

Thompson, Matthew A - DNR

From: Iverson, Bruce <Blverson@trccompanies.com>
Sent: Tuesday, April 7, 2020 3:29 PM
To: Thompson, Matthew A - DNR
Cc: Sheskey, Teresa
Subject: BRRTS #02-37-000006 Wauleco - 2020 First Quarterly Report
Attachments: 2020-04-07_Wauleco_2020 First Quarterly Report_BRRTS 02-37-000006.pdf

Matt, on behalf of Wauleco, Inc. (Wauleco), attached for your records is the 2020 First Quarterly Report for the Wauleco project site located in Wausau, WI. An electronic version will be submitted via the RR Program Submittal Portal; however, no paper copy will be submitted at this time per the WDNR RR Report dated April 1, 2020, which notes that the WDNR is temporarily suspending the requirement to submit a paper copy. If you have any questions, please contact me. Thanks, Bruce

Bruce Iverson, P.E. (WI)
Senior Project Manager



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April 7, 2020

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

Subject: 2020 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 2020 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) 826-3644.

Sincerely,

TRC

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

Bruce Iverson
Project Manager

Attachments: 2020 First Quarterly Report

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

**Wauleco, Inc. - Wausau, Wisconsin
Quarterly Report
Submitted April 2020**

Summary of 2020 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 2020 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 1.35 µg/L in January, 2.76 µg/L in February, and 1.87 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 29, <3.0 µg/L on February 26, and <3.0 µg/L on March 18, 2020.
- 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.

On-site screening PCP influent concentrations ranged from 2,060 µg/L to 8,129 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 2020	83	85	84
February 2020	84	85	88
March 2020	80	84	87

- The dissolved oxygen concentration in the influent to the FBR averaged 2.2 mg/L in January, 2.3 mg/L in February, and 2.5 mg/L in March 2020.

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 0.066 µg/L on January 29, 0.045 µg/L on February 26, and 0.023 µg/L on March 18, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in January was calculated at 0.0000195 lb/24 hours, 0.0000120 lb/24 hours in February, and 0.00000631 lb/24 hours in March, which are 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 24.61 gpm for January, 22.19 gpm for February, and 22.85 gpm for March 2020 (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

Water table elevations for the month of January 2020 are included in Table 3. Monthly water table elevations have been discontinued, with only quarterly elevations being measured, and semi-annual preparation of water table maps as discussed in the 2014 Annual Groundwater Monitoring Report dated April 16, 2015. A water table map for the month of January 2020 is included as Drawing 1.

The product thickness data for January 2020 are summarized in Table 4. Measurements show no product present in January.

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 3, 2020

**Table 1a
January 2020**

**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	1/29/2020	9.4	3.2				<	
Chemical Oxygen Demand	mg/L	1/29/2020	60	50				38	
Chloride	mg/L	1/29/2020	190	190				190	
Dissolved Oxygen	mg/L	1/2/2020	2.2	1.2	7.1				
	mg/L	1/8/2020	2.3	1.2	7				
	mg/L	1/15/2020	2.1	1	7.4				
	mg/L	1/23/2020	2	1	7				
	mg/L	1/29/2020	2.4	1.1	6.9				
Nitrogen, Ammonia	mg/L	1/2/2020	0.3	0.2	0.2				
	mg/L	1/8/2020	0.4	0.3	0.3				
	mg/L	1/15/2020	0.4	0.3	0.3				
	mg/L	1/23/2020	0.7	0.4	0.6				
	mg/L	1/29/2020	0.4	0.3	0.3				
Nitrogen, Nitrate	mg/L	1/2/2020	<	<	<				
	mg/L	1/8/2020	<	<	<				
	mg/L	1/15/2020	<	<	<				
	mg/L	1/23/2020	<	<	<				
	mg/L	1/29/2020	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	1/29/2020	<	<				<	
Pentachlorophenol-Screen	µg/L	1/1/2020						1	
	µg/L	1/2/2020	4545	928	931			1	
	µg/L	1/3/2020						2	
	µg/L	1/4/2020						1	
	µg/L	1/5/2020						1	
	µg/L	1/6/2020						1	
	µg/L	1/7/2020						1	
	µg/L	1/8/2020	4765	761	984			1	
	µg/L	1/9/2020						1	
	µg/L	1/10/2020						1	
	µg/L	1/11/2020						1	
	µg/L	1/12/2020						1	
	µg/L	1/13/2020						1	
	µg/L	1/14/2020						1	
	µg/L	1/15/2020	2126	319	411			1	
	µg/L	1/16/2020						1	
	µg/L	1/17/2020						1	
	µg/L	1/18/2020						1	
	µg/L	1/19/2020						1	
	µg/L	1/20/2020						1	
	µg/L	1/21/2020						1	
	µg/L	1/22/2020						1	
	µg/L	1/23/2020	2915	516	463			1	
	µg/L	1/24/2020						2	
	µg/L	1/25/2020						1	
	µg/L	1/26/2020						1	
	µg/L	1/27/2020						1	

**Table 1a
January 2020**

**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	1/28/2020						2	
	µg/L	1/29/2020	6089	402	561		418	3	
	µg/L	1/30/2020						5	
	µg/L	1/31/2020						3	
pH	S.U.	1/2/2020	6.85	6.85	6.85				
	S.U.	1/8/2020	6.85	6.75	6.8				
	S.U.	1/15/2020	6.8	6.8	6.85				
	S.U.	1/23/2020	6.7	6.65	6.7				
	S.U.	1/29/2020	6.9	6.8	6.9				
Phosphorus, Ortho	mg/L	1/29/2020	<	<				<	
Phosphorus, Phosphate	mg/L	1/2/2020	0.8	0.8	0.8				
	mg/L	1/8/2020	0.9	0.8	0.8				
	mg/L	1/15/2020	0.9	0.8	0.8				
	mg/L	1/23/2020	0.9	0.9	0.7				
	mg/L	1/29/2020	0.4	0.3	0.3				
Solids, Total Suspended	mg/L	1/29/2020	13	17				2.2	
Mercury	µg/L	1/29/2020	0.38					0.066	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	1/29/2020	320	62	59		53	<	<
2,4,5-Trichlorophenol	µg/L	1/29/2020	<	27	24		26	<	<
2,4,6-Trichlorophenol	µg/L	1/29/2020	<	<	<		<	<	<
2,4-Dichlorophenol	µg/L	1/29/2020	<	<	<		<	<	<
2,4-Dimethylphenol	µg/L	1/29/2020	<	<	<		<	<	<
2,4-Dinitrophenol	µg/L	1/29/2020	<	<	<		<	<	<
2,6-Dichlorophenol	µg/L	1/29/2020	<	<	<		<	<	<
2-Chlorophenol	µg/L	1/29/2020	<	<	<		<	<	<
2-Methylphenol	µg/L	1/29/2020	<	<	<		<	<	<
2-Nitrophenol	µg/L	1/29/2020	<	<	<		<	<	<
3&4-Methylphenol	µg/L	1/29/2020	<	<	<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	1/29/2020	<	<	<		<	<	<
4-Chloro-3-Methylphenol	µg/L	1/29/2020	<	<	<		<	<	<
4-Nitrophenol	µg/L	1/29/2020	<	<	<		<	<	<
Pentachlorophenol	µg/L	1/29/2020	3500	480	450		390	<	<
Phenol	µg/L	1/29/2020	<	<	<		<	<	<

**Table 1b
February 2020**

**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	2/26/2020	6.6	2.1				<	
Chemical Oxygen Demand	mg/L	2/26/2020	47	50				35	
Chloride	mg/L	2/26/2020	210	210				220	
Dissolved Oxygen	mg/L	2/7/2020	2.1	1	7				
	mg/L	2/14/2020	2.4	1.2	7.2				
	mg/L	2/21/2020	2.4	1.2	7.6				
	mg/L	2/26/2020	2.4	1.2	7.6				
Nitrogen, Ammonia	mg/L	2/7/2020	0.5	0.3	0.3				
	mg/L	2/14/2020	0.5	0.4	0.4				
	mg/L	2/21/2020	0.5	0.3	0.3				
	mg/L	2/26/2020	0.4	0.4	0.3				
Nitrogen, Nitrate	mg/L	2/7/2020	<	<	<				
	mg/L	2/14/2020	<	<	<				
	mg/L	2/21/2020	<	<	<				
	mg/L	2/26/2020	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	2/26/2020	<	<				<	
Pentachlorophenol-Screen	µg/L	2/1/2020						8	
	µg/L	2/2/2020						8	
	µg/L	2/3/2020						8	
	µg/L	2/4/2020						3	
	µg/L	2/5/2020						3	
	µg/L	2/6/2020						2	
	µg/L	2/7/2020	8129	1583	1645			2	
	µg/L	2/8/2020						4	
	µg/L	2/9/2020						4	
	µg/L	2/10/2020						4	
	µg/L	2/11/2020						2	
	µg/L	2/12/2020						2	
	µg/L	2/13/2020						2	
	µg/L	2/14/2020	6330	1125	626			1	
	µg/L	2/15/2020						2	
	µg/L	2/16/2020						2	
	µg/L	2/17/2020						2	
	µg/L	2/18/2020						1	
	µg/L	2/19/2020						10	
	µg/L	2/20/2020						1	
	µg/L	2/21/2020	2060	536	383			1	
	µg/L	2/22/2020						1	
	µg/L	2/23/2020						1	
	µg/L	2/24/2020						1	
	µg/L	2/25/2020						1	
	µg/L	2/26/2020	2900	412	480		7	1	
	µg/L	2/27/2020						1	

**Table 1b
February 2020**

**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	2/28/2020						1	
	µg/L	2/29/2020						1	
pH	S.U.	2/7/2020	6.9	6.8	6.8				
	S.U.	2/14/2020	6.9	6.9	6.9				
	S.U.	2/21/2020	6.8	6.8	6.8				
	S.U.	2/26/2020	6.8	6.75	6.8				
Phosphorus, Ortho	mg/L	2/26/2020	<	<				<	
Phosphorus, Phosphate	mg/L	2/7/2020	0.4	0.5	0.4				
	mg/L	2/14/2020	0.5	0.4	0.4				
	mg/L	2/21/2020	0.4	0.3	0.3				
	mg/L	2/26/2020	0.4	0.3	0.3				
Solids, Total Suspended	mg/L	2/26/2020	9.0	21				3.8	
Mercury	µg/L	2/26/2020						0.045	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	2/26/2020	290		48			<	<
2,4,5-Trichlorophenol	µg/L	2/26/2020	<		17			<	<
2,4,6-Trichlorophenol	µg/L	2/26/2020	<		<			<	<
2,4-Dichlorophenol	µg/L	2/26/2020	<		<			<	<
2,4-Dimethylphenol	µg/L	2/26/2020	<		<			<	<
2,4-Dinitrophenol	µg/L	2/26/2020	<		<			<	<
2,6-Dichlorophenol	µg/L	2/26/2020	<		<			<	<
2-Chlorophenol	µg/L	2/26/2020	<		<			<	<
2-Methylphenol	µg/L	2/26/2020	<		<			<	<
2-Nitrophenol	µg/L	2/26/2020	<		<			<	<
3&4-Methylphenol	µg/L	2/26/2020	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	2/26/2020	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	2/26/2020	<		<			<	<
4-Nitrophenol	µg/L	2/26/2020	<		<			<	<
Pentachlorophenol	µg/L	2/26/2020	3300		440			<	<
Phenol	µg/L	2/26/2020	<		<			<	<

**Table 1c
March 2020**

**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	3/18/2020	7.8	2.6				<	
Chemical Oxygen Demand	mg/L	3/18/2020	57	40				30	
Chloride	mg/L	3/18/2020	220	220				220	
Dissolved Oxygen	mg/L	3/4/2020	2.4	1.2	7.6				
	mg/L	3/12/2020	2.5	1.3	7.4				
	mg/L	3/18/2020	2.6	1.4	7.2				
	mg/L	3/26/2020	2.4	1	7				
Nitrogen, Ammonia	mg/L	3/4/2020	0.4	0.3	0.3				
	mg/L	3/12/2020	0.4	0.3	0.4				
	mg/L	3/18/2020	0.5	0.5	0.4				
	mg/L	3/26/2020	0.5	0.4	0.4				
Nitrogen, Nitrate	mg/L	3/4/2020	<	<	<				
	mg/L	3/12/2020	<	<	<				
	mg/L	3/18/2020	<	<	<				
	mg/L	3/26/2020	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	3/18/2020	<	<				<	
Pentachlorophenol-Screen	µg/L	3/1/2020						1	
	µg/L	3/2/2020						1	
	µg/L	3/3/2020						1	
	µg/L	3/4/2020	2375	410	555			1	
	µg/L	3/5/2020						2	
	µg/L	3/6/2020						4	
	µg/L	3/7/2020						4	
	µg/L	3/8/2020						4	
	µg/L	3/9/2020						4	
	µg/L	3/10/2020						2	
	µg/L	3/11/2020						1	
	µg/L	3/12/2020	6601	1899	1475			3	
	µg/L	3/13/2020						2	
	µg/L	3/14/2020						2	
	µg/L	3/15/2020						2	
	µg/L	3/16/2020						2	
	µg/L	3/17/2020						2	
	µg/L	3/18/2020	4352	1061	826		50	2	
	µg/L	3/19/2020						1	
	µg/L	3/20/2020						1	
	µg/L	3/21/2020						2	
	µg/L	3/22/2020						2	
	µg/L	3/23/2020						2	
	µg/L	3/24/2020						2	
	µg/L	3/25/2020						2	
	µg/L	3/26/2020	4230	968	698			1	
	µg/L	3/27/2020						1	
	µg/L	3/28/2020						1	

Table 1c
March 2020

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	3/29/2020						1	
	µg/L	3/30/2020						1	
	µg/L	3/31/2020						1	
pH	S.U.	3/4/2020	6.7	6.65	6.65				
	S.U.	3/12/2020	6.8	6.7	6.75				
	S.U.	3/18/2020	6.7	6.65	6.65				
	S.U.	3/26/2020	6.7	6.7	6.7				
Phosphorus, Ortho	mg/L	3/18/2020	<	<				<	
Phosphorus, Phosphate	mg/L	3/4/2020	0.4	0.2	0.2				
	mg/L	3/12/2020	0.4	0.3	0.3				
	mg/L	3/18/2020	0.3	0.3	0.3				
	mg/L	3/26/2020	0.4	0.4	0.4				
Solids, Total Suspended	mg/L	3/18/2020	15	22				3.0	
Mercury	µg/L	3/18/2020						0.023	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	3/18/2020	310	53	53			<	<
2,4,5-Trichlorophenol	µg/L	3/18/2020	<	24	25			<	<
2,4,6-Trichlorophenol	µg/L	3/18/2020	<	<	<			<	<
2,4-Dichlorophenol	µg/L	3/18/2020	<	<	<			<	<
2,4-Dimethylphenol	µg/L	3/18/2020	<	<	<			<	<
2,4-Dinitrophenol	µg/L	3/18/2020	<	<	<			<	<
2,6-Dichlorophenol	µg/L	3/18/2020	<	<	<			<	<
2-Chlorophenol	µg/L	3/18/2020	<	<	<			<	<
2-Methylphenol	µg/L	3/18/2020	<	<	<			<	<
2-Nitrophenol	µg/L	3/18/2020	<	<	<			<	<
3&4-Methylphenol	µg/L	3/18/2020	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	3/18/2020	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	3/18/2020	<	<	<			<	<
4-Nitrophenol	µg/L	3/18/2020	<	<	<			<	<
Pentachlorophenol	µg/L	3/18/2020	3100	450	450			<	<
Phenol	µg/L	3/18/2020	<	<	<			<	<

Table 2a
January 2020

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate ^{(1) (3)} (gpm)	POTW Discharge Flow Rate ^{(1) (4)} (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
1/1/2020	18.91	25.36	83645034
1/2/2020	19.09	25.78	83682157
1/3/2020	19.37	25.52	83718905
1/4/2020	19.55	25.56	83755705
1/5/2020	19.80	25.91	83793010
1/6/2020	19.86	25.69	83830005
1/7/2020	20.00	25.72	83867036
1/8/2020	20.06	25.76	83904137
1/9/2020	20.06	25.73	83941194
1/10/2020	20.16	25.81	83978355
1/11/2020	20.19	25.61	84015233
1/12/2020	20.29	25.71	84052256
1/13/2020	20.27	25.63	84089158
1/14/2020	20.26	25.63	84126060
1/15/2020	20.29	25.39	84162615
1/16/2020	20.38	25.42	84199217
1/17/2020	20.43	25.48	84235905
1/18/2020	20.49	25.12	84272083
1/19/2020	20.62	25.42	84308682
1/20/2020	20.60	25.36	84345204
1/21/2020	20.56	25.22	84381527
1/22/2020	20.50	25.36	84418047
1/23/2020	20.51	25.46	84454713
1/24/2020	18.98	23.90	84489123
1/25/2020	17.48	22.20	84521084
1/26/2020	17.09	22.10	84552914
1/27/2020	16.32	21.31	84583607
1/28/2020	16.33	21.69	84614835
1/29/2020	16.44	21.69	84646064
1/30/2020	16.49	21.34	84676795
1/31/2020	16.48	21.10	84707179
Average For The Month	19.29	24.61	
Total ⁽²⁾ :			1,098,666

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 2b
February 2020**

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

Date	Influent Groundwater Flow Rate ^{(1) (3)} (gpm)	POTW Discharge Flow Rate ^{(1) (4)} (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
2/1/2020	16.51	20.98	84737385
2/2/2020	16.49	21.21	84767934
2/3/2020	16.57	21.04	84798228
2/4/2020	16.56	20.85	84828255
2/5/2020	16.66	21.32	84858959
2/6/2020	16.71	21.12	84889366
2/7/2020	16.64	21.28	84920006
2/8/2020	16.65	21.08	84950365
2/9/2020	16.60	21.38	84981146
2/10/2020	16.55	21.21	85011685
2/11/2020	16.50	21.04	85041986
2/12/2020	16.52	21.31	85072667
2/13/2020	16.55	21.19	85103179
2/14/2020	16.51	21.03	85133456
2/15/2020	16.50	21.13	85163883
2/16/2020	16.53	21.26	85194499
2/17/2020	16.60	21.12	85224908
2/18/2020	16.61	21.21	85255447
2/19/2020	16.67	21.17	85285929
2/20/2020	16.62	21.09	85316302
2/21/2020	16.49	22.26	85348353
2/22/2020	19.31	25.68	85385330
2/23/2020	19.58	25.82	85422511
2/24/2020	19.98	25.76	85459606
2/25/2020	20.12	25.50	85496333
2/26/2020	19.29	24.97	85532288
2/27/2020	19.14	24.31	85567298
2/28/2020	19.17	23.76	85601517
2/29/2020	18.22	22.36	85633716
Average For The Month	17.34	22.19	
Total ⁽²⁾ :			926,537

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 2020

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate ^{(1) (3)} (gpm)	POTW Discharge Flow Rate ^{(1) (4)} (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
3/1/2020	18.11	22.43	85666014
3/2/2020	17.99	23.10	85699273
3/3/2020	17.95	22.25	85731311
3/4/2020	17.86	21.61	85762428
3/5/2020	17.59	22.10	85794257
3/6/2020	16.25	21.78	85825626
3/7/2020	16.26	21.28	85856272
3/8/2020	15.62	20.56	85885883
3/9/2020	15.63	21.23	85916452
3/10/2020	17.07	21.95	85948059
3/11/2020	17.27	23.45	85981827
3/12/2020	17.29	24.33	86016861
3/13/2020	17.31	24.65	86052352
3/14/2020	17.43	24.27	86087305
3/15/2020	17.09	24.20	86122149
3/16/2020	16.72	23.77	86156375
3/17/2020	16.76	23.75	86190570
3/18/2020	15.56	23.05	86223767
3/19/2020	15.91	23.16	86257116
3/20/2020	16.22	23.42	86290846
3/21/2020	16.20	23.13	86324146
3/22/2020	16.25	23.24	86357608
3/23/2020	16.25	23.08	86390839
3/24/2020	16.22	23.07	86424057
3/25/2020	16.28	23.00	86457174
3/26/2020	16.36	23.13	86490478
3/27/2020	15.75	22.55	86522948
3/28/2020	16.26	22.63	86555539
3/29/2020	16.17	22.80	86588373
3/30/2020	16.26	22.81	86621215
3/31/2020	16.17	22.60	86653752
Average For The Month	16.65	22.85	
Total ⁽²⁾ :			1,020,036

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.

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

Well	January 03, 2020 (ft msl)	February 2020	March 2020
PW01	1163.87	----	----
PW02	Abandoned	----	----
PW03	1163.74	----	----
PW3S	1162.87	----	----
PW04	1162.73	----	----
PW05	1162.79	----	----
PW06	1163.16	----	----
PW07	1162.91	----	----
PW08	1164.07	----	----
PW09I	----	----	----
PW09O	1162.79	----	----
PW10	1162.94	----	----
PW11	1161.69	----	----
PW12	1164.12	----	----
PW13	1162.80	----	----
PW14	1162.37	----	----
PW15	1162.42	----	----
PW16	1161.63	----	----
PW17	1160.92	----	----
PW18	1162.74	----	----
PW19	1161.61	----	----
PW20	1161.59	----	----
PW21	1161.89	----	----
PW22	1162.82	----	----
PW23	1162.73	----	----
PW24	1161.39	----	----
PW25	1158.76	----	----
PW26	1161.06	----	----
PW27	1158.6	----	----
PW28	1163.93	----	----
PW29	1163.99	----	----
P01	1162.73	----	----
OW01	1165.17	----	----
W01A	1164.32	----	----
W01B	1164.37	----	----
W02	1163.67	----	----
W03A	1162.15	----	----
W03B	1162.58	----	----
W04A	1163.25	----	----
W04B	1163.16	----	----
W05	1162.77	----	----
W06R	1164.24	----	----
W07	1163.93	----	----
W08	1172.64	----	----
W09	1163.31	----	----
W10A	1161.88	----	----
W10B	1161.88	----	----
W11	1161.55	----	----
W12	1161.07	----	----
W13	1162.74	----	----
W14	1161.36	----	----
W16	1162.49	----	----
W17	1162.42	----	----
W18	1162.21	----	----
W19	Abandoned	----	----

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

Well	January 03, 2020 (ft msl)	February 2020	March 2020
W21	1161.59	----	----
W22	1162.12	----	----
W23	1161.42	----	----
W24A	1161.41	----	----
W25	1164.3	----	----
W26/W26R	1161.76	----	----
W27	1162.08	----	----
W28	1162.36	----	----
W29/W29R	1161.82	----	----
W30	1162.71	----	----
W31	1161.77	----	----
W32	1161.79	----	----
W33	1162.96	----	----
W34	1162.89	----	----
W35	1162.93	----	----
W36	1163.52	----	----
W39	Abandoned	----	----
W40/W40R	1161.98	----	----
W41	1162.84	----	----
W42	1163.56	----	----
W44	1162.73	----	----
W45	1162.98	----	----
W46	1162.57	----	----
W47	1161.71	----	----
W48	1161.97	----	----
W49	1162.41	----	----
W66	1164.15	----	----
W67	1164.13	----	----
W68A	1164.12	----	----
W68B	1164.09	----	----
W69	1163.19	----	----
W70B	Abandoned	----	----
River	-----	----	----
IW01	1162.75	----	----
IW01A	1162.76	----	----
FP01	1161.18	----	----
FP02	1161.36	----	----
FP03	1160.34	----	----
FP04	1161.03	----	----
3M Basin	Water/Ice in both Basins	----	----
DFOWM 5	1163.81	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	1162.86	----	----
DFOWM 12	1163.52	----	----
W71	1166.17	----	----
W72	1164.6	----	----
W73	1163.45	----	----
W74	1162.97	----	----

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.

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

Well	January 03, 2020 (ft)	February 2020	March 2020
PW01	0.00	----	----
PW02	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	0.00	----	----
W01B	0.00	----	----
W02	0.00	----	----
W03A	0.00	----	----
W03B	0.00	----	----
W04A	0.00	----	----
W04B	0.00	----	----
W05	0.00	----	----
W06R	0.00	----	----
W07	0.00	----	----
W08	0.00	----	----
W09	0.00	----	----
W10A	0.00	----	----
W10B	0.00	----	----
W11	0.00	----	----
W12	0.00	----	----
W13	0.00	----	----
W14	0.00	----	----
W16	0.00	----	----
W17	0.00	----	----

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

Well	January 03, 2020 (ft)	February 2020	March 2020
W18	0.00	----	----
W19	Abandoned	----	----
W21	0.00	----	----
W22	0.00	----	----
W23	0.00	----	----
W24A	0.00	----	----
W25	0.00	----	----
W26/W26R	0.00	----	----
W27	0.00	----	----
W28	0.00	----	----
W29/W29R	0.00	----	----
W30	0.00	----	----
W31	0.00	----	----
W32	0.00	----	----
W33	0.00	----	----
W34	0.00	----	----
W35	0.00	----	----
W36	0.00	----	----
W39	Abandoned	----	----
W40/W40R	0.00	----	----
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	----	----
River	----	----	----
IW01	0.00	----	----
IW01A	0.00	----	----
FP01	0.00	----	----
FP02	0.00	----	----
FP03	0.00	----	----
FP04	0.00	----	----
3M Basin	0.00	----	----
DFOWM 5	0.00	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	0.00	----	----
DFOWM 12	0.00	----	----
W71	0.00	----	----
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

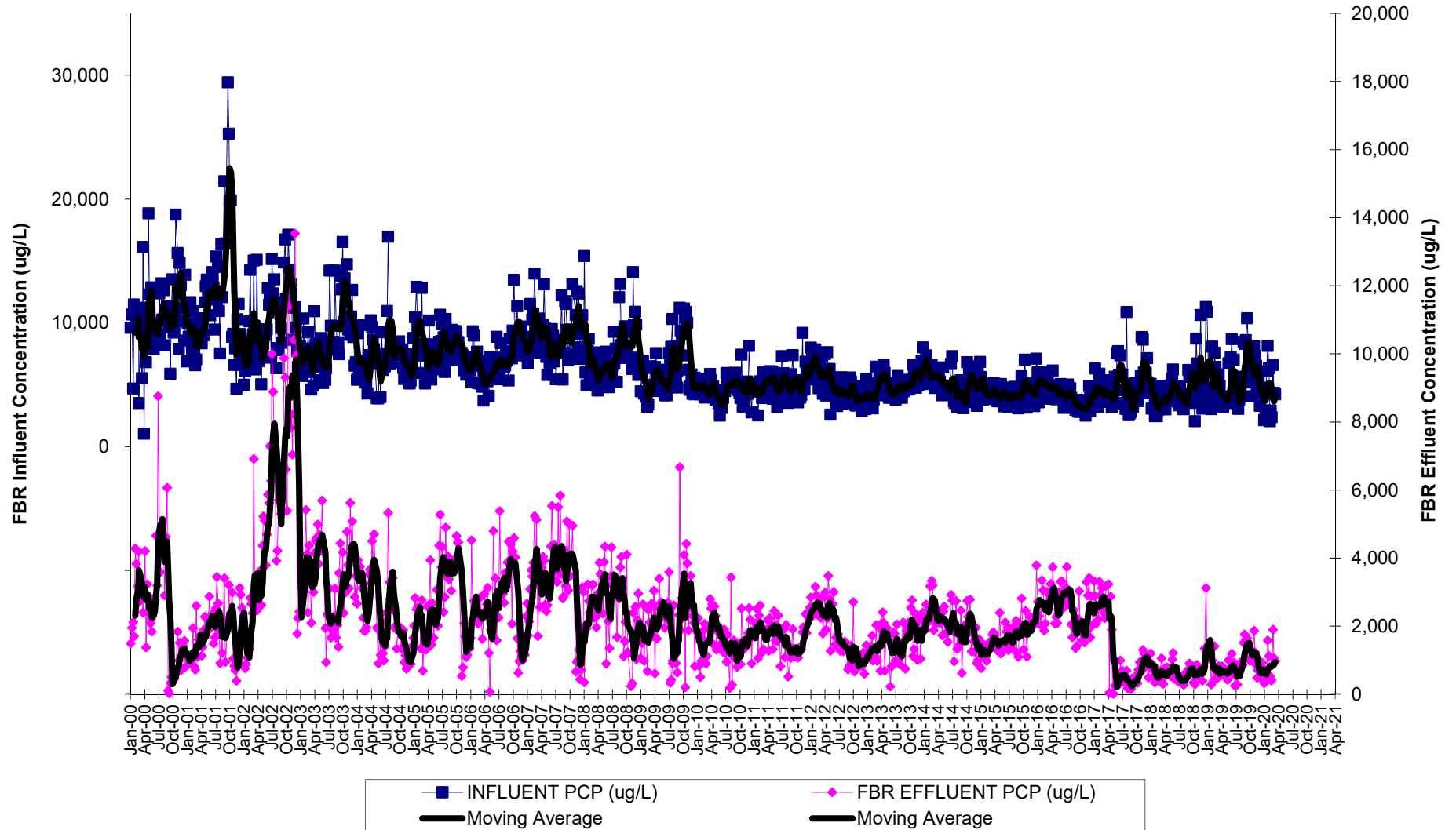
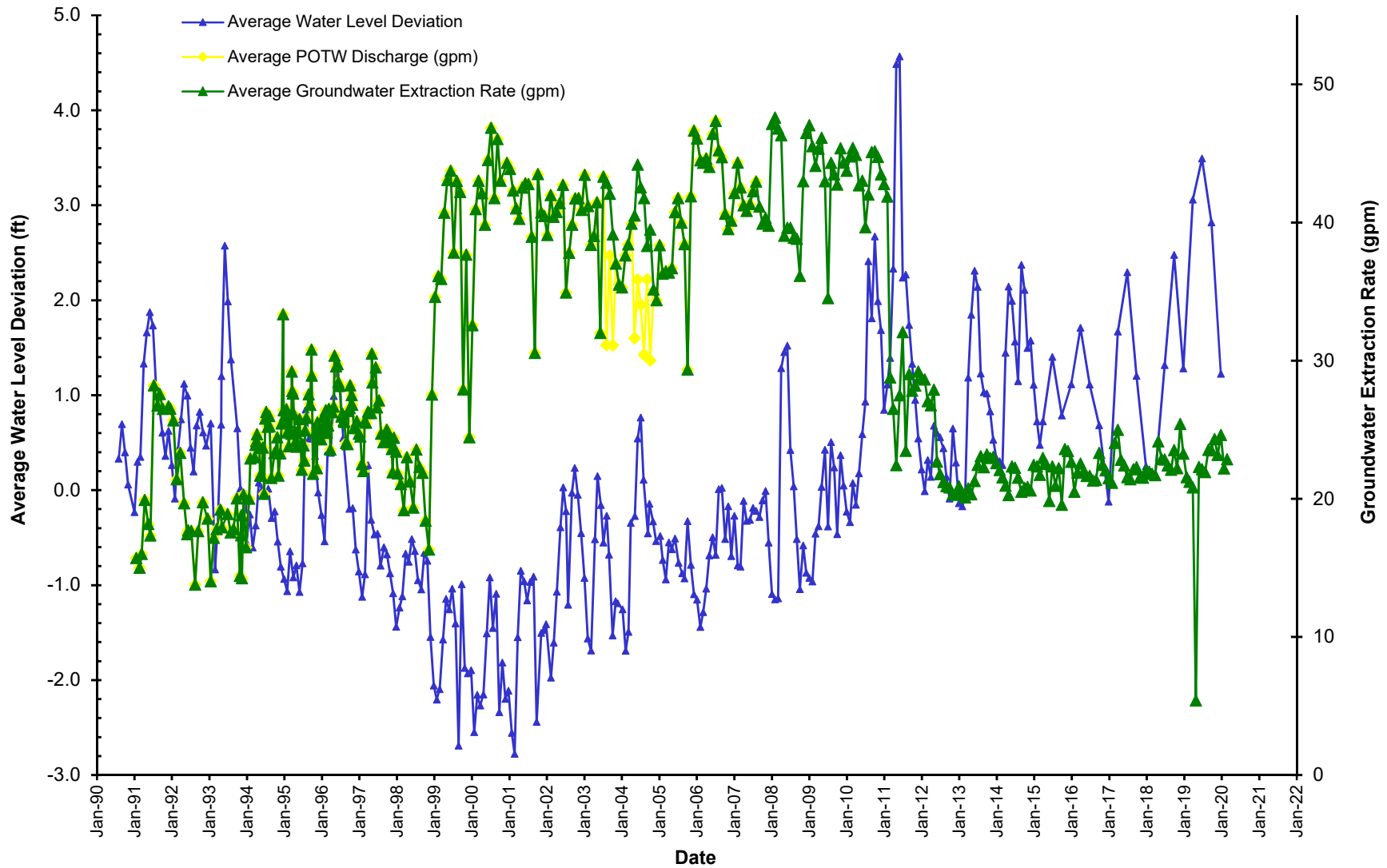


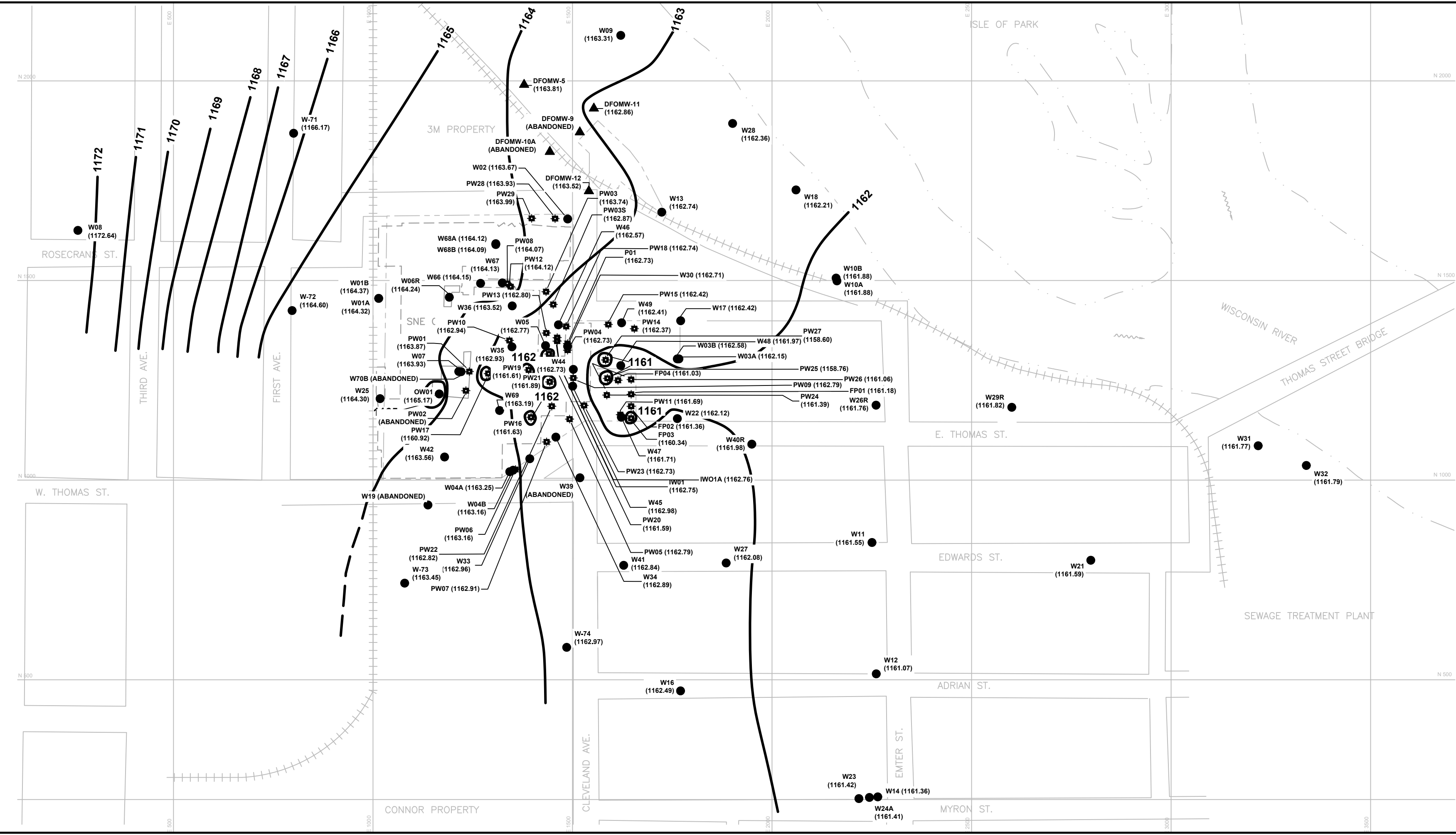
Figure 2

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



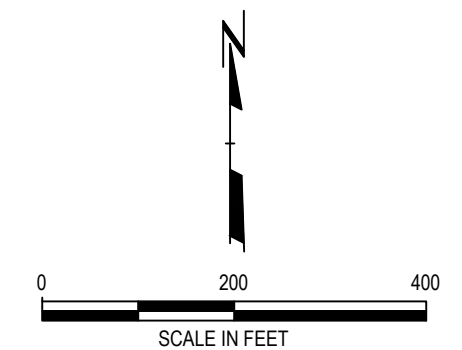
Note: The Average Groundwater Extraction Rate is a monthly average of the flow into the treatment system. The monthly average POTW discharge is less than the total extraction rate during the PPT pilot test due to the injection of treated water into IW01.

1164 - USER: T. FIEBRANZ - ATTACHED XREF'S: Bounding: Jan 2020 W. data - ATTACHED IMAGES: Drawing Name: J:\Wauleco\189597 - Annual 2020\0009189597.dwg - PLOT DATE: April 07, 2020 - 9:25 AM - LAYOUT: WATER TABLE MAP (JANUARY 3, 2020)



- 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

- 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 3, 2020. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 25.5 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.



PROJECT:		WAULECO, INC.	
		QUARTERLY REPORT	
		WAUSAU, WISCONSIN	
TITLE:			
WATER TABLE MAP			
(JANUARY 3, 2020)			
DRAWN BY:	T. FIEBRANZ	PROJ NO.:	189597.0009
CHECKED BY:	T. DUSHEK	DRAWING 1	
APPROVED BY:	K. QUINN		
DATE:	APRIL 2020		
FILE NO.:		189597.0009.01.WT JAN 20.dwg	

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