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Our ref: 12655584-LTR-17

February 02, 2026

Ms. Clara Copps
Remedial Project Manager
SEMD, Remedial Response Section 3
United States Environmental Protection Agency – Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Response to EPA Comments, EPA Review of Groundwater Sampling Work Plan - PFAS
Wausau Groundwater Contamination Superfund Site

Dear Ms. Copps:

In response to the U.S. Environmental Protection Agency's (USEPA) letter of January 13, 2026, we are providing the following responses to comments related to the Wausau Water Supply Superfund Site in Wausau, Wisconsin (Site). USEPA comments are outlined in bold below, followed by GHD responses in italics.

United States Environmental Protection Agency Comments January 13, 2026

1. **General comment: Please include a discussion of City PFAS sampling results in the annual groundwater monitoring report, given that all active City wells are in the vicinity of the site. Please discuss data from the previous year (2025) and, if possible, include information about the City's sampling sources/locations.**

   Acknowledged.

2. **General comment: Cross sections should be included in the PFAS data report/annual monitoring report that help to show the vertical degree and extent of the potential PFAS groundwater contamination.**

   Acknowledged.

3. **Page 1, Section 2.1: If PFAS is detected in this upcoming sampling event, then samples should be collected upgradient, sidegradient and/or downgradient until the plume is delineated. The expectation is that the PFAS plume be fully delineated, and new monitoring wells be installed to achieve this if necessary.**

   We acknowledge this comment and have revised Section 2.1 accordingly.

4. **Sampling locations (figure 2):**
   a. **Add wells C6S and C4D to the sampling plan to provide upgradient data points to the southern end of the known groundwater plume.**

      The Work Plan has been revised and now includes monitoring wells C6S and C4D.

b. **E24AR has identified CVOC impacts in past sampling events, indicating that there is some easterly flow to the groundwater plume. Given this, please add this monitoring well to the PFAS sampling plan. E37A may be omitted since CVOCs have not been detected at this location in recent monitoring events.**

   The Work Plan has been revised to include monitoring of well E24AR, while well E37A has been removed from the Work Plan.

c. **To help to evaluate the vertical extent of potential PFAS contamination, we recommend that R2S and W55A be added to the PFAS sampling plan. These wells are co-located with wells that are already proposed as a part of the PFAS sampling plan.**

   The Work Plan has been revised to include monitoring of well R2S and W55A.

If you have any questions on the changes to the report, please do not hesitate to contact us.

Regards,

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MR/ls/LTR-17/S4

Copy to: PRP Group (Email)

Groundwater Sampling Work Plan - PFAS

Revision 1

Wausau Water Supply NPL Site
Wausau, Wisconsin

City of Wausau

February 02, 2026

→ The Power of Commitment

Contents

Figure Index

1. Introduction

In response to the U.S. Environmental Protection Agency's (USEPA) request in a letter dated April 24, 2025, GHD on behalf of the Wausau Potential Responsible Party (PRP) Group has prepared this PFAS Groundwater Sampling Work Plan (Work Plan) that provides the proposed scope of work and field procedures for conducting the PFAS groundwater sampling activities associated with the Wausau Water Supply Superfund Site in Wausau, Wisconsin (Site). The site location is shown in Figure 1.

2. Field Investigation Activities

2.1 Groundwater Monitoring

Groundwater monitoring at the Site consists of an annual groundwater monitoring event, covered in the existing approved groundwater monitoring plan (dated June 2000), and PFAS sampling upon USEPA request, as described herein. If PFAS is not found in the initial samples, we recommend no further PFAS testing. If PFAS is found in the initial samples, further sampling will be conducted until the plume is fully delineated. Groundwater sampling will be conducted to detect potential changes in the hydrogeologic and chemical characteristics of the groundwater. Laboratory analysis of PFAS will be performed by Eurofins Cleveland in accordance with the QAPP.

2.1.1 Groundwater Elevation Monitoring

Sitewide groundwater elevation monitoring will be conducted concurrently with each scheduled groundwater sampling event, according to the groundwater sampling procedures described in Appendix B-01 of the QAPP.

2.1.2 PFAS Monitoring Locations

The 14 proposed PFAS groundwater sampling locations consist of monitoring wells C4S, C4D, C6S, W54, R4D, C2S, R2S, R2D, W55, and W55A on the West Bank and WC3B, WC5A, W22A, and E24AR on the East Bank as presented in Figure 2. Groundwater elevation monitoring will be conducted prior to groundwater sampling. The full list of PFAS target analytes can be found in Worksheet #12-4-2 of the QAPP.

3. Sampling Equipment and Procedures

The procedures and protocols for collecting and analyzing samples and performing all field related activities are described in the following sections.

3.1 General Sampling Procedures

The following protocols will be employed during all sampling events at the Site:

- Sampling activities will be conducted in accordance with the Health and Safety Plan (HASP).
- Monitoring well locations will be inspected during monitoring activities.
- Sampling instruments and equipment will be cleaned in accordance with the protocols presented in Section 5.0 prior to sampling at each location.
- A new pair of disposable nitrile gloves will be used at each location to be sampled for chemical analyses. Additional glove changes will be undertaken as conditions warrant.

– Sampling generated wastes such as gloves, Tyvek suits, etc. will be collected and containerized for subsequent disposal.
– Sampling and analysis activities, decontamination activities, handling of investigation derived waste (IDW), and the selection, use, and calibration of sampling equipment and instruments will follow the protocols and guidelines of the Work Plan and QAPP.

3.2 PFAS-Specific Sampling Procedures

When PFAS analysis is required, monitoring well groundwater samples will be collected using low-flow procedures described here, using a PFAS-free submersible pump (excluding Grundfos pumps), high-density polyethylene (HDPE) or silicone tubing, or other PFAS approved tubing at each sampling location. The specific sampling procedure outlined below has been developed based on the current knowledge and best practices of PFAS sampling. All field staff will follow these procedures to ensure that the potential for cross-contamination of samples is minimized.

3.2.1 General PFAS Field Procedures

Materials that are likely to come into direct contact with the sample should be PFAS-free, other materials, such as clothing, personal care products, waterproof notebooks, sticky notes, are unlikely to influence sample results; however, if possible, the preference is for sampler(s) to wear synthetic and natural fibers (preferably cotton) that are well laundered no fabric softener. Personal Care Products (PCPs) are allowable provided they are not applied near the sampling area, and hands are thoroughly washed and gloves worn prior to sample handling.

During sampling, never place caps from sample containers on the ground or in a pocket. The protocol is to hold the sample container in one hand and the sample container cap in the other. It is important not to touch the inside of the sample container cap or the inside of the sample container to any ports or with your hands. Don new disposable nitrile gloves at each sampling location and following contact with a potential contaminant source. If the sampler's gloves are compromised at any point during the individual sample collection, the sampler must change to a new pair of gloves so that the sample is representative of the Site conditions. Nitrile gloves also need to be worn when labelling bottles and preparing coolers for shipment in order to avoid contact with adhesives (bottle labels, cooler labels), which could lead to contamination of the PFAS samples.

The following represents a general PFAS sampling approach:

1. Sampler must wash hands with certified PFAS-free water before wearing initial pair of nitrile gloves to limit contamination during sampling from activities undertaken prior to arrival at the site.
2. Fine and Ultra-Fine point Sharpie® markers are acceptable to label the empty sample bottle while in the staging area provided the lid is on the sample bottle and gloves are changed following sample bottle labelling. Pre-printed labels from the laboratory may be used as well.
3. Samples for PFAS analysis shall be collected in laboratory supplied polypropylene or high-density polyethylene (HDPE) bottles with unlined non-Teflon polypropylene or HDPE screw cap.
4. PFAS samples shall be filled to the bottom of the neck of the bottle and not to the very top.
5. PFAS equipment blanks shall be collected by using the bottle of certified PFAS-free water (provided by the laboratory) and pouring it over the decontaminated depth-to-water meter or decontaminated pump and collecting the water in sample containers.

Materials to avoid during sampling events include:

– Perfluoroalkoxy polymer (PFA), which is known to be used in the food packaging industry.
– Food containers.
– Perfluoropolyethers (PFPE) are used as a surface treatment for natural stone.
– Metal, glass, plastic, textiles, leather, and paper and paperboard treatment for food-contact applications.

- Side-Chain Fluorinated Polymers such as fluorinated acrylates, methacrylate, urethane, and oxetane polymers have been used in surfactants and surface protection products. These polymers are useful as water-, stain-, and grease proofing finishes for textile, leather, and paper surfaces.
- Teflon ®, polytetrafluoroethylene (PTFE).
- Waterproof coatings containing PFAS.
- Chemicals with "fluoro" on the SDS.
- Fluorinated ethylene propylene (FEP).
- Ethylene tetrafluoroethylene (ETFE).
- Low-density polyethylene (LDPE), polyvinylidene fluoride (PVDF).

3.2.2 PFAS Decontamination Procedures

Field sampling equipment used at each sample location requires cleaning between uses. When sampling for PFAS, the Safety Data Sheets (SDSs) of commonly used detergents or soaps used in decontamination procedures will be reviewed to ensure that fluoro-containing chemicals are not in the ingredients list. Alconox®, Liquinox®, and distilled water are all acceptable products to decontaminate equipment. Laboratory-certified PFAS-free water will be used for the final rinse during the decontamination of sampling equipment.

3.3 Monitoring Well Purging and Sampling

3.3.1 Monitoring Well Purging

- Water levels at all locations to be sampled will be measured on one day, prior to purging wells.
- The depth to water in each well will be measured and recorded to the nearest 0.01 foot using an electric water level tape. The measuring device will be decontaminated with distilled water prior to use at each well.
- New disposable nitrile gloves will be used when sampling each well. New glove changes will be made as conditions warrant.
- The equipment used for purging will be decontaminated prior to use at each well. Polyethylene discharge hose tubing will be dedicated to each well. Purge water will be containerized and stored on-site until laboratory analytical results are available.
- The wells will be purged using low flow groundwater purging techniques with an electric submersible pump or bladder pump. Low flow purging at the monitoring wells will be conducted using a maximum pumping rate of 500 mL/min. The pumps will be lowered slowly into the well, with their intake corresponding to the middle of the saturated portion of the well screen interval.
- During groundwater purging, field measurements of pH, specific conductivity, temperature, ORP, dissolved oxygen (DO), and turbidity will be taken every 5 minutes for a minimum of 20 minutes. The measurement of these field parameters will be used to evaluate if stabilization of the purged groundwater has occurred prior to the collection of groundwater samples. The field measurements will be taken and recorded approximately every 5 minutes. Groundwater stabilization will be considered achieved when three consecutive readings or a maximum of five well screen volumes are purged for each of the field parameters, and are within the following limits:

pH	±0.1 pH units of the average value of the three readings
Temperature	±3 percent of the average value of the three readings
Conductivity	±0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm or ±0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm
ORP	±10 millivolts (mV) of the average value of the three readings
DO	±10 percent of the average value of the three readings
Turbidity	±10 percent of the average value of the three readings, or a final value of less than 5 NTU If final turbidity is <= 5 NTU collect total metals only. If turbidity > 5 NTU collect total and dissolved (field filtered) metals samples

– Calibration procedures for the equipment used to collect field parameters are described in Appendix B of the QAPP.
– During the purging process, the depth to groundwater will be periodically measured to ensure minimal drawdown during pumping (i.e. <0.3 feet). If excessive drawdown occurs, then the purge rate will be reduced by increments of 50 to 100 mL/min to a minimum rate of 100 mL/min until the drawdown stabilizes.
– In the event that drawdown does not stabilize, low-flow purging will continue for no more than 2 hours. The well will then be purged to the top of the pump and allowed to recover. Following sufficient recovery, the sample will be collected.

3.3.2 Monitoring Well Sampling

Following well purging, monitoring well sampling will be conducted according to the following protocols:

– Sampling will be conducted as soon after purging as possible.
– New disposable nitrile gloves will be used for sampling the well. Additional glove changes will be undertaken as conditions warrant.
– The monitoring wells will be sampled using bladder pumps or electric submersible pumps at a rate between 100 and 500 mL/min to minimize volatilization of the volatile organic portion of the sample. Prior to use for purging and/or sampling, non-dedicated pumps to be utilized for sampling will be cleaned as specified by Section 5.0.
– For monitoring wells converted from residential wells, the pump intake depth will be identified based on a review of the respective geophysical logs.
– Sample container, preservation, shipping, and packaging requirements will be in accordance with the QAPP.
– A sufficient amount of groundwater will be collected for chemical analysis. Quality control sample requirements are discussed in the QAPP. Duplicate samples will be collected concurrently with the original samples; therefore, sampling equipment will not be decontaminated before the collection of the duplicate sample. Equipment (rinsate) blanks will be collected using only analyte-free deionized water supplied by the laboratory. All sample containers will be precleaned in accordance with "Specifications and Guidance for Contaminant-free Sample Containers", USEPA 540/R-93/051.

4. Sample Handling and Custody Requirements

The procedures for sample handling, labeling, shipping, and chain-of-custody documentation are provided in the subsections that follow.

4.1 Sample Handling

The sample numbering system for the project has been designed to uniquely identify each sample from each sampling program and event. The site-specific sample number should consist of the following:

MC-MMDDYY-XX-01

where	MC (Matrix Code)	Designates sample type (GW-water, RW-residential well, L-leachate, SW-surface water, SD-sediment, S-soil)
	yymmdd	Date of collection
	XX	Sampler initials
	01	Sequential number starting with 01 each sample event

Trip blank samples will be identified on the chain-of-custody form with the date of collection. MS/MSD samples will also be identified on the chain-of-custody form.

Samples will be placed in shipping coolers containing bagged, cubed ice immediately following collection. The samples will be grouped in the shipping cooler by the order in which the samples are collected. The samples will be shipped to the laboratory via an overnight courier service, generally on the day they are collected. The only exceptions to this procedure will be for samples collected after the courier service has picked up the shipment for the day, and samples collected on a Sunday or holiday. In these instances, the samples will be shipped on the next business day. An example chain-of-custody form is provided in Appendix B of the QAPP.

4.2 Sample Custody

Chain-of-custody is the sequence of possession of an item. An item (such as a sample or final evidence file) is considered to be in custody if the item is in actual possession of a person, the item is in the view of the person after being in his/her actual possession, or the item was in a person's physical possession but was placed in a secure area by that person. Field, laboratory, and final evidence files custody procedures are described in the subsections that follow.

4.2.1 Field Custody Procedures

Logbooks, field sheets, or electronic data collection methods will be used to record field data collection activities. Entries into field logbooks or field sheets will be described in as much detail as possible to ensure that a particular situation can be reconstructed solely from the entries. Field logbooks or field sheets will be stored at GHD's office when not in use. Refer to Appendix B-04 of the QAPP for additional sample handling procedures.

5. Field Equipment and Sample Container Cleaning Procedures

The following procedures will be followed for decontamination of sampling equipment both before and between sampling events:

1. Wipe to remove loose debris.
2. Wash thoroughly with Alconox or equivalent detergent.
3. Rinse with potable water.

4. Rinse with distilled water.
5. Air dry.

Rinse waters will be contained and disposed of appropriately.

Sample containers will be provided by the laboratory. All containers will be precleaned in accordance with the USEPA guidance document entitled "Specifications and Guidance for Contaminant-Free Sample Containers", USEPA 540/R-93/051. Certificates of analysis for each lot of containers will be maintained by the laboratory.

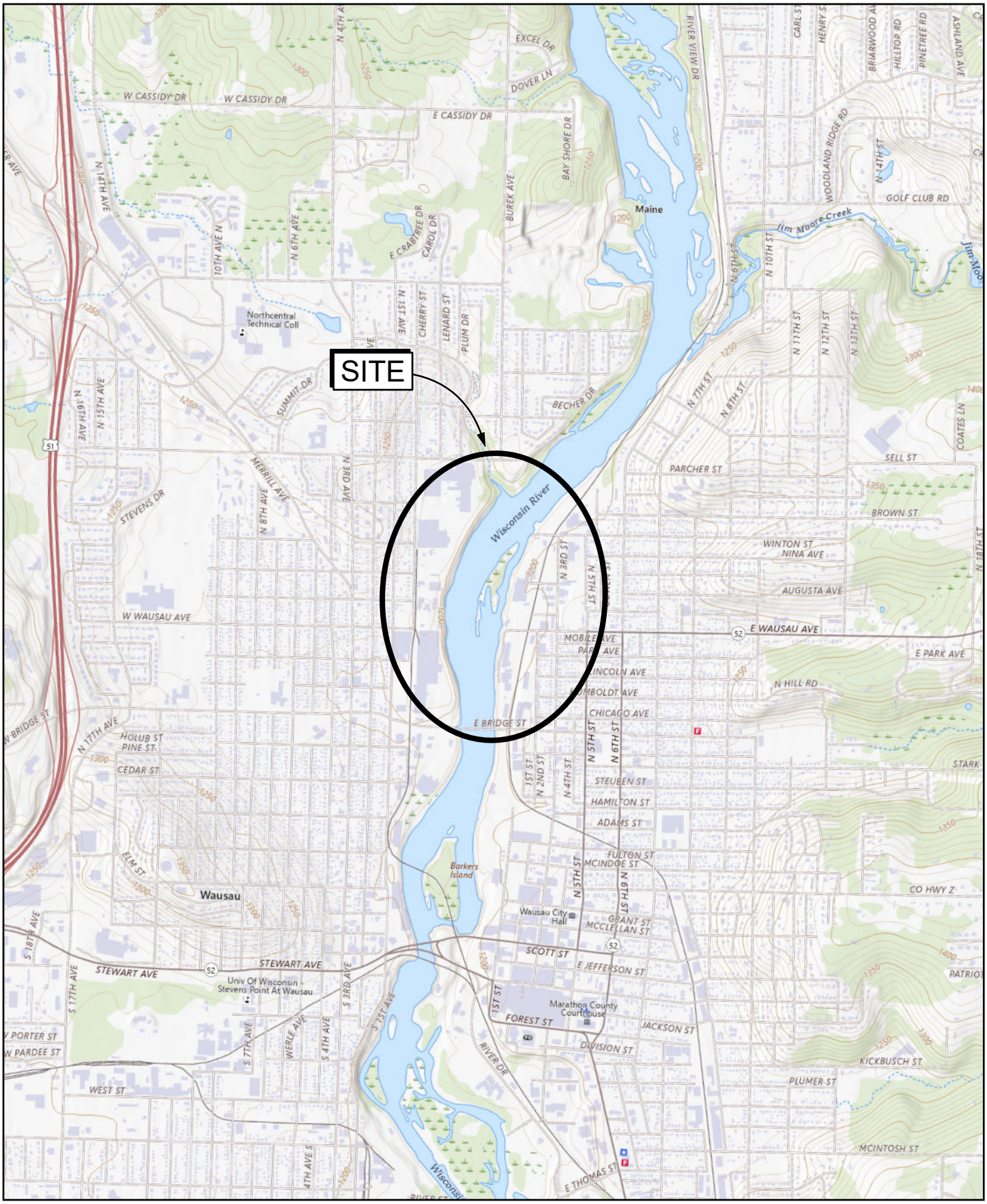
6. Reporting

PFAS sampling will be conducted during the annual groundwater sampling event, and the results will be included in the annual groundwater monitoring report submitted to WDNR and USEPA.

7. Schedule

The 2025 annual sampling event has been postponed from fall 2025 to spring 2026 in order to accommodate the addition of PFAS sampling. The sampling schedule will be confirmed once WDNR and USEPA have approved this Work Plan. Upon completion of the field investigation, the annual monitoring report, including the PFAS sampling results, will be submitted to WDNR and USEPA within 60 days of receiving the finalized analytical data.

Figures



Paper Size ANSI A

0 500 1,000 1,500 2,000

Feet

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN UTM Zone 16N

N

GHD

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Project No. **12655584**
Revision No. **-**
Date **11/07/2025**

SITE LOCATION

FIGURE 1

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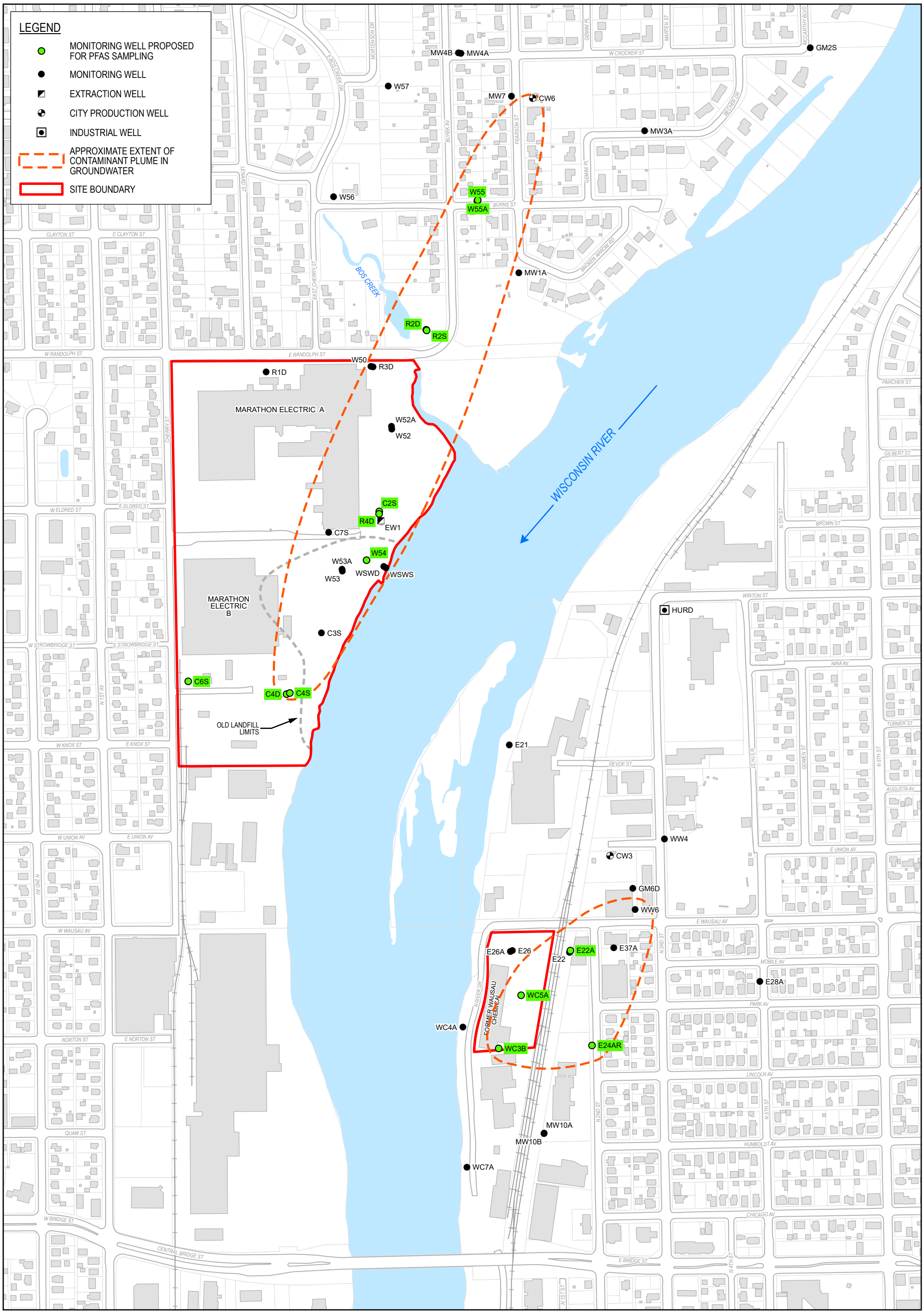
LEGEND
MONITORING WELL PROPOSED FOR PFAS SAMPLING
MONITORING WELL
EXTRACTION WELL
CITY PRODUCTION WELL
INDUSTRIAL WELL
APPROXIMATE EXTENT OF CONTAMINANT PLUME IN GROUNDWATER
SITE BOUNDARY
MW4B
MW4A
GM2S
W57
MW7
CW6
MW3A
W56
W55
W55A
MW1A
R2D
R2S
W50
R3D
R1D
MARATHON ELECTRIC A
W52A
W52
C2S
R4D
EW1
C7S
W54
W53A
W53
WSWD
WSWS
MARATHON ELECTRIC B
C3S
C6S
C4D
C4S
OLD LANDFILL LIMITS
WISCONSIN RIVER
HURD
E21
WW4
CW3
GM6D
WW6
E26A
E26
E22
E22A
E37A
E28A
WC5A
WC4A
WC3B
E24AR
MW10A
MW10B
WC7A
BOS CREEK
MORTENSON DR
E BOS CREEK DR
BUREK AV
PEARSON ST
GEMINI PL
MARTEN ST
MCCARTHY BLVD
W CROCKER ST
BECHER DR
BURNS ST
BROKEN ARROW RD
LENARD ST
EAST CHERRY ST
CLAYTON ST
E CLAYTON ST
W RANDOLPH ST
E RANDOLPH ST
CHERRY ST
W ELDRED ST
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W STROWBRIDGE ST
E STROWBRIDGE ST
N 1ST AV
W KNOX ST
E KNOX ST
W UNION AV
E UNION AV
N 2ND AV
W WAUSAU AV
NORTON ST
E NORTON ST
QUAW ST
W BRIDGE ST
CENTRAL BRIDGE ST
N RIVER DR
FORMER WAUSAU CHEMICAL
N 2ND ST
N 1ST ST
E BRIDGE ST
N 4TH ST
HUMBOLDT AV
LINCOLN AV
N 5TH ST
PARK AV
MOBILE AV
E WAUSAU AV
N 3RD ST
CHICAGO AV
WINTON ST
NINA AV
DEVOE ST
GOWEN ST
N 6TH ST
AUGUSTA AV
TURNER ST
BROWN ST
GILBERT ST
PARCHER ST
Paper Size ANSI B
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Feet
N
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet
GHD
WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN
PROPOSED PFAS SAMPLING LOCATIONS
Project No. 12655584
Revision No. -
Date 01/27/2026
FIGURE 2
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