

Notice: Use this form to request a **written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

Definitions

"Property" refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

"Liability Clarification" refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

"Technical Assistance" refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

"Post-closure modification" refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

Select the Correct Form

This form should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do **not** use this form if one of the following applies:

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: dnr.wi.gov/topic/Brownfields/Pubs.html.

Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

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Section 1. Contact and Recipient Information

Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

Last Name Nelson	First Denice	MI	Organization/ Business Name Tyco Fire Products LP
Mailing Address 2700 Industrial Parkway South		City Marinette	State WI
		ZIP Code 54143	
Phone # (include area code)	Fax # (include area code)	Email	

The requester listed above: (select all that apply)

- Is currently the owner
 Is considering selling the Property
 Is renting or leasing the Property
 Is considering acquiring the Property
 Is a lender with a mortgagee interest in the Property
 Other. Explain the status of the Property with respect to the applicant:

Contact Information (to be contacted with questions about this request)

Select if same as requester

Contact Last Name Johnson	First Shauna	MI	Organization/ Business Name Arcadis
Mailing Address 225 West Wacker Drive, Suite 2015		City Chicago	State IL
		ZIP Code 60606	
Phone # (include area code) (312) 575-3732	Fax # (include area code)	Email shauna.johnson@arcadis.com	

Environmental Consultant (if applicable)

Contact Last Name Johnson	First Shauna	MI	Organization/ Business Name
Mailing Address 225 West Wacker Drive, Suite 2015		City Chicago	State IL
		ZIP Code 60606	
Phone # (include area code) (312) 575-3732	Fax # (include area code)	Email shauna.johnson@arcadis.com	

Section 2. Property Information

Property Name Tyco Fire Technology Center - PFCs	FID No. (if known) 438005590
BRRTS No. (if known) 0238580694	Parcel Identification Number
Street Address 2700 Industrial Parkway South	City Marinette
	State WI
	ZIP Code 54143
County Marinette	Municipality where the Property is located <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of Marinette
Property is composed of: <input type="radio"/> Single tax parcel	<input checked="" type="radio"/> Multiple tax parcels
Property Size Acres 380	

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1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

No Yes

Date requested by: _____

Reason: _____

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

No. **Include the fee that is required for your request in Section 3, 4 or 5.**

Yes. **Do not include a separate fee.** This request will be billed separately through the VPLE Program.

Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:

Section 3. Technical Assistance or Post-Closure Modifications;

Section 4. Liability Clarification; or Section 5. Specialized Agreement.

Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: [Numbers in brackets are for WI DNR Use]

- No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - **Include a fee of \$350.** Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- Review of Site Investigation Work Plan - NR 716.09, [135] - **Include a fee of \$700.**
- Review of Site Investigation Report - NR 716.15, [137] - **Include a fee of \$1050.**
- Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - **Include a fee of \$1050.**
- Review of a Remedial Action Options Report - NR 722.13, [143] - **Include a fee of \$1050.**
- Review of a Remedial Action Design Report - NR 724.09, [148] - **Include a fee of \$1050.**
- Review of a Remedial Action Documentation Report - NR 724.15, [152] - **Include a fee of \$350**
- Review of a Long-term Monitoring Plan - NR 724.17, [25] - **Include a fee of \$425.**
- Review of an Operation and Maintenance Plan - NR 724.13, [192] - **Include a fee of \$425.**

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- Schedule a Technical Assistance Meeting - **Include a fee of \$700.**
- Hazardous Waste Determination - **Include a fee of \$700.**
- Other Technical Assistance - **Include a fee of \$700.** Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. **Include a fee of \$1050, and:**
 - Include a fee of \$300 for sites with residual soil contamination; and
 - Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this fo

Section 6. Other Information Submitted

Identify all materials that are included with this request.

Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.

Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.

Phase I Environmental Site Assessment Report - Date: _____

Phase II Environmental Site Assessment Report - Date: _____

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Legal Description of Property (required for all liability requests and specialized agreements)

Map of the Property (required for all liability requests and specialized agreements)

Analytical results of the following sampled media: Select all that apply and include date of collection.

Groundwater

Soil

Sediment

Other medium - Describe: _____

Date of Collection: _____

A copy of the closure letter and submittal materials

Draft tax cancellation agreement

Draft agreement for assignment of tax foreclosure judgment

Other report(s) or information - Describe: Revised Long-Term Potable Well Sampling Plan, v.10

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

Yes - Date (if known): _____

No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at:

dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf.

Section 7. Certification by the Person who completed this form

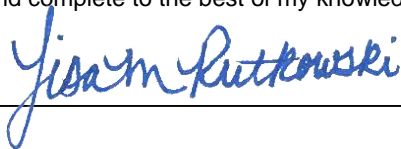
I am the person submitting this request (requester)

I prepared this request for: Denice Nelson

Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.

Signature



Date Signed

10/1/2024

Senior Environmental Specialist

Title

(414) 277-6233

Telephone Number (include area code)

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a [DNR regional brownfields specialist](#) with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

DNR NORTHERN REGION

Attn: RR Program Assistant
Department of Natural Resources
223 E Steinfest Rd Antigo, WI 54409

DNR NORTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313

DNR SOUTH CENTRAL REGION

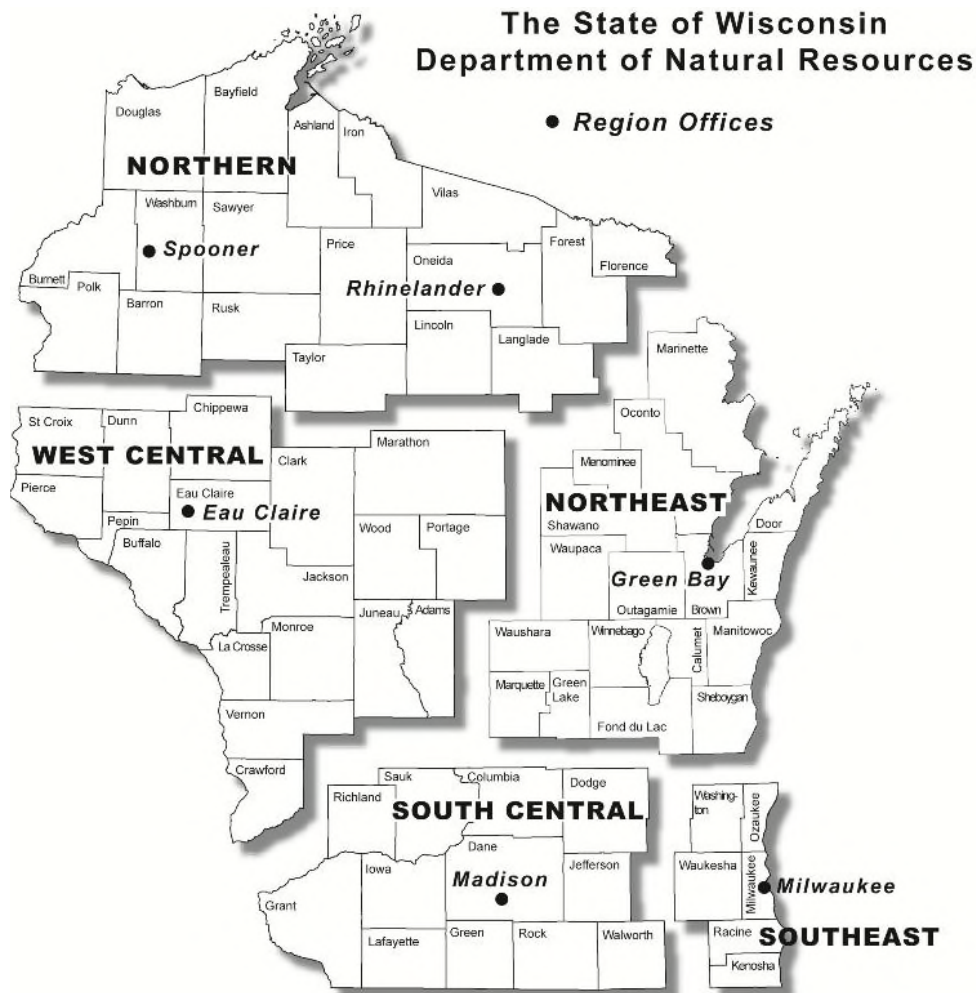
Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

DNR SOUTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2300 North Martin Luther King Drive
Milwaukee WI 53212

DNR WEST CENTRAL REGION

Attn: RR Program Assistant
Department of Natural Resources
1300 Clairemont Ave.
Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

DNR Use Only			
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer		Comments	
Fee Enclosed? <input type="radio"/> Yes <input type="radio"/> No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

Tyco Fire Products LP

REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

**Tyco Fire Technology Center
2700 Industrial Parkway South
Marinette, Wisconsin 54143
BRRTS# 02-38-580694**

October 1, 2024

Revised Long-Term Potable Well Sampling Plan

Tyco Fire Technology Center, 2700 Industrial Parkway South, Marinette, Wisconsin 54143
BRRTS# 02-38-580694

October 1, 2024

Prepared By:

Arcadis U.S., Inc.
126 North Jefferson Street, Suite 400
Milwaukee
Wisconsin 53202
Phone: 414 276 7742
Fax: 414 276 7603

Prepared For:

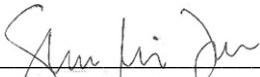
Tyco Fire Products LP
2700 Industrial Parkway South
Marinette, Wisconsin 54143

Our Ref:

30203152



Lisa M. Rutkowski
Senior Environmental Scientist



Shauna M. Johnson
Certified Project Manager



Scott T. Potter, PhD
Chief Hydrogeologist

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Version Control

Revision No.	Date Issued	Page No.	Description
0	3/8/2018	All	Initial Release
1	4/20/2018	All	Revisions based on WDNR comment letter dated March 30, 2018
2	4/1/2020	All	Regular update as requested by WDNR
3	3/16/2021	All	Revisions based on WDNR letter dated November 16, 2020
4	10/1/2021	All	Revisions based on WDNR comment letter dated June 18, 2021
5	5/17/2022	All	Revisions based on WDNR comment letters dated December 16, 2021
6	10/3/2022	All	Revisions reflecting potential drinking water source changes within PWSA
7	4/3/2023	All	Revisions based on WDNR comment letter dated 11/18/2022
8	10/2/2023	All	Regular update as requested by WDNR
9	4/1/2024	All	Regular update as requested by WDNR
10	10/1/2024	All	Updated per the WDNR letter dated August 26, 2024 requesting a report combining this sampling plan with analytical results and updates on well status previously provided in a separate Annual Potable Well Sampling Report.

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Acronyms and Abbreviations

Arcadis	Arcadis U.S., Inc.
BRRTS	Bureau of Remediation and Redevelopment Tracking System
COC	chain-of-custody
FTC	Fire Technology Center
GAC	Granular Activated Carbon
HDPE	high-density polyethylene
ID	identification
JCI	Johnson Controls, Inc.
NR	Natural Resources
PFAS	per- and polyfluoroalkyl substances
POET	point of entry treatment
PTFE	polytetrafluoroethylene
PWSA	potable well sampling area
RL	reporting limit
Site	Tyco Fire Technology Center located at 2700 Industrial Parkway South, Marinette, Wisconsin
TOC	total organic carbon
Tyco	Tyco Fire Products LP
USEPA	United States Environmental Protection Agency
WDHS	Wisconsin Department of Health Services
WDNR	Wisconsin Department of Natural Resources

Executive Summary

Arcadis U.S., Inc on behalf of Tyco Fire Products LP (Tyco) has prepared this Revised Long-Term Potable Well Sampling Plan (sampling plan) for the Tyco Fire Technology Center site located at 2700 Industrial Parkway South in Marinette, Wisconsin (Site; **Figure 1**).¹ This sampling plan outlines the activities that Tyco is performing to eliminate the primary potential exposure pathway (drinking water) for per- and polyfluoroalkyl substances (PFAS) in the potable well sampling area (PWSA) (as defined herein). This report also includes analytical results and updates on well status previously provided in a separate Annual Potable Well Sampling Report (Annual Report) that will now be reported herein. The Annual Report dated July 31, 2024, included data for samples collected through March 31, 2024. This sampling plan includes data for samples collected between April 1, 2024 and June 30, 2024.

During this reporting period, Arcadis sampled potable wells in the PWSA following the timelines and procedures as set forth in the *Revised Long-Term Potable Well Sampling Plan* (Arcadis 2024a):

- April – June 2024 (3 wells)

The results from the sampling are consistent with previous monitoring activities. The continued reduction in the number of samples collected under the residential sampling program is representative of the mature nature of the program and the number of wells that have either been replaced or are in the process of being replaced by the private replacement deep bedrock drinking water wells (Replacement Wells). It is proposed that the submission frequency of this report be reduced from a semiannual (every 6 months) report to an annual submittal. Tyco will continue to update WDNR on deep well progress as previously approved.

Tyco is addressing potentially impacted drinking water in the PWSA in three ways. First, Tyco has offered free bottled water to every parcel with a potable well within the PWSA. The bottled water is offered, regardless of the results of any sampling results from the potable well.

Second, Tyco offered a Point-of-Entry Treatment (POET) system for every residential drinking water well within the PWSA that had confirmed detections of PFAS. This report details the POET Monitoring Program that Tyco will continue to provide for each installed POET, until the Replacement Well is installed for that parcel. After the Replacement Well is installed for a parcel and test results confirm that the drinking water meets drinking water limits that apply to municipal drinking water in Marinette, the property owners will be allowed to keep the POET and maintain it at their own cost and expense, or Tyco will pay to remove the POET.

Third, Tyco is installing Replacement Wells in the PWSA. Tyco will continue to sample the previously existing potable wells that have been sampled in the PWSA, at the frequency previously used, until the Replacement Wells are installed for a parcel.² At the time of installation, Tyco will sample the Replacement Well to confirm that

¹ Wisconsin Department of Natural Resources (WDNR) has incorrectly identified Johnson Controls, Inc. (JCI) as a “responsible party” for this property under the Wisconsin Spills Law. The WDNR is in error. JCI does not own or operate the property at issue. In addition, JCI is not the corporate parent of Tyco.

² Tyco believes that continuing sampling at the frequency previously used will result in less disruption and confusion to the well owners and citizens of Marinette County. However, by continuing this activity, Tyco is not acknowledging the authority of the WDNR to require an investigation or remediation of PFAS, or to require the provision of alternate water supplies. Tyco is also not acknowledging or confirming the validity, enforceability, accuracy, or scientific basis, for the use of any proposed or final enforcement standards for PFAS enforced by Wisconsin Department of Health Services, WDNR, or other state or federal agency.

Revised Long-Term Potable Well Sampling Plan

the drinking water meets drinking water limits that apply to municipal drinking water in Marinette. The results will also be evaluated against the Wisconsin Department of Health Services (WDHS) current recommended standards for PFAS in groundwater. Thereafter, Tyco will sample the Replacement Wells quarterly for 1 year to confirm that there is no PFAS above recommended groundwater standards and that the systems installed are successfully treating naturally occurring elements in the water. Tyco will also continue to conduct sampling of groundwater wells in the PWSA pursuant to an approved Groundwater Monitoring Plan. If one of the deep bedrock long-term groundwater monitoring wells located near a Replacement Well detects PFAS above certain levels (addressed in more detail herein), Tyco will work in cooperation with the property owner and the Wisconsin Department of Natural Resources to determine appropriate next steps for ensuring safe drinking water.

1 Introduction

On behalf of Tyco Fire Products LP (Tyco), Arcadis U.S., Inc. (Arcadis) prepared this *Revised Long-Term Potable Well Sampling Plan* (sampling plan) for the Tyco Fire Technology Center (FTC) located at 2700 Industrial Parkway South in Marinette, Wisconsin (Site; **Figure 1**). Tyco and Arcadis are conducting Site investigation and monitoring activities under the oversight of the Wisconsin Department of Natural Resources (WDNR). As requested by WDNR, this document provides an update to the Revised Long-Term Potable Well Sampling Plan (Arcadis 2024a). This sampling plan and future versions, to be submitted every 12 months, will be applicable as described herein while existing potable wells (**Table 1**) in the potable well sampling area (PWSA) are in operation. This sampling plan does not apply to any private replacement deep bedrock drinking water wells (Replacement Wells) because they will be subject to the provisions of the Groundwater Monitoring Program. This report also includes updates on well status previously provided in a separate Annual Potable Well Sampling Report (Annual Report) that will now be reported herein. The Annual Report dated July 31, 2024 included data for samples collected through March 31, 2024. This sampling plan includes data for samples collected between April 1, 2024 and June 30, 2024. It is proposed that the submission frequency of this report be reduced from a semiannual (every 6 months) report to an annual submittal because the number of wells remaining in this program will be reduced by two thirds once the remaining Replacement Wells that have been requested are installed in the coming months.

In the PWSA, Tyco (a) provides bottled water, (b) offered a Point-of-Entry Treatment (POET) system for every residential drinking water well within the PWSA that had confirmed detections of per- and polyfluoroalkyl substances (PFAS) and conducts a POET Monitoring Program (**Table 2**), (c) conducts a potable well sampling program that was initiated in December 2017 and continues quarterly, and (d) is installing Replacement Wells.

Tyco has offered free bottled water to every parcel with a potable well within the PWSA. The bottled water is offered, regardless of the results of any sampling results from the potable well. Bottled water will be discontinued following installation of a Replacement Well and associated treatment system, and the testing results demonstrate the water is safe to drink.

Tyco previously offered a POET system for every residential drinking water well within the PWSA that had confirmed detections of PFAS. The interim POET system solution is offered to properties within the PWSA with confirmed PFAS detections above Wisconsin Department of Health Services (WDHS) current recommended groundwater standards where a Replacement Well is not feasible. This report details the POET Monitoring Program that Tyco will continue to provide for each installed POET, until the Replacement Well is installed for that parcel. After the Replacement Well is installed for a parcel and test results confirm that the drinking water meets drinking water limits that apply to municipal drinking water in Marinette, the property owners will be allowed to keep the POET and maintain it at their own cost and expense, or Tyco will pay to remove the POET.

Tyco is installing Replacement Wells in the PWSA. Tyco will continue to sample the previously existing potable wells in the PWSA, at the frequency previously used, until the Replacement Well is installed for a parcel. At the time of installation, Tyco will sample the Replacement Well to confirm that the drinking water meets drinking water limits that apply to municipal drinking water in Marinette. The results will also be evaluated against (WDHS current recommended standards for PFAS in groundwater. Thereafter, Tyco will sample the Replacement Wells quarterly for 1 year to confirm that there is no PFAS above recommended groundwater standards and that the systems installed are successfully treating naturally occurring elements in the water.

Revised Long-Term Potable Well Sampling Plan

Tyco will continue to monitor the extent of groundwater contamination in the PWSA through a network of monitoring wells and piezometers already in place or planned, pursuant to an approved Groundwater Monitoring Plan. If one of the deep bedrock long-term groundwater monitoring wells located near a Replacement Well detects PFAS above certain levels (addressed in more detail herein), Tyco will work in cooperation with the property owner and the WDNR to determine appropriate next steps for ensuring safe drinking water.

2 Potable Well Sampling Plan Summary

Tyco initiated the potable well sampling program in December 2017 (WDNR Bureau of Remediation and Redevelopment Tracking System [BRRTS] #02-38-580694). The objective of the sampling program has been to determine whether potable wells in the sampling area contain detectable levels of PFAS. The potable well sampling program continues to monitor for PFAS in private drinking water wells within the PWSA (**Figure 2**) that have not been replaced with a private deep well.

2.1 Bottled Water

Tyco continues to offer bottled water to private well users within the PWSA regardless of sampling participation or results. Bottled water is managed per the updated Comprehensive Alternative Water Management Plan submitted to WDNR in April 2024. Bottled water is discontinued at the request of the property owner/user, after property owners/users have a Replacement Well installed and receive the results from the treated sample demonstrating their water is safe to drink, or when a property becomes vacant. As of the date of this report, 78 Replacement Wells have been installed. Associated with these wells, 61 customers were receiving bottled water. The seventeen properties that received a new deep well that did not previously have bottled water service were due to the conditions described below:

- Users of a well were non-responsive to the offer of bottled water;
- Users of 5 wells declined bottled water;
- Users of 6 wells voluntarily discontinued bottled water service;
- A new deep well was installed on a previously undeveloped property where bottled water was not needed;
- A new deep well was installed on a property that had not previously been part of the PWSA and therefore did not receive an offer of bottled water, but a deep well offer was extended to maintain continuity of the established PWSA;
- Users of a well never accepted the offer of bottled water because the well serviced a shop where the water was not consumed;
- A new deep well was installed on a property that was previously used for farming but now has an inhabitable structure;
- A new deep well was installed for irrigation purposes and did not replace a potable well.

Of the 61 customers receiving bottled water prior to Replacement Well installation, service has been discontinued for 33 customers as of the date of this report. The remaining bottled water service accounts will be discontinued following completion of well connection, water testing, and notification that their drinking water meets regulatory criteria and is safe to drink.

2.2 Potable Well Sampling Program

A list of wells within the Potable Well Sampling Program is presented in **Table 1**.

The spring 2024 quarterly potable well sampling event extended through June 30, 2024. During the previous events, Arcadis sampled a total of 173 potable wells located generally to the southeast of the Site where residents rely on private wells for drinking water. The list below categorizes wells based on the highest levels detected at that location in the history of this sampling program:

- Potable wells analyzed for 36 PFAS compound list: 155
- Potable wells with results above the reporting limit (RL) for compounds in **Table 3**: 111
- Potable wells with results between the method detection limit and RL for compounds in **Table 3**: 38
- Potable wells with no detected results for compounds in **Table 3**: 24

2.3 POET Monitoring Program

POETs were previously offered via phone call and sampling results letter to every parcel owner in the PWSA where the potable well results confirmed PFAS detections. Forty-seven POET systems have been installed to date to treat groundwater used as drinking water under this program. A list of POET systems and associated status is included in **Table 2**. Currently Arcadis continues to collect POET system samples from active POETs on a regular basis to confirm the effectiveness of PFAS removal and system operations.

In the event of a confirmed detection of PFAS above WDHS current recommended groundwater standards at parcels located within the PWSA but outside the City of Marinette, a deep well will be re-offered. If the installation of a deep well is not feasible or if the schedule for installing a deep well is greater than one year, a POET may be temporarily installed. For potable wells located inside the City of Marinette, the owners are required to connect to municipal water. There is one potable well (WS-035) where currently, a connection to municipal water is not practical. Tyco is working with the City of Marinette and the homeowner to update the portion of the municipal system near this residence to allow for future connection. The homeowner was previously offered a POET system, but did not accept due to the space constraints at the residence that would make it impractical to install a system. The offer to install a POET system was reiterated and accepted, but space constraints may still prevent installation. Arcadis is continuing outreach with the tenant to schedule a time to evaluate installation of a POET.

As Replacement Wells are installed, the POETs are no longer necessary. At the time that laboratory data are supplied to the homeowner demonstrating that the new well water is safe to drink, Tyco will allow the parcel owners to continue to own and maintain the POETs, or Tyco will remove the POET at Tyco's expense.

Routine maintenance is conducted on each POET system. Sediment filters are typically replaced every 3 months; UV lights and the quartz sleeves are replaced once every year; and granular activated carbon (GAC) tanks are replaced when initial breakthrough is observed or as appropriate based on a conservative analysis of previous results for the specific POET system over the course of at least 12 months. Those analyses indicated breakthrough varied based on water usage, concentrations of PFAS for each well, and concentration of total organic carbon (TOC). The water available or yield from a driven point well also causes variability in when breakthrough is observed. POET system PFAS monitoring data has been provided to WDNR.

3 Long-Term Sampling Plan for Existing Potable Wells

3.1 Existing Potable Wells

The frequency of sampling for existing potable wells will be consistent with those proposed in the *Ninth Revised Long-Term Potable Well Sampling Plan* (Arcadis 2024a).

The potable well sampling plan criteria were established based on data collected to date that indicate most wells in the PWSA do not have detections above the reporting limit and all wells were offered bottled water to eliminate the drinking water exposure pathway regardless of sampling results. Results from potable wells are used to inform residents of their specific groundwater conditions relative to PFAS but are not a source of remedial decision-making data. Instead, the borings, piezometers, and wells installed for monitoring purposes will be used to monitor groundwater quality over time.

As noted in **Section 1**, this sampling plan is proposed to be updated every 12 months. With WDNR concurrence, the next update will be provided October 1, 2025.

3.2 POET Systems

3.2.1 Proposed POET Maintenance Schedule for Existing POET Systems

POET systems installed for less than one year will be sampled on a quarterly basis to determine POET system efficiency. After a minimum of one year of monitoring, POET systems are transitioned to the maintenance program described below. The POET system maintenance program uses sampling data from each POET over the course of at least one year to determine a conservative GAC vessel change out schedule. Bottled water service remains available to POET users.

The conservative sampling schedule that was established for the POET program when systems were first installed starting in early 2018 resulted in a large amount of data available to help predict when POET systems would show breakthrough. In addition to analyzing inlet, mid-carbon and outlet samples for PFAS, TOC was collected from the well prior to POET system installation and flow meter readings were collected during each sampling event to determine weekly or monthly water usage. This information as well as the inlet concentrations and regular sampling to identify when initial breakthrough occurred resulted in the ability to reduce the sampling frequency for well-established POET systems and move them to a maintenance-only program.

The GAC change schedule was established by looking at all data relevant to each system. The GAC will be changed in every system at least once per year, even if breakthrough was observed two years or more after installation. Systems where breakthrough was observed earlier than 12 months will be changed out more frequently. Section 3.2.1 describes the various scenarios that are relevant to determining the GAC changeout schedule. The observed breakthrough and GAC change frequency for each POET is included in **Table 2**. The GAC changeout schedule is based on when initial breakthrough was observed, not when detections of PFAS exceeded the concentrations set forth on **Table 3**. This conservative approach to establishing the GAC changeout

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schedule in conjunction with the offer of bottled water to users of the potable wells, eliminates any potential drinking water exposure pathway.

Any POET systems with original GAC tanks that have been in operation for a year or more without exhibiting any signs of PFAS break-through will be maintained by replacing the GAC tanks once per year. POET systems with historic influent results below concentrations set forth in **Table 3** will be sampled at the effluent approximately every other year to confirm the efficacy of the selected maintenance program. POET systems with historic influent results above concentrations set forth in **Table 3** will be sampled at the effluent approximately annually to confirm the efficacy of the selected maintenance program. These samples will be collected immediately prior to the scheduled GAC tank replacement closest to the sampling schedule described above.

GAC Change Frequency	Rationale	Remaining POET Systems (as of October 1, 2024, listed by POET ID #)
Annual	POET systems had non-detect concentrations at the mid-carbon and post-carbon sampling locations for more than a year.	20, 26, 27, 29, 31, 35, 38, 40, 41, 42, 45, 46, 47
9 months	POET systems that have shown PFAS breakthrough between 9 months and 1 year.	28
6 months	POET systems that have shown PFAS breakthrough between six months and nine months.	3
As-needed	POET systems that have shown varying influent or PFAS breakthrough before six months will continue to be monitored on a quarterly basis and the GAC tanks will be replaced when breakthrough is observed. The sampling frequency may be increased or decreased based on future sampling results.	6
2-3 months	POET systems that have shown PFAS breakthrough before three months.	19
Winterization Schedule	POET systems in operation for less than 12 months because of planned service disruption due to extended vacations or absence for the winter will be winterized and then reinstalled with new GAC upon the homeowner's return without the collection of additional samples. This also applies to properties with unplanned service disruption due to vacancy, death, or home for sale. Winterization consists of bypassing the system, removing the GAC tanks and filters, and removing residual water from the system.	11

GAC Change Frequency	Rationale	POET Systems Removed (as of October 1, 2024)
Discontinued Service (Removed Systems)	POET systems that have been removed from service due to a Replacement Well installation, or by request of the owner (as indicated by an asterisk).	1, 2, 4, 5, 7, 8, 9*, 10, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 30, 32, 33, 34, 36, 37, 39, 43, 44

*POET removed at request of owner

POET systems that have not operated for at least a year will be monitored quarterly for at least 12 months to determine the future GAC maintenance schedule, at which point sampling will be discontinued. This does not apply to any systems currently. All systems in place have operated for a minimum of 12 months.

Sediment filters will continue to be replaced approximately every 3 months and ultraviolet lamps and quartz sleeves will continue to be replaced once every year.

3.2.2 Proposed POET Maintenance Schedule for New POET Systems

Tyco is now installing Replacement Wells in the PWSA. As a result, it is not anticipated that new POET systems will be installed with the exception of the interim POET at the property pending connection to municipal water described in Section 2.3 (WS-035). If they are, it will be a temporary solution and new POET systems will be monitored as noted in 3.2.1.

POET system performance monitoring samples will be collected at the inlet, mid-carbon and outlet locations according to the following schedule:

- Initial Sampling – Upon system installation and start-up
- Month 3 (Week 12) – After 3 months or 12 weeks of system operation
- Month 6 – After 6 months of system operation
- Month 9 – After 9 months of system operation
- Month 12 – After 12 months of system operation.

3.2.3 Adjustments to POET Maintenance Schedules Based on Sampling Results

As described in **Section 3.2.1**, POET maintenance schedules were established based on observed breakthrough. It is reasonable to expect that there may be some instances where low levels of PFAS are detected in the POET effluent. Detections in POET effluent of less than one tenth of concentrations set forth in **Table 3** will be treated as demonstrating the effectiveness of the POET maintenance program and no changes will be made to the maintenance plan.

Detections in POET effluent greater than one tenth of concentrations set forth in **Table 3** will adjust the GAC changeout maintenance frequency to one category more conservative (i.e., annual maintenance will move to 9 months, 9 months will move to 6 months, or 6 months will move to quarterly) and an effluent sample will be collected at the time of the next GAC change. After sampling confirms the effectiveness of the updated

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maintenance schedule, the POET will remain in the new maintenance category and return to the sampling schedule described in **Section 3.2.1**.

4 Sampling Procedures

The detection of PFAS compounds, including at low concentrations, can be influenced by common PFAS-containing materials that may be present at the sampling site. Therefore, the following sampling protocols were strictly followed by sampling personnel.

4.1 Prior to Sample Collection

Arcadis staff will coordinate a sample date and time with each well's contact person. Upon arrival, Arcadis will provide introductions and let the resident/property owner know the purpose is to collect a potable well sample for PFAS analysis in accordance with previous correspondence provided to them regarding the sampling. Arcadis will request information from the property owner regarding the water system at each property. Information that will be recorded includes presence of water softeners, sediment traps, filters, etc., and the location of these items.

Additional activities to be performed and procedures to be followed by the sampling team prior to potable well sample collection include:

- Put on a new set of nitrile gloves immediately prior to sampling.
- Do not use gloved hands to subsequently handle papers, pens, clothes, etc., before collecting samples.
- Use the 2-250 milliliter high-density polyethylene (HDPE) bottles that are supplied by the laboratory for each sample location.
- Sample bottle caps must remain on the bottle until immediately prior to sample collection, and the bottle must be sealed immediately after sample collection.

Additional COVID-related precautions may be implemented as appropriate based on Federal, State, or County guidance to protect homeowners and the sampling team. Those precautions may include but are not limited to:

- Sampling team personnel will practice established social distancing protocols when interacting with homeowners.
- Sampling team personnel will wear individual protective masks.
- Sampling team personnel will request verbal sampling permission from each of the homeowners and sign the homeowner acceptance, on behalf of the homeowner, of such verbal agreement on the electronic tablet.
- Sampling locations will be prioritized to outdoor spigots, instead of indoor locations, when possible, weather permitting.

4.2 During Sample Collection

Potable water outfalls and taps are likely to vary. If possible, the team will avoid sampling from any taps fitted with Teflon tape or other potential PFAS-containing materials. Stainless steel and polyvinyl chloride materials are acceptable. The sampling team will collect unfiltered samples from a tap or port, as follows:

- Initiate flow from the water source and allow the system to flush for at least three minutes.
- Collect the sample into the HDPE bottle until the sample bottle is full (leaving slight headspace in the bottle is acceptable).

- Tightly screw on the polypropylene or HDPE cap.

4.3 After Sample Collection

Upon collection, the sample bottles will be placed in a sealed Ziploc® or similar bag. Sample collection information will be recorded including the sample identification (ID) and time of sampling on the sample bottle label, in the field notes, and on the chain-of-custody (COC) form. The COC form will be marked for analysis with a standard turnaround time (approximately two weeks). Samples will be placed in coolers, with enough ice to keep the sample temperature between 0 and 4°C until delivered to the laboratory. Only “wet” ice will be used, with no use of “blue ice” or similar cold storage packets. PFAS sample coolers will be shipped via Federal Express Priority Overnight delivery to:

Sample Receiving
Eurofins TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, California 95605-1500

Samples will be analyzed for the 36 PFAS compounds reportable using Method 537 Modified. Beginning February 1, 2025, samples will be analyzed using Method 1633 per WDNR regulations.

All disposable sampling materials will be treated as single use and disposed appropriately after sampling at each location. Samples from each residence will be kept in their own dedicated cooler with the appropriate quality assurance samples.

4.4 Quality Assurance/Quality Control

Avoiding cross-contamination from PFAS-containing materials during this sampling will be of utmost importance given the very low detection limits for the analyses that will be conducted for these compounds. As such, materials with the potential to contain PFAS will not be used during the sampling (including polytetrafluoroethylene [PTFE] pipe tape, pipe thread pastes that contain PTFE, PTFE sample tubing, food wrappers, water resistant/proof clothing, waterproof field books, etc.)

Sample information, including sample ID and date/time collected, will be recorded on the provided bottle labels and attached to the sample bottles immediately after sealing the bottles. This information also will be recorded on the COC form provided by the laboratory, in a Potable Water Supply Sample Log, and in the sampling team’s field notes. A signed copy of the COC form will be provided to the laboratory whenever a sample cooler is delivered to the laboratory. A copy of each COC form will be kept with the field notes and sample logs.

After receipt from the laboratory, Arcadis will conduct a preliminary data quality review (Level 2 data validation). The sample results will be communicated to well owners/users after completion of the preliminary data quality review, as outlined in the “Project Communication” section below. After completion of the preliminary data quality review, Arcadis will conduct a more comprehensive validation of the data (Level 4 data validation). The timeframe for the Level 4 validation may vary based on the amount of time required for the laboratory to send additional Quality Assurance/Quality Control information to Arcadis, and the number of samples under review. The anticipated timeframe for completion of Level 4 validation is approximately four weeks after receipt of the complete Level 4 data package from the laboratory. If any changes to the reported sampling results become

necessary after completion of the Level 4 validation, the well owners/users and WDNR will be notified of those changes.

Data will be reviewed in accordance with United States Environmental Protection Agency (USEPA) National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999, as appropriate).

5 Potable Well Results

This section summarizes the potable well and POET system influent and effluent results. The results from the most recent sampling events, April 1, 2024 through June 30, 2024, are included in **Table 4**.

Exhibit 1. Number of Potable Wells Sampled Between April 2024 and June 2024

	Spring 2024 (April-June)
Number of Potable Wells Sampled	3

Exhibit 2. Potable Wells Sampled During Reporting Period

Potable Well Program	POET Programs	
	Monitoring	Maintenance
WS-061A, WS-061B, WS-089	WS-106R, POET-37	WS-025, POET-28; WS-030, POET-31; WS-036, POET-3; WS-061B, POET-27; WS-109, POET-17; WS-121A, POET-16; WS-121B, POET-36; WS-152, POET-42

In December 2021, at the request of WDNR, Tyco stopped influent sampling of POET systems enrolled in a maintenance program and instead began sampling system effluent to document maintenance program effectiveness. Historical comparisons are not available for all 36 PFAS due to updates to sampling methodologies.

There was one POET system (POET-27) where the owner was non-responsive for over a year relative to maintenance. This POET system was installed in a rental house that was not occupied. When maintenance was completed during the current reporting period, an effluent sample was collected after the GAC was changed, as the sampling of expired media from a system not in use would not have been appropriate. In addition, the owner requested a sample be collected from the influent at the same time. Currently, the POET system is not in use as the property is vacant.

5.1 Evaluation of Potable Well Data

A total of 173 different potable wells within the PWSA were sampled during quarterly sampling events from December 2017 to June 30, 2024. Five of these wells were determined to not be potable wells and sampling was discontinued. One well was reported by the property owner to be abandoned and two additional wells are associated with the former Bay Area Medical Center and have been abandoned; therefore, sampling was discontinued, resulting in a total of 165 potable wells that had been eligible for sampling. As previously stated,

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every inhabitable structure within the PWSA has access to free, safe drinking water via bottled water service and/or POET system. Where POET systems are in place, only system influent results are evaluated for the purposes of this report. Samples collected from the effluent of POETs are all below Table 3 values.

The historical data since December 2017 indicates the majority of wells with detections above the reporting limit (RL) are shallow wells, mostly sand points less than 37 feet deep based on available well construction forms or homeowner-provided information. Low concentrations of perfluorooctane sulfonamide (FOSA) were detected above the RL in wells of varying depth. As noted above, well depth information is not available for all wells sampled. Shallow wells are depicted on **Figure 3**, deep wells are depicted on **Figure 4** and wells of unknown depth are depicted on **Figure 5**.

All the residences with potable wells have access to safe drinking water via POET systems, a replacement well, and/or bottled water.

6 Project Communication

Results letters will be provided to the applicable well owners/users and WDNR within 10 business days of Arcadis receiving results from the laboratory. If the PFAS concentrations from a well are above the concentrations set forth on **Table 3** for the first time, a phone call will be placed to the well owner/user within two days of completing the preliminary data quality review for the laboratory results to inform the owner or tenant of their results and confirm their bottled water status or offer bottled water as appropriate. If the PFAS concentrations from the effluent of a POET system are above the concentrations set forth on **Table 3** following the routine maintenance schedule, a phone call will be placed to the well owner/user within two days of completing the preliminary data quality review for the laboratory results to inform the owner or tenant of their results and schedule a GAC change as appropriate and/or update their GAC changeout frequency.

Tyco will provide WDNR copies of the letters provided to well owners/users within 10 business days of Arcadis receiving results from the laboratory. Validated results will be included in regular database submissions.

With WDNR's approval, Tyco will submit an updated version of the Revised Long-Term Potable Well Sampling Plan to the WDNR by October 1, 2025, including a summary of the results from the potable well and POET programs for the previous year.

7 Conclusions and Recommendations

The results reported here are consistent with previous monitoring activities.

Tyco will continue to provide short-term drinking water solutions such as bottled water service and POET systems in accordance with the *Revised Comprehensive Alternative Water Management Plan* (Arcadis 2024b). In the interim period, Tyco recommends continuing the potable well sampling program and POET monitoring program as outlined in the *Revised Long-Term Potable Well Sampling Plan* (Arcadis 2024a) until the Replacement Wells are installed for those parcels (Arcadis 2022c). An updated version of the Revised Long-Term Potable Well Sampling Plan will be submitted to the WDNR by October 1, 2025. Tyco has eliminated the primary potential exposure pathway for PFAS from historic operations and will continue to perform the ongoing sampling work and keep the community informed of these activities.

In parallel, Tyco will continue to advance long-term drinking water solutions by offering and installing Replacement Wells to any property owners in the PWSA.

8 Closing

This sampling plan presents the approach for bottled water service, sampling and maintenance of POET systems, and sampling of existing potable wells. Tyco has eliminated the primary potential exposure pathway for PFAS from historic operations and will continue to work with the DNR and affected property owners.

9 References

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- Arcadis 2018b. Revised Long-Term Potable Well Sampling Plan. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, Wisconsin 54143. BRRTS# 02-38-580694. Revision 1. April 20, 2018.
- Arcadis 2020a. Comprehensive Alternative Water Management Plan. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, Wisconsin 54143. BRRTS# 02-38-580694, 02-38-581955. March 19, 2020.
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- Arcadis 2022b. Potable Well Sampling Program Annual Summary Report – FTC Sampling Area. Tyco Fire Technology Center, 2700 Industrial Parkway, Marinette, WI 54143. BRRTS# 02-38-580694. August 8, 2022.
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Tables

Table 1
Potable Well Program Status
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Well ID	# of Quarterly Samples Collected ⁽³⁾	Category	Sampling Frequency	Comments
WS-001	10	RL<T3	Biennially	
WS-002	2	ND	N/A	Well abandoned
WS-004	1	ND	N/A	Well abandoned
WS-005	12	RL<T3	N/A	Well abandoned
WS-005B	2	MDL<RL	N/A	Not a drinking water well
WS-006	4	RL<T3	N/A	Well abandoned
WS-007B ⁽¹⁾	2	>T3	N/A	Well abandoned
WS-010	7	RL<T3	Biennially	
WS-011	8	MDL<RL	N/A	Well abandoned
WS-012	8	MDL<RL	N/A	Deep well installed
WS-014	13	MDL<RL	Biennially	
WS-015	5	RL<T3	Biennially	
WS-016	8	MDL<RL	Biennially	Deep well installation pending
WS-020	9	RL<T3	Biennially	Deep well installation pending
WS-021	3	RL<T3	N/A	Well abandoned
WS-022	8	ND	Biennially	Deep well installation pending
WS-026	10	MDL<RL	Biennially	
WS-027	6	MDL<RL	Biennially	Deep well installed
WS-028	5	RL<T3	Biennially	
WS-029	9	RL<T3	Biennially	Deep well installation pending
WS-031	11	RL<T3	Biennially	Deep well installation pending
WS-033	11	RL<T3	Biennially	
WS-034	10	MDL<RL	N/A	Well abandoned
WS-035	7	RL<T3	Biennially	
WS-039	9	ND	Biennially	Deep well installation pending
WS-040	8	RL<T3	Biennially	
WS-043	7	ND	Biennially	Deep well installation pending
WS-044	11	RL<T3	Biennially	Deep well installation pending
WS-045	11	ND	Biennially	Deep well installation pending
WS-046	6	RL<T3	Biennially	Deep well installation pending
WS-047	2	ND	Biennially	Deep well installation pending
WS-048 ⁽¹⁾	11	>T3	Annually	
WS-050	11	RL<T3	Biennially	Deep well installation pending
WS-051	11	RL<T3	Biennially	Deep well installation pending
WS-055	8	RL<T3	Biennially	Deep well installation pending
WS-056	5	MDL<RL	Biennially	Deep well installation pending
WS-059	6	RL<T3	Biennially	
WS-061A	4	ND	Biennially	
WS-063	11	RL<T3	N/A	Deep well installed
WS-064	9	RL<T3	Biennially	Deep well installation pending
WS-065	10	MDL<RL	N/A	Deep well installed
WS-066	10	RL<T3	N/A	Well abandoned
WS-069A	9	RL<T3	Biennially	Deep well installation pending
WS-069B ⁽¹⁾	9	>T3	Annually	Deep well installation pending
WS-070 ⁽¹⁾	1	>T3	Annually	

Notes on Page 3.

Table 1
Potable Well Program Status
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Well ID	# of Quarterly Samples Collected ⁽³⁾	Category	Sampling Frequency	Comments
WS-071	8	RL<T3	N/A	Deep well installed
WS-072	10	ND	N/A	Well abandoned
WS-073	11	MDL<RL	N/A	Well abandoned
WS-074	2	RL<T3	N/A	Deep well installed
WS-075	11	ND	Biennially	
WS-076	3	ND	N/A	Well abandoned
WS-077	7	RL<T3	Biennially	Deep well installation pending
WS-078	12	ND	Biennially	Deep well installation pending
WS-079	12	RL<T3	Biennially	Deep well installation pending
WS-080	4	MDL<RL	Biennially	Deep well installation pending
WS-081	3	MDL<RL	N/A	Well abandoned
WS-082	3	MDL<RL	N/A	Well abandoned
WS-082B	2	>T3	N/A	Deep well installed
WS-082C	2	>T3	N/A	Not a drinking water well
WS-082D ⁽¹⁾	3	>T3	N/A	Deep well installed
WS-083	7	MDL<RL	N/A	Well abandoned
WS-084	13	ND	Biennially	
WS-085	9	MDL<RL	Biennially	
WS-086	7	RL<T3	Biennially	Deep well installation pending
WS-087	13	RL<T3	N/A	Well abandoned
WS-088	9	MDL<RL	Biennially	Deep well installation pending
WS-089	6	ND	Biennially	
WS-091	4	ND	Biennially	Deep well installation pending
WS-093	7	RL<T3	Biennially	Deep well installation pending
WS-094 ⁽¹⁾	7	RL<T3	N/A	Deep well installed
WS-095	3	ND	Biennially	Deep well installation pending
WS-098	6	RL<T3	Biennially	
WS-101 ⁽²⁾	3	>T3	Annually	Deep well installation pending
WS-102	10	RL<T3	N/A	Deep well installed
WS-103	6	RL<T3	Biennially	
WS-104	10	MDL<RL	Biennially	Deep well installation pending
WS-105	2	ND	Biennially	
WS-107	8	RL<T3	Biennially	
WS-108	10	RL<T3	Biennially	Deep well installation pending
WS-110A	11	MDL<RL	Biennially	
WS-112	10	MDL<RL	N/A	Well abandoned
WS-113	11	ND	N/A	Well abandoned
WS-114	6	MDL<RL	Biennially	Deep well installation pending
WS-116	8	MDL<RL	N/A	Deep well installed
WS-117	9	MDL<RL	N/A	Well abandoned
WS-118A	7	RL<T3	Biennially	
WS-118B	6	ND	Biennially	
WS-119	11	MDL<RL	Biennially	Deep well installation pending
WS-120	7	RL<T3	N/A	Well abandoned
WS-122	11	MDL<RL	N/A	Well abandoned

Notes on Page 3.

Table 1
Potable Well Program Status
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Well ID	# of Quarterly Samples Collected ⁽³⁾	Category	Sampling Frequency	Comments
WS-123	6	RL<T3	N/A	Deep well installed
WS-124 ⁽¹⁾	6	RL<T3	Biennially	Deep well installation pending
WS-125	8	MDL<RL	Biennially	Deep well installation pending
WS-127	4	RL<T3	N/A	Well abandoned
WS-128	4	ND	N/A	Well abandoned
WS-130	11	MDL<RL	Biennially	
WS-131	7	MDL<RL	N/A	Deep well installed
WS-132	9	RL<T3	N/A	Well abandoned
WS-134	6	MDL<RL	Biennially	Deep well installation pending
WS-135	4	RL<T3	Biennially	Deep well installation pending
WS-136	7	RL<T3	N/A	Well abandoned
WS-137	8	RL<T3	Biennially	Deep well installation pending
WS-138	9	ND	Biennially	
WS-139	8	MDL<RL	Biennially	Deep well installation pending
WS-140	7	RL<T3	Biennially	Deep well installation pending
WS-141	8	MDL<RL	N/A	Well abandoned
WS-142	4	RL<T3	N/A	Well abandoned
WS-143	7	RL<T3	N/A	Well abandoned
WS-144	6	RL<T3	Biennially	
WS-145	6	RL<T3	Biennially	
WS-146B	1	>T3	N/A	Not a drinking water well
WS-147 ⁽²⁾	3	>T3	N/A	Well abandoned
WS-148	2	ND	N/A	Well abandoned per owner
WS-149	3	RL<T3	Biennially	
WS-150	3	RL<T3	Biennially	Deep well installation pending
WS-151	6	RL<T3	Biennially	
WS-153	8	MDL<RL	Biennially	Deep well installed
WS-154	6	ND	N/A	Deep well installed
WS-155	3	MDL<RL	Biennially	
WS-156	8	ND	Biennially	
WS-157	6	RL<T3	Biennially	
WS-158	3	>T3	N/A	Well abandoned
WS-159 ⁽¹⁾	4	>T3	Annually	Deep well installation pending
WS-160	4	MDL<RL	N/A	Well abandoned
WS-161	4	RL<T3	Biennially	Deep well installation pending
WS-162	2	RL<T3	N/A	Well abandoned
WS-164	1	MDL<RL	N/A	Well abandoned

Notes:

⁽¹⁾ = POET offer extended

⁽²⁾ = POET offer declined

⁽³⁾ = Number of quarterly samples collected through Spring 2024 sampling event

ID = Identification

MDL = method detection limit

N/A = not applicable

ND = not detected above the laboratory MDL

RL = reporting limit

T3 = WDHS Recommended Standards detailed in Table 3

Deep wells that have been scheduled for drilling are listed as pending

Wells replaced by a new deep well are removed from the potable well sampling program

Table 2
POET System Program Status
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Well Sample ID	POET ID	Category	Sampling/Maintenance Status	Comments
WS-007A ⁽¹⁾	POET-43	>T3	Well abandoned	POET removed 5/1/2024
WS-008	POET-7	>T3	Well abandoned	POET removed 4/3/2024
WS-009	POET-26	RL<T3	Maintenance	
WS-013	POET-10	RL<T3	Well abandoned	POET removed 7/11/2024
WS-017	POET-40	RL<T3	Maintenance	
WS-018	POET-29	>T3	Maintenance	
WS-019	POET-5	>T3	Well abandoned	POET removed 10/11/2023
WS-023	POET-14	RL<T3	Deep well installed	POET removed 7/17/2024
WS-024	POET-11	>T3	Maintenance	Deep well installation pending
WS-025	POET-28	>T3	Maintenance	
WS-030	POET-31	>T3	Deep well installed	POET not removed as of 10/1/2024
WS-032	POET-25	MDL<RL	Well abandoned	POET removed 8/28/2024
WS-036	POET-3	>T3	Maintenance	
WS-037	POET-32	>T3	Well abandoned	POET removed 1/30/2023
WS-038	POET-19	>T3	Maintenance	Deep well installation pending
WS-041	POET-46	RL<T3	Maintenance	
WS-042	POET-45	RL<T3	Maintenance	
WS-049	POET-35	RL<T3	Maintenance	Deep well installation pending
WS-052	POET-2	>T3	Well abandoned	POET removed 12/11/2023
WS-053	POET-21	RL<T3	Well abandoned	POET removed 6/1/2023
WS-054	POET-30	>T3	Well abandoned	POET removed 5/10/2023
WS-057	POET-34	>T3	Well abandoned	POET removed 7/24/2024
WS-058	POET-1	>T3	Well abandoned	POET removed 8/8/2024
WS-060	POET-47	>T3	Maintenance	Deep well installation pending
WS-061B	POET-27	>T3	Maintenance	
WS-062	POET-44	>T3	Well abandoned	POET removed 10/10/2023
WS-067	POET-39	RL<T3	Deep well installed	POET removed 9/12/2024
WS-068	POET-12	>T3	Well abandoned	POET removed 10/17/2023
WS-090	POET-4	>T3	Well abandoned	POET removed 10/9/2023
WS-092	POET-22	RL<T3	Well abandoned	POET removed 9/26/2024
WS-096	POET-6	>T3	Quarterly Sampling	Deep well installation pending
WS-097	POET-13	RL<T3	Well abandoned	POET removed 1/25/2024
WS-099	POET-15	RL<T3	Well abandoned	POET removed 1/22/2024
WS-100	POET-24	RL<T3	Well abandoned	POET removed 1/22/2024
WS-106 / WS-106R	POET-37	>T3	Well abandoned	POET removed 7/16/2024
WS-109	POET-17	>T3	Well abandoned	POET removed 8/27/2024
WS-111	POET-18	RL<T3	Well abandoned	POET removed 9/5/2024
WS-115	POET-20	MDL < RL	Maintenance	
WS-121A	POET-16	>T3	Well abandoned	POET removed 9/16/2024
WS-121B	POET-36	RL<T3	Well abandoned	POET removed 9/16/2024
WS-126	POET-23	MDL < RL	Well abandoned	POET removed 10/27/2023
WS-129	POET-38	RL<T3	Well abandoned	POET not removed as of 10/1/2024
WS-133	POET-33	RL<T3	Well abandoned	POET removed 2/6/2023
WS-146A / WS-146AR	POET-8	> T3	Well abandoned	POET removed 5/2/2024
WS-146B	POET-9	>T3	Uninstalled	Not a drinking water well
WS-152	POET-42	RL < T3	Maintenance	
WS-163	POET-41	> T3	Maintenance	

Notes:

⁽¹⁾ = During deep well installation, it was discovered that the POET system was connected to WS-007B. All POET influent data identified as WS-007A is actually from WS-007B.

Sampling/Maintenance status subject to change based on available data

ID = Identification

MDL = method detection limit

N/A = not applicable

ND = not detected above the laboratory MDL

POET = Point of Entry Treatment

RL = reporting limit

T3 = WDHS Recommended Standards detailed in Table 3

Deep wells that have been scheduled for drilling are listed as pending

Wells replaced by a new deep well are removed from the POET program

Table 3
List of Compounds
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Analyte	Wisconsin DHS Recommended Standards (not adopted) ⁽¹⁾	Public/Municipal Drinking Water Standards (Not Applicable to Private Wells) ⁽²⁾	Units
PFBA	10,000	--	ng/L
PFPeA	--	--	ng/L
PFHxA	150,000	--	ng/L
PFHpA	--	--	ng/L
PFOA	20	4	ng/L
PFNA	30	10	ng/L
PFDA	300	--	ng/L
PFUnA	3,000	--	ng/L
PFDoA	500	--	ng/L
PFTriA	--	--	ng/L
PFTeA	10,000	--	ng/L
PFHxDA	--	--	ng/L
PFODA	400,000	--	ng/L
PFBS	450,000	2,000	ng/L
PFPeS	--	--	ng/L
PFHxS	40	10	ng/L
PFHpS	--	--	ng/L
PFOS	20	4	ng/L
PFNS	--	--	ng/L
PFDS	--	--	ng/L
PFDoS	--	--	ng/L
4:2 FTS	--	--	ng/L
6:2 FTS	--	--	ng/L
8:2 FTS	--	--	ng/L
10:2 FTS	--	--	ng/L
FOSA	20	--	ng/L
NMeFOSA	--	--	ng/L
NEtFOSA	20	--	ng/L
NMeFOSAA	--	--	ng/L
NEtFOSAA	20	--	ng/L
NMeFOSE	--	--	ng/L
NEtFOSE	20	--	ng/L
HFPO-DA (GenX)	300	10	ng/L
ADONA	3,000	--	ng/L
F-53B Major	--	--	ng/L
F-53B Minor	--	--	ng/L

Notes:

-- = No standard

ng/L = nanograms per liter

⁽¹⁾ = In June 2019, WDHS recommended individual groundwater standards of 20 ng/L for PFOA and PFOS. The WDNR proposed those standards through the state rulemaking process. In February 2022, the Wisconsin Natural Resource Board did not approve the proposed rulemaking for groundwater. In November 2020 the Wisconsin DHS recommended a combined groundwater standard of 20 ng/L for: FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS and PFOA. DHS also recommended individual standards for FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFBS, PFHxS, PFNA, PFDA, PFDoA, PFHxA, PFTeA, PFUnA, PFBA, PFODA, DONA, and GenX. The agency's authority under the scope statement expired in September 2023. In September 2022, the Governor approved a Statement of Scope to establish groundwater standards for PFOA, PFOS, PFBS and GenX (referred to as the "Four PFAS"). The Statement of Scope was approved by the Natural Resources Board in December 2022. Pursuant to state law, the WDNR has stopped work on the proposed rule and notified the state legislature that, following economic analysis, the proposed costs would exceed statutory thresholds. As a result, the WDNR cannot continue the rulemaking without authorization from the state legislature.

⁽²⁾ = In 2024, the US EPA established individual Maximum Contaminant Levels in drinking water for a number of substances, including PFOA, PFOS, PFHxS, PFNA, and HFPO-DA; and for mixtures containing two or more of PFHxS, PFNA, HFPO-DA and PFBS calculated as a Hazard Index. These standards do not apply to private drinking water wells.

Table 3
List of Compounds
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

Chemical Abbreviations:

Perfluorobutanoic acid (PFBA)
Perfluoropentanoic acid (PFPeA)
Perfluorohexanoic acid (PFHxA)
Perfluoroheptanoic acid (PFHpA)
Perfluorooctanoic acid (PFOA)
Perfluorononanoic acid (PFNA)
Perfluorodecanoic acid (PFDA)
Perfluoroundecanoic acid (PFUnA)
Perfluorododecanoic acid (PFDoA)
Perfluorotridecanoic acid (PFTriA)
Perfluorotetradecanoic acid (PFTeA)
Perfluorohexadecanoic acid (PFHxDA)
Perfluorooctadecanoic acid (PFODA)
Perfluorobutane sulfonic acid (PFBS)
Perfluoropentane sulfonic acid (PFPeS)
Perfluorohexane sulfonic acid (PFHxS)
Perfluoroheptane sulfonic acid (PFHpS)
Perfluorooctane sulfonic acid (PFOS)
Perfluorononane sulfonic acid (PFNS)
Perfluorodecane sulfonic acid (PFDS)
Perfluorododecane sulfonic acid (PFDoS)
4:2 Fluorotelomer sulfonate (4:2 FTS)
6:2 Fluorotelomer sulfonate (6:2 FTS)
8:2 Fluorotelomer sulfonate (8:2 FTS)
10:2 Fluorotelomer sulfonate (10:2 FTS)
Perfluorooctane sulfonamide (FOSA)
N-methylperfluorooctanesulfonamide (NMeFOSA)
N-ethylperfluorooctanesulfonamide (NEtFOSA)
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
N-methylperfluorooctanesulfonamidoethanol (NEtFOSAA)
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)
Hexafluoropropylene oxide dimer acid (HFPO-DA or GenX)
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (F-53B Major)
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)

Table 4
Potable Well Results
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

			Location	WS-025	WS-025	WS-030	WS-030	WS-036	WS-036	WS-061A	WS-061B
			Sample ID	POET-28-POST (051424)	DUP-544 (051424)	POET-31-POST (042224)	DUP-540 (042224)	POET-3-POST (062024)	DUP-548 (062024)	WS-061A (042224)	WS-061B (042224)
			Sample Event	POET Effluent	POET Effluent	POET Effluent	POET Effluent	POET Effluent	POET Effluent	Spring 2024	Spring 2024
			Sample Date	5/14/2024	5/14/2024	4/22/2024	4/22/2024	6/20/2024	6/20/2024	4/22/2024	4/22/2024
			Sample Type	N	FD	N	FD	N	FD	N	N
			General Well Depth	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Deep	Shallow
			Detailed Well Depth	30-40	30-40	28	28	<30	<30	124	N/A
			Source	-	-	+, -	+, -	-	-	+, -	N/A
Chemical Name	Wisconsin DHS Recommended Standards (not adopted) ⁽¹⁾	Public/Municipal Drinking Water Standards (Not Applicable to Private Wells) ⁽²⁾	Unit								
PFBA	10,000	--	ng/L	< 2.2 U	< 2.2 U	< 2.2 U	< 2.5 U	< 2.2 U	< 2.3 U	< 2.1 U	6.6
PFPeA	--	--	ng/L	4.0	2.6	< 0.46 U	< 0.50 U	< 0.46 U	< 0.46 U	< 0.43 U	9.7
PFHxA	150,000	--	ng/L	2.0	1.0 J	< 0.54 U	< 0.59 U	< 0.54 U	< 0.54 U	< 0.51 U	5.7
PFHpA	--	--	ng/L	0.90 J	0.47 J	< 0.23 U	< 0.26 U	< 0.23 U	< 0.23 U	< 0.22 U	3.2
PFOA	20	4	ng/L	2.1	1.5 J	< 0.80 U	< 0.87 U	< 0.79 U	< 0.80 U	< 0.75 U	4.9
PFNA	30	10	ng/L	< 0.25 U	< 0.25 U	< 0.25 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	0.31 J
PFDA	300	--	ng/L	< 0.28 U	< 0.29 U	< 0.29 U	< 0.32 U	< 0.29 U	< 0.29 U	< 0.28 U	< 0.30 U
PFUnA	3,000	--	ng/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.1 U	< 1.0 U	< 1.0 U	< 0.98 U	< 1.0 U
PFDaA	500	--	ng/L	< 0.50 U	< 0.51 U	< 0.51 U	< 0.56 U	< 0.51 U	< 0.52 U	< 0.49 U	< 0.52 U
PFTriA	--	--	ng/L	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
PFTeA	10,000	--	ng/L	< 0.67 U	< 0.68 U	< 0.68 U	< 0.75 U	< 0.68 U	< 0.69 U	< 0.65 U	< 0.69 U
PFHxDA	--	--	ng/L	< 0.82 U	< 0.83 U	< 0.83 U	< 0.91 U	< 0.83 U	< 0.84 U	< 0.79 U	< 0.85 U
PFODA	400,000	--	ng/L	< 0.86 UJ	< 0.88 UJ	< 0.88 UJ	< 0.96 UJ	< 0.87 U	< 0.88 U	< 0.83 U	< 0.89 UJ
PFBS	450,000	2,000	ng/L	< 0.18 U	< 0.19 U	< 0.19 U	< 0.20 U	< 0.19 U	< 0.19 U	< 0.18 U	1.3 J
PFPeS	--	--	ng/L	< 0.28 U	< 0.28 U	< 0.28 U	< 0.31 U	< 0.28 U	< 0.28 U	< 0.27 U	< 0.29 U
PFHxS	40	10	ng/L	< 0.52 U	< 0.53 U	< 0.53 U	< 0.58 U	< 0.53 U	< 0.54 U	< 0.51 U	1.6 J
PFHpS	--	--	ng/L	< 0.17 U	< 0.18 U	< 0.18 U	< 0.19 U	< 0.18 U	< 0.18 U	< 0.17 U	< 0.18 U
PFOS	20	4	ng/L	< 0.50 U	< 0.50 U	< 0.51 U	< 0.55 U	< 0.50 U	< 0.51 U	< 0.48 U	7.3
PFNS	--	--	ng/L	< 0.34 U	< 0.35 U	< 0.35 U	< 0.38 U	< 0.34 U	< 0.35 U	< 0.33 U	< 0.35 U
PFDS	--	--	ng/L	< 0.29 U	< 0.30 U	< 0.30 U	< 0.33 U	< 0.30 U	< 0.30 U	< 0.28 U	< 0.30 U
PFDoS	--	--	ng/L	< 0.89 U	< 0.91 U	< 0.91 U	< 0.99 U	< 0.90 U	< 0.91 U	< 0.86 U	< 0.92 U
4:2 FTS	--	--	ng/L	< 0.22 U	< 0.22 U	< 0.22 U	< 0.25 U	< 0.22 U	< 0.23 U	< 0.21 U	< 0.23 U
6:2 FTS	--	--	ng/L	< 2.3 U	< 2.3 U	< 2.3 U	< 2.6 U	< 2.3 U	< 2.3 U	< 2.2 U	< 2.4 U
8:2 FTS	--	--	ng/L	< 0.42 U	< 0.43 U	< 0.43 U	< 0.47 U	< 0.43 U	< 0.43 U	< 0.41 U	< 0.44 U
10:2 FTS	--	--	ng/L	< 0.61 U	< 0.63 U	< 0.63 U	< 0.68 U	< 0.62 U	< 0.63 U	< 0.59 U	< 0.64 U
FOSA	20	--	ng/L	< 0.90 U	< 0.92 U	< 0.92 U	< 1.0 U	< 0.91 U	< 0.92 U	< 0.87 U	< 0.93 U
NMeFOSA	--	--	ng/L	< 0.39 U	< 0.40 U	< 0.40 U	< 0.44 U	< 0.40 U	< 0.40 U	< 0.38 U	< 0.41 U
NEtFOSA	20	--	ng/L	< 0.80 U	< 0.81 U	< 0.81 U	< 0.89 U	< 0.81 U	< 0.82 U	< 0.77 U	< 0.83 U
NMeFOSAA	--	--	ng/L	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.1 U
NEtFOSAA	20	--	ng/L	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
NMeFOSE	--	--	ng/L	< 1.3 U	< 1.3 U	< 1.3 U	< 1.4 U	< 1.3 U	< 1.3 U	< 1.2 U	< 1.3 U
NEtFOSE	20	--	ng/L	< 0.78 U	< 0.79 U	< 0.80 U	< 0.87 U	< 0.79 U	< 0.80 U	< 0.75 U	< 0.81 U
HFPO-DA (GenX)	300	10	ng/L	< 1.4 U	< 1.4 U	< 1.4 U	< 1.5 U	< 1.4 U	< 1.4 U	< 1.3 U	< 1.4 U
DONA	3,000	--	ng/L	< 0.37 U	< 0.37 U	< 0.37 U	< 0.41 U	< 0.37 U	< 0.38 U	< 0.35 U	< 0.38 U
F-53B Major	--	--	ng/L	< 0.22 U	< 0.22 U	< 0.22 U	< 0.25 U	< 0.22 U	< 0.23 U	< 0.21 U	< 0.23 U
F-53B Minor	--	--	ng/L	< 0.29 U	< 0.30 U	< 0.30 U	< 0.33 U	< 0.30 U	< 0.30 U	< 0.28 U	< 0.30 U

Notes on Page 4.

Table 4
Potable Well Results
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

			Location	WS-061B	WS-089	WS-089	WS-106R	WS-106R	WS-106R	WS-106R
			Sample ID	POET-27-POST (042224)	WS-089 (052924)	DUP-547 (052924)	POET-37-MID (043024)	POET-37-POST (043024)	WS-106R (043024)	DUP-542 (043024)
			Sample Event	POET Effluent	Spring 2024	Spring 2024	POET	POET	POET	POET
			Sample Date	4/22/2024	5/29/2024	5/29/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024
			Sample Type	N	N	FD	N	N	N	FD
			General Well Depth	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
			Detailed Well Depth	N/A	64	64	37	37	37	37
			Source	N/A	+, -	+, -	+	+	+	+
Chemical Name	Wisconsin DHS Recommended Standards (not adopted) ⁽¹⁾	Public/Municipal Drinking Water Standards (Not Applicable to Private Wells) ⁽²⁾	Unit							
PFBA	10,000	--	ng/L	< 2.3 U	< 2.1 U	< 2.1 U	3.9 J	< 2.2 U	6.2	4.0 J
PFPeA	--	--	ng/L	< 0.46 U	< 0.43 U	< 0.43 U	< 0.47 U	< 0.45 U	28	0.56 J
PFHxA	150,000	--	ng/L	< 0.55 U	< 0.51 U	< 0.51 U	< 0.55 U	< 0.53 U	19	< 0.54 U
PFHpA	--	--	ng/L	< 0.24 U	< 0.22 U	< 0.22 U	< 0.24 U	< 0.23 U	13	< 0.23 U
PFOA	20	4	ng/L	< 0.80 U	< 0.74 U	< 0.75 U	< 0.81 U	< 0.78 U	69	< 0.79 U
PFNA	30	10	ng/L	< 0.25 U	< 0.24 U	< 0.24 U	< 0.26 U	< 0.25 U	5.0	< 0.25 U
PFDA	300	--	ng/L	< 0.29 U	< 0.27 U	< 0.27 U	< 0.30 U	< 0.29 U	< 0.30 U	< 0.29 U
PFUnA	3,000	--	ng/L	< 1.0 U	< 0.96 U	< 0.97 U	< 1.1 U	< 1.0 U	< 1.1 U	< 1.0 U
PFDaA	500	--	ng/L	< 0.52 U	< 0.48 U	< 0.49 U	< 0.53 U	< 0.51 U	< 0.54 U	< 0.51 U
PFTriA	--	--	ng/L	< 1.2 U	< 1.1 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.2 U
PFTeA	10,000	--	ng/L	< 0.69 U	< 0.64 U	< 0.65 U	< 0.70 U	< 0.67 U	< 0.71 U	< 0.67 U
PFHxDA	--	--	ng/L	< 0.84 U	< 0.78 U	< 0.79 U	< 0.85 U	< 0.82 U	< 0.87 U	< 0.82 U
PFODA	400,000	--	ng/L	< 0.89 UJ	< 0.82 U	< 0.83 U	< 0.90 U	< 0.87 U	< 0.92 U	< 0.87 U
PFBS	450,000	2,000	ng/L	< 0.19 U	< 0.18 U	< 0.18 U	< 0.19 U	< 0.18 U	0.49 J	< 0.18 U
PFPeS	--	--	ng/L	< 0.28 U	< 0.26 U	< 0.27 U	< 0.29 U	< 0.28 U	0.34 J	< 0.28 U
PFHxS	40	10	ng/L	< 0.54 U	< 0.50 U	< 0.50 U	< 0.54 U	< 0.52 U	7.0	< 0.53 U
PFHpS	--	--	ng/L	< 0.18 U	< 0.17 U	< 0.17 U	< 0.18 U	< 0.17 U	< 0.19 U	< 0.18 U
PFOS	20	4	ng/L	< 0.51 U	< 0.47 U	< 0.48 U	< 0.52 U	< 0.50 U	< 0.53 U	< 0.50 U
PFNS	--	--	ng/L	< 0.35 U	< 0.32 U	< 0.33 U	< 0.35 U	< 0.34 U	< 0.36 U	< 0.34 U
PFDS	--	--	ng/L	< 0.30 U	< 0.28 U	< 0.28 U	< 0.31 U	< 0.29 U	< 0.31 U	< 0.30 U
PFDoS	--	--	ng/L	< 0.91 U	< 0.85 U	< 0.86 U	< 0.93 U	< 0.89 U	< 0.95 U	< 0.90 U
4:2 FTS	--	--	ng/L	< 0.23 U	< 0.21 U	< 0.21 U	< 0.23 U	< 0.22 U	0.31 J	< 0.22 U
6:2 FTS	--	--	ng/L	< 2.4 U	< 2.2 U	< 2.2 U	< 2.4 U	< 2.3 U	9.8	< 2.3 U
8:2 FTS	--	--	ng/L	< 0.43 U	< 0.40 U	< 0.41 U	< 0.44 U	< 0.42 U	< 0.45 U	< 0.43 U
10:2 FTS	--	--	ng/L	< 0.63 U	< 0.59 U	< 0.59 U	< 0.64 U	< 0.62 U	< 0.66 U	< 0.62 U
FOSA	20	--	ng/L	1.3 J	< 0.86 U	< 0.87 U	< 0.94 U	< 0.90 U	< 0.96 U	< 0.91 U
NMeFOSA	--	--	ng/L	< 0.41 U	< 0.38 U	< 0.38 U	< 0.41 U	< 0.40 U	< 0.42 U	< 0.40 U
NEtFOSA	20	--	ng/L	< 0.82 U	< 0.76 U	< 0.77 U	< 0.83 U	< 0.80 U	< 0.85 U	< 0.80 U
NMeFOSAA	--	--	ng/L	< 1.1 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.1 U
NEtFOSAA	20	--	ng/L	< 1.2 U	< 1.1 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.2 U
NMeFOSE	--	--	ng/L	< 1.3 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.3 U	< 1.4 U	< 1.3 U
NEtFOSE	20	--	ng/L	< 0.80 U	< 0.74 U	< 0.75 U	< 0.81 U	< 0.78 U	< 0.83 U	< 0.79 U
HFPO-DA (GenX)	300	10	ng/L	< 1.4 U	< 1.3 U	< 1.3 U	< 1.4 U	< 1.4 U	< 1.5 U	< 1.4 U
DONA	3,000	--	ng/L	< 0.38 U	< 0.35 U	< 0.35 U	< 0.38 U	< 0.37 U	< 0.39 U	< 0.37 U
F-53B Major	--	--	ng/L	< 0.23 U	< 0.21 U	< 0.21 U	< 0.23 U	< 0.22 U	< 0.23 U	< 0.22 U
F-53B Minor	--	--	ng/L	< 0.30 U	< 0.28 U	< 0.28 U	< 0.31 U	< 0.29 U	< 0.31 U	< 0.30 U

Notes on Page 4.

Table 4
Potable Well Results
Revised Long-Term Potable Well Sampling Plan
Marinette, Wisconsin

			Location	WS-109	WS-109	WS-121A	WS-121A	WS-121B	WS-152	WS-152
			Sample ID	POET-17-POST (052924)	DUP-546 (052924)	POET-16-POST (050824)	DUP-543 (050824)	POET-36-POST (050824)	POET-42-POST (042424)	DUP-541 (042424)
			Sample Event	POET Effluent	POET Effluent	POET Effluent	POET Effluent	POET Effluent	POET Effluent	POET Effluent
			Sample Date	5/29/2024	5/29/2024	5/8/2024	5/8/2024	5/8/2024	4/24/2024	4/24/2024
			Sample Type	N	FD	N	FD	N	N	FD
			General Well Depth	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
			Detailed Well Depth	21	21	24	24	26	28	28
			Source	+	+	+	+	+	+, -	+, -
Chemical Name	Wisconsin DHS Recommended Standards (not adopted) ⁽¹⁾	Public/Municipal Drinking Water Standards (Not Applicable to Private Wells) ⁽²⁾	Unit							
PFBA	10,000	--	ng/L	< 2.2 U	< 2.2 U	< 2.2 U	< 2.2 U	< 2.3 U	3.5 J	3.7 J
PFPeA	--	--	ng/L	< 0.44 U	< 0.45 U	< 0.45 U	< 0.45 U	< 0.47 U	6.6	7.0
PFHxA	150,000	--	ng/L	< 0.52 U	< 0.53 U	< 0.53 U	< 0.53 U	< 0.56 U	< 0.57 U	< 0.54 U
PFHpA	--	--	ng/L	< 0.23 U	< 0.23 U	< 0.23 U	< 0.23 U	< 0.24 U	< 0.25 U	< 0.23 U
PFOA	20	4	ng/L	< 0.77 U	< 0.78 U	< 0.78 U	< 0.77 U	< 0.82 U	< 0.84 U	< 0.80 U
PFNA	30	10	ng/L	< 0.24 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.27 U	< 0.25 U
PFDA	300	--	ng/L	< 0.28 U	< 0.28 U	< 0.28 U	< 0.28 U	< 0.30 U	< 0.31 U	< 0.29 U
PFUnA	3,000	--	ng/L	< 0.99 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.1 U	< 1.1 U	< 1.0 U
PFDaA	500	--	ng/L	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.53 U	< 0.54 U	< 0.52 U
PFTriA	--	--	ng/L	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.3 U	< 1.2 U
PFTeA	10,000	--	ng/L	< 0.66 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.70 U	< 0.72 U	< 0.69 U
PFHxDA	--	--	ng/L	< 0.80 U	< 0.81 U	< 0.81 U	< 0.81 U	< 0.86 U	< 0.88 U	< 0.84 U
PFODA	400,000	--	ng/L	< 0.85 U	< 0.86 U	< 0.86 UJ	< 0.86 UJ	< 0.91 UJ	< 0.93 U	< 0.88 U
PFBS	450,000	2,000	ng/L	< 0.18 U	< 0.18 U	< 0.18 U	< 0.18 U	< 0.19 U	< 0.20 U	< 0.19 U
PFPeS	--	--	ng/L	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.29 U	< 0.30 U	< 0.28 U
PFHxS	40	10	ng/L	< 0.51 U	< 0.52 U	< 0.52 U	< 0.52 U	< 0.55 U	< 0.56 U	< 0.54 U
PFHpS	--	--	ng/L	< 0.17 U	< 0.17 U	< 0.17 U	< 0.17 U	< 0.18 U	< 0.19 U	< 0.18 U
PFOS	20	4	ng/L	< 0.49 U	< 0.49 U	< 0.49 U	< 0.49 U	< 0.52 U	< 0.53 U	< 0.51 U
PFNS	--	--	ng/L	< 0.33 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.36 U	< 0.37 U	< 0.35 U
PFDS	--	--	ng/L	< 0.29 U	< 0.29 U	< 0.29 U	< 0.29 U	< 0.31 U	< 0.32 U	< 0.30 U
PFDoS	--	--	ng/L	< 0.87 U	< 0.89 U	< 0.89 U	< 0.88 U	< 0.94 U	< 0.96 U	< 0.91 U
4:2 FTS	--	--	ng/L	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U	< 0.23 U	< 0.24 U	< 0.23 U
6:2 FTS	--	--	ng/L	< 2.3 U	< 2.3 U	< 2.3 U	< 2.3 U	< 2.4 U	< 2.5 U	< 2.3 U
8:2 FTS	--	--	ng/L	< 0.41 U	< 0.42 U	< 0.42 U	< 0.42 U	< 0.44 U	< 0.45 U	< 0.43 U
10:2 FTS	--	--	ng/L	< 0.60 U	< 0.61 U	< 0.61 U	< 0.61 U	< 0.65 U	< 0.66 U	< 0.63 U
FOSA	20	--	ng/L	< 0.88 U	< 0.90 U	1.7 J	1.5 J	1.5 J	< 0.97 U	< 0.92 U
NMeFOSA	--	--	ng/L	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.42 U	< 0.42 U	< 0.40 U
NEtFOSA	20	--	ng/L	< 0.78 U	< 0.79 U	< 0.79 U	< 0.79 U	< 0.84 U	< 0.86 U	< 0.82 U
NMeFOSAA	--	--	ng/L	< 1.1 U	< 1.1 U	< 1.1 U	< 1.1 U	< 1.2 U	< 1.2 U	< 1.1 U
NEtFOSAA	20	--	ng/L	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.3 U	< 1.3 U	< 1.2 U
NMeFOSE	--	--	ng/L	< 1.3 U	< 1.3 U	< 1.3 U	< 1.3 U	< 1.4 U	< 1.4 U	< 1.3 U
NEtFOSE	20	--	ng/L	< 0.77 U	< 0.78 U	< 0.78 U	< 0.77 U	< 0.82 U	< 0.84 U	< 0.80 U
HFPO-DA (GenX)	300	10	ng/L	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	< 1.5 U	< 1.4 U
DONA	3,000	--	ng/L	< 0.36 U	< 0.37 U	< 0.37 U	< 0.36 U	< 0.39 U	< 0.39 U	< 0.38 U
F-53B Major	--	--	ng/L	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U	< 0.23 U	< 0.24 U	< 0.23 U
F-53B Minor	--	--	ng/L	< 0.29 U	< 0.29 U	< 0.29 U	< 0.29 U	< 0.31 U	< 0.32 U	< 0.30 U

Notes on Page 4.

Table 4
Potable Well Results
Potable Well Sampling Program Annual Summary Report - FTC Sampling Area
Marinette, Wisconsin

Notes:

< = Compound not detected at method detection limit.

⁽¹⁾ = In June 2019 the Wisconsin Department of Health Services (DHS) recommended individual groundwater standards of 20 ng/L for PFOA and PFOS. The WDNR proposed those standards through the state rulemaking process. In February 2022, the Wisconsin Natural Resources Board did not approve the proposed rulemaking for groundwater. In August 2022, WDNR promulgated a drinking water standard of 70 ng/L for PFOA and PFOS, individually and combined, for public water systems. This standard does not apply to private drinking water wells.

⁽²⁾ = In November 2020 the Wisconsin DHS recommended a combined groundwater standard of 20 ng/L for: FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS and PFOA. DHS also recommended individual standards for FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFBS, PFHxS, PFNA, PFDA, PFDoA, PFHxA, PFTeA, PFUnA, PFBA, PFODA, DONA, and GenX. In March 2021, The Wisconsin Natural Resources Board approved a Statement of Scope to initiate a rulemaking for this recommendation. The WDNR has not yet proposed rules to initiate the rulemaking process to implement this recommendation; the agency's authority to do so under the Statement of Scope will expire in September 2023.

-- = No standard

FD = Field Duplicate

N = Normal sample

ng/L = nanograms per liter

- = Information gathered from sampling log according to homeowners

+ = Information gathered from well construction form

+, - = Information gathered from well construction form, but information also available from sampling log

Detailed well depth in feet

POET (Point of Entry Treatment) = Sample collected as part of the POET system monitoring program

POET Effluent = Effluent sample collected prior to granular activated carbon change

Spring = Sample collected as part of the the specified potable well sampling event

Data Qualifier:

U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample

D = Dilution required for sample analysis

UJ = The compound was not detected above the reported sample method detection limit. However, the reported limit is approximate and may or may not represent the actual method detection limit.

UB = Compound considered non-detect at the listed value due to associated blank contamination.

J- = The result is an estimated quantity. The associated numerical value is expected to have a negative or low bias.

J+ = The result is an estimated quantity. The associated numerical value is expected to have a positive or high bias.

UJ- = The compound was not detected above the reported sample method detection limit. However, the reported limit is expected to be biased low and may or may not represent the actual method detection limit.

Chemical Abbreviations:

PFOA = Perfluorooctanoic acid (C8)

PFOS = Perfluorooctanesulfonic acid (C8)

PFBS = Perfluorobutanesulfonic acid (C4)

PFHpA = Perfluoroheptanoic acid (C7)

PFHxS = Perfluorohexanesulfonic acid (C6)

PFNA = Perfluorononanoic acid (C9)

PFDA = Perfluorodecanoic acid (C10)

PFDoA = Perfluorododecanoic acid (C12)

PFHxA = Perfluorohexanoic acid (C6)

PFTeA = Perfluorotetradecanoic acid (C14)

PFTriA = Perfluorotridecanoic acid (C13)

PFUnA = Perfluoroundecanoic acid (C11)

NEtFOSAA = N-ethylperfluorooctanesulfonamidoacetic acid (C12)

NMeFOSAA = N-methylperfluorooctanesulfonamidoacetic acid (C11)

PFBA = Perfluorobutanoic acid (C4)

PFPeA = Perfluoropentanoic acid (C5)

PFHxDA = Perfluoro-n-hexadecanoic acid (C16)

PFODA = Perfluoro-n-octadecanoic acid (C18)

PFPeS = Perfluoropentanesulfonic acid (C5)

PFHpS = Perfluoroheptanesulfonic acid (C7)

PFNS = Perfluorononanesulfonic acid (C9)

PFDS = Perfluorodecanesulfonic acid (C10)

PFDoS = Perfluorododecanesulfonic acid (C12)

FOSA = Perfluorooctanesulfonamide (C8)

NEtFOSA = N-ethylperfluorooctanesulfonamide (C10)

NMeFOSA = N-methylperfluorooctanesulfonamide (C9)

NMeFOSE = N-methylperfluorooctanesulfonamidoethanol (C11)

NEtFOSE = N-ethylperfluorooctanesulfonamidoethanol (C12)

4:2 FTS = 4:2 fluorotelomer sulfonate (C6)

6:2 FTS = 6:2 fluorotelomer sulfonate (C8)

8:2 FTS = 8:2 fluorotelomer sulfonate (C10)

10:2 FTS = 10:2 fluorotelomer sulfonate (C12)

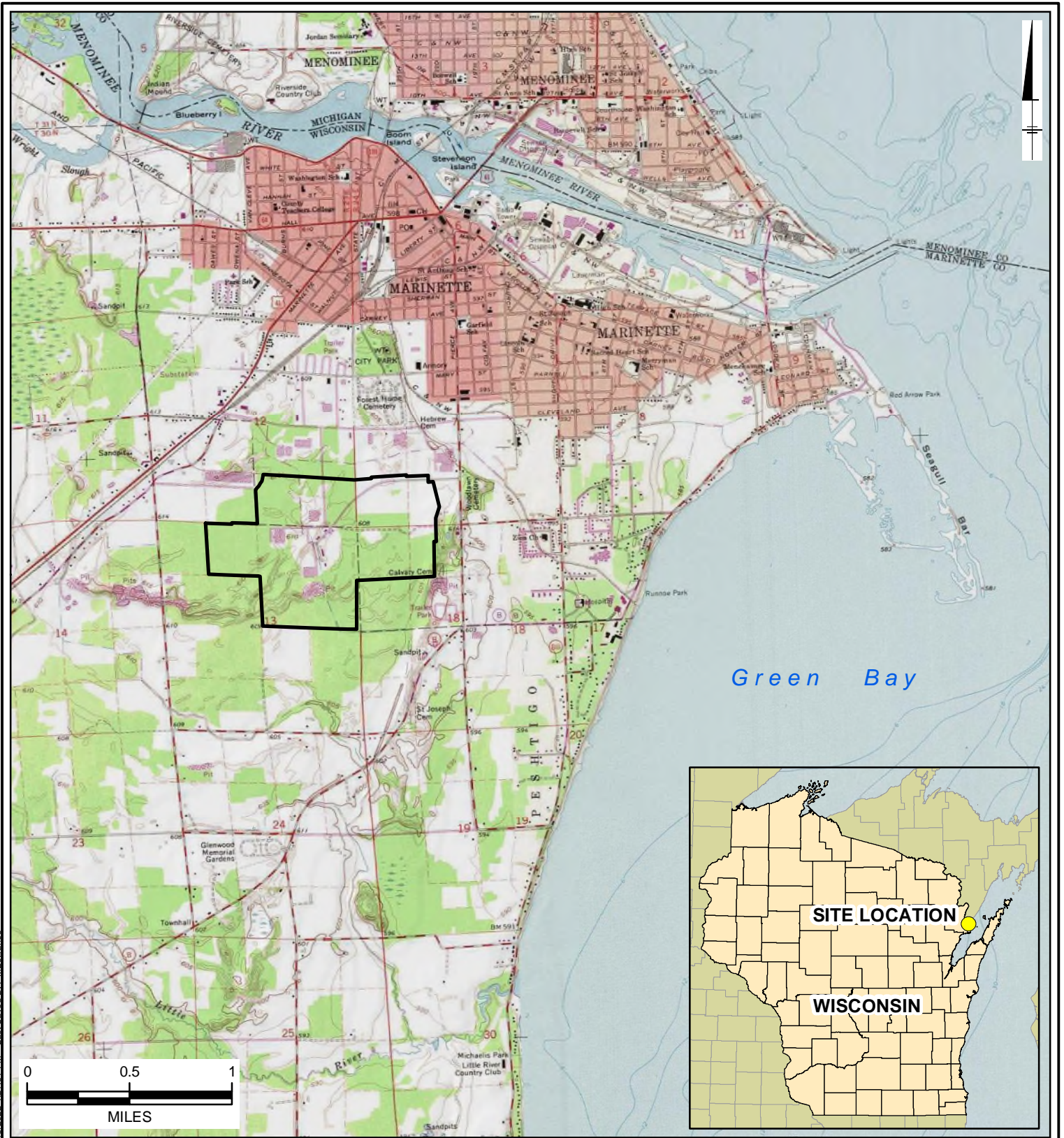
DONA = 4,8-Dioxa-3H-perfluorononanoic acid (C7)

HFPO-DA (GenX) = Hexafluoropropylene oxide dimer acid (C6)

9Cl-PF3ONS = 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (C8)

11Cl-PF3OUdS = 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (C10)

Figures



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LEGEND:

 APPROXIMATE SITE PROPERTY BOUNDARY

NOTES:

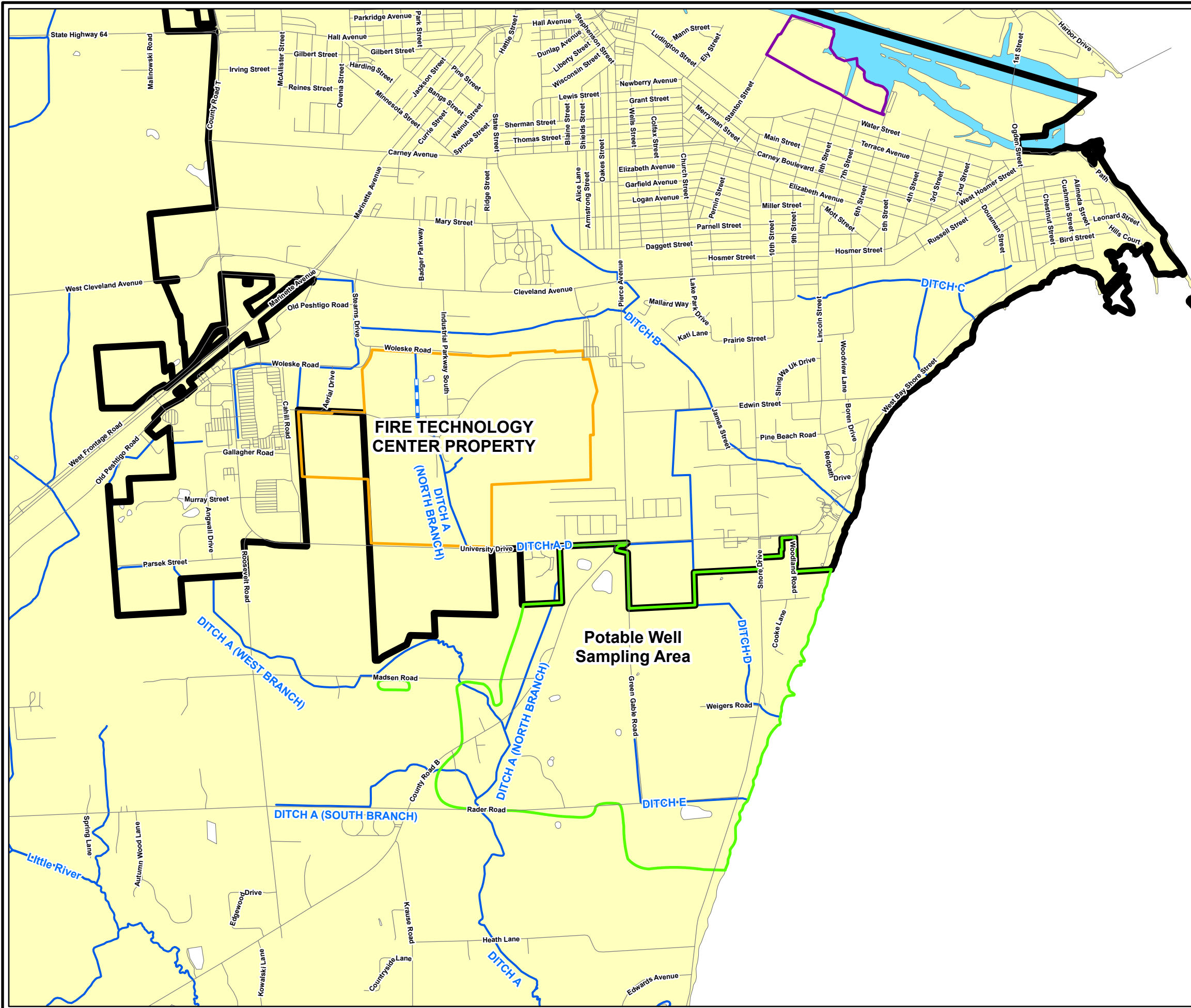
1. TOPOGRAPHIC MAP SOURCE: COPYRIGHT:© 2013 NATIONAL GEOGRAPHIC SOCIETY, I-CUBED, ACCESSED JANUARY 2022.

TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

SITE LOCATION

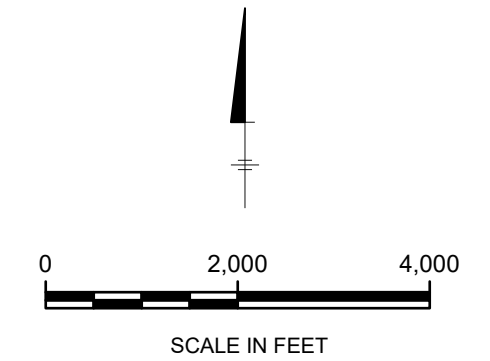


**FIGURE
1**



LEGEND:

- POTABLE WELL SAMPLING AREA
- APPROXIMATE STANTON STREET FACILITY PROPERTY BOUNDARY
- APPROXIMATE SITE PROPERTY BOUNDARY
- APPROXIMATE MARINETTE CITY BOUNDARY
- WATERBODY
- DITCH OR STREAM
- ROAD

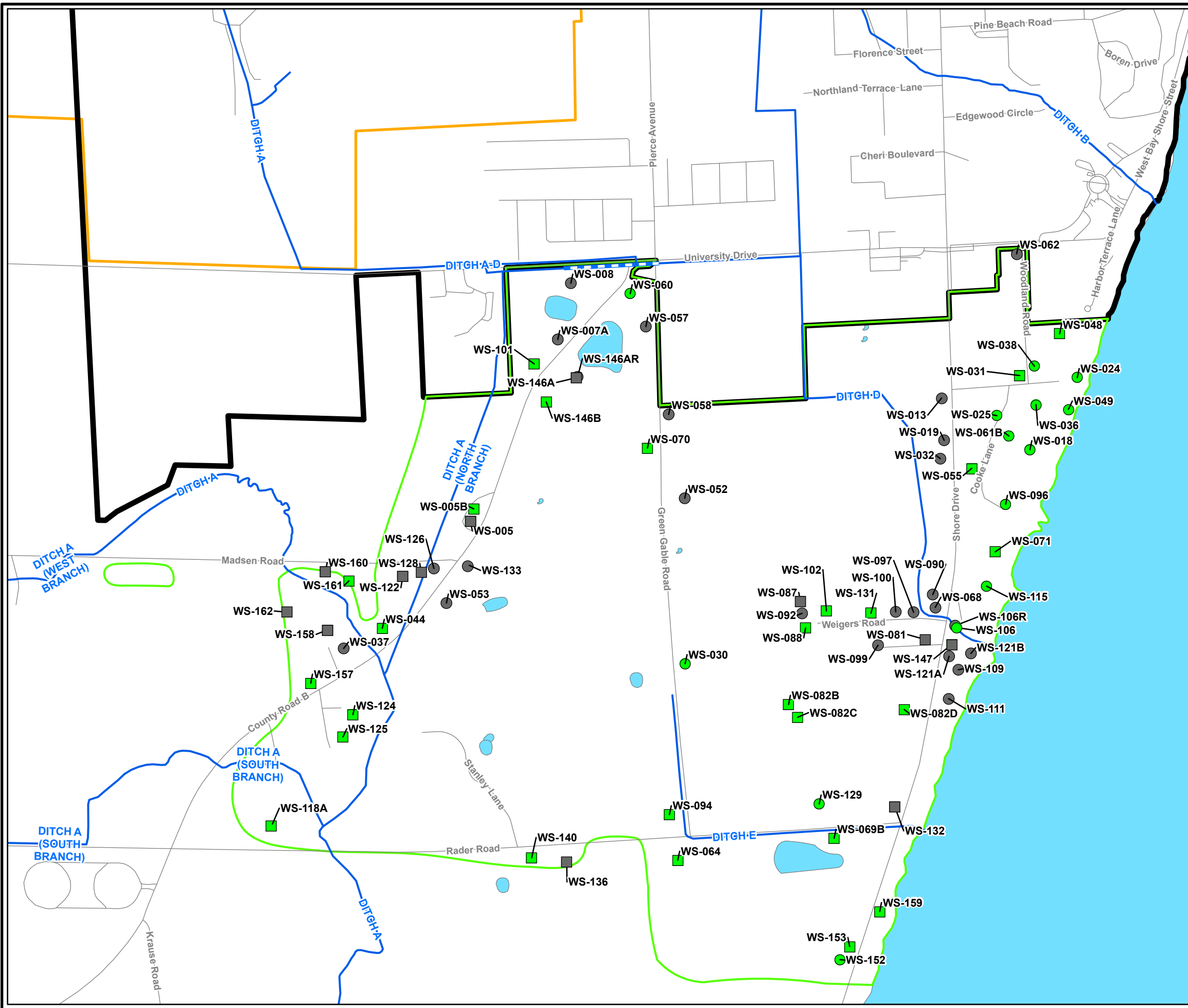


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POTABLE WELL SAMPLING AREA

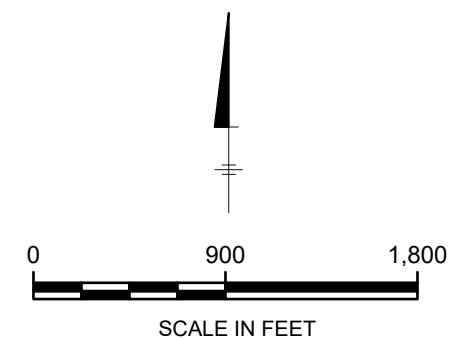
ARCADIS | FIGURE 2

T:\ENV\TYCO\PRO_REPORT\FIGURES\FIGURES\REVISED\T_PWSP_V7\REVISED\T_PWSP_V7.aprx Figure2_PotableWell_Shallow 9/24/2024 7:18 PM



- LEGEND:**
- POTABLE WELL SAMPLING AREA
 - APPROXIMATE SITE PROPERTY BOUNDARY
 - APPROXIMATE MARINETTE CITY BOUNDARY
 - ROAD
 - DITCH OR STREAM
 - CULVERT
 - POTABLE WELL LOCATION WITH POET SYSTEM INSTALLED
 - POTABLE WELL LOCATION
 - ABANDONED POTABLE WELL LOCATION WITH POET SYSTEM REMOVED
 - ABANDONED POTABLE WELL LOCATION

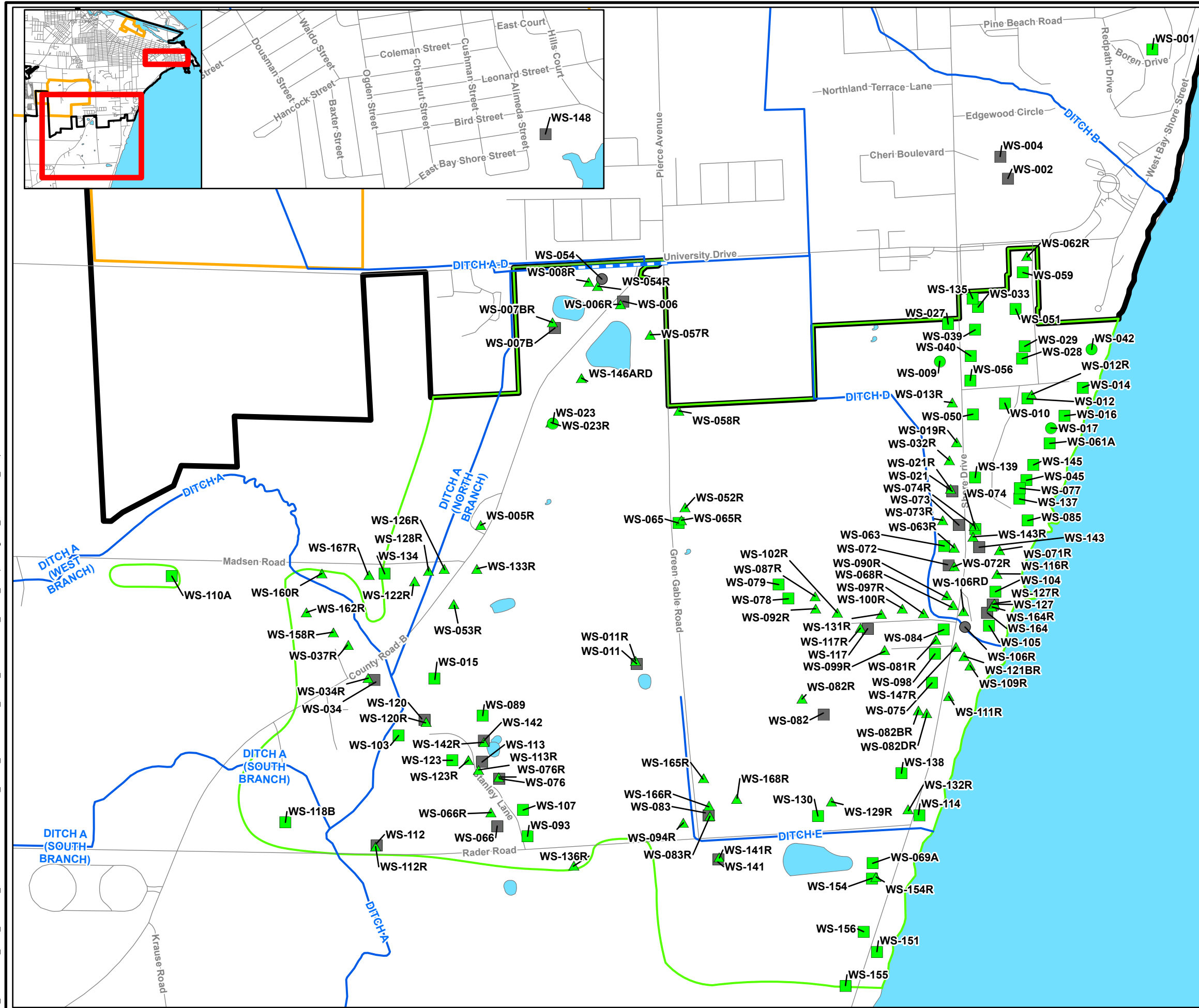
- NOTES:**
1. WELL LOCATIONS ARE APPROXIMATE.
 2. ALL WELLS ARE SAND POINTS.
 3. WS-106R IS A DRILLED WELL TO 37 FEET AND WS-146B IS A HAND DRILLED WELL TO 65 FEET.
 4. WS-106R IS A REPLACEMENT WELL FOR A SAND POINT WELL THAT WAS DRILLED TO 37 FEET.



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**POTABLE WELL LOCATIONS -
SAND POINT WELLS < 37 FEET**

ARCADIS | **FIGURE 3**

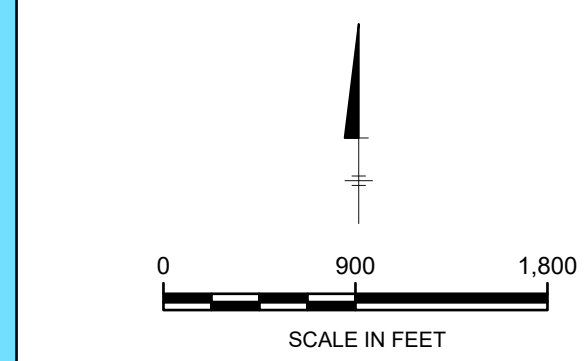


LEGEND:

- POTABLE WELL SAMPLING AREA
- APPROXIMATE SITE PROPERTY BOUNDARY
- APPROXIMATE MARINETTE CITY BOUNDARY
- ROAD
- DITCH OR STREAM
- CULVERT
- POTABLE WELL LOCATION WITH POET SYSTEM INSTALLED
- POTABLE WELL LOCATION
- ▲ DEEP REPLACEMENT POTABLE WELL LOCATION
- ABANDONED POTABLE WELL LOCATION WITH POET SYSTEM REMOVED
- ABANDONED POTABLE WELL LOCATION

NOTES:

1. WELL LOCATIONS ARE APPROXIMATE.
2. ALL WELLS ARE DRILLED WELLS.

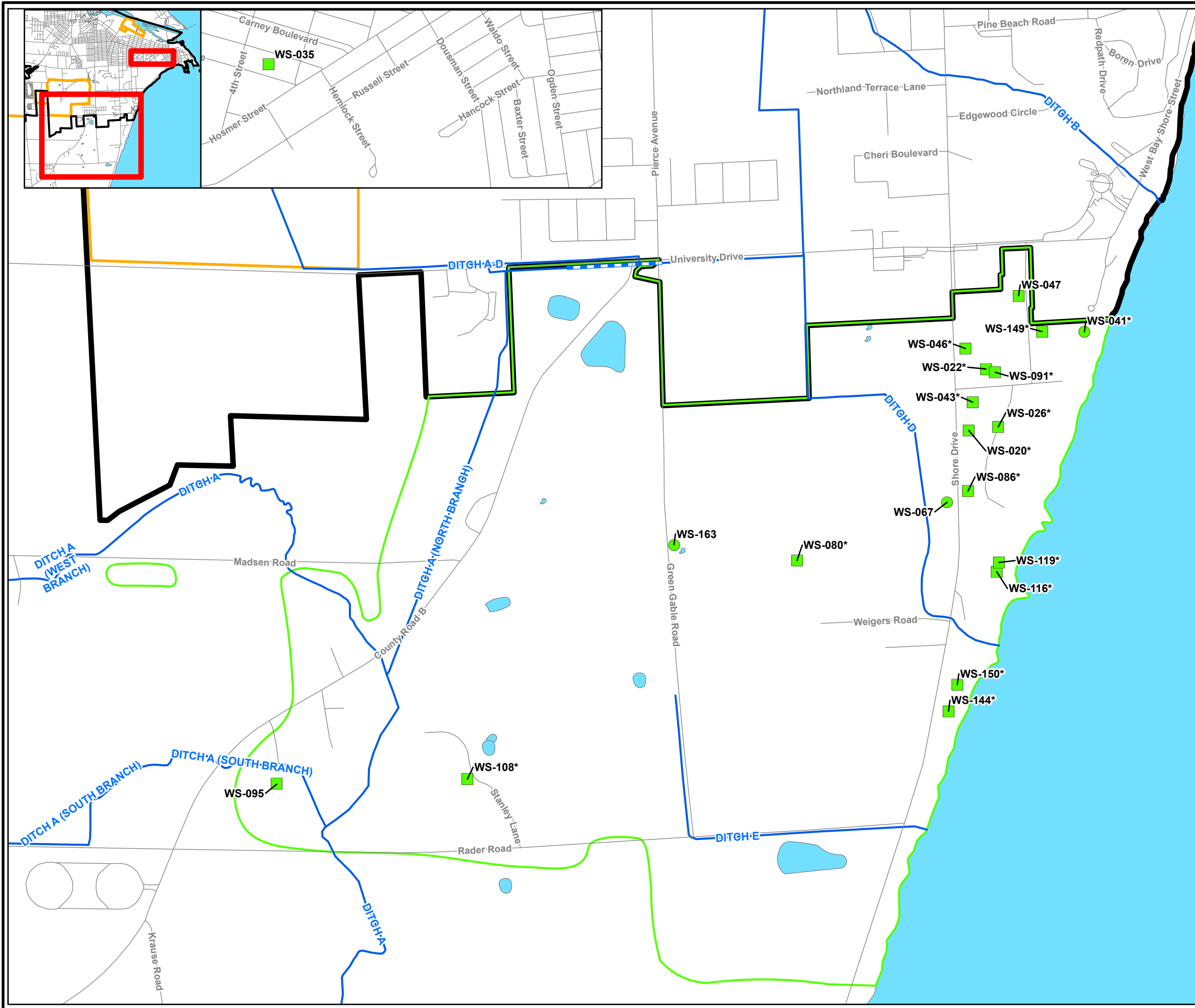


TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

**POTABLE WELL LOCATIONS -
DRILLED WELLS > 37 FEET**

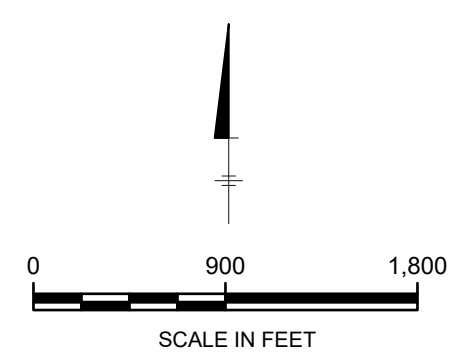
ARCADIS | **FIGURE 4**

T:\ENV\TYCO\PRO_REPORT_FIGURES\FIG1\Revised\I_PWSP_V7\Revised\I_PWSP_V7.aprx Figure4_PotableWell_UnknownDepth 9/24/2024 6:54 PM



- LEGEND:**
- POTABLE WELL SAMPLING AREA
 - APPROXIMATE SITE PROPERTY BOUNDARY
 - APPROXIMATE MARINETTE CITY BOUNDARY
 - ROAD
 - DITCH OR STREAM
 - POTABLE WELL LOCATION WITH POET SYSTEM INSTALLED
 - POTABLE WELL LOCATION

- NOTES:**
1. WELL LOCATIONS ARE APPROXIMATE.
 2. * - INDICATES THE WELL IS DRILLED BUT THE DEPTH IS UNKNOWN.



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**POTABLE WELL LOCATIONS -
UNKNOWN WELL DEPTHS**

FIGURE
5

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