical grade (DNT mixture, 2,4- and 2,6-)	25321-14-6	SVOC-Explosive	0.05	1.4E-04		
Dinitrotoluene, 2,4- (2,4-DNT)	121-14-2	SVOC-Explosive	0.05	1.4E-04		
Dinitrotoluene, 2,6- (2,6-DNT)	606-20-2	SVOC-Explosive	0.05	1.4E-04		
Dinoseb (DNBP)	88-85-7	Pesticide	7.	0.123		
Dioxane, 1,4-	123-91-1	VOC	3.	0.001		
Dioxin (2,3,7,8-TCDD)	1746-01-6	Dioxin/Furan	3.00E-05	3.0E-05		
Endrin	72-20-8	Pesticide	2.	0.16		
EPTC	759-94-4	VOC	250.	0.26		
Ethyl Chloride (Chloroethane)	75-00-3	VOC	400.	0.23		
Ethyl Ether (Diethyl Ether)	60-29-7	VOC	1,000.	0.45		
Ethylbenzene	100-41-4	VOC	700.	1.6		
Ethylene Glycol	107-21-1	SVOC	14,000.	5.7		
Fluoranthene	206-44-0	PAH	400.	89.	0.11	
Fluorene	86-73-7	PAH	400.	15.	0.052	
Fluoride	7782-41-4	Inorganic	4,000.	1,202.		
Formaldehyde	50-00-0	VOC	1,000.	0.4		
Heptachlor	76-44-8	Pesticide	0.4	0.066		
Heptachlor Epoxide	1024-57-3	Pesticide	0.2	0.008		
Hexachlorobenzene	118-74-1	Pesticide	1.	0.025		
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	Pesticide	0.2	0.002		
Hexane, N-	110-54-3	VOC	600.	8.5		
Lead	7439-92-1	Inorganic	15.	27.	32.	E
Manganese	7439-96-5	Inorganic	300.	39.		
Mercury	7439-97-6	Inorganic	2.	0.21	0.192	
Methanol	67-56-1	VOC	5,000.	2.		
Methoxychlor	72-43-5	Pesticide	40.	4.3		
Methyl Ethyl Ketone (2-Butanone)	78-93-3	VOC	4,000.	1.7		
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	VOC	500.	0.23		
Methyl tert-Butyl Ether (MTBE)	1634-04-4	VOC	60.	0.027		
Methylene Chloride	75-09-2	VOC	5.	0.003		
Metolachlor/s-Metolachlor	51218-45-2	SVOC	100.	0.24		
Metribuzin	21087-64-9	SVOC	70.	0.043		
Molybdenum	7439-98-7	Inorganic	40.	1.619		
Naphthalene	91-20-3	PAH	100.	0.66	0.04	
Nickel	7440-02-0	Inorganic	100.	13.	19.	E
Nitrosodiphenylamine, N- (NDPA)	86-30-6	SVOC	7.	0.076		
Pentachlorophenol (PCP)	87-86-5	Pesticide	1.	0.003		
Phenol	108-95-2	SVOC	2,000.	2.3		
Picloram	1918-02-1	SVOC	500.	0.28		
Polychlorinated biphenyls (PCBs)	1336-36-3	PCBs	0.03	0.009		
Prometon	1610-18-0	SVOC	100.	0.095		
Propazine	139-40-2	SVOC	10.	0.018		
Pyrene	129-00-0	PAH	250.	55	0.13	
Pyridine	110-86-1	VOC	10.	0.007		

Result below LOD.
Result below LOD.

Result below LOD.

Result below LOD.

Selenium	7782-49-2	Inorganic	50.	0.52	2.32	E
Silver	7440-22-4	Inorganic	50.	0.85		
Simazine	122-34-9	Pesticide	4.	0.004		
Styrene	100-42-5	VOC	100.	0.22		
Tetrachloroethane, 1,1,1,2-	630-20-6	VOC	70.	0.053		
Tetrachloroethane, 1,1,2,2-	79-34-5	VOC	0.2	1.6E-04		
Tetrachloroethylene (Perchloroethylene, PCE, PERC)	127-18-4	VOC	5.	0.005		
Tetrahydrofuran	109-99-9	Dioxin/Furan	50.	0.022		
Thallium	7440-28-0	Inorganic	2.	0.28		
Toluene	108-88-3	VOC	800.	1.1		
Toxaphene	8001-35-2	Pesticide	3.	0.93		
Trichlorobenzene, 1,2,4-	120-82-1	VOC	70.	0.41		
Trichloroethane, 1,1,1-	71-55-6	VOC	200.	0.14		
Trichloroethane, 1,1,2-	79-00-5	VOC	5.	0.003		
Trichloroethylene (TCE)	79-01-6	VOC	5.	0.004		
Trichlorofluoromethane (Fluorotrichloromethane)	75-69-4	VOC	3,490.	4.5		
Trichlorophenoxypropionic acid, 2,4,5- (2,4,5-TP/Silvex)	93-72-1	Pesticide	50.	0.055		
Trichloropropane, 1,2,3-	96-18-4	VOC	60.	0.052		
Trifluralin	1582-09-8	VOC	7.5	0.49		
Trimethylbenzenes (1,2,4- and 1,3,5- combined)	95-63-6 / 108-67-8	VOC	480.	1.4		
Vanadium	7440-62-2	Inorganic	30.	60.		
Vinyl chloride	75-01-4	VOC	0.2	1.4E-04		
Xylenes (m-, o-, p- combined)	1330-20-7	VOC	2,000.	4.		

Result below LOD.

Appendix H
Sediment sample map

FISHERMAN'S PIER DREDGING SEDIMENT SAMPLE MAP



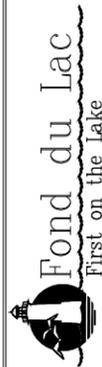
Plotted By: nwaldschmidt

Layout: Sediment Sample Map

Plot Date: Nov 11, 2024 - 3:37pm

ACAD File Path: J:\Projects\2024 Projects\2024 Fisherman's Pier Dredging Permit.dwg

DEPARTMENT OF PUBLIC WORKS
ENGINEERING & TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN
PHONE: 920-322-5470
FAX: 920-322-5071



PROJECT
**FISHERMAN'S PIER
SEDIMENT SAMPLE MAP**

BENCH MARKS

SURVEYED BY: _____ DATE: _____
DRAWN BY: _____ DATE: _____
DESIGNED BY: _____ DATE: _____
SCALE: HORIZ. _____ VERT. _____
ACAD FILE: 2024_FISHERMAN'S PIER DREDGING PERMIT.DWG

REVISIONS:
BY: _____ DATE: _____
BY: _____ DATE: _____
BY: _____ DATE: _____

SHEET
1
1

Appendix I
2023 10 31 SCE Tech Memo Dredging LHE Application



TECHNICAL MEMO

To: Nick Waldschmidt, PE, City of Fond du Lac Engineering and Traffic Division
From: Ken Ebbott/Sand County Environmental, Inc.
Re: WDNR Low Hazard Grant Exemption Dredged Material
Fisherman's Pier, Fond du Lac, Wisconsin
Subject: Potential Environmental Concerns From Dredged Sediment
Date: October 31, 2023

SITE HISTORY

The City of Fond du Lac dredged sediment from Fisherman's Pier in February and March 2023. An estimated 2335 cubic yards of material was stockpiled for dewatering. The proposed reuse for the material includes blended topsoil backfill (approximately 100 cubic yards) on future municipal construction projects, and fill in a previously utilized stockpile in Lakeside Park West (approximately 2,235 cubic yards).

The area for fill placement received low hazard exempt dredgings previously. The location is approximately 40 feet from the southern edge of Lake Winnebago on an island surrounded to the north by Lake Winnebago and to the south by a wetland (Supple's Marsh). The dredgings will be placed at elevations of 753 feet above mean sea level (msl) or higher, which is at least 5.5 feet above the Lake Winnebago elevations that range from 745.2 to 747.5 feet above mean seal level (msl). The base flood elevation of the adjacent floodplain is 749 feet msl.

Dredged material from this channel of the Fond du Lac River has previously been placed in the same proposed Lakeside Park West location. Dredging and disposal permission was obtained from the WDNR at least 8 times since 2006, and dredging has occurred multiple times prior to 2006.

An exemption for use of the fill was requested from the Wisconsin Department of Natural Resources (WDNR) by the City of Fond du Lac in September 2023. A preliminary WDNR review of submitted information indicated that among other needs, further review of the potential for leaching of compounds from the sediment to groundwater was necessary to approve the exemption.

This Technical Memorandum provides information related to the sediment chemistry results and potential for environmental risks related to this planned project.

LABORATORY ANALYTICAL RESULTS

City of Fond du Lac staff collected two representative samples of the sediment on November 10, 2022. Samples were analyzed for required parameters by Badger Laboratory, Neenah, WI. The laboratory analytical reports are attached. Considering that

the planned use of the sediment is as fill at municipal locations, the laboratory results were compared to three standards: direct contact for non-industrial sites¹, potential leaching to groundwater² and background metal concentrations in Wisconsin³.

Based on the analytical reports and previous WDNR correspondence from September 2023, six compounds are present in one or both of the sediment samples at concentrations that exceed standards. Table 1 (attached) presents a summary of the detected concentrations and relevant standards for comparison, along with a brief discussion of the significance of the detection for each analyte.

INTERPRETATION

The following interpretations have been made:

A) The dredging material does not pose a risk of exposure via direct contact.

1. The dredged soil will be covered with 6 inches of topsoil after placement. Grass vegetation will be established over the top of the placed topsoil. These measures will minimize the potential for direct contact and airborne migration of particulates from the dredged material.
2. The concentrations of benzo (a) pyrene (0.25 and 0.16 mg/kg), exceed the generic non-industrial direct contact standard for the substance (0.115 mg/kg). However, use of the cumulative risk calculation method allowed by the WDNR per NR 722 (see attached Direct Contact Exceedance Hazard-Risk Calculation - Cumulative Assessment of cPAHs) indicates the cumulative risk of exposure from these samples falls below the PAH carcinogenic cancer risk. As such, the two sediment PAH sample results indicate the dredged soils do not pose a risk via direct contact.
3. The results for arsenic indicate the soil at one of the two dredged sample locations contains 12 mg/kg total arsenic. The background threshold value (BTV) for arsenic is 8 mg/kg for Wisconsin. However, review of the range of detected background values from the study in Wisconsin ("*Wisconsin Statewide Soil-Arsenic Background Threshold Value*", PUBL RR-940, July 2013) indicates concentrations as high as 39 mg/kg have been detected in background samples. In addition, the result of 12 mg/kg identified by the laboratory falls between the limit of detection (7.27 mg/kg) and the limit of quantification (24 mg/kg) and is considered a "J-flagged value", or estimated value.
4. For comparison purposes, concentrations of arsenic as high as 100 mg/kg are allowed to remain in place and not pose a risk to human health or the environment at historic orchard facilities in Wisconsin, per the approved soil standards adopted by both the WDNR and the Wisconsin Department of Agriculture, Trade, and Consumer Protection (WDATCP). Up to 100 mg/kg arsenic is considered typical of soil that has received historic applications of lead arsenate pesticide. Orchard soils with arsenic levels below 100 mg/kg that are covered with vegetation are not considered by the WDNR or WDATCP to pose a risk via direct contact or leaching to groundwater.

¹ Wis. Adm. Code, WDNR NR 720 Not-To-Exceed D-C RCLs from web-calculator at: http://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search (Chicago as climatic zone)

² Wis. Adm. Code, WDNR NR 720 Residual Contaminant Levels Protective of Groundwater Quality, (Soil-to-Groundwater Scenario Results using Dilution Factor 2) based on USEPA Soil Screening Calculator Regional Screening Levels at <https://www.epa.gov/risk/regional-screening-levels-rsls>

³ Wis. Adm. Code, WDNR NR 720 Background threshold values from web-calculator that references non-outlier trace element maximum levels in Wisconsin surface soils from the USGS Report at: <http://pubs.usgs.gov/sir/2011/5202>.

B) Detected concentrations of cadmium, mercury, arsenic, nickel, and chrysene are present at levels above theoretical leach to groundwater RCL's. However, the dredged material does not pose a risk of contaminant migration to groundwater above levels of concern, based on a variety of factors, as noted below:

1. The sloped surface of the sediment, combined with planned covering of the soil with vegetation will minimize infiltration of precipitation through the dredged sediment. Runoff and evapotranspiration will minimize the amount of water that migrates through the sediments and into the aquifer. As shown on the attached excerpt from the United States Environmental Protection Agency (USEPA) soil screening calculator, which describes the assessment methodology, the generic soil to groundwater RCL's assume soil-to-water partitioning in the sediment is instantaneous and linear in the contaminated soil. At this facility, the sediment will only occasionally be in contact with infiltrating precipitation, and migration through the sediment will be intermittent. As a result, the calculated soil-to-groundwater RCL's are exceedingly conservative for this situation.
2. The concentration of the metals cadmium and nickel were detected at concentrations slightly above the theoretical leach-to-groundwater RCLs, but all concentrations of these two metals are lower than the background values recognized as naturally occurring in Wisconsin. Because they are below natural background levels in Wisconsin soil, they are not considered a contaminant of concern.
3. As shown on Table 1, the laboratory analytical results for many of the detected compounds (cadmium, mercury, arsenic, chrysene) are at concentrations between the laboratory limit of detection and limit of quantification. As noted previously, this is referred to as "J-flagged", and represents a concentration that is considered estimated and may not be reproducible. Data that is J-flagged is often not used for comparison when completing regulatory assessments.
4. Even if J-flagged results are assumed to be representative, the observed concentration of the metals mercury and arsenic may pose a theoretical risk of migration to groundwater at levels above the NR 140 groundwater standards. However, as noted on Table 1, sediment samples analysis included particle size testing. Both samples consist primarily of fine-grained soil (55 to 59 percent silt and clay particles). In general, fine-grained soil has a significantly larger cation exchange capacity (CEC) than coarser materials. The high CEC of the sediments will allow greater retention and retardation of the metals against dissolution and migration through soil water. The fine-grained nature of the sediment will help limit potential migration of metals, such as mercury and arsenic, to groundwater.
5. Similarly, for the organic PAH compound chrysene, the estimated (J-flagged) concentration in one of the sediment samples (0.250 mg/kg) exceeds the theoretical 0.1412 mg/kg concentration that may leach to groundwater at levels above the chrysene NR 140 enforcement standard. The other analysis of sediment had no detection of chrysene, at <0.179 mg/kg) However, as noted in WDNR guidance RR-890, which is based on the USEPA soil screening calculator, the method used to establish theoretical RCLs for leaching from soil is based on an assumed concentration of 0.2 % organic carbon content in the soil. An excerpt from the USEPA Calculator method description is attached that indicates the assumptions made in determination of the theoretical leach to groundwater values. For this situation, the significantly higher amount of organic carbon in the sediment (tested values range from 8.7% to 12.5%) will result in significantly greater adherence of large organic compounds, such as chrysene to the sediment. Higher carbon content in soils reduces the amount of leaching of organic molecules through the material. The 8.7% to 12.5 % total organic carbon present in the sediment is significantly higher than the default assumption of 0.2% used to calculate the generic chrysene RCL, and the actual chrysene leach-to-groundwater RCL should be much greater. Unfortunately, there is not an easy way to quantify a revised soil RCL based on the actual organic carbon content, but qualitatively it should be at least several orders of magnitude higher. Based on this assumption and comparison with the actual sediment concentrations of organic carbon, it is not likely the observed, very low levels of chrysene, (0.25 to non-detectable at less than 0.17 mg/kg) will leach from the sediment at concentrations greater than the NR 140 Enforcement Standards.

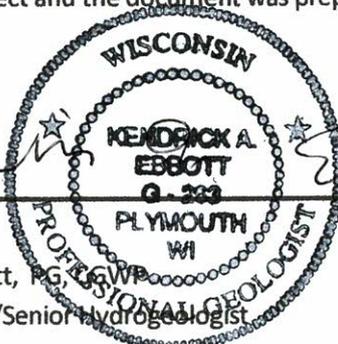
6. The value for mercury that presents a theoretical risk to groundwater (RCL) is calculated at 0.208 mg/kg mercury in soil. The observed concentrations in the two sediment samples are only 0.223 and 0.239 mg/kg, which are very close to the RCL, and are low levels. As noted above, the sediment consists of fine-grained soil that will impede migration of metals to the water table. In addition, the theoretical RCL value of 0.208, as well as the assumed leaching potential for all the other metals, including arsenic, are based on other EPA assumptions about the site conditions that are not necessarily valid for this situation. Some of the assumptions in the derivation of the soil to groundwater RCLs are shown on the attached excerpt from the USEPA soil screening calculator methodology page. The information indicates the soil containing the compound, for example, mercury, will have instantaneous and linear soil-to-water partitioning that will immediately reach the water table surface. At the Fond du Lac site, the dredged sediment will be placed a minimum of 3 to 5 feet above lake level and will not be saturated. The contact with infiltrating precipitation and the degree of leaching will be intermittent, and should be significantly lower than the assumptions utilized in the USEPA soil to groundwater RCL derivation method. In addition, the RCL calculation methods assume there will be no biological loss of the chemicals from the soil over time. Given the proposed unsaturated placement of the sediment, the high organic content of the sediment, and the planned vegetative cover with roots and microbial populations, it is likely some degree of microbial activity will occur in the sediment that may reduce contaminant concentrations over time.
7. The vast majority of the proposed fill placement is adjacent to Lake Winnebago and Supple's Marsh. Infiltrating precipitation will eventually leach through the sediment and discharge to shallow groundwater, which will flow to the adjacent surface water bodies. Chemicals in the sediment will be diluted via precipitation, and then enter groundwater, where it will again be diluted via mixing with the adjacent groundwater. Groundwater will slowly discharge from beneath the fill area to the adjacent surface water bodies, and chemicals dissolved in the groundwater will be further diluted by mixing with comparatively huge volumes of surface water relative to the small quantity of slowly discharging groundwater. The impact of the sediment chemistry at the observed minor concentrations on the groundwater and adjacent surface water will be inconsequential due to these dilution effects.

CONCLUSION

Based on the observed information, use of the dredged material as proposed by the City of Fond du Lac will not result in an adverse impact to human health or the environment, and the Low Hazard Exemption Request should be approved by the WDNR.

CERTIFICATION

I, Kendrick A. Ebbott, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of Ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of Ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chs. NR 700 to 726, Wis. Adm. Code.



10/31/2023

Date

Kendrick A. Ebbott, R.G.
Project Manager/Senior Hydrogeologist

Table 1
Soil Chemistry Results - Compounds above Standards
City of Fond du Lac Dredged Material - WDNR Application for Low Hazard Exemption
Fisherman's Pier Dredgings
Fond du Lac, Wisconsin

Dredged Sample	Sample Date	Physical Properties				Metals				Polynuclear Aromatic Hydrocarbons (PAH)			Discussion
		Clay %	Silt %	Sand %	Total Organic Carbon mg/kg	Arsenic mg/kg	Cadmium mg/kg	Mercury mg/kg	Nickel Soluble Salts mg/kg	Benzo(a)Pyrene mg/kg	Chrysene mg/kg	Calculated Cumulative cPAH* Concentration per WDNR 2017	
WI Background Threshold Value		NS	NS	NS	NS	8	1	NS	31	NS	NS	NS	
Non-Industrial Direct Contact RCL		NS	NS	NS	NS	0.677	71.1	3.13	1550	0.115	115	NS	
Industrial Direct Contact RCL		NS	NS	NS	NS	3	985	3.13	22500	2.11	2110	NS	
Groundwater Pathway RCL		NS	NS	NS	NS	0.584	0.752	0.208	13.06	0.47	0.1442	NS	
DNR Orchard Site RCLs		NS	NS	NS	NS	100	NS	NS	NS	NS	NS	NS	
Cumulative cPAH Cancer Risk		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 x 10 ⁻⁶	
1 10:30	11/10/22	11	44	46	87000	<7.27	0.496 J	<u>0.223 J</u>	13	<u>0.250 J</u>	<u>0.250 J</u>	3.8 x 10 ⁻⁶	Detection Mercury, Benzo (a) Pyrene and Chrysene below Limit of Quantitation and are estimated. Mercury and Chrysene values unlikely to leach to groundwater due to 55 percent fines and 8.7% total organic carbon in soil. Benzo (a) Pyrene exceeds direct contact residential cancer risk but total carcinogenic PAHs are below WDNR Standards.
2 11:00	11/10/22	13	46	42	125000	12 J	<u>0.983*</u>	<u>0.239 J</u>	<u>15*</u>	<u>0.160 J</u>	<0.170	3.2 x 10 ⁻⁶	Detection Arsenic, Mercury, Benzo (a) Pyrene below Limit of Quantitation and are estimated. Mercury and Arsenic values unlikely to leach to groundwater due to 59 percent fines and 12.5% total organic carbon in soil. Cadmium and Nickel below naturally occurring background threshold value for Wisconsin. Benzo (a) Pyrene exceeds direct contact residential cancer risk but total carcinogenic PAHs are below WDNR Standards.

Notes

- not analyzed (no data)
- RCL residual contaminant levels
- 2.72 *italicized* result indicates a non-industrial direct contact RCL exceedence (top four feet of soil only)
- 4.4** **bold** result indicates exceedence of industrial direct contact standards (top four feet of soil only)
- 69 underlined result indicates a groundwater RCL exceedence
- mg/kg milligrams per kilogram (parts per million)
- * concentration is above standards but below background threshold values and is considered within the range of natural concentrations
- <0.1 not detected (below method detection limit)
- NS no standard
- J analyte was detected but is below the quantitation limit (the concentration is estimated)

All samples collected by City of Fond du Lac

O:\1-Projects\Fond du Lac - Dredging Disposal\Data\{Master Data Tables.xlsx}Table 1 Soil above Stds

FOND DU LAC, CITY OF
 160 S MACY ST
 FOND DU LAC, WI

 Project Number: 22017263
 Report Date: 12/13/2022
 Sampled By: CLIENT

Attn: NICK WALDSCHMIDT

Samples: 2

 Sample Number: 52039380
 Sample ID: 10:30AM SEDIMENT
 Sample Date: 11/10/2022
 Date Received: 11/11/2022
 Results expressed on a dry weight basis.

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
GENERAL ANALYSIS								
MOISTURE	59.7	%	0.1	0.1		CALC	11/29/2022	
OIL AND GREASE (HEXANE)	2233	mg/kg Dry	519	519		SM5520E	11/22/2022	
PARTICLE SIZE	DONE						12/13/2022	44
Clay	11	%					12/13/2022	
Sand	46	%					12/13/2022	
Silt	44	%					12/13/2022	
Texture name	Loam						12/13/2022	
SAMPLE PREP	DONE							
TOTAL SOLIDS	40.3	%	0.010	0.010		SM2540B	11/15/2022	
METALS								
ARSENIC, TOTAL	<7.27	mg/kg Dry	7.27	24	172	6010B	11/15/2022	
BARIUM, TOTAL	69	mg/kg Dry	0.129	0.429	172	6010B	11/15/2022	
CADMIUM, TOTAL	0.496	mg/kg Dry	0.171	0.571	172	6010B	11/15/2022	
CHROMIUM, TOTAL	37	mg/kg Dry	0.985	3.28	172	6010B	11/15/2022	
COPPER, TOTAL	21	mg/kg Dry	0.556	1.85	172	6010B	11/15/2022	
LEAD, TOTAL	17	mg/kg Dry	2.35	7.84	172	6010B	11/15/2022	
MERCURY, TOTAL	0.223	mg/kg Dry	0.099	0.323	187	7471B	11/18/2022	
NICKEL, TOTAL	13	mg/kg Dry	0.643	2.14	172	6010B	11/15/2022	
SELENIUM, TOTAL	<3.50	mg/kg Dry	3.50	12	172	6010B	11/15/2022	
SOLIDS DIGESTION	DONE					SW846-3050B	11/14/2022	
ZINC, TOTAL	67	mg/kg Dry	1.58	5.29	172	6010B	11/15/2022	
NUTRIENTS								
AMMONIA NITROGEN	988	mg/kg Dry	25	82	49	SM4500NH3G	11/21/2022	
KJELDAHL NITROGEN	13464	mg/kg Dry	931	3099	1500	EPA351.2	11/28/2022	
NITRATE NITROGEN	<4.96	mg/kg Dry	4.96	17	20	EPA300.0	11/11/2022	
NITRITE NITROGEN	<4.96	mg/kg Dry	4.96	17	20	EPA300.0	11/11/2022	
PHOSPHORUS, TOTAL	1829	mg/kg Dry	37	124	500	EPA365.4	11/28/2022	
ORGANICS								
DIOXIN	DONE							5
2,3,7,8-TCDD	0.15	ng/kg Dry	0.12	1.5	1	1613B	11/22/2022	J
FURANS	DONE							5
2,3,7,8-TCDF	1.5	ng/kg Dry	0.19	1.5	1	1613B	11/23/2022	J
PAH	DONE					8310		4
1-Methylnaphthalene	<81	µg/Kg-dry	81	270	1	SW8270E	11/27/2022	
2-Chloronaphthalene	<110	µg/Kg-dry	110	350	1	SW8270E	11/27/2022	
2-Methylnaphthalene	<95	µg/Kg-dry	95	320	1	SW8270E	11/27/2022	
Acenaphthene	<120	µg/Kg-dry	120	390	1	SW8270E	11/27/2022	
Acenaphthylene	<110	µg/Kg-dry	110	360	1	SW8270E	11/27/2022	
Anthracene	<120	µg/Kg-dry	120	410	1	SW8270E	11/27/2022	
Benzo(a)anthracene	220	µg/Kg-dry	130	440	1	SW8270E	11/27/2022	J
Benzo(a)pyrene	250	µg/Kg-dry	110	360	1	SW8270E	11/27/2022	J
Benzo(b)fluoranthene	270	µg/Kg-dry	120	390	1	SW8270E	11/27/2022	J
Benzo(g,h,i)perylene	150	µg/Kg-dry	78	260	1	SW8270E	11/27/2022	J
Benzo(k)fluoranthene	<110	µg/Kg-dry	110	370	1	SW8270E	11/27/2022	
Chrysene	250	µg/Kg-dry	130	420	1	SW8270E	11/27/2022	J
Dibenzo(a,h)anthracene	<110	µg/Kg-dry	110	370	1	SW8270E	11/27/2022	
Fluoranthene	290	µg/Kg-dry	110	360	1	SW8270E	11/27/2022	J
Fluorene	<110	µg/Kg-dry	110	350	1	SW8270E	11/27/2022	

CERTIFICATIONS

Indeno(1,2,3-cd)pyrene	210	µg/Kg-dry	120	400	1	SW8270E	11/27/2022	J
Naphthalene	<130	µg/Kg-dry	130	440	1	SW8270E	11/27/2022	
Phenanthrene	<84	µg/Kg-dry	84	280	1	SW8270E	11/27/2022	
Pyrene	290	µg/Kg-dry	130	440	1	SW8270E	11/27/2022	J
PCBs	DONE							4
Aroclor 1016	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
Aroclor 1221	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
Aroclor 1232	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
Aroclor 1242	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
Aroclor 1248	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
Aroclor 1254	<17	µg/Kg-dry	17	58	1	SW8082	11/21/2022	
Aroclor 1260	<17	µg/Kg-dry	17	58	1	SW8082	11/21/2022	
Aroclor 1262	<17	µg/Kg-dry	17	58	1	SW8082	11/21/2022	
Aroclor 1268	<17	µg/Kg-dry	17	58	1	SW8082	11/21/2022	
PCBs, Total	<25	µg/Kg-dry	25	82	1	SW8082	11/21/2022	
PESTICIDE	DONE							4
4,4'-DDD	<400	µg/Kg-dry	400	1300	2	SW8081A	11/24/2022	
4,4'-DDE	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
4,4'-DDT	<420	µg/Kg-dry	420	1400	2	SW8081A	11/24/2022	
Aldrin	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
Chlordane, Technical	<620	µg/Kg-dry	620	2100	2	SW8081A	11/24/2022	
Dieldrin	<440	µg/Kg-dry	440	1500	2	SW8081A	11/24/2022	
Endosulfan I	<420	µg/Kg-dry	420	1400	2	SW8081A	11/24/2022	
Endosulfan II	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
Endosulfan sulfate	<380	µg/Kg-dry	380	1300	2	SW8081A	11/24/2022	
Endrin	<510	µg/Kg-dry	510	1700	2	SW8081A	11/24/2022	
Endrin aldehyde	<400	µg/Kg-dry	400	1300	2	SW8081A	11/24/2022	
Endrin ketone	<380	µg/Kg-dry	380	1300	2	SW8081A	11/24/2022	
Heptachlor	<400	µg/Kg-dry	400	1300	2	SW8081A	11/24/2022	
Heptachlor epoxide	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
Methoxychlor	<420	µg/Kg-dry	420	1400	2	SW8081A	11/24/2022	
Toxaphene	<670	µg/Kg-dry	670	2200	2	SW8081A	11/24/2022	
alpha-BHC	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
alpha-Chlordane	<420	µg/Kg-dry	420	1400	2	SW8081A	11/24/2022	
beta-BHC	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
delta-BHC	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
gamma-BHC (Lindane)	<410	µg/Kg-dry	410	1400	2	SW8081A	11/24/2022	
gamma-Chlordane	<420	µg/Kg-dry	420	1400	2	SW8081A	11/24/2022	
TOTAL ORGANIC CARBON	87000	mg/kg Dry	440	1500	1	L-Kahn/9060A	11/16/2022	27

Sample Number: 52039381
 Sample ID: 11:00AM SEDIMENT
 Sample Date: 11/10/2022
 Date Received: 11/11/2022
 Results expressed on a dry weight basis.

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
<u>GENERAL ANALYSIS</u>								
MOISTURE	70.7	%	0.1	0.1		CALC	11/29/2022	
OIL AND GREASE (HEXANE)	4713	mg/kg Dry	628	628		SM5520E	11/22/2022	
PARTICLE SIZE								
Clay	13	%					12/13/2022	
Sand	42	%					12/13/2022	
Silt	46	%					12/13/2022	
Texture name	Loam						12/13/2022	
SAMPLE PREP	DONE							
TOTAL SOLIDS	29.3	%	0.010	0.010		SM2540B	11/15/2022	
<u>METALS</u>								
ARSENIC, TOTAL	12	mg/kg Dry	7.27	24	125	6010B	11/15/2022	
BARIUM, TOTAL	85	mg/kg Dry	0.13	0.433	125	6010B	11/15/2022	
CADMIUM, TOTAL	0.983	mg/kg Dry	0.171	0.567	125	6010B	11/15/2022	
CHROMIUM, TOTAL	44	mg/kg Dry	0.983	3.27	125	6010B	11/15/2022	
COPPER, TOTAL	29	mg/kg Dry	0.556	1.85	125	6010B	11/15/2022	
LEAD, TOTAL	22	mg/kg Dry	2.35	7.82	125	6010B	11/15/2022	
MERCURY, TOTAL	0.239	mg/kg Dry	0.137	0.444	180	7471B	11/18/2022	

NICKEL, TOTAL	15	mg/kg Dry	0.642	2.14	125	6010B	11/15/2022	
SELENIUM, TOTAL	<3.52	mg/kg Dry	3.52	12	125	6010B	11/15/2022	
SOLIDS DIGESTION	DONE					SW846-3050B	11/14/2022	
ZINC, TOTAL	85	mg/kg Dry	1.58	5.26	125	6010B	11/15/2022	
NUTRIENTS								
AMMONIA NITROGEN	730	mg/kg Dry	32	106	45	SM4500NH3G	11/21/2022	
KJELDAHL NITROGEN	9471	mg/kg Dry	427	1420	500	EPA351.2	11/28/2022	
NITRATE NITROGEN	<6.83	mg/kg Dry	6.83	23	20	EPA300.0	11/11/2022	
NITRITE NITROGEN	<6.826	mg/kg Dry	6.83	23	20	EPA300.0	11/11/2022	
PHOSPHORUS, TOTAL	1689	mg/kg Dry	51	171	500	EPA365.4	11/28/2022	
ORGANICS								
DIOXIN	DONE							5
2,3,7,8-TCDD	<0.38	ng/kg Dry	0.38	2.6	1	1613B	11/22/2022	
FURANS	DONE							5
2,3,7,8-TCDF	2.2	ng/kg Dry	0.25	2.6	1	1613B	11/22/2022	J
PAH	DONE					8310		4
1-Methylnaphthalene	<110	µg/Kg-dry	110	380	1	SW8270E	11/27/2022	
2-Chloronaphthalene	<150	µg/Kg-dry	150	490	1	SW8270E	11/27/2022	
2-Methylnaphthalene	<130	µg/Kg-dry	130	440	1	SW8270E	11/27/2022	
Acenaphthene	<160	µg/Kg-dry	160	540	1	SW8270E	11/27/2022	
Acenaphthylene	<150	µg/Kg-dry	150	500	1	SW8270E	11/27/2022	
Anthracene	<170	µg/Kg-dry	170	570	1	SW8270E	11/27/2022	
Benzo(a)anthracene	<180	µg/Kg-dry	180	610	1	SW8270E	11/27/2022	
Benzo(a)pyrene	160	µg/Kg-dry	150	510	1	SW8270E	11/27/2022	J
Benzo(b)fluoranthene	180	µg/Kg-dry	160	540	1	SW8270E	11/27/2022	J
Benzo(g,h,i)perylene	150	µg/Kg-dry	110	360	1	SW8270E	11/27/2022	J
Benzo(k)fluoranthene	<150	µg/Kg-dry	150	520	1	SW8270E	11/27/2022	
Chrysene	<170	µg/Kg-dry	170	580	1	SW8270E	11/27/2022	
Dibenzo(a,h)anthracene	<150	µg/Kg-dry	150	510	1	SW8270E	11/27/2022	
Fluoranthene	<150	µg/Kg-dry	150	500	1	SW8270E	11/27/2022	
Fluorene	<150	µg/Kg-dry	150	490	1	SW8270E	11/27/2022	
Indeno(1,2,3-cd)pyrene	190	µg/Kg-dry	170	550	1	SW8270E	11/27/2022	J
Naphthalene	<180	µg/Kg-dry	180	610	1	SW8270E	11/27/2022	
Phenanthrene	<120	µg/Kg-dry	120	390	1	SW8270E	11/27/2022	
Pyrene	<180	µg/Kg-dry	180	610	1	SW8270E	11/27/2022	
PCBs	DONE							4
Aroclor 1016	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
Aroclor 1221	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
Aroclor 1232	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
Aroclor 1242	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
Aroclor 1248	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
Aroclor 1254	<23	µg/Kg-dry	23	76	1	SW8082	11/21/2022	
Aroclor 1260	<23	µg/Kg-dry	23	76	1	SW8082	11/21/2022	
Aroclor 1262	<23	µg/Kg-dry	23	76	1	SW8082	11/21/2022	
Aroclor 1268	<23	µg/Kg-dry	23	76	1	SW8082	11/21/2022	
PCBs, Total	<32	µg/Kg-dry	32	110	1	SW8082	11/21/2022	
PESTICIDE	DONE							4
4,4'-DDD	<690	µg/Kg-dry	690	2300	2	SW8081A	11/24/2022	
4,4'-DDE	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
4,4'-DDT	<720	µg/Kg-dry	720	2400	2	SW8081A	11/24/2022	
Aldrin	<700	µg/Kg-dry	700	2300	2	SW8081A	11/24/2022	
Chlordane, Technical	<1100	µg/Kg-dry	1100	3600	2	SW8081A	11/24/2022	
Dieldrin	<750	µg/Kg-dry	750	2500	2	SW8081A	11/24/2022	
Endosulfan I	<730	µg/Kg-dry	730	2400	2	SW8081A	11/24/2022	
Endosulfan II	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
Endosulfan sulfate	<660	µg/Kg-dry	660	2200	2	SW8081A	11/24/2022	
Endrin	<870	µg/Kg-dry	870	2900	2	SW8081A	11/24/2022	
Endrin aldehyde	<680	µg/Kg-dry	680	2300	2	SW8081A	11/24/2022	
Endrin ketone	<660	µg/Kg-dry	660	2200	2	SW8081A	11/24/2022	
Heptachlor	<700	µg/Kg-dry	700	2300	2	SW8081A	11/24/2022	
Heptachlor epoxide	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
Methoxychlor	<720	µg/Kg-dry	720	2400	2	SW8081A	11/24/2022	
Toxaphene	<1200	µg/Kg-dry	1200	3900	2	SW8081A	11/24/2022	
alpha-BHC	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
alpha-Chlordane	<720	µg/Kg-dry	720	2400	2	SW8081A	11/24/2022	
beta-BHC	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
delta-BHC	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	
gamma-BHC (Lindane)	<710	µg/Kg-dry	710	2400	2	SW8081A	11/24/2022	

gamma-Chlordane	<720	µg/Kg-dry	720	2400	2	SW8081A	11/24/2022	
TOTAL ORGANIC CARBON	125000	mg/kg Dry	520	1700	1	L-Kahn/9060A	11/16/2022	27

Quality Assurance Code(s):

- J. Analyte detected between the LOD and LOQ.
- 4. Analyzed by subcontracted lab: Certification #399084510
- 5. Analyzed by subcontracted lab: Certification #999407970
- 27. Analyzed by subcontracted lab: Certification# 157066030
- 44. Analyzed by subcontracted lab: UW Soil & Forage Analysis Lab

All LOD/LOQs adjusted for dilution and/or solids content.
LOD = Limit of Detection LOQ = Limit of Quantitation

BADGER LABORATORIES, INC.
WDNR Certified Lab #445023150
Approved By:



BL:gr

Sample 52039380

Non-Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
Benzo[a]pyrene	0.115		0.25

Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
-------------	-------------	------------------------------	----------------------

Groundwater

Contaminant	RCL (mg/kg) x2	Background Threshold (mg/kg)	Test Results (mg/kg)
Chrysene (PAH)	0.1442		0.25
Mercury	0.208		0.223

Sample 52039381

Non-Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
Benzo[a]pyrene	0.115		0.16
Arsenic, Inorganic	0.677	8	12

Industrial

Contaminant	RCL (mg/kg)	Background Threshold (mg/kg)	Test Results (mg/kg)
Arsenic, Inorganic	3	8	12

Groundwater

Contaminant	RCL (mg/kg) x2	Background Threshold (mg/kg)	Test Results (mg/kg)
Arsenic	0.584		12
Cadmium	0.752		0.983
Mercury	0.208		0.239
Nickel	13.0612		15

Excerpt from EPA Soil Screening Calculator

[Regional Screening Levels \(RSLs\) - User's Guide | US EPA](#)

4.8.3 Method 1 for SSL Determination

Method 1 employs a partitioning equation for migration to groundwater and defaults are provided. This method is used to generate the download default tables. If H' is not available, SSL can still be calculated. H' changes when groundwater temperature changes. Please see section 4.9.9 of this user guide for H' determination at temperature other than 25°C.

- method 1.

$$\text{SSL} \left(\frac{\text{mg}}{\text{kg}} \right) = C_{\text{water}} \left(\frac{\text{mg}}{\text{L}} \right) \times \left[K_d \left(\frac{\text{L}}{\text{kg}} \right) + \left(\frac{\theta_w \left(\frac{0.3 L_{\text{water}}}{L_{\text{soil}}} \right) + \theta_a \left(\frac{L_{\text{air}}}{L_{\text{soil}}} \right) \times H'}{\rho_b \left(\frac{1.5 \text{ kg}}{\text{L}} \right)} \right)$$

where:

$$C_{\text{water}} \left(\frac{\text{mg}}{\text{L}} \right) = \text{SL} \left(\frac{\mu\text{g}}{\text{L}} \right) \times \left(\frac{\text{mg}}{1000 \mu\text{g}} \right) \times \text{DAF}$$

where:

$$\text{SL} \left(\frac{\mu\text{g}}{\text{L}} \right) = \text{MCL} \left(\frac{\mu\text{g}}{\text{L}} \right); \text{RSL} \left(\frac{\mu\text{g}}{\text{L}} \right); \text{RML} \left(\frac{\mu\text{g}}{\text{L}} \right); \text{ or PRG} \left(\frac{\mu\text{g}}{\text{L}} \right)$$

$$\theta_a \left(\frac{L_{\text{air}}}{L_{\text{soil}}} \right) = n \left(\frac{L_{\text{pore}}}{L_{\text{soil}}} \right) - \theta_w \left(\frac{0.3 L_{\text{water}}}{L_{\text{soil}}} \right); n \left(\frac{L_{\text{pore}}}{L_{\text{soil}}} \right) = 1 - \frac{\rho_b \left(\frac{1.5 \text{ kg}}{\text{L}} \right)}{\rho_s \left(\frac{2.65 \text{ kg}}{\text{L}} \right)}$$

and:

$$K_d \left(\frac{\text{L}}{\text{kg}} \right) = f_{\text{oc}} \left(\frac{0.002 \text{ g-carbon}}{\text{g-soil}} \right) \times K_{\text{oc}} \left(\frac{\text{L}}{\text{kg}} \right), \text{ for organic compounds;}$$

$K_d \left(\frac{\text{L}}{\text{kg}} \right)$ values for inorganic compounds are listed in the user guide.

The fraction of organic carbon (f_{oc}) selected for this equation is 0.002. This is the default for subsurface soil identified in U.S. EPA 1996b, Sections 2.5.2 and 2.5.7. According to this source, soil organic carbon decreases rapidly with depth. Note that the default f_{oc} in section “4.9.4 Infinite Source Chronic Volatilization Factor (VF_{ulim})” is 0.006, which is the default for surface soil from the same study.

4.8.6 Conservative and Simplifying Assumptions for the Soil to Groundwater Scenario

The SSL scenario was designed for use during the early stages of a site evaluation when information about subsurface conditions may be limited. Because of this constraint, methods 1 and 2 are based on conservative, simplifying assumptions about the release and transport of contaminants in the subsurface. These assumptions include:

- The source is infinite (i.e., steady-state concentrations will be maintained in ground water over the exposure period of interest).
- Contaminants are uniformly distributed throughout the zone of contamination.
- Soil contamination extends from the surface to the water table (i.e., adsorption sites are filled in the unsaturated zone beneath the area of contamination).
- There is no contaminant loss due to biological degradation or volatilization in the unsaturated zone.
- Equilibrium soil/water partitioning is instantaneous and linear in the contaminated soil.
- The receptor well is at the edge of the source (i.e., there is no dilution from recharge downgradient of the site) and is screened within the plume.
- The aquifer is unconsolidated and unconfined (surficial).
- Aquifer properties are homogeneous and isotropic.
- Chelating or complexing agents not present.
- No facilitated transport (e.g., colloidal transport) of inorganic contaminants in aquifer.

RSLs developed using this methodology can be viewed as evolving risk-based levels that can be refined as more site information becomes available. The early use of the methodology at a site will help focus further subsurface investigations on areas of true concern with respect to ground water quality and will provide information on soil characteristics, aquifer characteristics, and contaminant properties that can be built upon as a site evaluation progresses.

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay, WI 54313-6727

Tony Evers, Governor
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



April 24, 2024

Mr. Nick Waldschmidt
City of Fond du Lac
P.O. Box 150
Fond du Lac, WI 54936

FID#: 420010910
Fond du Lac County
SW/Exemption

Subject: Conditional Low-Hazard Waste Grant of Exemption for the Disposal of Dredge Material from Fisherman's Pier, City of Fond du Lac, Fond du Lac County, Wisconsin

Dear Mr. Waldschmidt:

The Department of Natural Resources (department) has reviewed your request for a Low-Hazard Waste Grant of Exemption (LHE) request dated November 2, 2023, for the disposal of dredged sediments from the Fisherman's Pier dredge project at the City of Fond du Lac (City) owned property located at Lakeside Park West. Lakeside Park West is a closed unlicensed landfill known as Supples Marsh (FID# 420010910) and has previously been used as a disposal location for City dredging projects, including material previously dredged from Fisherman's Pier. The department hereby grants the exemption in accordance with s. 289.43(8), Stats. This exemption is limited to the disposal of dredge sediments from Fisherman's Pier dredge project as proposed in your request.

It is the department's opinion that the proposed plans to dispose of dredge sediments at the City owned Lakeside Park West property will not cause environmental pollution provided it is conducted in accordance with the proposed plan dated November 2, 2023, and the conditions of this approval.

This exemption does not relieve you of obligations to meet all other applicable federal, state, or local permits, zoning and regulatory requirements including any remedial actions that may be necessary at the site.

If you have any questions regarding this grant of exemption, please contact Kevin Bartel at 920-883-9301 or by e-mail at kevin.bartel@wisconsin.gov.

Sincerely,

Kristin DuFresne
Waste and Materials Management Program Supervisor
Northeast Region

CC: John Redmond, City of Fond du Lac (via e-mail jredmond@fdl.wi.gov)
Kevin Bartel – WDNR/WA (via e-mail)

PROJECT SUMMARY

Fisherman's Pier is a channel leading to Lake Winnebago near the Lakeside Park Pavilion located at 71 Promen Drive in the City of Fond du Lac (City). The City removed approximately 2,335 cubic yards of sediment from the channel in February and March 2023. Prior to dredging, samples were collected from in-situ cores and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. Results indicated the material contains benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Code, non-industrial direct contact residual contaminant level (RCL). Chrysene, cadmium, mercury, and nickel were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCLs. Arsenic concentrations exceeded the industrial direct contact RCL and the background threshold value. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in the samples but at concentrations that were between the laboratories Limit of Detection (LOD) and Limit of Quantification (LOQ). The city is proposing to dispose of the material in two ways, which include:

1. Blending the dredge material with topsoil at a 50:50 ratio to be used on municipal projects. The mixture will be used by City staff to repair lawn areas after utility excavations and pavement, curb and gutter, and sidewalk replacement. Prior to using the mixture, the blended material will be resampled for PAHs to verify the concentrations are below the ch. NR 720, Wis. Adm. Code, RCLs. If the material is not below the RCLs, additional topsoil will be added to the blended material and the mixture resampled.
2. Using the material as fill at Lakeside Park West, located on the south shoreline of Lake Winnebago. This area is a closed unlicensed landfill known as Supples Marsh (FID #420010910) and has previously been used as a disposal location for several city of Fond du Lac dredging projects, including material previously dredged from Fisherman's Pier. Disposal of the material will be limited to areas previously used for disposal. The material may be used to construct landscape features for future use of the area as a park with walking trails. The dredge material will be covered with 6-inches of clean topsoil or a blend of 50:50 dredge material and topsoil that has been tested for PAHs. Some of the dredge material may also be temporarily stockpiled at Lakeside Park West and covered with a tested 50:50 blend of topsoil and dredge material until its final placement at Lakeside Park West has been determined. This location is owned the City.

This low-hazard waste grant of exemption applies solely to the material dredged from Fisherman's Pier in February and March 2023, provided the material is placed in accordance with the City's proposal and the conditions of this Low Hazard Grant of Exemption.

BEFORE THE
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL LOW HAZARD WASTE GRANT OF EXEMPTION
FOR THE DISPOSAL OF DREDGE MATERIAL
FROM FISHERMAN'S PIER
CITY OF FOND DU LAC, WI

FINDINGS OF FACT

The Department of Natural Resources (department) finds that:

1. On November 29, 2022, the Wisconsin Department of Natural Resources (department) issued the City of Fond du Lac (City) a permit to remove material from the bed of Lake Winnebago at Fisherman's Pier in Lakeside Park, City of Fond du Lac, Fond du Lac County, Wisconsin. The description of the site using Public Land Survey System (PLSS) is the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 3, Township 15 North, Range 17 East. The coordinates for the site in the Wisconsin Transverse Mercator coordinate system of 1983 based on the 1991 adjustment to the North American Datum of 1983 (WTM91) system are: 645241.30 (X), 370632.18 (Y). The Chapter 30 Permit number is IP-NE-2016-20-03626 / 03885 and is valid until November 15, 2021; however, an extension may be granted by the department.
2. Dredging of Fisherman's Pier was completed in February and March 2023 and the material was temporarily stockpiled at the southeast corner of Doty St. and Harborview Dr. in the City of Fond du Lac for dewatering. Approximately 2,335 cubic yards of material were removed.
3. Samples were taken from two in-situ cores collected from the sediment and analyzed for several parameters including metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, dioxins, and furans. Results indicated the material contains benzo(a)pyrene slightly above the ch. NR 720, Wis. Adm. Code, non-industrial direct contact residual contaminant level (RCL). Chrysene, cadmium, mercury, and nickel were also detected above the ch. NR 720, Wis. Adm. Code, groundwater pathway RCLs. Arsenic concentrations exceeded the industrial direct contact RCL and the background threshold value. PCBs and pesticides were not detected in the samples. Dioxins and furans were detected in the samples but at concentrations that were between the laboratories Limit of Detection (LOD) and Limit of Quantification (LOQ)
4. On June 30, 2023, Nick Waldschmidt of the City of Fond du Lac submitted an incomplete low-hazard waste grant of exemption request for the disposal of sediment dredged from Fisherman's Pier for various purposes, including use in municipal projects and use as fill at Lakeside Park West.
5. On November 2, 2023, Nick Waldschmidt of the City of Fond du Lac submitted a completed low-hazard waste grant of exemption request for the disposal of sediment dredged from Fisherman's Pier for various purposes, including use in municipal projects and use as fill at Lakeside Park West.
6. The correct plan review fee of \$550 was received by the department on July 7, 2023.
7. On May 6, 2008 and August 8, 2017, public meetings were held at the Fond du Lac City County Government building in the City of Fond du Lac, Wisconsin in accordance with the requirements of s. 289.54(2), Stats.
8. Additional facts relevant to the review of the low-hazard waste grant of exemption include the following:

- a. The 50:50 mixture of dredge material and topsoil will be sampled for PAHs prior to use in municipal projects where a 6-inch topsoil cover is not planned.
 - b. Any raw dredge material or 50:50 mixture of dredge material and topsoil that is not sampled for PAHs prior to final placement will be covered with a minimum of 6-inches of clean topsoil.
 - c. The dredge material disposal area at Lakeside Park West where an untested mixture of 50:50 dredge material and topsoil will be used to cover temporary stockpiles of dredge material is currently gated at the access point. The gate limits public access.
9. Additional documents and information considered in review of the exemption request include:
- a. The City of Fond du Lac's May 2008 LHE for the disposal of dredged material from Fisherman's Pier at Lakeside Park West and for use in a topsoil mix.
 - b. The City of Fond du Lac's August 2017 LHE for the disposal of dredged material from Fisherman's Pier Lakeside Park West and for use in a topsoil mix.
 - c. The department's guidance document titled 'Exempting Low-Hazard Wastes from Solid Waste Regulations' (PUB WA 1645, June 2015).
 - d. Army Corps of Engineers Nationwide Permit #35 for Maintenance Dredging issued to the city of Fond du Lac on October 28, 2016.
10. The department has considered the environmental impacts of the proposal and has complied with the requirements of ch. NR 150, Wis. Adm. Code and s. 1.11. Stats., and, consistent with social, economic, and other essential considerations, the department has adopted all practical means to avoid or minimize environmental harm.
11. The department considers this action to be a routine approval and a minor action as defined in s. NR 150.03 (15), Wis. Adm. Code.
12. If the conditions set forth below are complied with, the disposal of the materials will not result in environmental pollution as defined in s. 289.01(8), Stats.
13. The department has conducted a continuing review of the potential hazard to public health and the environment of solid waste disposal facilities in general as well as this specific proposal. Based upon this review, the department finds that regulation under s. 289, Stats., is not warranted in light of the low potential hazard to public health or the environment.

CONCLUSIONS OF LAW

1. Based upon the foregoing, the department has authority under s. 289.43(8), Stats., to grant the conditional exemption set forth below.
2. The conditions set forth below are needed to ensure that the disposal of the material as proposed, and in accordance with the conditions of this approval, will not result in environmental pollution as defined in s. 289.01(8), Stats.
3. The department has authority under s. NR 150.20(1m)(k), Wis. Adm. Code, to consider a routine approval a

minor action and authority under s. NR 150.20(1m), Wis. Adm. Code, to not perform an environmental analysis under the provisions of Wisconsin Environmental Policy Act (WEPA) for minor actions.

CONDITIONAL GRANT OF EXEMPTION

In accordance with the authority granted to the department under s. 289.43(8)(b)2., Wis. Stats., the department hereby grants The City of Fond Du Lac a low hazard waste exemption to allow for the disposal of approximately 2,335 cubic yards (cy) of dredged sediments to be disposed of at the Lakeside Park West site and to be used as topsoil, subject to the following conditions:

1. Failure to maintain compliance with applicable laws, rules, regulations, and terms and conditions of this exemption, for any reason, may be grounds for immediate suspension or revocation of this exemption. The department reserves the right to revoke this approval if the department discovers that one or more of the conditions are not being followed.
2. This approval does not exempt the property owner and the waste generator from any responsibility or liability for any injuries to individuals; or any responsibility under Ch. 292, Wis. Stats., Chs. NR 700-754, Wis. Adm. Code, or Ch. NR 140, Wis. Adm. Code, to take all corrective actions that the department determines would be needed to restore the environment and protections to human health and the environment if it is discovered that the contaminated material has caused environmental pollution as defined in s. 291.01 (4), Wis. Stats.
3. Material placement as proposed shall be completed within 1 year of the effective date of this letter unless a written extension of this exemption is obtained from the department.
4. Permanent covering of the dredged sediments shall be completed within 1 years of the effective date of this letter unless a written extension of this exemption is obtained from the department.
5. This grant of exemption is only applicable for material dredged from Fisherman's Pier under the dredge permit number IP-NE-2022-20-03634, provided the material is placed as specified in this approval.
6. Dredge material mixed with topsoil for use in municipal projects shall be mixed at a minimum ratio of 50:50 and sampled for PAHs at a minimum frequency of one composite sample per 300 cubic yards material (dredge material and topsoil following mixing) composed of at least 15 aliquots selected from random locations within the stockpile. Dredge material/topsoil mixture with PAH concentrations below ch. NR 720, Wis. Adm. Code, non-industrial direct contact and groundwater pathway RCLs can be used as clean fill and does not need to be covered with clean topsoil. Blended material above non-industrial direct contact and groundwater pathway RCLs shall be blended with additional topsoil and resampled prior to use in municipal projects. Alternatively, the material may be disposed at Lakeside Park West without additional blending with topsoil and sampling as indicated condition number 4 below.
7. The sediment/topsoil mixture shall only be used on city projects in accordance with the terms and conditions of the May 2008 and August 2017 Low Hazard Grant of Exemption and shall not be distributed to the public.
8. Any dredge material temporarily covered with 50:50 mixture of dredge material and topsoil at Lakeside Park West that has not been retested for PAHs shall be covered with 6-inches of clean topsoil prior to use of the area as a park with unlimited public access.
9. A status report shall be submitted to the department's Waste and Materials Management program within 90 days of placement of the dredge material. The report shall provide a brief overview of where dredge material

was placed, results of sampling conducted on blended dredge material and topsoil (if applicable), and when additional dredging from Fisherman's Pier is anticipated.

This grant of exemption is based on the information available to the department as of the date of approval. If additional information, project changes or other circumstances indicate a possible need to modify this exemption, the department may ask that further information relating to this activity be provided. Likewise, the department accepts proposals to modify exemptions, as provided for in state statutes and administrative codes. Unless specifically noted, the conditions of this grant of exemption do not supersede or replace any previous conditions of approval for this property.

NOTICE OF APPEAL RIGHTS

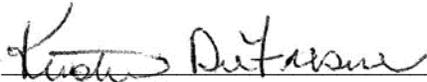
If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review department decisions must be filed.

For judicial review of a decision pursuant to section 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the department, to file your petition with the appropriate circuit court and serve the petition on the department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

Dated: April 24, 2024

DEPARTMENT OF NATURAL RESOURCES

For the Secretary



Kristin DuFrense

Waste and Materials Management Program Supervisor
Northeast Region



Kevin Bartel

Waste and Materials Management Hydrogeologist