



December 29, 2022

MR GREG PROM
SUPERIOR WATER LIGHT & POWER CO
2915 HILL AVE
SUPERIOR WI 54880

SUBJECT: 100% Remedial Action Design Report – Upland Area,
Superior Water Light and Power Manufactured Gas Plant
Winter Street and USH 53, Superior, Wisconsin
BRRTS ID: 02-16-275446

Dear Mr. Prom,

The Wisconsin Department of Natural Resources (DNR) has completed a review of the October 7, 2022, 100% Upland Area Remedial Action Design Report, submitted to the DNR on your behalf by Foth Infrastructure and Environment, LLC (Foth) on October 17, 2022 (RAD). The RAD is for the remedial action option conditionally approved by the DNR on January 28, 2021, for the upland portion of the former Superior Water Light and Power (SWL&P) Manufactured Gas Plant (Site) only. An Air Management Plan (AMP), Field Sampling Plan (FSP), Construction Quality Assurance Plan (CQAPP), Erosion Control and Storm Water Management Plan (ECSWMP), Remedial Action Quality Assurance Plan (RAQAPP), and Remedial Action Operations Maintenance and Monitoring Plan (RAOM&M) were submitted to the DNR along with the RAD (collectively referred to as the “reviewed reports”). The DNR received a \$1050 fee on November 1, 2022, for review of the RAD.

The term “Site” is used in this letter as defined in § NR 700.03(56) and includes the area of contamination near the former MGP gas holder and Hortonsphere as well as the MGP discharge area north and east of the former manufactured gas plant including the BNSF right of way (ROW); City of Superior property; wastewater treatment plant (WWTP) property and retention pond; Cutler Laliberte McDougal Corporation properties; Lakehead Concrete Works; and the area of contaminated sediment in the slip west of the WWTP where manufactured gas plant contamination was detected. Also, the term “active remedial action” in this letter means the planned air sparging/soil vapor extraction and excavation of contaminated soil.

The DNR Remediation and Redevelopment Program reviewed the RAD, AMP, FSP, CQAP, ECSWMP, RAQAPP, and RAOM&M for compliance with Wisconsin Statutes (Wis. Stat.) chapter 292 and Wisconsin Administrative (Wis. Admin.) Code chs. NR 700-799. The DNR’s review is not an engineering review of the document nor is it a detailed review of every component of every report. The DNR’s review focused on responses to comments provided by the DNR to previous iterations of the design reports.

Following review of the above referenced reports, the DNR conditionally approves the 100% design based on the information and projected performance of the remedial action provided by SWL&P and Foth. If the remedial action is insufficient to comply with the requirements of Wis. Stat. ch. 292 and/or Wis. Admin. Code chs. NR 700-799, the DNR will require additional investigation and/or remedial action.

Because the various Target Concentrations (Site-Specific Excavation Target Concentration, Site-Specific Biosparge Target Concentration, Site-Specific Enhanced MNA Target Concentration) contained in the reviewed reports and developed by Foth were not developed under Wis. Admin. Code, achievement of the Remedial Action Objectives (RAOs) developed by SWL&P and Foth may not meet the requirements for site closure under Wis. Admin. Code ch. NR 726. Therefore, it is likely additional remedial action will be necessary following the active remedial action activities. The use of natural attenuation may be an acceptable remediation option following active remediation; however, its use will need to be evaluated following the active remedial action. The DNR is not approving the use of natural attenuation as a remedial action at this Site at this time.

The DNR reminds SWL&P and Foth that any discharge of a hazardous substance is a discharge to the environment and responsibilities are defined in Wis. Stat. ch. 292 and Wis. Admin. Code chs. NR 700-799. Any hazardous substance discharge to any media (soil, groundwater, air, surface water, or sediment) requires a response under statute and code. Assessment of sediment and surface water quality and proof of control of hazardous substance discharges to the C Street slip will be necessary during and following remedial action, and will be evaluated as part of any future closure request.

The DNR's December 23, 2021, letter commenting on the 90% Remedial Action Design Report contains comments on the use of averaging and the target concentrations derived by Foth for determination of mass of contaminants on site and timeframe for the active remedial action. It appears some of the DNR comments regarding this were not addressed in the 100% design report. The DNR maintains that contaminant mass estimates provided by Foth may be an underestimate of contamination at the site, and operation of the active remedial action may be longer than planned by Foth to achieve the RAOs established by SWL&P and Foth as well as the Wis. Admin. Code ch. NR 726 closure requirements.

CONTINUING OBLIGATIONS

Continuing obligations (COs) are legally required conditions which include both COs and other requirements as a condition of approving a remedial action if residual contamination remains on site following a remedial action (Wis. Stat. § 292.12(2)). Since SWL&P and Foth believe residual contamination will remain on site following the active remedial action, the DNR has imposed the following continuing obligations on this Site:

COs are applied at the following locations:

Owner and Parcel ID	COs Applied
BNSF Property 1280164/02-802-06648-01 1280320/02-802-07101-01	<ul style="list-style-type: none"> • Soil Contamination • Use of Industrial Soil Standards • Use of a Structural Impediment • Groundwater Contamination • Continued Sampling of Monitoring Wells • Vapor: Commercial or Industrial Use of Property • Vapor: Future Actions to Address Vapor Intrusion
City of Superior 1280319/02-802-07101-00 1280321/02-802-07102-00 City ROW	<ul style="list-style-type: none"> • Soil Contamination • Use of Industrial Soil Standards • Use of a Structural Impediment • Groundwater Contamination • Continued Sampling of Monitoring Wells • Vapor: Commercial or Industrial Use of Property • Vapor: Future Actions to Address Vapor Intrusion
Graymont 1280163/02-802-06648-00	<ul style="list-style-type: none"> • Soil Contamination • Use of Industrial Soil Standards

1280166/02-802-06649-00 1280289/02-802-07095-00 1280325/02-802-07103-00	<ul style="list-style-type: none"> • Use of a Structural Impediment • Groundwater Contamination • Continued Sampling of Monitoring Wells • Vapor: Commercial or Industrial Use of Property • Vapor: Future Actions to Address Vapor Intrusion
Lakehead Concrete 1280324/02-802-07102-03	<ul style="list-style-type: none"> • Soil Contamination • Use of Industrial Soil Standards • Use of a Structural Impediment • Groundwater Contamination • Continued Sampling of Monitoring Wells • Vapor: Commercial or Industrial Use of Property • Vapor: Future Actions to Address Vapor Intrusion

Under Wis. Stat. § 292.12(5), property owners and occupants of the properties referenced above must comply with conditions as explained in this letter. The property owner must notify occupants for any condition specified in this letter under Wis. Admin. Code § NR 727.05(2). Additional COs, modification of COs, and/or notifications under Wis. Admin. Code chs. NR 726 and NR 727 may be necessary at the time of site closure under Wis. Admin. Code ch. NR 726. COs remain in effect until it can be shown that the CO is no longer necessary to protect human health or the environment (Wis. Stat. §292.12(2)(c)). COs do remain in effect if necessary following closure of the site under Wis. Admin. Code ch. NR 726.

SOIL

Continuing Obligations to Address Soil Contamination

Soil Contamination (Wis. Admin. Code chs. NR 718, NR 500 to 599, and Wis. Stat. ch. 289)

Soil contamination remains as indicated on the enclosed Figure 2, Approximate Extent of Combined Soil and Groundwater Contamination, Superior, Wisconsin, April 2022. If soil in the location(s) shown on the figure is excavated in the future, the property owner or right of way holder at the time of excavation must sample and analyze the excavated soil. If sampling confirms that contamination is present, the property owner or right of way holder at the time of excavation will need to determine if the material is considered solid waste and ensure that any storage, treatment, or disposal complies with applicable standards and rules. Contaminated soil may be managed under Wis. Admin. Code ch. NR 718 with prior DNR approval.

In addition, all current and future property owners, occupants and right of way holders need to be aware that excavation of the contaminated soil may pose an inhalation and direct contact hazard; special precautions may be needed to prevent a threat to human health.

Industrial Soil Standards (Wis. Stat. § 292.12(6), NR 720.05(5), NR 727.07(5))

Industrial soil standards (Wis. Admin. Code ch. NR 720 residual contaminant levels, or RCLs) for direct contact apply where soil contamination remains at the properties listed above as shown on the enclosed Figure 2. Use of the properties described above where contamination is present is restricted to industrial use and may not be used or developed for a residential, commercial, agricultural, or other non-industrial use until soil contaminant levels no longer exceed non-industrial direct contact RCLs as the result of additional remediation or natural attenuation and the DNR has reviewed and approved a request to modify this condition.

Structural Impediment (Wis. Stat. § 292.12(2)(b), NR 727.07(2))

Structural impediment(s) including but not limited to the building on and off the footprint of the former MGP building, City of Superior buildings and sewer lines, railroad tracks, and material piles at Lakehead Concrete may make complete site investigation and/or remediation of the contamination on this property impracticable. Upon removal of a structural impediment, SWL&P and/or the property owner shall investigate the degree and extent of contamination obstructed by the structural impediment. If contamination is found at that time, the property owner shall remediate the contamination in accordance with Wis. Admin. Code chs. NR 700-799.

GROUNDWATER*Continuing Obligations to Address Groundwater Contamination and/or Monitoring Wells*Groundwater Contamination (Wis. Admin. Code ch. NR 140 and § NR 812.09(4)(w))

Groundwater contamination which equals or exceeds the enforcement standards is present as shown on the enclosed Figure 2. To construct a new well or reconstruct an existing well in the area of contamination, the property owner must obtain prior DNR approval. Additional casing may be necessary to prevent contamination of the well.

Continued Monitoring Required (Wis. Admin. Code § NR 716.14(2), ch. NR 141)

The continued monitoring of wells will be necessary during the remedial action activities. Monitoring wells as shown on the enclosed map (Figure 4-1, Long Term Groundwater Monitoring Network, October 2022), will be sampled according to the FSP.

VAPOR*Continuing Obligations to Address Vapor Contamination*

Vapor intrusion (VI) is the movement of vapors coming from volatile chemicals in the soil or groundwater or within preferential pathways into buildings where people may breathe air contaminated by the vapors.

VI - Commercial/Industrial Use (Wis. Stat. § 292.12(2))

Volatile Organic Compounds (VOCs) remain in soil and groundwater as shown on the enclosed Figure 2 at concentrations that may be of concern for vapor intrusion, and that may pose a long-term risk to human health if allowed to migrate into an occupied building. Use of the properties described above where VOC contamination is present is restricted to industrial. If changes in property or land use are planned, the property owner must evaluate whether conditions are protective for the proposed use. The DNR may require additional response actions to enable the proposed use of the property.

VI - Future Concern (Wis. Stat. § 292.12(2))

VOCs and semivolatile organic compounds remain in soil and groundwater as shown on the enclosed Figure 2 at concentrations that may be of concern for vapor intrusion. Vapor control technologies may be required in the future if a building is constructed, renovated, or expanded in an area where no building currently exists unless the property owner assesses the vapor pathway and the DNR agrees that vapor control technologies are not needed.

DNR NOTIFICATION AND APPROVAL REQUIREMENTS

Certain activities are limited at sites with COs imposed to maintain protectiveness to human health and the environment. The property owner is required to notify the DNR at least 45 days before and obtain approval from the DNR prior to taking the following actions (Wis. Admin. Code §§ NR 727.07, Wis. Stat. § 292.12(6)).

- Before changing the use of the property to a non-industrial use, when industrial soil standards were at the time of remedial action approval.
- Before removing a structural impediment.
- Before changing the use or occupancy to a different commercial or industrial use or to a residential exposure setting.
- Before changing the land use for sites where commercial or industrial exposure settings were used to determine vapor risk screening levels.
- Before constructing a building and/or modifying use of or the construction of an existing building or changing property use.

Certain activities are limited at sites where COs have been imposed to reduce the risk of exposure to residual contamination via vapor intrusion. For properties with a continuing obligation for addressing the future risk of vapor intrusion when buildings exist at the time of remedial action approval, changes to the current building use and layout are prohibited without prior DNR approval. This includes any change in building construction, reconstruction or partial demolition. The DNR may require additional actions may be required at that time to re-assess for vapor intrusion and mitigate, as appropriate.

SUBMITTALS AND CONTACT INFORMATION

Site, case-related information and DNR contacts can be found online in the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW); go to dnr.wi.gov and search "BOTW." Use the BRRTS ID # found at the top of this letter. The site can also be found on the map view, Remediation and Redevelopment Sites Map (RRSM) by searching "RRSM."

Send written notifications and inspection logs and monitoring well filling and sealing forms to the DNR using the RR Program Submittal Portal at dnr.wi.gov, search "RR submittal portal" (<https://dnr.wi.gov/topic/Brownfields/Submittal.html>). Questions on using this portal can be directed to the Project Manager below or to the environmental program associate (EPA) for the regional DNR office. Visit dnr.wi.gov, search "RR contacts" and select the EPA tab (<https://dnr.wi.gov/topic/Brownfields/Contact.html>).

The DNR appreciates your efforts to restore the environment at this site. Please contact John Sager at john.sager@wisconsin.gov or (715) 919-7239 if you have any questions. You may also contact me at Christopher.saari@wisconsin.gov or (715) 208-4004.

Sincerely,



Christopher A. Saari
Northern Region Team Supervisor
Remediation and Redevelopment Program

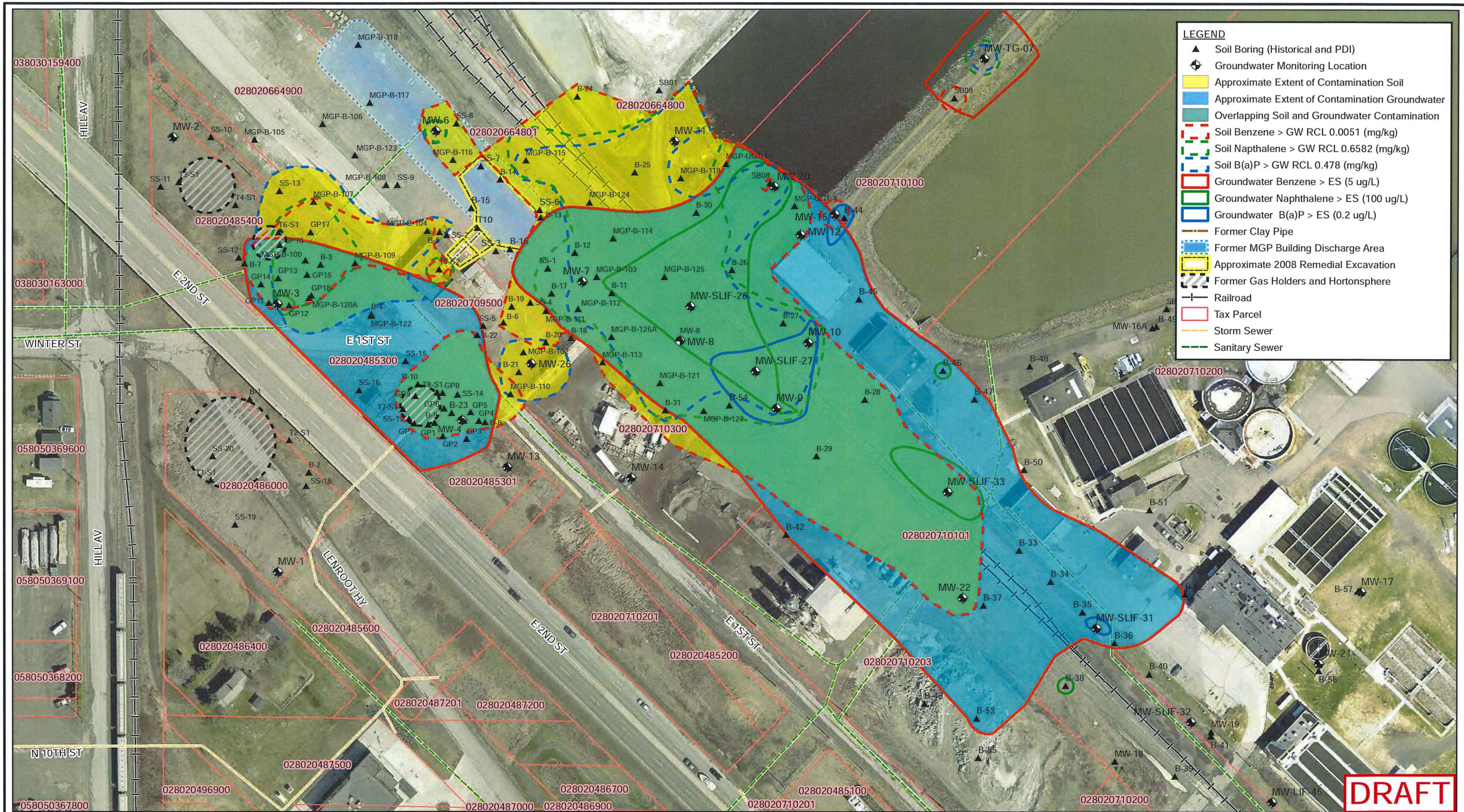
Attachments:

- Figure 2, Approximate Extent of Combined Soil and Groundwater Contamination Superior, Wisconsin, April 2022
- Figure 4-1, Long Term Groundwater Monitoring Network, October 2022

cc: File

John Sager – DNR Superior (via email)

Erin Hughes – Foth (via email)



LEGEND

- ▲ Soil Boring (Historical and PDI)
- ⊕ Groundwater Monitoring Location
- Yellow Area: Approximate Extent of Contamination Soil
- Blue Area: Approximate Extent of Contamination Groundwater
- Green Area: Overlapping Soil and Groundwater Contamination
- Red Dashed Line: Soil Benzene > GW RCL 0.0051 (mg/kg)
- Green Dashed Line: Soil Naphthalene > GW RCL 0.6582 (mg/kg)
- Blue Dashed Line: Soil B(a)P > GW RCL 0.478 (mg/kg)
- Red Solid Line: Groundwater Benzene > ES (5 ug/L)
- Green Solid Line: Groundwater Naphthalene > ES (100 ug/L)
- Blue Solid Line: Groundwater B(a)P > ES (0.2 ug/L)
- Orange Line: Former Clay Pipe
- Blue Dotted Area: Former MGP Building Discharge Area
- Yellow Dotted Area: Approximate 2008 Remedial Excavation
- Black and White Hatched Area: Former Gas Holders and Hortonsphere
- Black Line: Railroad
- Red Outline: Tax Parcel
- Yellow Line: Storm Sewer
- Green Line: Sanitary Sewer

- NOTES:**
- 2019 - 3" resolution air photo from Douglas County.
 - Horizontal coordinate system: NAD 1983 Douglas County, units in feet.
 - Groundwater impacts were estimated based on the maximum concentration observed between the April 2017 and July 2020 (PDI) monitoring events. The extent of groundwater contamination is delineated as exceedances of the WDNR NR 140 Enforcement Standard (ES).
 - Soil impacts were estimated from historical and PDI sample data. The extent of soil contamination is delineated as exceedances of the WDNR. Industrial soil direct-contact RCL for soil 0-4 ft bgs or soil to groundwater protection RCL for soil >4 ft bgs.
 - Parcels supplied by Douglas County GIS.

Industrial Soil D-C RCL
 - Benzene <7.07 mg/kg
 - Naphthalene <24.1 mg/kg
 - Benzo(a)pyrene <2.11 mg/kg

Soil to Groundwater Protection RCL
 - Benzene <0.0051 mg/kg
 - Naphthalene <0.6582 mg/kg
 - Benzo(a)pyrene <0.478 mg/kg



This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.



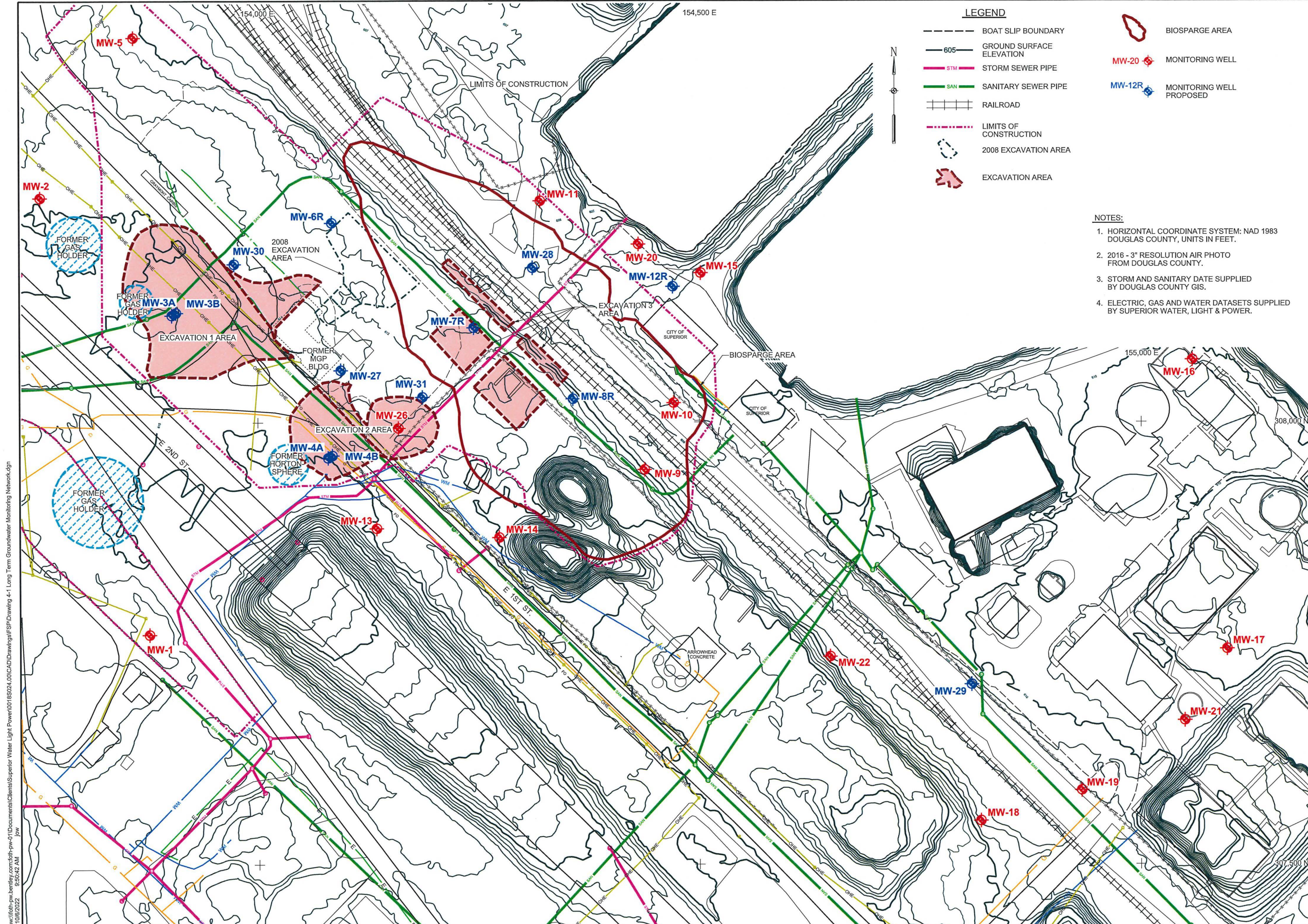
SUPERIOR WATER, LIGHT & POWER

FIGURE 2

APPROXIMATE EXTENT OF COMBINED SOIL AND GROUNDWATER CONTAMINATION SUPERIOR, WISCONSIN

Date: APRIL 2022	Revision Date:
Drawn By: SGL	Checked By: BDS1
Project: 18S024	

DRAFT



LEGEND

- BOAT SLIP BOUNDARY
- 605 GROUND SURFACE ELEVATION
- STM STORM SEWER PIPE
- SAN SANITARY SEWER PIPE
- RAILROAD
- LIMITS OF CONSTRUCTION
- 2008 EXCAVATION AREA
- EXCAVATION AREA
- BIOSPARGE AREA
- MW-20 MONITORING WELL
- MW-12R MONITORING WELL PROPOSED

- NOTES:**
- HORIZONTAL COORDINATE SYSTEM: NAD 1983 DOUGLAS COUNTY, UNITS IN FEET.
 - 2016 - 3" RESOLUTION AIR PHOTO FROM DOUGLAS COUNTY.
 - STORM AND SANITARY DATE SUPPLIED BY DOUGLAS COUNTY GIS.
 - ELECTRIC, GAS AND WATER DATASETS SUPPLIED BY SUPERIOR WATER, LIGHT & POWER.

Foth
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**UPLAND AREA REMEDIAL ACTION
 DESIGN DRAWINGS
 FOR THE
 FORMER MGP SITE
 SUPERIOR WATER, LIGHT & POWER**

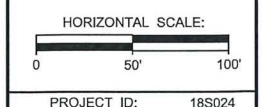
DOUGLAS COUNTY
 WISCONSIN

NO.	BY	DATE	DESCRIPTION

RECORD DRAWING OF COMPLETED CONSTRUCTION BY:
 RECORD DRAWINGS OF COMPLETED CONSTRUCTION
 CONFORMING TO CONTRACTOR AND / OR OWNERS' RECORDS.
 BY: _____ DATE: _____

DATE OF PREPARATION	
BY	DATE
SURVEYED	
DRAWN	JOW OCT. 2022
DESIGNED	
CHECKED	BDS1 OCT. 2022

**LONG - TERM
 GROUNDWATER
 MONITORING
 NETWORK**



PROJECT ID: 18S024
4-1

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