

Alyssa Sellwood
Complex Sites Project Manager, Remediation and Redevelopment Program
State of Wisconsin Department of Natural Resources
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Date: January 31, 2025

Our Ref: 30232647

Subject: Deep Aquifer Bedrock Well Design and Long-Term Monitoring
Update – Quarterly Deep Private Well Update (October-December 2024)
Tyco Fire Technology Center, Marinette, WI
BRRTS# 02-38-580694

Dear Ms. Sellwood,

On behalf of Tyco Fire Products LP (Tyco), Arcadis U.S., Inc. (Arcadis) prepared this Quarterly Deep Private Well Update in response to the Wisconsin Department of Natural Resources (WDNR) letter dated November 17, 2023. The November 2023 WDNR letter commented on the submittal of a quarterly private deep bedrock well update starting in February 2024 and lasting through the final deep well installations.

To fulfill the WDNR request, Arcadis is providing the current private deep bedrock well installation status update regarding the Potable Well Sampling Area (PWSA). This includes the information requested within the November 2023 WDNR letters.

Tyco continues to investigate per- and poly-fluoroalkyl substances (PFAS) potentially related to the Tyco Fire Technology Center located at 2700 Industrial Parkway South in Marinette, Wisconsin (the Site; **Figure 1**).

Continued Efforts For Deep Replacement Potable Wells

Tyco continues to install private deep bedrock wells as a drinking water solution for neighbors that request to participate in the program. As of the end of December 2024, Tyco had successfully completed deep bedrock replacement wells for 90 private wells (**Table X.4**) and has agreements to install 40 additional deep bedrock replacement wells. Table X.4 also includes status of sampling of the new deep replacement potable wells. Copies of the letter notifications provided to residents with their results are sent separately to the WDNR via email. All data provided to date continue to support deep wells as a permanent drinking water solution for the PWSA.

The next quarterly deep private well update will be submitted in second quarter of 2025.

Deep Aquifer Bedrock Well Design – Quarterly Deep Private Well Update
January 31, 2025

Sincerely,
Arcadis U.S., Inc.

A handwritten signature in blue ink, appearing to read "Matt Coleman", with a long, sweeping underline.

Matt Coleman
Project Communications Manager

CC. Denice Nelson, JCI
Scott Wahl, JCI

Enclosures:
Table X.4 - LTDW Deep Well Installation Progress Update
Figure 1
Figure 2

Table X.4
Quarterly Deep Private Well Update
Tyco Fire Products LP
Marinette, Wisconsin

WI Unique Well ID	Parcel Number	House Number	Street Name	Previous Well ID	Replacement Well ID	Well Depth (ft bgs)	Retrofit Liner	Well Replacement Date	Sampling Date #1	Sampling Date #2	Sampling Date #3	Sampling Date #4	Sampling Date #5 - Final
AAW649	024-02253.001	N2713	Shore Drive	WS-132	WS-132R	542	N	12/5/2022	12/12/2022	1/26/2023; 1/27/2023	6/20/2023	--	3/14/2024
AAW650	024-02229.000	N2881	Shore Drive	WS-072	WS-072R	562	N	12/6/2022	12/12/2022	12/12/2023; 1/20/2023	3/21/2023	10/31/2023	12/26/2023
AAV479	024-01345.001	W964	County Road B	WS-037	WS-037R	520	N	1/15/2023	1/16/2023	1/31/2023	5/24/2023	--	5/3/2024
AAV483	024-01855.000	W889	County Road B	WS-133	WS-133R	510	N	2/1/2023	2/2/2023	2/7/2023	6/20/2023	--	3/11/2024; 4/29/2024
AAT584	024-01856.007	N2816	Stanley Lane	WS-120	WS-120R	480	N	2/15/2023	2/16/2023	2/21/2023	6/21/2023	--	3/15/2024
AAV497	024-01812.007	W716	County Road B	WS-054	WS-054R	600	N	3/22/2023	3/23/2023	6/22/2023; 7/10/2023; 8/24/2023	2/13/2024	5/1/2024	8/20/2024
AAV515	024-01849.001	W905	County Road B	WS-053	WS-053R	520	N	5/18/2023	5/19/2023	6/2/2023	--	3/7/2024	6/26/2024
AAV516	024-01344.001	W959	County Road B	WS-034	WS-034R	540	N	5/19/2023	5/22/2023	5/30/2023	10/31/2023	2/12/2024	5/1/2024
AAZ789	024-01851.000	W896	County Road B	WS-126	WS-126RL	480	Y ¹	6/16/2023	9/6/2023	10/31/2023	4/10/2024	6/3/2024	10/16/2024
AAZ785	024-01856.012	N2778	Stanley Lane	WS-142	WS-142R	522	N	6/26/2023	9/27/2023	10/20/2023	2/15/2024	6/7/2024	--
AAZ791	024-01354.001	W924	Rader Road	WS-112	WS-112R	484	N	8/28/2023	9/26/2023	9/28/2023	2/13/2024	5/1/2024	9/19/2024
ABO263	024-01852.000	W877	Madsen Road	WS-122	WS-122R	520	N	9/5/2023	9/7/2023	10/3/2023	3/18/2024	6/18/2024	--
ABO264	024-01347.000	W907	Madsen Road	WS-167	WS-167R	522	N	9/5/2023	9/8/2023	12/13/2023	2/27/2024	9/11/2024	--
ABO302	024-02196.000	W461	University Drive	WS-062	WS-062R	540	N	9/7/2023	9/12/2023	10/11/2023	3/18/2024	6/20/2024	--
ABO946	024-02230.001	N2861	Shore Drive	WS-090	WS-090R	542	N	9/21/2023	10/5/2023	10/10/2023	2/12/2024	7/8/2024	10/22/2024
ABO948	024-02231.000	N2849	Shore Drive	WS-068	WS-068R	542	N	9/25/2023	10/5/2023	10/18/2023	2/15/2024	6/26/2024	--
ABO938	024-01834.000	N2969	Shore Drive	WS-019	WS-019R	542	N	9/27/2023	10/6/2023	10/13/2023	2/13/2024	7/12/2024	--
AAE171	024-01865.001	W691	Rader Road	WS-141	WS-141R	545	N	9/29/2023	4/1/2024	12/11/2023	4/1/2024	9/5/2024	--
ABP340	024-01864.004	Undeveloped	Green Gable Road/ Rader Road	--	WS-168R	520	N	10/10/2023	10/10/2023	12/20/2023	2/16/2024	9/11/2024	--
ABP385	024-01864.005	N2740	Green Gable Road	WS-165	WS-165R	500	N	10/10/2023	10/12/2023	11/8/2023	3/6/2024	7/12/2024	--
ABP486	024-01864.002	N2718	Green Gable Road	WS-166	WS-166R	500	N	10/13/2023	10/17/2023	12/20/2023	2/16/2024	9/11/2024	--
ABP499	024-01864.003	W688	Rader Road	WS-083	WS-083R	500	N	10/16/2023	10/17/2023	12/28/2023	2/16/2024	9/11/2024	--
AAZ790	024-01830.000	N2936	Green Gable Road	WS-052	WS-052R	500	N	10/30/2023	12/7/2023	12/13/2023	4/2/2024	9/13/2024	--
ABR796	024-02236.000	W546	Weigers Road	WS-100	WS-100R	582	N	1/2/2024	1/25/2024	1/25/2024	5/1/2024	9/11/2024	--
ABR781	024-02240.000	N2825	Shore Drive	WS-099	WS-099R	602	N	1/8/2024	1/25/2024	1/25/2024	5/9/2024	9/12/2024	--
ABR795	024-02233.000	W536	Weigers Road	WS-097	WS-097R	582	N	1/9/2024	1/23/2024	1/26/2024	5/9/2024	9/12/2024	--
ABS159	024-01345.002	W966	County Road B	WS-158	WS-158R	500	N	2/7/2024	2/8/2024	6/24/2024	--	--	--
ABT026	024-01812.005	W732	County Road B	WS-008	WS-008R	520	N	3/20/2024	3/25/2024	4/4/2024	9/11/2024	--	--
ABT044	024-01812.002_B	W752	County Road B	WS-007B	WS-007BR	540	N	3/22/2024	3/26/2024	5/2/2024	9/10/2024	--	--
ABT135	024-01811.000	W725	County Road B	WS-006	WS-006R	520	N	4/1/2024	4/11/2024	5/14/2024	9/10/2024	--	--
ABT154	024-01815.002	W761	County Road B	WS-146AR	WS-146ARD	500	N	4/2/2024	4/11/2024	5/3/2024	9/12/2024	--	--
ABT639	024-01346.000	W939	Madsen Road	WS-160	WS-160R	540	N	5/1/2024	5/2/2024	5/17/2024	9/18/2024	--	--
ABT638	024-01819.000	W866	County Road B	WS-005	WS-005R	515	N	5/4/2024	5/7/2024	5/15/2024	9/10/2024	--	--
ABT349	024-01848.000	N2819	Green Gable Road	WS-011	WS-011R	540	N	5/12/2024	7/16/2024	10/9/2024	--	--	--
AAZ787	024-01856.026	N2731	Stanley Lane	WS-066	WS-066R	564	N	5/22/2024	7/15/2024	7/19/2024	--	--	--
ABU677	024-02238.001	W559	Weigers Road	WS-117	WS-117R	510	N	5/28/2024	6/18/2024	6/18/2024	10/10/2024	--	--
ABU678	024-02226.000	N2830	Shore Drive	WS-147	WS-147R	542	N	5/29/2024	--	--	--	--	--
ABT640	024-01824.000	W797	County Road B	WS-023	WS-023R	540	N	6/14/2024	6/20/2024	7/18/2024	--	--	--
AAB612	024-02242.000	N2829	Shore Drive	WS-081	WS-081R	607	N	6/18/2024	8/22/2024	9/19/2024	--	--	--

Notes provided on Page 3

Table X.4
Quarterly Deep Private Well Update
Tyco Fire Products LP
Marinette, Wisconsin

WI Unique Well ID	Parcel Number	House Number	Street Name	Previous Well ID	Replacement Well ID	Well Depth (ft bgs)	Retrofit Liner	Well Replacement Date	Sampling Date #1	Sampling Date #2	Sampling Date #3	Sampling Date #4	Sampling Date #5 - Final
ABV398	024-01856.019	N2754	Stanley Lane	WS-076	WS-076R	540	N	6/19/2024	6/20/2024	8/12/2024	--	--	--
ABV046	024-01831.000	N2922	Green Gable Road	WS-065	WS-065R	500	N	6/20/2024	7/15/2024; 11/19/24	12/12/2024	--	--	--
ABV443	024-01833.000	N2995	Shore Drive	WS-013	WS-013R	510	N	6/21/2024	7/9/2024	7/12/2024	--	--	--
ABV552	024-01841.000	W605	Weigers Road	WS-092	WS-092R	582	N	6/24/2024	10/22/2024	10/22/2024	--	--	--
AAB609	024-01866.001	N2655	Shore Drive	WS-154	WS-154R	523	N	6/24/2024	8/21/2024	10/29/2024	--	--	--
ABV554	024-02222.000	N2844	Shore Drive	WS-106R	WS-106RD	502	N	6/25/2024	7/9/2024	7/9/2024	--	--	--
ABV047	024-01828.000	N2990	Green Gable Road	WS-058	WS-058RL	500	Y ¹	6/26/2024	7/16/2024; 9/19/24; 10/24/24	10/24/2024	--	--	--
AAB611	024-02224.000	N2824	Shore Drive	WS-121B	WS-121BR	504	N	6/26/2024	8/20/2024	9/19/2024	--	--	--
--	024-02224.000	N2820	Shore Drive	WS-121A ²	WS-121BR	--	--	6/26/2024	8/20/2024	9/17/2024	--	--	--
AAB610	024-02246.001	N2788	Shore Drive	WS-111	WS-111	524	N	7/11/2024	8/21/2024	9/10/2024	--	--	--
AAB614	024-02260.002	W608	Rader Road	WS-129	WS-129	505	N	7/14/2024	8/23/2024	--	--	--	--
ABW307	024-01816.000	N3051	Green Gable Road	WS-057	WS-057R	500	N	7/19/2024	7/22/2024	8/2/2024	--	--	--
ABV783	024-02228.000	N2897	Shore Drive	WS-063	WS-063R	605	N	7/22/2024	8/19/2024	9/12/2024	--	--	--
ABV738	024-02214.000	N2896	Shore Drive	WS-071	WS-071R	505	N	7/27/2024	8/21/2024	9/11/2024	--	--	--
AAB615	024-01858.003	W777	Rader Road	WS-136	WS-136R	505	N	7/29/2024	8/22/2024	9/5/2024	--	--	--
ABW611	024-02237.000	W596	Weigers Road	WS-102	WS-102R	580	N	7/30/2024	--	--	--	--	--
ABW618	024-02234.000	W558	Weigers Road	WS-131	WS-131R	582	N	7/31/2024	--	--	--	--	--
ABW688	024-01842.000	W609	Weigers Road	WS-087	WS-087R	582	N	8/1/2024	10/22/2024	10/22/2024	--	--	--
ABV736	024-01835.000	N2961	Shore Drive	WS-032	WS-032R	545	N	8/3/2024	8/22/2024	8/28/2024	--	--	--
ABV779	024-02213.000	N2898	Shore Drive	WS-143	WS-143R	524	N	8/4/2024	8/20/2024	9/3/2024	--	--	--
AAE176	024-02412.000	W451	Oakwood Beach Road	WS-012	WS-012R	505	N	8/5/2024	--	--	--	--	--
ABW693	024-01342.005	W977	Madsen Road	WS-162	WS-162R	463	N	8/5/2024	8/6/2024	8/23/2024	--	--	--
ABW861	024-01851.001	W869	Madsen Road	WS-128	WS-128R	520	N	8/8/2024	8/12/2024	8/23/2024	--	--	--
AAB613	024-01837.001	N2935	Shore Drive	WS-021	WS-021R	545	N	8/11/2024	8/22/2024	9/13/2024	--	--	--
ABV785	024-01839.000	N2915	Shore Drive	WS-073	WS-073R	626	N	8/16/2024	8/19/2024	10/29/2024	--	--	--
ABV784	024-02225.000	N2814	Shore Drive	WS-109	WS-109R	504	N	8/17/2024	8/21/2024	8/28/2024	--	--	--
AAE178	024-02257.001_D	N2779	Shore Drive	WS-082D	WS-082DR	525	N	8/19/2024	8/22/2024	--	--	--	--
ABW771	024-01838.000	N2921	Shore Drive	WS-067	WS-067R	626	N	8/20/2024	8/23/2024	10/8/2024	--	--	--
AAE179	024-02257.001	N2795	Shore Drive	WS-082	WS-082R	525	N	8/20/2024	8/26/2024	--	--	--	--
AAE180	024-02257.001	N2795	Shore Drive	--	WS-082BR	640	N	8/23/2024	--	--	--	--	--
ABV782	024-02433.000	N2914	Shore Drive	WS-074	WS-074R	505	N	8/27/2024	10/1/2024	10/29/2024	--	--	--
ABW772	024-02216.001	N2880	Shore Drive	WS-116	WS-116R	589	N	8/28/2024	10/2/2024	10/3/2024	--	--	--
ABX628	024-01856.015	N2766	Stanley Lane	WS-113	WS-113R	540	N	8/29/2024	10/17/2024	9/25/2024; 10/17/24	--	--	--
ABW996	024-01843.002	N2816	Green Gable Road	WS-030	WS-030R	500	N	9/4/2024	11/19/2024	--	--	--	--
AAB608	024-01856.005	N2775	Stanley Lane	WS-123	WS-123R	503	N	9/5/2024	10/1/2024	10/29/2024	--	--	--
ABT350	024-01857.005	N2715	Green Gable Road	WS-094	WS-094R	500	N	9/8/2024	11/20/2024	12/12/2024	--	--	--
ABY353	024-02220.000	N2856	Shore Drive	WS-164	WS-164R	502	N	9/19/2024	--	--	--	--	--
ABY352	024-02219.000	N2860	Shore Drive	WS-127	WS-127R	502	N	9/19/2024	10/3/2024	10/3/2024	--	--	--
ABY486	024-01827.001	N3045	Shore Drive	WS-027	WS-027R	522	N	9/25/2024	10/8/2024	10/16/2024	--	--	--
ABY515	024-01871.000	N2609	Shore Drive	WS-153	WS-153R	502	N	9/26/2024	10/8/2024	10/16/2024	--	--	--
AAE183	024-02205.000	N3035	Woodland Road	WS-029	WS-029R	625	N	10/25/2024	10/30/2024	--	--	--	--
ABZ125	024-01859.000	W803	Rader Road	WS-140	WS-140R	500	N	10/27/2024	12/3/2024	--	--	--	--
AAE184	024-02194.000	W432	Oakwood Beach Road	WS-024	WS-024R	460	N	10/28/2024	--	--	--	--	--

Notes provided on Page 3

Table X.4
Quarterly Deep Private Well Update
Tyco Fire Products LP
Marinette, Wisconsin

WI Unique Well ID	Parcel Number	House Number	Street Name	Previous Well ID	Replacement Well ID	Well Depth (ft bgs)	Retrofit Liner	Well Replacement Date	Sampling Date #1	Sampling Date #2	Sampling Date #3	Sampling Date #4	Sampling Date #5 - Final
AAE185	024-02409.000	W427	Oakwood Beach Road	WS-049	WS-049R	625	N	10/29/2024	--	--	--	--	--
AAE182	024-02411.000	W431	Oakwood Beach Road	WS-016	WS-016R	645	N	10/31/2024	11/6/2024	11/12/2024	--	--	--
ABZ128	024-01858.001	W713	Rader Road	WS-064	WS-064R	510	N	11/23/2024	12/3/2024	--	--	--	--
ACA778	024-02193.000	N3018	Woodland Road	WS-038	WS-038R	540	N	12/6/2024	12/9/2024	12/19/2024			
ACA838	024-01840.002	W613	Weigers Road	WS-079	WS-079R	542	N	12/9/2024	--	--	--	--	--
ACA855	024-02208.000	N3028	Shore Drive	WS-046	WS-046R	420	N	12/10/2024	--	--	--	--	--
ACA955	024-02207.000	N3040	Shore Drive	WS-039	WS-039R	540	N	12/17/2024	12/17/2024	--	--	--	--
ACB055	024-01356.003	W983	County Road B	WS-125	WS-125R	600	N	12/18/2024	--	--	--	--	--
ACB062	024-01840.004	W611	Weigers Road	WS-078	WS-078R	602	N	12/19/2024	--	--	--	--	--

Notes:

1 = retrofit liner consists of a 4-inch steel liner that has been grouted in place to a depth of approximately 300 feet below ground surface within the existing deep well (Arcadis 2023. Deep Aquifer Bedrock Well Design and Long-Term Monitoring – Interim Response Status Update. August).

2 = Well WS-121A was abandoned and the structure previously serviced by it was connected to replacement well WS-121BR. WS-121BR supplies 2 separate structures on the property, however both structures have individual treatment systems. WS-121A is tracked as sampling occurs from its treatment system under sample ID 'WS-121BR_RO2-POST'.

Orange indicates new data point (well replacement or sample) since the previous quarterly report submittal.

Acronyms and Abbreviations:

-- = not applicable

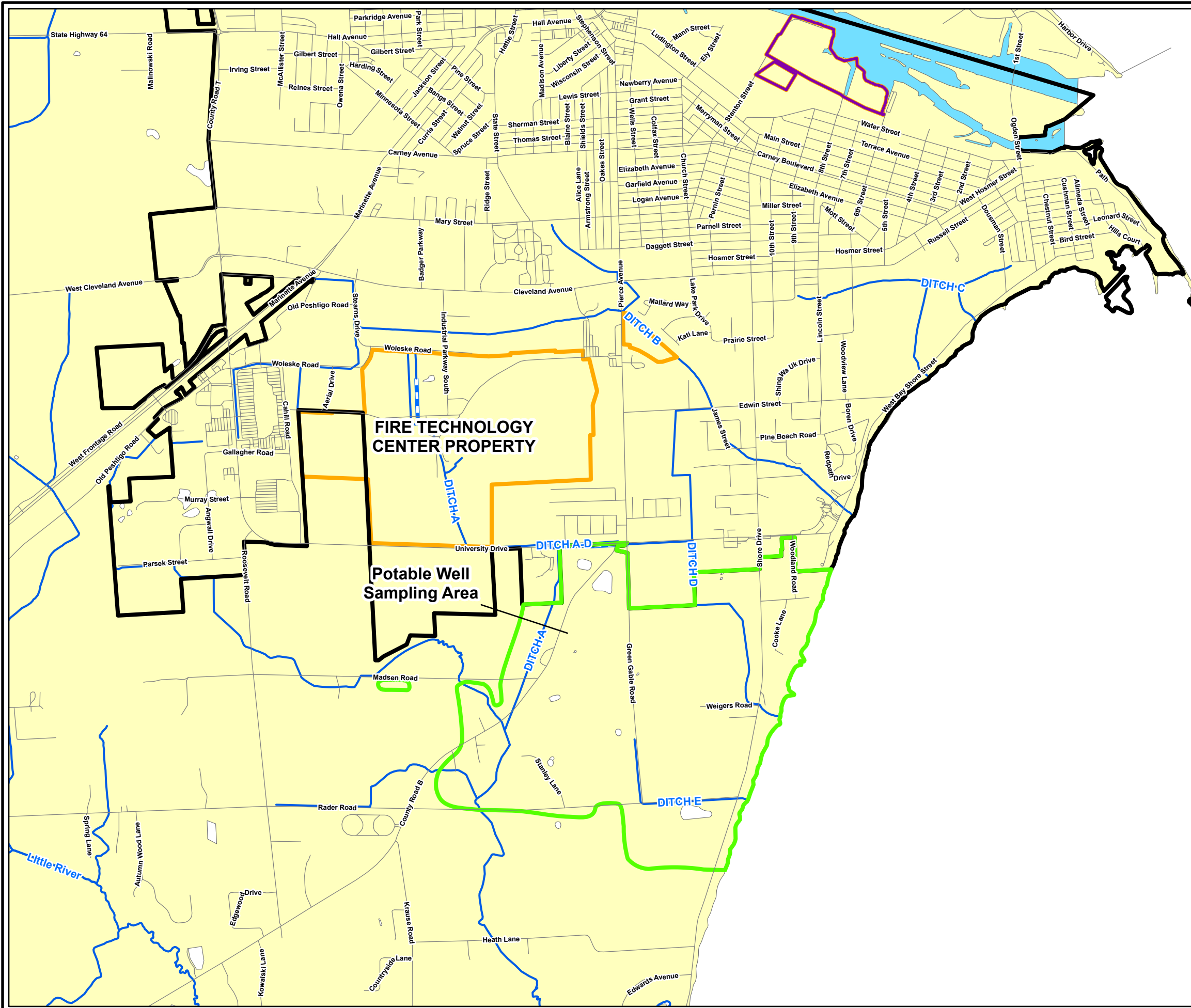
ft bgs = feet below ground surface

ID = identification

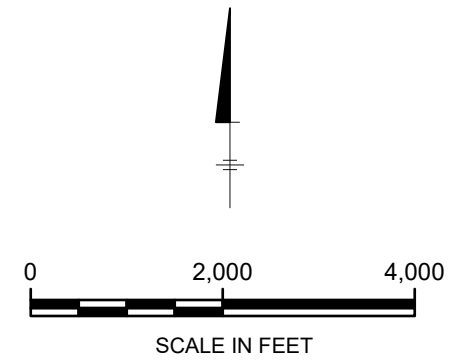
N = no

Y = yes

TY_ENVTYCO_PRO_REPORT_FIGURES/FTCD/Deep_Monitoring_Well.aprx 1/16/2025 12:49 PM



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

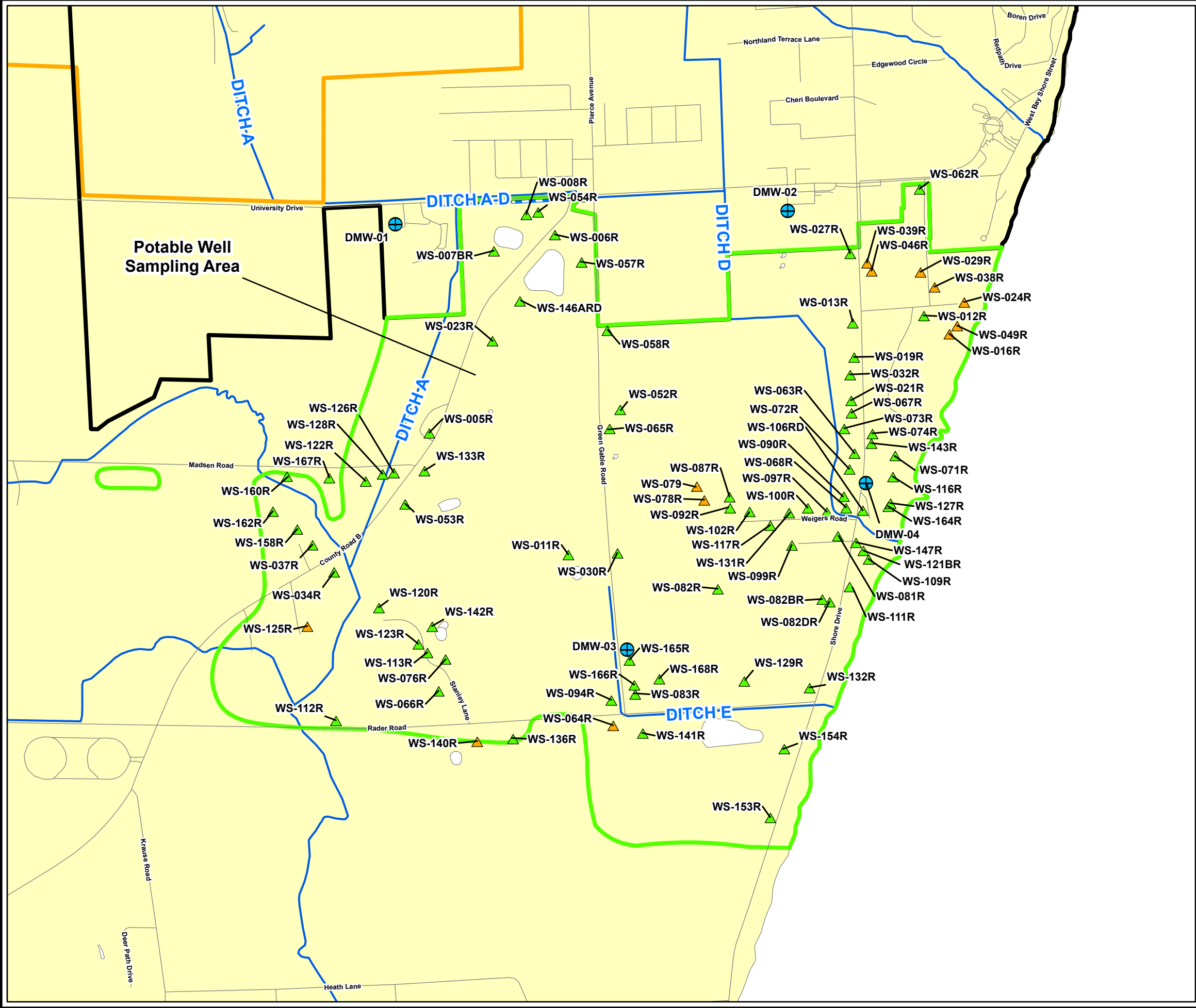


TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

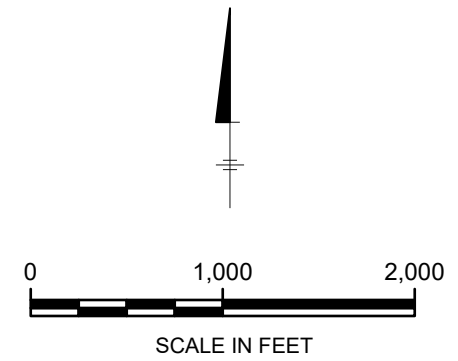
SITE LOCATION MAP

ARCADIS | **FIGURE 1**

TYCO_ENV\TYCO_PRO_REPORT_FIGURES\FTC\Deep_Monitoring_Well.aprx 1/13/2025 3:59 PM



- LEGEND:**
- ▲ DEEP REPLACEMENT POTABLE WELL 4Q 2024
 - ▲ DEEP REPLACEMENT POTABLE WELL
 - ⊕ DEEP MONITORING WELL LOCATION
 - ▭ POTABLE WELL SAMPLING AREA
 - ▭ APPROXIMATE SITE PROPERTY BOUNDARY
 - ▭ APPROXIMATE MARINETTE CITY BOUNDARY
 - ▭ WATERBODY
 - DITCH OR STREAM
 - ROAD



TYCO FIRE PRODUCTS LP
MARINETTE, WISCONSIN

**DEEP POTABLE
WELL LOCATIONS**

FIGURE
2