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April 8, 2022

Mr. Matt Thompson  
Wisconsin Department of Natural Resources  
1300 W. Clairemont Avenue  
Eau Claire, WI 54701

Subject: 2022 First Quarterly Report - Wauleco, Inc., Wausau, Wisconsin  
BRRTS #02-37-000006

Dear Mr. Thompson:

On behalf of Wauleco, Inc., TRC is submitting a copy (enclosed) of the 2022 First Quarterly Report for the Wauleco, Inc., site in Wausau, Wisconsin.

If you have any questions or comments regarding this information, please call me at (608) 235-4963.

Sincerely,

TRC

A handwritten signature in blue ink, appearing to read "Bruce Iverson".

Bruce Iverson  
Project Manager

Attachments: 2022 First Quarterly Report

cc: Evan Schreiner – Wauleco, Inc. (2 copies)  
David Crass – Michael Best & Friedrich, LLP (electronic copy only)  
Tom Dushek – TRC Wauleco (1 copy)  
Ken Quinn – TRC (1 copy)

**Wauleco, Inc. - Wausau, Wisconsin  
Quarterly Report  
Submitted April 2022**

**Summary of 2022 First Quarter Activities**

**Groundwater Extraction and Treatment System Operation**

Tables 1a, b, and c summarize the extraction and treatment system performance data for this reporting period. The results of the water discharged to the municipal sewer during the first quarter of 2022 are summarized as follows:

- Pentachlorophenol (PCP) screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sanitary sewer, averaged 2.17 µg/L in January, 3.46 µg/L in February, and 6.0 µg/L in March.
- Laboratory results for the sampling event conducted this quarter are included in Tables 1a, b, and c for each month. The laboratory results for PCP in the system effluent was <3.0 µg/L on January 19, 0.97 µg/L on February 16, and 2.0 µg/L on March 15, 2022.
- Both laboratory and on-site screening results indicate that the effluent PCP concentrations were below the monthly average permit level of 150 µg/L and the daily maximum concentration of 300 µg/L.
- Total treatment system efficiency (including carbon polishing units) removed more than 99 percent of the PCP between the influent and the effluent.
- The groundwater treatment system was shutdown and the DNR was notified on March 17 to repair a pipe. The system was off-line for the remainder of the month for replacement of the pipe.

On-site screening PCP influent concentrations ranged from 5,413 µg/L to 7,601 µg/L during the quarter (Tables 1a, b, and c). PCP influent and effluent concentrations in the fluidized bed reactor (FBR) are presented graphically, both as individual data points and as moving averages, on Figure 1. FBR results included the following:

- As shown on Figure 1 and in Tables 1a, b, and c, PCP concentrations in the FBR influent fluctuated during the quarter, and generally remain within normal concentrations.
- The average PCP removal efficiency for the biological portion (*i.e.*, FBR influent to the fixed film reactor [FFR] effluent) of the system during this quarter is compared to the following:

Month	Average PCP Removal (%)	Previous 12 Month Average (%)	Average 1 Year Ago (%)
January 2022	73	76	78
February 2022	74	75	79
March 2022	67	75	75

- The dissolved oxygen concentration in the influent to the FBR averaged 3.0 mg/L in January, 2.9 mg/L in February, and 3.7 mg/L in March 2022.

Laboratory results for the mercury analysis of the system effluent samples are included in Tables 1a, b, and c. The mercury concentration in the system effluent sample (discharged to the sanitary sewer) was 0.033 µg/L on January 19, 0.036 µg/L on February 16, and 0.046 µg/L on March 15, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in January was calculated at 0.00000846 lb/24 hours, in February was calculated at 0.00000926 lb/24 hours, and March was calculated at 0.0000119 lb/24 hours which is below the permit discharge limit of 0.00048 lb/24 hours.

The daily groundwater flow of the effluent to the Wausau Wastewater Treatment Plant averaged 21.34 gpm for January, 21.40 gpm for February, and 21.61 gpm for the days it was in operation in March 2022 (Tables 2a, b, and c). Since June, 2012 the pumping rate has been operated at approximately 22 gpm.

Figure 2 shows the average groundwater flow extracted and the average daily flow discharged to the Wausau Wastewater Treatment Plant.

### **Groundwater Monitoring**

A complete round of water table elevations for the month of January 2022 are summarized in Table 3. A water table map for the month of January 2022 is included as Drawing 1.

The product thickness data for January 2022 are summarized in Table 4. Measurements show minimal product present in January.

Water table elevations and product thickness data for February and March, 2022 for eleven select monitoring wells being measured in association with the City of Wausau Wastewater Treatment Plant dewatering are also summarized in Tables 3 and 4, respectively. Measurements show no product present in February and March for these wells.

Enclosures: Tables 1a, b, and c – Above Ground Treatment System Data  
Tables 2a, b, and c – Treatment System Flows  
Table 3 – Groundwater Elevation Data  
Table 4 – Free Product Measurements  
Figure 1 – FBR Influent and Effluent PCP Concentrations  
Figure 2 – Average Groundwater Extraction Rates and Water Level Deviation Versus Time  
Drawing 1 – Water Table Map – January 4, 2022

**TABLE 1a  
JANUARY 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	1/19/2022	6.5	3.2				<	
Chemical Oxygen Demand	mg/L	1/19/2022	22	41				<	
Chloride	mg/L	1/19/2022	150	150				150	
Dissolved Oxygen	mg/L	1/6/2022	3.2	1.1	5.8				
	mg/L	1/11/2022	3	1	5.5				
	mg/L	1/19/2022	3.4	1.2	5.8				
	mg/L	1/27/2022	2.5	1.1	6.2				
Nitrogen, Ammonia	mg/L	1/6/2022	0.4	0.5	0.3				
	mg/L	1/11/2022	0.4	0.4	0.4				
	mg/L	1/19/2022	0.6	0.4	0.4				
	mg/L	1/27/2022	0.5	0.4	0.4				
Nitrogen, Nitrate	mg/L	1/6/2022	<	<	<				
	mg/L	1/11/2022	<	<	<				
	mg/L	1/19/2022	<	<	<				
	mg/L	1/27/2022	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	1/19/2022	<	<			<		
Nitrogen, Total Kjeldahl	mg/L	1/19/2022	<	<			0.93		
Pentachlorophenol-Screen	µg/L	1/1/2022						2	
	µg/L	1/2/2022						2	
	µg/L	1/3/2022						2	
	µg/L	1/4/2022						2	
	µg/L	1/5/2022						1	
	µg/L	1/6/2022	5884	1433	1596			1	
	µg/L	1/7/2022						2	
	µg/L	1/8/2022						3	
	µg/L	1/9/2022						3	
	µg/L	1/10/2022						3	
	µg/L	1/11/2022	5436	1624	1420			2	
	µg/L	1/12/2022						2	
	µg/L	1/13/2022						2	
	µg/L	1/14/2022						1	
	µg/L	1/15/2022						1	
	µg/L	1/16/2022						1	
	µg/L	1/17/2022						1	
	µg/L	1/18/2022						1	
	µg/L	1/19/2022	5413	1375	1416		454	1	
	µg/L	1/20/2022						2	
	µg/L	1/21/2022						2	
	µg/L	1/22/2022						3	
	µg/L	1/23/2022						3	
	µg/L	1/24/2022						3	
	µg/L	1/25/2022						3	
	µg/L	1/26/2022						3	
	µg/L	1/27/2022	7601	1906	2173			3	
	µg/L	1/28/2022						4	

**TABLE 1a  
JANUARY 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	1/29/2022						3	
	µg/L	1/30/2022						3	
	µg/L	1/31/2022						3	
pH	S.U.	1/6/2022	6.8	6.75	6.8				
	S.U.	1/11/2022	6.8	6.75	6.75				
	S.U.	1/19/2022	6.95	6.95	6.95				
	S.U.	1/27/2022	6.8	6.8	6.8				
Phosphorus, Ortho	mg/L	1/19/2022	<	<				<	
Phosphorus, Phosphate	mg/L	1/6/2022	0.6	0.2	0.2				
	mg/L	1/11/2022	0.5	0.3	0.3				
	mg/L	1/19/2022	0.4	0.2	0.4				
	mg/L	1/27/2022	1.1	0.4	0.4				
Solids, Total Suspended	mg/L	1/19/2022	11	10				4.8	
Mercury	µg/L	1/19/2022	0.18					0.033	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	1/19/2022	270	84	81		62	<	<
2,4,5-Trichlorophenol	µg/L	1/19/2022	<	<	<		<	<	<
2,4,6-Trichlorophenol	µg/L	1/19/2022	<	<	<		<	<	<
2,4-Dichlorophenol	µg/L	1/19/2022	<	<	<		<	<	<
2,4-Dimethylphenol	µg/L	1/19/2022	<	<	<		<	<	<
2,4-Dinitrophenol	µg/L	1/19/2022	<	<	<		<	<	<
2,6-Dichlorophenol	µg/L	1/19/2022	<	<	<		<	<	<
2-Chlorophenol	µg/L	1/19/2022	<	<	<		<	<	<
2-Methylphenol	µg/L	1/19/2022	<	<	<		<	<	<
2-Nitrophenol	µg/L	1/19/2022	<	<	<		<	<	<
3&4-Methylphenol	µg/L	1/19/2022	<	<	<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	1/19/2022	<	<	<		<	<	<
4-Chloro-3-Methylphenol	µg/L	1/19/2022	<	<	<		<	<	<
4-Nitrophenol	µg/L	1/19/2022	<	<	<		<	<	<
Pentachlorophenol	µg/L	1/19/2022	3200	880	810		610	<	<
Phenol	µg/L	1/19/2022	<	<	<		<	<	<

**TABLE 1b  
FEBRUARY 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	2/16/2022	7.5	3.2				<	
Chemical Oxygen Demand	mg/L	2/16/2022	36	27				<	
Chloride	mg/L	2/16/2022	160	160				170	
Dissolved Oxygen	mg/L	2/3/2022	2.6	1.2	6.3				
	mg/L	2/10/2022	3	1.4	6.2				
	mg/L	2/16/2022	2.8	1.4	6.2				
	mg/L	2/23/2022	3.2	1.4	6.5				
Nitrogen, Ammonia	mg/L	2/3/2022	1.5	0.4	0.3				
	mg/L	2/10/2022	0.7	0.6	0.5				
	mg/L	2/16/2022	0.4	0.3	0.2				
	mg/L	2/23/2022	0.4	0.3	0.3				
Nitrogen, Nitrate	mg/L	2/3/2022	<	<	<				
	mg/L	2/10/2022	<	<	<				
	mg/L	2/16/2022	<	<	<				
	mg/L	2/23/2022	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	2/16/2022	<	<				<	
Pentachlorophenol-Screen	µg/L	2/1/2022						3	
	µg/L	2/2/2022						2	
	µg/L	2/3/2022	5631	1672	1583			2	
	µg/L	2/4/2022						2	
	µg/L	2/5/2022						2	
	µg/L	2/6/2022						2	
	µg/L	2/7/2022						2	
	µg/L	2/8/2022						2	
	µg/L	2/9/2022						3	
	µg/L	2/10/2022	5907	1613	1649			3	
	µg/L	2/11/2022						3	
	µg/L	2/12/2022						4	
	µg/L	2/13/2022						4	
	µg/L	2/14/2022						4	
	µg/L	2/15/2022						4	
	µg/L	2/16/2022	6590	1751	1551		338	4	
	µg/L	2/17/2022						4	
	µg/L	2/18/2022						4	
	µg/L	2/19/2022						4	
	µg/L	2/20/2022						4	
	µg/L	2/21/2022						4	
	µg/L	2/22/2022						4	
	µg/L	2/23/2022	7166	1755	1770			4	
µg/L	2/24/2022						6		
µg/L	2/25/2022						5		
µg/L	2/26/2022						4		
µg/L	2/27/2022						4		

**TABLE 1b  
FEBRUARY 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	2/28/2022						4	
pH	S.U.	2/3/2022	6.85	6.8	6.8				
	S.U.	2/10/2022	6.75	6.7	6.75				
	S.U.	2/16/2022	6.8	6.75	6.85				
	S.U.	2/23/2022	6.75	6.7	6.7				
Phosphorus, Ortho	mg/L	2/16/2022	<	<				<	
Phosphorus, Phosphate	mg/L	2/3/2022	0.5	0.4	0.3				
	mg/L	2/10/2022	0.4	0.3	0.3				
	mg/L	2/16/2022	0.3	0.2	0.2				
	mg/L	2/23/2022	0.4	0.2	0.2				
Solids, Total Suspended	mg/L	2/16/2022	13	12				5.6	
Mercury	µg/L	2/16/2022						0.036	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	2/16/2022	210		66			<	<
2,4,5-Trichlorophenol	µg/L	2/16/2022	<		<			<	<
2,4,6-Trichlorophenol	µg/L	2/16/2022	<		<			<	<
2,4-Dichlorophenol	µg/L	2/16/2022	<		<			<	<
2,4-Dimethylphenol	µg/L	2/16/2022	<		<			<	<
2,4-Dinitrophenol	µg/L	2/16/2022	<		<			<	<
2,6-Dichlorophenol	µg/L	2/16/2022	<		<			<	<
2-Chlorophenol	µg/L	2/16/2022	<		<			<	<
2-Methylphenol	µg/L	2/16/2022	<		<			<	<
2-Nitrophenol	µg/L	2/16/2022	<		<			<	<
3&4-Methylphenol	µg/L	2/16/2022	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	2/16/2022	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	2/16/2022	<		<			<	<
4-Nitrophenol	µg/L	2/16/2022	<		<			<	<
Pentachlorophenol	µg/L	2/16/2022	2900		660			0.97	1.2
Phenol	µg/L	2/16/2022	<		<			<	<

**TABLE 1c  
MARCH 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	3/15/2022	6.6	3.7				<	
Chemical Oxygen Demand	mg/L	3/15/2022	19	<				<	
Chloride	mg/L	3/15/2022	180	180				190	
Dissolved Oxygen	mg/L	3/2/2022	3.5	1.4	6.4				
	mg/L	3/9/2022	3.6	1.4	6.3				
	mg/L	3/15/2022	4	1.5	6.6				
Nitrogen, Ammonia	mg/L	3/2/2022	0.4	0.3	0.3				
	mg/L	3/9/2022	0.7	0.6	0.6				
	mg/L	3/15/2022	0.6	0.3	0.3				
Nitrogen, Nitrate	mg/L	3/2/2022	<	<	<				
	mg/L	3/9/2022	<	<	<				
	mg/L	3/15/2022	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	3/15/2022	0.47	<				<	
Pentachlorophenol-Screen	µg/L	3/1/2022						5	
	µg/L	3/2/2022	5969	1347	1706			4	
	µg/L	3/3/2022						8	
	µg/L	3/4/2022						8	
	µg/L	3/5/2022						6	
	µg/L	3/6/2022						6	
	µg/L	3/7/2022						6	
	µg/L	3/8/2022						6	
	µg/L	3/9/2022	6675	2365	2321			6	
	µg/L	3/10/2022						7	
	µg/L	3/11/2022						5	
	µg/L	3/12/2022						5	
	µg/L	3/13/2022						5	
	µg/L	3/14/2022						5	
	µg/L	3/15/2022	5867	2003	2129		585	4	
	µg/L	3/16/2022						6	
	µg/L	3/17/2022						8	
	µg/L	3/18/2022						8	
	µg/L	3/19/2022							
	µg/L	3/20/2022							
	µg/L	3/21/2022							
µg/L	3/22/2022								
µg/L	3/23/2022								
µg/L	3/24/2022								
µg/L	3/25/2022								
µg/L	3/26/2022								
µg/L	3/27/2022								
µg/L	3/28/2022								
µg/L	3/29/2022								
µg/L	3/30/2022								
µg/L	3/31/2022								



**TABLE 1c  
MARCH 2022**

**Above Ground Treatment System Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
pH	S.U.	3/2/2022	6.75	6.7	6.75				
	S.U.	3/9/2022	6.7	6.7	6.75				
	S.U.	3/15/2022	6.7	6.6	6.7				
Phosphorus, Ortho	mg/L	3/15/2022	<	<				<	
Phosphorus, Phosphate	mg/L	3/2/2022	0.4	0.2	0.2				
	mg/L	3/9/2022	0.4	0.2	0.2				
	mg/L	3/15/2022	0.4	0.2	0.2				
Solids, Total Suspended	mg/L	3/15/2022	10	5.0				8.2	
Mercury	µg/L	3/15/2022						0.046	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	3/15/2022	260	98	95			<	<
2,4,5-Trichlorophenol	µg/L	3/15/2022	<	<	<			<	<
2,4,6-Trichlorophenol	µg/L	3/15/2022	<	<	<			<	<
2,4-Dichlorophenol	µg/L	3/15/2022	<	<	<			<	<
2,4-Dimethylphenol	µg/L	3/15/2022	<	<	<			<	<
2,4-Dinitrophenol	µg/L	3/15/2022	<	<	<			<	<
2,6-Dichlorophenol	µg/L	3/15/2022	<	<	<			<	<
2-Chlorophenol	µg/L	3/15/2022	<	<	<			<	<
2-Methylphenol	µg/L	3/15/2022	<	<	<			<	<
2-Nitrophenol	µg/L	3/15/2022	<	<	<			<	<
3&4-Methylphenol	µg/L	3/15/2022	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	3/15/2022	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	3/15/2022	<	<	<			<	<
4-Nitrophenol	µg/L	3/15/2022	<	<	<			<	<
Pentachlorophenol	µg/L	3/15/2022	2800	900	870			2.0	2.0
Phenol	µg/L	3/15/2022	<	<	<			<	<

**TABLE 2a**  
**JANUARY 2022**  
**Treatment System Flows**  
**Wauleco, Inc.**  
**Wausau, Wisconsin**

Date	Influent Groundwater Flow Rate <sup>(1)(3)</sup> (gpm)	POTW Discharge Flow Rate <sup>(1)(4)</sup> (gpm)	POTW Totalized Discharge <sup>(3)</sup> (gal)
1/1/2022	23.39	21.76	106276509
1/2/2022	23.39	21.56	106307562
1/3/2022	23.51	21.65	106338734
1/4/2022	23.44	21.48	106369666
1/5/2022	23.42	21.66	106400851
1/6/2022	23.45	21.61	106431963
1/7/2022	23.59	21.59	106463059
1/8/2022	23.25	21.51	106494031
1/9/2022	23.22	21.39	106524834
1/10/2022	23.08	21.31	106555525
1/11/2022	23.25	21.26	106586133
1/12/2022	23.40	21.27	106616768
1/13/2022	23.40	21.35	106647509
1/14/2022	23.23	21.28	106678153
1/15/2022	22.92	21.36	106708911
1/16/2022	23.11	21.29	106739573
1/17/2022	23.10	21.20	106770100
1/18/2022	22.91	21.30	106800774
1/19/2022	22.88	21.23	106831348
1/20/2022	22.93	21.26	106861969
1/21/2022	22.87	21.15	106892422
1/22/2022	22.82	21.29	106923083
1/23/2022	22.93	21.25	106953679
1/24/2022	22.80	21.27	106984302
1/25/2022	22.96	21.30	107014975
1/26/2022	22.86	21.25	107045574
1/27/2022	22.81	21.23	107076140
1/28/2022	22.76	21.19	107106655
1/29/2022	22.62	21.28	107137293
1/30/2022	22.48	21.11	107167685
1/31/2022	22.16	20.79	107197616
Average For The Month	23.06	21.34	
Total <sup>(2)</sup> :			952,438

Footnotes:

- <sup>(1)</sup> Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- <sup>(2)</sup> Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- <sup>(3)</sup> Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- <sup>(4)</sup> A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

**TABLE 2b**  
**FEBRUARY 2022**  
**Treatment System Flows**  
**Wauleco, Inc.**  
**Wausau, Wisconsin**

Date	Influent Groundwater Flow Rate <sup>(1) (3)</sup> (gpm)	POTW Discharge Flow Rate <sup>(1) (4)</sup> (gpm)	POTW Totalized Discharge <sup>(3)</sup> (gal)
2/1/2022	22.90	21.38	107228401
2/2/2022	23.18	21.58	107259482
2/3/2022	23.27	21.51	107290460
2/4/2022	23.15	21.47	107321381
2/5/2022	22.89	21.36	107352135
2/6/2022	22.88	21.24	107382726
2/7/2022	22.80	21.15	107413179
2/8/2022	22.89	21.16	107443644
2/9/2022	23.08	21.42	107474484
2/10/2022	23.26	21.75	107505811
2/11/2022	23.25	21.72	107537091
2/12/2022	23.26	21.59	107568183
2/13/2022	23.30	21.56	107599235
2/14/2022	23.17	21.39	107630041
2/15/2022	23.07	21.56	107661086
2/16/2022	23.01	21.27	107691710
2/17/2022	23.14	21.35	107722452
2/18/2022	23.12	21.30	107753130
2/19/2022	23.13	21.40	107783941
2/20/2022	23.11	21.40	107814757
2/21/2022	23.18	21.32	107845458
2/22/2022	23.25	21.45	107876346
2/23/2022	23.13	21.33	107907061
2/24/2022	23.20	21.32	107937762
2/25/2022	23.12	21.38	107968543
2/26/2022	23.05	21.42	107999394
2/27/2022	23.02	21.28	108030040
2/28/2022	22.99	21.17	108060518
Average For The Month	23.10	21.40	
Total <sup>(2)</sup> :			862,902

**Footnotes:**

- (1) Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- (2) Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- (3) Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- (4) A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

**TABLE 2c  
MARCH 2022**

**Treatment System Flows  
Wauleco, Inc.  
Wausau, Wisconsin**

Date	Influent Groundwater Flow Rate <sup>(1) (3)</sup> (gpm)	POTW Discharge Flow Rate <sup>(1) (4)</sup> (gpm)	POTW Totalized Discharge <sup>(3)</sup> (gal)
3/1/2022	22.85	21.72	108091794
3/2/2022	22.66	21.91	108123346
3/3/2022	22.77	21.94	108154946
3/4/2022	22.64	21.85	108186408
3/5/2022	22.45	21.75	108217733
3/6/2022	22.54	21.74	108249033
3/7/2022	22.46	21.65	108280209
3/8/2022	22.75	21.69	108311441
3/9/2022	22.73	21.65	108342619
3/10/2022	22.67	21.79	108373995
3/11/2022	22.55	21.62	108405128
3/12/2022	22.20	21.55	108436164
3/13/2022	21.03	20.41	108465555
3/14/2022	22.09	21.30	108496231
3/15/2022	21.99	21.09	108526607
3/16/2022	22.44	21.58	108557675
3/17/2022	22.67	22.16	108589579
3/18/2022	0.57	2.90	108593754
3/19/2022	0.00	0.00	108593754
3/20/2022	0.00	0.00	108593754
3/21/2022	0.00	0.00	108593754
3/22/2022	0.00	0.00	108593754
3/23/2022	0.00	0.00	108593754
3/24/2022	0.00	0.00	108593754
3/25/2022	0.00	0.00	108593754
3/26/2022	0.00	0.00	108593754
3/27/2022	0.00	0.00	108593754
3/28/2022	0.00	0.00	108593754
3/29/2022	0.00	0.00	108593754
3/30/2022	0.00	0.00	108593754
3/31/2022	0.00	0.00	108593754
Average For The Month	12.74	12.34	
Average For The Month While Running	22.44	21.61	
Total <sup>(2)</sup> :			533,236

**Footnotes:**

- (1) Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- (2) Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- (3) Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- (4) A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

**TABLE 3**

**Groundwater Elevation Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<b>Well</b>	<b>January 04, 2022 (ft msl)</b>	<b>February 01, 2022 (ft msl)</b>	<b>March 01, 2022 (ft msl)</b>
PW01	1162.74	----	----
PW02	Abandoned	Abandoned	Abandoned
PW03	1162.66	----	----
PW3S	1161.78	----	----
PW04	1161.63	----	----
PW05	1161.69	----	----
PW06	1162.08	----	----
PW07	1161.85	----	----
PW08	1163.03	----	----
PW09I	----	----	----
PW09O	1161.67	----	----
PW10	1161.87	----	----
PW11	1160.49	----	----
PW12	1162.98	----	----
PW13	1161.70	----	----
PW14	1160.97	----	----
PW15	1161.02	----	----
PW16	1160.16	----	----
PW17	1157.06	----	----
PW18	1161.63	----	----
PW19	1160.14	----	----
PW20	1160.01	----	----
PW21	1160.47	----	----
PW22	1161.73	----	----
PW23	1161.63	----	----
PW24	1159.57	----	----
PW25	1157.73	----	----
PW26	1159.09	----	----
PW27	1155.89	----	----
PW28	1162.82	----	----
PW29	1162.91	----	----
P01	1161.61	----	----
OW01	1164.05	----	----
W01A	Abandoned	Abandoned	Abandoned
W01B	Abandoned	Abandoned	Abandoned
W02	1162.55	----	----
W03A	1160.86	----	----
W03B	1161.48	----	----
W04A	1162.18	----	----
W04B	1162.1	----	----
W05	1161.69	----	----
W06R	1163.1	----	----
W07	1162.77	----	----
W08	1171.29	----	----
W09	1162.06	----	----
W10A	1160.89	1160.88	1160.93
W10B	1160.89	----	----
W11	1160.58	1160.38	1160.14
W12	1160.23	1160.00	1159.75
W13	1161.41	----	----
W14	1160.46	1160.14	1159.80
W16	1161.49	1161.31	1161.05
W17	1161.02	----	----
W18	1160.97	----	----
W19	Abandoned	Abandoned	Abandoned

TABLE 3 (continued)

**Groundwater Elevation Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Well</u>	<u>January 04, 2022 (ft msl)</u>	<u>February 01, 2022 (ft msl)</u>	<u>March 01, 2022 (ft msl)</u>
W21	1160.46	1160.20	1159.99
W22	1160.9	1160.66	1160.40
W23	1160.51	-----	-----
W24A	1160.5	-----	-----
W25	1163.17	-----	-----
W26/W26R	1160.8	1160.68	1160.56
W27	1161.13	1160.94	1160.72
W28	1161.01	-----	-----
W29/W29R	1160.71	1160.62	1160.52
W30	1161.6	-----	-----
W31	1160.78	-----	-----
W32	1160.78	1160.71	1160.79
W33	1161.89	-----	-----
W34	1161.81	-----	-----
W35	1161.85	-----	-----
W36	1162.44	-----	-----
W39	Abandoned	Abandoned	Abandoned
W40/W40R	1160.96	-----	-----
W41	1161.82	-----	-----
W42	1162.5	-----	-----
W44	1161.6	-----	-----
W45	1161.67	-----	-----
W46	1161.44	-----	-----
W47	1160.49	-----	-----
W48	1160.58	-----	-----
W49	1160.95	-----	-----
W66	1163.02	-----	-----
W67	1163	-----	-----
W68A	1163.02	-----	-----
W68B	1162.95	-----	-----
W69	1161.96	-----	-----
W70B	Abandoned	Abandoned	Abandoned
River	-----	-----	-----
IW01	1161.65	-----	-----
IW01A	1161.66	-----	-----
FP01	1160.00	-----	-----
FP02	1160.12	-----	-----
FP03	1158.83	-----	-----
FP04	1159.76	-----	-----
3M Basin	Ice & snow	-----	-----
DFOWM 5	1162.69	-----	-----
DFOWM 9	Abandoned	Abandoned	Abandoned
DFOWM 10A	Abandoned	Abandoned	Abandoned
DFOWM 11	1161.57	-----	-----
DFOWM 12	1162.5	-----	-----
W71	1164.98	-----	-----
W72	1163.44	-----	-----
W73	1162.44	-----	-----
W74	1161.98	-----	-----

**Notes:**

1. ft msl = feet mean sea level
2. PW09O denotes the outer well and PW09I denotes the inner well
3. ----- = Well not measured
4. Groundwater elevations have been adjusted for product thickness.
5. Top of casing elevations were resurveyed for the on-site wells on December 4, 2009 . Use of the new data began in January 2010.

Table 4

Free Product Measurements  
 Wauleco, Inc.  
 Wausau, Wisconsin

Well	January 04, 2022 (ft)	February 01, 2022 (ft msl)	March 01, 2022 (ft msl)
PW01	0.00	----	----
PW02	Abandoned	Abandoned	Abandoned
PW03	0.00	----	----
PW3S	0.00	----	----
PW04	0.00	----	----
PW05	0.00	----	----
PW06	0.00	----	----
PW07	0.00	----	----
PW08	0.00	----	----
PW09I	----	----	----
PW09O	0.00	----	----
PW10	0.00	----	----
PW11	0.00	----	----
PW12	0.00	----	----
PW13	0.00	----	----
PW14	0.00	----	----
PW15	0.00	----	----
PW16	0.00	----	----
PW17	0.00	----	----
PW18	0.00	----	----
PW19	0.00	----	----
PW20	0.00	----	----
PW21	0.00	----	----
PW22	0.00	----	----
PW23	0.00	----	----
PW24	0.00	----	----
PW25	0.00	----	----
PW26	0.00	----	----
PW27	0.00	----	----
PW28	0.00	----	----
PW29	0.00	----	----
P01	0.00	----	----
OW01	0.00	----	----
W01A	Abandoned	Abandoned	Abandoned
W01B	Abandoned	Abandoned	Abandoned
W02	0.00	----	----
W03A	0.00	----	----
W03B	0.00	----	----
W04A	0.00	----	----
W04B	0.00	----	----
W05	0.00	----	----
W06R	0.00	----	----
W07	0.13	----	----
W08	0.00	----	----
W09	0.00	----	----
W10A	0.00	0.00	0.00
W10B	0.00	----	----
W11	0.00	0.00	0.00
W12	0.00	0.00	0.00
W13	0.00	----	----
W14	0.00	0.00	0.00
W16	0.00	0.00	0.00
W17	0.00	----	----

**Table 4 (continued)**

**Free Product Measurements  
Wauleco, Inc.  
Wausau, Wisconsin**

<b>Well</b>	<b>January 04, 2022 (ft)</b>	<b>February 01, 2022 (ft msl)</b>	<b>March 01, 2022 (ft msl)</b>
W18	0.00	----	----
W19	Abandoned	Abandoned	Abandoned
W21	0.00	0.00	0.00
W22	0.00	0.00	0.00
W23	0.00	----	----
W24A	0.00	----	----
W25	0.00	----	----
W26/W26R	0.00	0.00	0.00
W27	0.00	0.00	0.00
W28	0.00	----	----
W29/W29R	0.00	0.00	0.00
W30	0.00	----	----
W31	0.00	----	----
W32	0.00	0.00	0.00
W33	0.00	----	----
W34	0.00	----	----
W35	0.15	----	----
W36	0.00	----	----
W39	Abandoned	Abandoned	Abandoned
W40/W40R	0.20	----	----
W41	0.00	----	----
W42	0.00	----	----
W44	0.00	----	----
W45	0.00	----	----
W46	0.00	----	----
W47	0.00	----	----
W48	0.00	----	----
W49	0.00	----	----
W66	0.00	----	----
W67	0.00	----	----
W68A	0.00	----	----
W68B	0.00	----	----
W69	0.00	----	----
W70B	Abandoned	Abandoned	Abandoned
River	----	----	----
IW01	0.00	----	----
IW01A	0.00	----	----
FP01	0.00	----	----
FP02	0.00	----	----
FP03	0.00	----	----
FP04	0.00	----	----
3M Basin	----	----	----
DFOWM 5	----	----	----
DFOWM 9	Abandoned	Abandoned	Abandoned
DFOWM 10A	Abandoned	Abandoned	Abandoned
DFOWM 11	----	----	----
DFOWM 12	----	----	----
W71	----	----	----
W72	0.00	----	----
W73	0.00	----	----
W74	0.00	----	----

**Notes:**

1. PW09O denotes the outer well and PW09I denotes the inner well
2. ---- = Well not measured



**FIGURE 1**  
**FBR Influent and Effluent PCP Concentrations**  
**Wauleco, Inc.**  
**Wausau, WI**

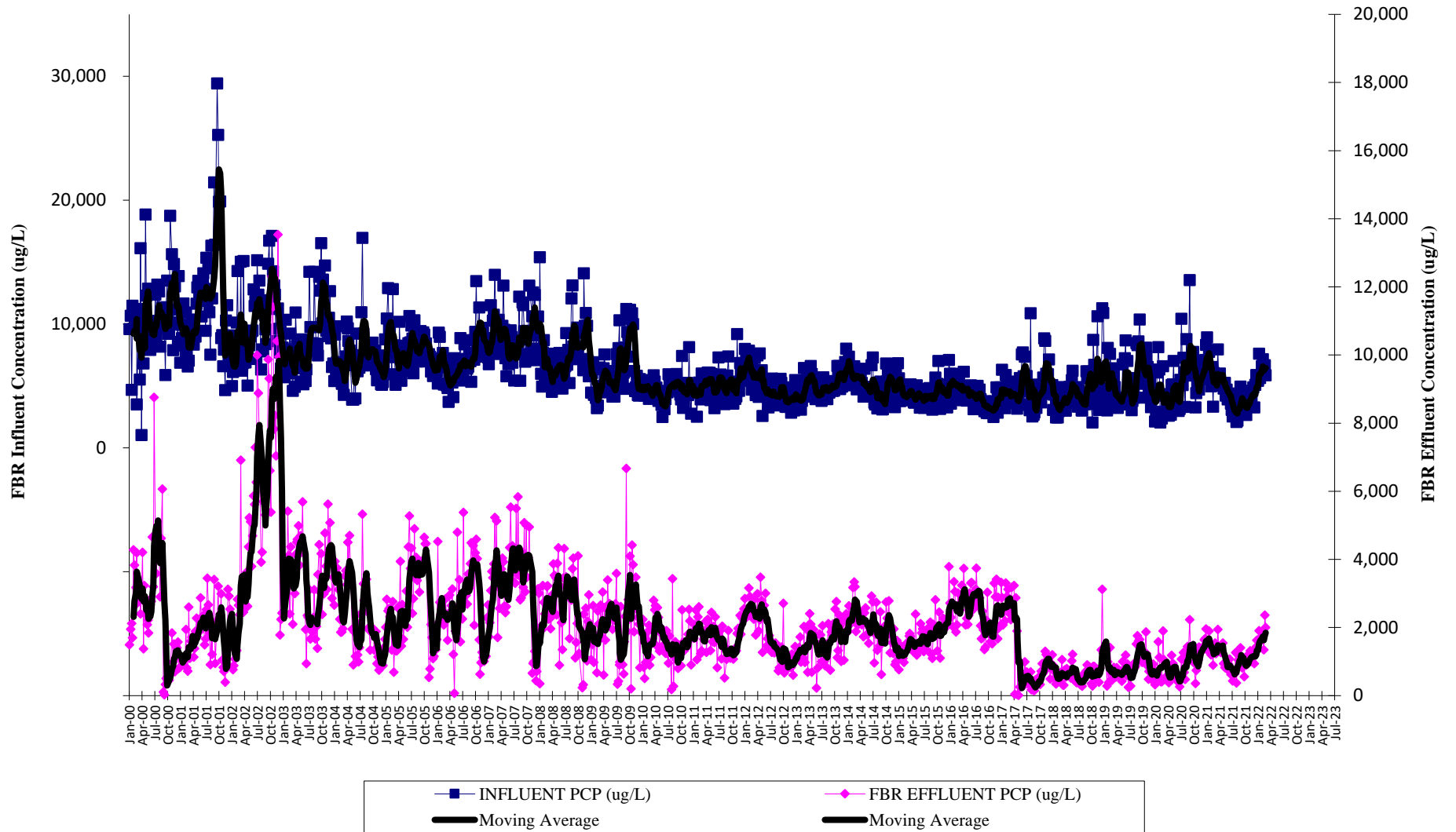
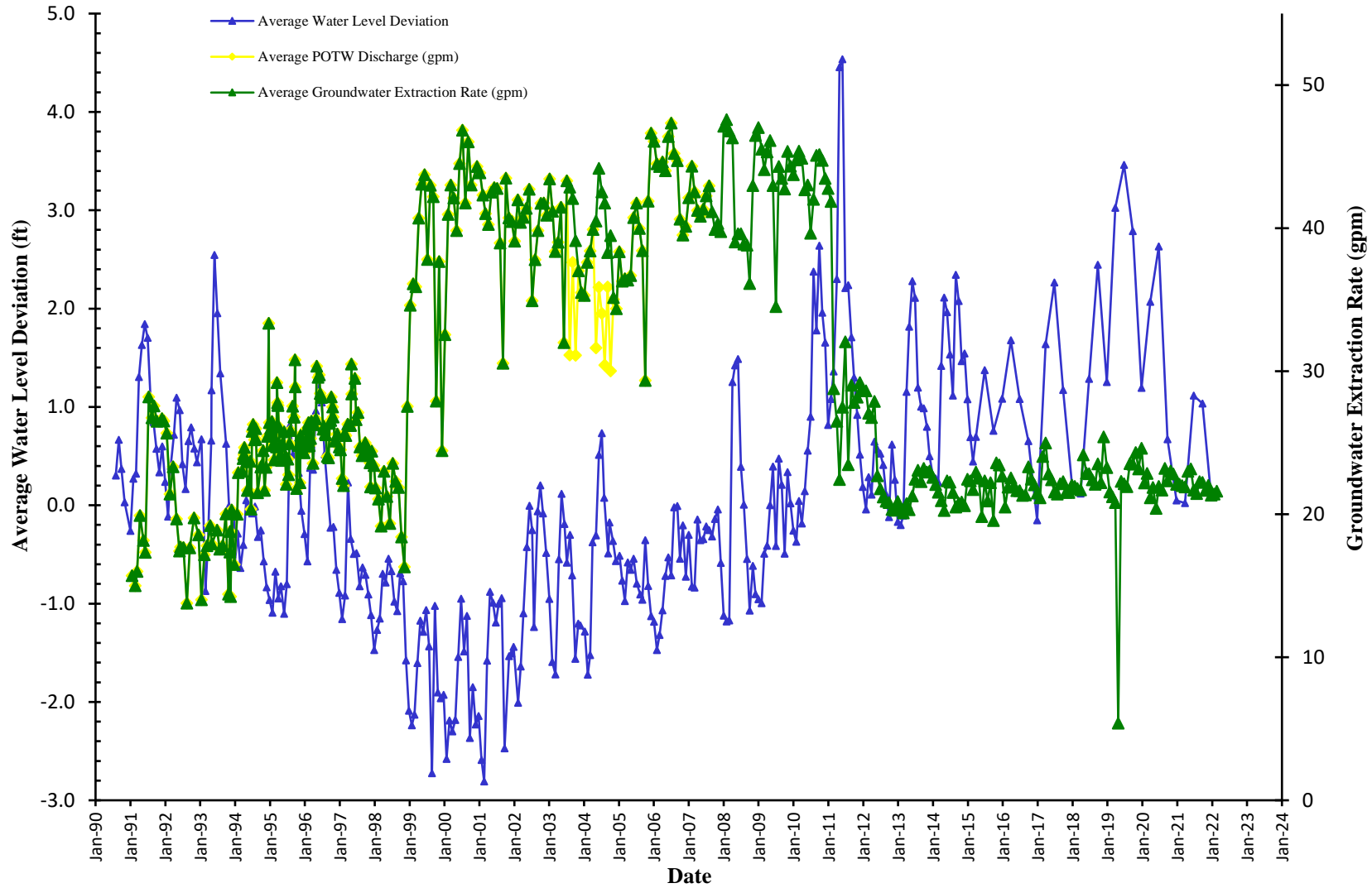


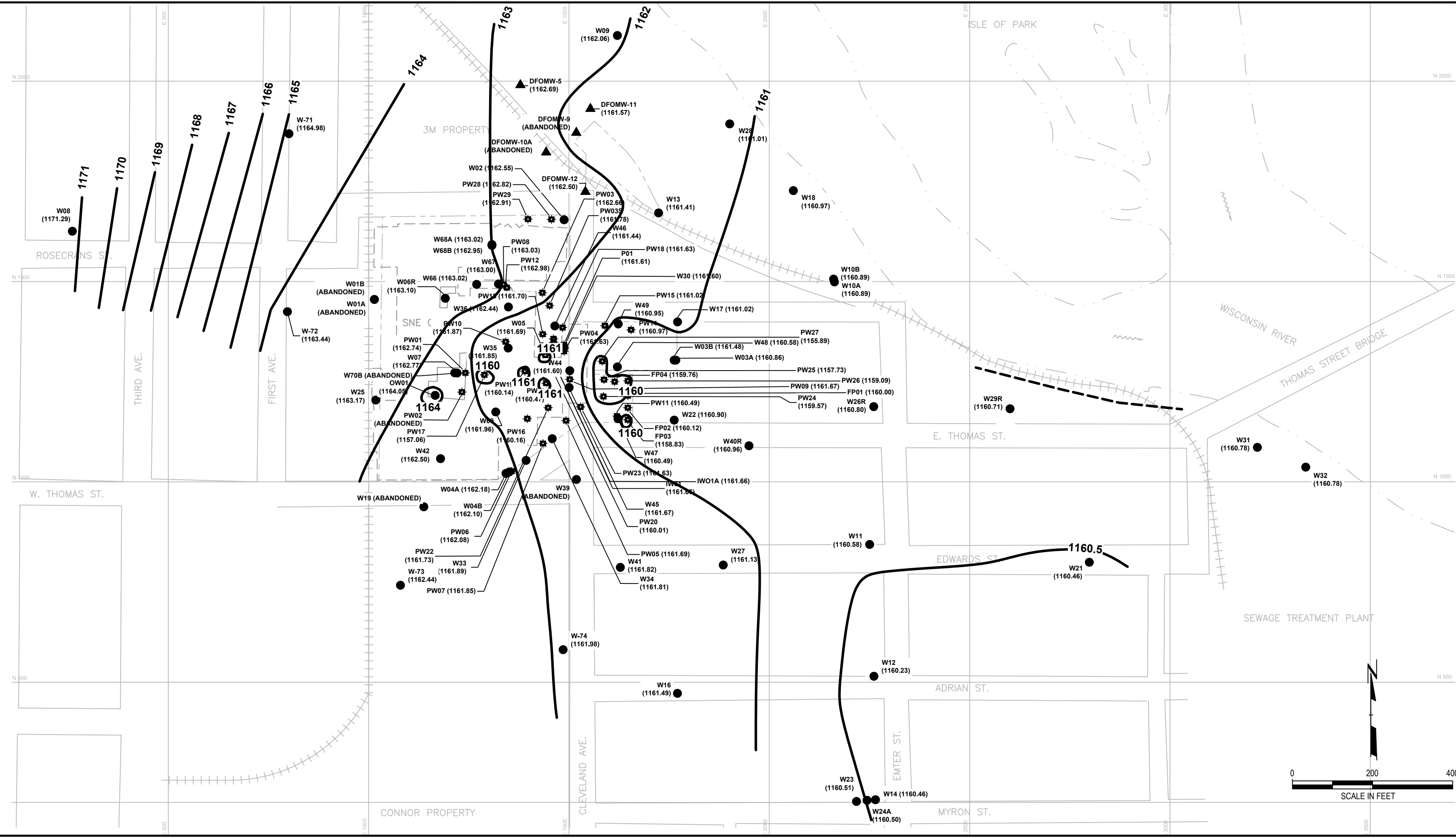
FIGURE 2

Average Groundwater Extraction Rates and Water Level Deviation Versus Time  
Wauleco, Inc.  
Wausau, WI



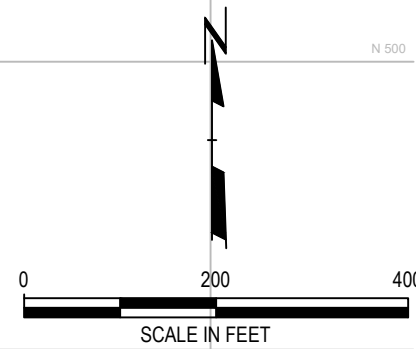
**Note:** The Average Groundwater Extraction Rate is a monthly average of the flow into the treatment system. The monthly average POTW discharge is less than the total extraction rate during the PPT pilot test due to the injection of treated water into IW01.

1164 - USER: E:\alexander - ATTACHED XREFS - Drawings - JAN 2022\VT.dwg -- ATTACHED MAPS --  
 DRAWING NAME: M:\Waukeco\189597 - Annual 2022\0111\_189597\0011\04.WT JAN 22.dwg -- PLOT DATE: February 08, 2022 - 8:47PM -- LAYOUT: WATER TABLE MAP (JANUARY 4, 2022)  
 Version: 2017-10-21



- LEGEND**
- W17 ● (1162.42) MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
  - PW12 ■ (1164.12) EXTRACTION WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
  - APPROXIMATE PROPERTY LINE
  - - - - - FORMER BUILDING OUTLINE
  - 1161 — WATER TABLE ELEVATION CONTOUR
  - ▲ DFOMW-5 3M GROUNDWATER MONITORING WELL
  - - - - - APPROXIMATE LOCATION OF SHEET PILE WALL

- NOTES**
1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL, MWH DRAWING 2082658.302160101-B1, AND 3M WELLS LOCATION BASED ON 3M MAPS.
  2. WATER ELEVATIONS OBTAINED BY TRC ON JANUARY 4, 2022. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 21.5 GPM.
  3. WAULECO WELLS PW02 AND W70B WERE ABANDONED ON 7/21/16 DURING SOIL MOUND REMOVAL ACTIVITIES BY TRC. 3M WELLS DFOMW9 AND DFOMW10A WERE ABANDONED BY 3M IN THE SUMMER OF 2015.
  4. WAULECO WELLS W19 AND W39 WERE ABANDONED ON 3/28/19 PRIOR TO THOMAS STREET RECONSTRUCTION. WELLS W26, W29, AND W40 WERE ALSO ABANDONED ON 3/28/19, WITH REPLACEMENT WELLS W26R, W29R, AND W40R INSTALLED ON 6/24/19.
  5. THE CITY OF WAUSAU INSTALLED A STEEL SHEET PILING WALL IN 2020 TO REPLACE A ROCK WALL ON THE WISCONSIN RIVER BANK LOCATED WEST OF THE THOMAS STREET BRIDGE.
  6. WAULECO WELLS W1A AND W1B WERE ABANDONED ON 6/29/21 AND 6/30/21 DUE TO THE RAILROAD PROPERTY TRANSFER TO 3M.



<b>PROJECT:</b>		<b>WAULECO, INC.</b>	
<b>ANNUAL GROUNDWATER MONITORING REPORT</b>		<b>WAUSAU, WISCONSIN</b>	
<b>TITLE:</b>			
<b>WATER TABLE MAP</b>			
<b>(JANUARY 4 2022)</b>			
DRAWN BY:	E.ALEXANDER	PROJ NO.:	189597.0011
CHECKED BY:	T.DUSHEK	<b>DRAWING 1</b>	
APPROVED BY:	K.QUINN		
DATE:	JANUARY 2022		
		708 Heartland Trail Suite 3000 Madison, WI 53717 Phone: 608.826.3600	
FILE NO.:		189597.0011.04.WT JAN 22.dwg	