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April 18, 2018

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

Subject: 2018 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 2018 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 Environmental Corporation

Bruce Iverson
Project Manager

Attachments: 2018 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 2018**

Summary of 2018 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 2018 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 1.10 µg/L in January, 1.04 µg/L in February, and 2.84 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 23, <3.0 µg/L on February 14, and 4.0 µg/L March 14, 2018.
- 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 2,454 µg/L to 5,077 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 2018	85	77	51
February 2018	83	80	45
March 2018	80	85	37

- The dissolved oxygen concentration in the influent to the FBR averaged 2.6 mg/L in January, 3.2 mg/L in February, and 3.0 mg/L in March 2018.

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 <0.02 µg/L on January 23, 0.042 on February 14, and <0.02 µg/L March 14, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in January and March was calculated using half the detection limit of 0.01 µg/L, at 0.00000265 lb/24 hours in January and 0.00000262 in March, which are below the permit discharge limit of 0.00048 lb/24 hours. The mass loading for mercury in February was calculated at 0.0000111 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 22.03 gpm for January, 21.94 gpm for February, and 21.79 gpm for March 2018 (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 2018 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 2018 is included as Drawing 1 in this Quarterly Report.

The product thickness data for January 2018 are summarized in Table 4. Measurements show small amounts of product present in January. Two monitoring wells measured had free product: PW29 had 0.21 ft, and W35 had 0.22 ft. PW29 is no longer an active pumping well, and is monitored only for groundwater elevations.

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 8, 2018

**TABLE 1a
JANUARY 2018**

**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	1/23/2018	8.3	5.2				<	
Chemical Oxygen Demand	mg/L	1/23/2018	42	<				<	
Chloride	mg/L	1/23/2018	180	180				180	
Dissolved Oxygen	mg/L	1/3/2018	2.4	1.2	6.8				
	mg/L	1/12/2018	2.6	1.4	6.6				
	mg/L	1/18/2018	2.7	1.1	6.9				
	mg/L	1/23/2018	2.7	1	6.9				
Nitrogen, Ammonia	mg/L	1/3/2018	2.1	2.1	1				
	mg/L	1/12/2018	0.1	0.2	1				
	mg/L	1/18/2018	1.6	1.3	1.1				
	mg/L	1/23/2018	2	1.8	1.6				
Nitrogen, Nitrate	mg/L	1/3/2018	<	<	<				
	mg/L	1/12/2018	<	<	<				
	mg/L	1/18/2018	<	<	<				
	mg/L	1/23/2018	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	1/23/2018	2.7	2.6				2.7	
Nitrogen, Total Kjeldahl	mg/L	1/23/2018	<	<				<	
Pentachlorophenol-Screen	µg/L	1/1/2018						1	
	µg/L	1/2/2018						1	
	µg/L	1/3/2018	4875	835	566			2	
	µg/L	1/4/2018						2	
	µg/L	1/5/2018						1	
	µg/L	1/6/2018						1	
	µg/L	1/7/2018						1	
	µg/L	1/8/2018						1	
	µg/L	1/9/2018						1	
	µg/L	1/10/2018						1	
	µg/L	1/11/2018						1	
	µg/L	1/12/2018	5077	1202	842			2	
	µg/L	1/13/2018						1	
	µg/L	1/14/2018						1	
	µg/L	1/15/2018						1	
	µg/L	1/16/2018						1	
	µg/L	1/17/2018						1	
	µg/L	1/18/2018	3059	899	632			1	
	µg/L	1/19/2018						1	
	µg/L	1/20/2018						1	
	µg/L	1/21/2018						1	
	µg/L	1/22/2018						1	
	µg/L	1/23/2018	4298	730	540		13	1	
	µg/L	1/24/2018						1	
	µg/L	1/25/2018						1	
	µg/L	1/26/2018						1	
	µg/L	1/27/2018						1	
	µg/L	1/28/2018						1	

**TABLE 1a
JANUARY 2018**

**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	1/29/2018						1	
	µg/L	1/30/2018						1	
	µg/L	1/31/2018						1	
pH	S.U.	1/3/2018	7	6.95	6.95				
	S.U.	1/12/2018	7	6.9	6.95				
	S.U.	1/18/2018	6.95	6.9	6.95				
	S.U.	1/23/2018	6.95	6.9	6.95				
Phosphorus, Ortho	mg/L	1/23/2018	<	<				<	
Phosphorus, Phosphate	mg/L	1/3/2018	0.8	0.6	0.5				
	mg/L	1/12/2018	1	0.8	0.4				
	mg/L	1/18/2018	1.1	0.9	0.7				
	mg/L	1/23/2018	0.9	0.6	0.4				
Solids, Total Suspended	mg/L	1/23/2018	9.2	12				<	
Mercury	µg/L	1/23/2018	0.036					<	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	1/23/2018	280	54	49		<	<	<
2,4,5-Trichlorophenol	µg/L	1/23/2018	<	<	<		<	<	<
2,4,6-Trichlorophenol	µg/L	1/23/2018	<	<	<		<	<	<
2,4-Dichlorophenol	µg/L	1/23/2018	<	<	<		<	<	<
2,4-Dimethylphenol	µg/L	1/23/2018	<	<	<		<	<	<
2,4-Dinitrophenol	µg/L	1/23/2018	<	<	<		<	<	<
2,6-Dichlorophenol	µg/L	1/23/2018	<	<	<		<	<	<
2-Chlorophenol	µg/L	1/23/2018	<	<	<		<	<	<
2-Methylphenol	µg/L	1/23/2018	<	<	<		<	<	<
2-Nitrophenol	µg/L	1/23/2018	<	<	<		<	<	<
3&4-Methylphenol	µg/L	1/23/2018	<	<	<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	1/23/2018	<	<	<		<	<	<
4-Chloro-3-Methylphenol	µg/L	1/23/2018	<	<	<		<	<	<
4-Nitrophenol	µg/L	1/23/2018	<	<	<		<	<	<
Pentachlorophenol	µg/L	1/23/2018	3900	760	710		20	<	<
Phenol	µg/L	1/23/2018	<	<	<		<	<	<

**TABLE 1b
FEBRUARY 2018**

**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	2/14/2018	9.0	15				<	
Chemical Oxygen Demand	mg/L	2/14/2018	76	60				46	
Chloride	mg/L	2/14/2018	160	160				160	
Dissolved Oxygen	mg/L	2/1/2018	3	1.4	7				
	mg/L	2/8/2018	2.8	1.1	7				
	mg/L	2/14/2018	3.1	1.3	7.2				
	mg/L	2/21/2018	3.4	1.2	7.4				
	mg/L	2/28/2018	3.6	1.4	7.7				
Nitrogen, Ammonia	mg/L	2/1/2018	2	1.5	1.4				
	mg/L	2/8/2018	3.2	0.9	1.2				
	mg/L	2/14/2018	1	1.3	1.4				
	mg/L	2/21/2018	1.9	1.6	1.3				
	mg/L	2/28/2018	1.5	1.5	1.2				
Nitrogen, Nitrate	mg/L	2/1/2018	<	<	<				
	mg/L	2/8/2018	<	<	<				
	mg/L	2/14/2018	<	<	<				
	mg/L	2/21/2018	<	<	<				
	mg/L	2/28/2018	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	2/14/2018	<	<				43	
Pentachlorophenol-Screen	µg/L	2/1/2018	3529	454	444			1	
	µg/L	2/2/2018						1	
	µg/L	2/3/2018						1	
	µg/L	2/4/2018						1	
	µg/L	2/5/2018						1	
	µg/L	2/6/2018						1	
	µg/L	2/7/2018						1	
	µg/L	2/8/2018	2454	343	362			1	
	µg/L	2/9/2018						1	
	µg/L	2/10/2018						1	
	µg/L	2/11/2018						1	
	µg/L	2/12/2018						1	
	µg/L	2/13/2018						1	
	µg/L	2/14/2018	4372	574	804		29	1	
	µg/L	2/15/2018						2	
	µg/L	2/16/2018						1	
	µg/L	2/17/2018						1	
	µg/L	2/18/2018						1	
	µg/L	2/19/2018						1	
	µg/L	2/20/2018						1	
	µg/L	2/21/2018	2464	432	232			1	
	µg/L	2/22/2018						1	
	µg/L	2/23/2018						1	
	µg/L	2/24/2018						1	

**TABLE 1b
FEBRUARY 2018**

**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	2/25/2018						1	
	µg/L	2/26/2018						1	
	µg/L	2/27/2018						1	
	µg/L	2/28/2018	2964	645	789			1	
pH	S.U.	2/1/2018	7	6.9	6.95				
	S.U.	2/8/2018	7	6.9	6.95				
	S.U.	2/14/2018	7.05	7	7				
	S.U.	2/21/2018	7	6.95	7				
	S.U.	2/28/2018	7	6.95	6.95				
Phosphorus, Ortho	mg/L	2/14/2018	<	<				<	
Phosphorus, Phosphate	mg/L	2/1/2018	1.2	1	0.9				
	mg/L	2/8/2018	1	0.9	0.6				
	mg/L	2/14/2018	0.9	1.1	0.6				
	mg/L	2/21/2018	0.8	1	0.9				
	mg/L	2/28/2018	0.9	1	0.9				
Solids, Total Suspended	mg/L	2/14/2018	11	13				<	
Mercury	µg/L	2/14/2018						0.042	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	2/14/2018	250		42			<	<
2,4,5-Trichlorophenol	µg/L	2/14/2018	<		<			<	<
2,4,6-Trichlorophenol	µg/L	2/14/2018	<		<			<	<
2,4-Dichlorophenol	µg/L	2/14/2018	<		<			<	<
2,4-Dimethylphenol	µg/L	2/14/2018	<		<			<	<
2,4-Dinitrophenol	µg/L	2/14/2018	<		<			<	<
2,6-Dichlorophenol	µg/L	2/14/2018	<		<			<	<
2-Chlorophenol	µg/L	2/14/2018	<		<			<	<
2-Methylphenol	µg/L	2/14/2018	<		<			<	<
2-Nitrophenol	µg/L	2/14/2018	<		<			<	<
3&4-Methylphenol	µg/L	2/14/2018	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	2/14/2018	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	2/14/2018	<		<			<	<
4-Nitrophenol	µg/L	2/14/2018	<		<			<	<
Pentachlorophenol	µg/L	2/14/2018	3500		600			<	<
Phenol	µg/L	2/14/2018	<		<			<	<

**TABLE 1c
MARCH 2018**

**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	3/14/2018	10	<				<	
Chemical Oxygen Demand	mg/L	3/14/2018	32	37				31	
Chloride	mg/L	3/14/2018	170	170				170	
Dissolved Oxygen	mg/L	3/7/2018	3.8	1.5	7.6				
	mg/L	3/14/2018	2.7	1.8	6.2				
	mg/L	3/22/2018	3.2	1.4	7				
	mg/L	3/29/2018	2.2	1.8	6.6				
Nitrogen, Ammonia	mg/L	3/7/2018	1	1.6	1.6				
	mg/L	3/14/2018	1.3	1	1.1				
	mg/L	3/22/2018	2	1.2	1.6				
	mg/L	3/29/2018	1.7	1.4	1.2				
Nitrogen, Nitrate	mg/L	3/7/2018	<	<	<				
	mg/L	3/14/2018	<	<	<				
	mg/L	3/22/2018	<	<	<				
	mg/L	3/29/2018	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	3/14/2018	<	0.82				<	
Pentachlorophenol-Screen	µg/L	3/1/2018						1	
	µg/L	3/2/2018						2	
	µg/L	3/3/2018						1	
	µg/L	3/4/2018						1	
	µg/L	3/5/2018						1	
	µg/L	3/6/2018						2	
	µg/L	3/7/2018	3098	520	751			1	
	µg/L	3/8/2018						2	
	µg/L	3/9/2018						2	
	µg/L	3/10/2018						4	
	µg/L	3/11/2018						4	
	µg/L	3/12/2018						2	
	µg/L	3/13/2018						2	
	µg/L	3/14/2018	3856	680	709		102	2	
	µg/L	3/15/2018						3	
	µg/L	3/16/2018						3	
	µg/L	3/17/2018						2	
	µg/L	3/18/2018						2	
	µg/L	3/19/2018						2	
	µg/L	3/20/2018						5	
	µg/L	3/21/2018						6	
	µg/L	3/22/2018	4917	1056	1275			6	
	µg/L	3/23/2018						5	
	µg/L	3/24/2018						5	
	µg/L	3/25/2018						5	
	µg/L	3/26/2018						5	
	µg/L	3/27/2018						3	
	µg/L	3/28/2018						3	

**TABLE 1c
MARCH 2018**

**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	3/29/2018	3309	317	433			2	
	µg/L	3/30/2018						2	
	µg/L	3/31/2018						2	
pH	S.U.	3/7/2018	6.95	6.9	6.95				
	S.U.	3/14/2018	7	6.9	6.9				
	S.U.	3/22/2018	7.05	7	7.05				
	S.U.	3/29/2018	6.95	6.85	6.9				
Phosphorus, Ortho	mg/L	3/14/2018	<	<				<	
Phosphorus, Phosphate	mg/L	3/7/2018	1	1.1	0.9				
	mg/L	3/14/2018	0.9	1.1	0.9				
	mg/L	3/22/2018	0.9	1	0.9				
	mg/L	3/29/2018	0.8	1.3	1				
Solids, Total Suspended	mg/L	3/14/2018	11	15				<	
Mercury	µg/L	3/14/2018						<	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	3/14/2018	310	63	68			<	<
2,4,5-Trichlorophenol	µg/L	3/14/2018	<	<	<			<	<
2,4,6-Trichlorophenol	µg/L	3/14/2018	<	<	<			<	<
2,4-Dichlorophenol	µg/L	3/14/2018	<	<	<			<	<
2,4-Dimethylphenol	µg/L	3/14/2018	<	<	<			<	<
2,4-Dinitrophenol	µg/L	3/14/2018	<	<	<			<	<
2,6-Dichlorophenol	µg/L	3/14/2018	<	<	<			<	<
2-Chlorophenol	µg/L	3/14/2018	<	<	<			<	<
2-Methylphenol	µg/L	3/14/2018	<	<	<			<	<
2-Nitrophenol	µg/L	3/14/2018	<	<	<			<	<
3&4-Methylphenol	µg/L	3/14/2018	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	3/14/2018	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	3/14/2018	<	<	<			<	<
4-Nitrophenol	µg/L	3/14/2018	<	<	<			<	<
Pentachlorophenol	µg/L	3/14/2018	4700	780	830			4.0	4.3
Phenol	µg/L	3/14/2018	<	<	<			<	<

**TABLE 2a
JANUARY 2018**

**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)
1/1/2018	22.60	21.98	60793112
1/2/2018	22.43	22.25	60825145
1/3/2018	22.52	22.03	60856866
1/4/2018	22.60	21.94	60888459
1/5/2018	22.64	22.15	60920357
1/6/2018	22.65	22.02	60952060
1/7/2018	22.64	22.01	60983758
1/8/2018	22.64	22.08	61015559
1/9/2018	22.60	21.78	61046925
1/10/2018	22.54	22.06	61078695
1/11/2018	22.56	22.01	61110390
1/12/2018	22.50	22.03	61142114
1/13/2018	22.49	21.91	61173663
1/14/2018	22.51	21.94	61205257
1/15/2018	22.55	21.90	61236798
1/16/2018	22.60	22.04	61268538
1/17/2018	22.59	21.99	61300204
1/18/2018	22.57	22.00	61331890
1/19/2018	22.46	22.01	61363580
1/20/2018	22.49	22.04	61395320
1/21/2018	22.48	22.13	61427181
1/22/2018	22.53	22.08	61458983
1/23/2018	22.59	22.14	61490862
1/24/2018	22.56	22.17	61522792
1/25/2018	22.55	22.13	61554659
1/26/2018	22.60	22.02	61586366
1/27/2018	22.60	22.15	61618262
1/28/2018	22.61	21.84	61649712
1/29/2018	22.65	22.16	61681620
1/30/2018	22.39	21.99	61713290
1/31/2018	22.39	21.96	61744917
Monthly Average	22.55	22.03	
Total ⁽²⁾ :			983,450

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 2018

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)
2/1/2018	22.37	21.96	61776542
2/2/2018	22.36	21.94	61808130
2/3/2018	22.35	22.00	61839807
2/4/2018	22.34	21.96	61871434
2/5/2018	22.38	21.90	61902969
2/6/2018	22.39	21.89	61934484
2/7/2018	22.39	21.96	61966105
2/8/2018	22.39	21.88	61997608
2/9/2018	22.39	21.88	62029117
2/10/2018	22.38	21.96	62060735
2/11/2018	22.33	21.91	62092285
2/12/2018	22.20	21.83	62123723
2/13/2018	22.12	21.83	62155163
2/14/2018	22.49	22.09	62186974
2/15/2018	22.57	22.18	62218913
2/16/2018	22.12	21.83	62250344
2/17/2018	22.13	21.85	62281805
2/18/2018	22.27	21.95	62313418
2/19/2018	22.32	21.90	62344959
2/20/2018	22.42	22.03	62376685
2/21/2018	22.44	21.96	62408312
2/22/2018	22.46	21.92	62439881
2/23/2018	22.44	21.92	62471442
2/24/2018	22.44	21.98	62503093
2/25/2018	22.45	21.97	62534730
2/26/2018	22.37	21.89	62566256
2/27/2018	22.32	21.94	62597856
2/28/2018	22.33	21.95	62629466
Average For The Month	22.36	21.94	
Total ⁽²⁾ :			884,549

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 2018

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

<u>Date</u>	<u>Influent Groundwater Flow Rate ⁽¹⁾⁽³⁾ (gpm)</u>	<u>POTW Discharge Flow Rate ⁽¹⁾⁽⁴⁾ (gpm)</u>	<u>POTW Totalized Discharge ⁽³⁾ (gal)</u>
3/1/2018	22.40	22.05	62661223
3/2/2018	22.38	21.99	62692883
3/3/2018	22.06	21.77	62724238
3/4/2018	21.81	21.62	62755374
3/5/2018	21.78	21.50	62786328
3/6/2018	21.79	21.66	62817522
3/7/2018	21.77	21.57	62848589
3/8/2018	21.63	21.50	62879551
3/9/2018	21.60	21.47	62910463
3/10/2018	21.66	21.51	62941442
3/11/2018	20.79	20.55	62971034
3/12/2018	21.70	21.69	63002269
3/13/2018	21.69	21.42	63033117
3/14/2018	22.24	21.58	63064199
3/15/2018	22.42	22.11	63096038
3/16/2018	22.42	22.06	63127805
3/17/2018	22.43	22.09	63159618
3/18/2018	22.45	22.07	63191405
3/19/2018	22.46	22.04	63223136
3/20/2018	22.43	22.02	63254841
3/21/2018	22.41	21.97	63286483
3/22/2018	22.42	21.97	63318114
3/23/2018	22.49	21.93	63349689
3/24/2018	22.51	22.01	63381390
3/25/2018	22.50	21.93	63412971
3/26/2018	22.49	21.93	63444554
3/27/2018	22.50	21.93	63476139
3/28/2018	22.52	21.83	63507579
3/29/2018	22.55	21.95	63539186
3/30/2018	22.54	21.84	63570633
3/31/2018	22.55	21.85	63602091
Average	22.17	21.79	
Total ⁽²⁾ :			972,625

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**

<u>Well</u>	<u>January 08, 2018 (ft msl)</u>	<u>February 2018</u>	<u>March 2018</u>
PW01	1162.91	----	----
PW02	Abandoned	----	----
PW03	1162.81	----	----
PW3S	1162.07	----	----
PW04	1161.94	----	----
PW05	1161.99	----	----
PW06	1162.32	----	----
PW07	1162.12	----	----
PW08	1163.15	----	----
PW09I	----	----	----
PW09O	1161.98	----	----
PW10	1162.15	----	----
PW11	1160.46	----	----
PW12	1162.66	----	----
PW13	1162.03	----	----
PW14	1161.21	----	----
PW15	1161.29	----	----
PW16	1161.91	----	----
PW17	1161.44	----	----
PW18	1161.95	----	----
PW19	1161.61	----	----
PW20	1161.3	----	----
PW21	1161.36	----	----
PW22	1162.03	----	----
PW23	1161.92	----	----
PW24	1160.31	----	----
PW25	1159.21	----	----
PW26	1159.71	----	----
PW27	1159.29	----	----
PW28	1162.97	----	----
PW29	1163.03	----	----
P01	1161.92	----	----
OW01	1164.16	----	----
W01A	1163.27	----	----
W01B	1163.3	----	----
W02	1162.67	----	----
W03A	1161	----	----
W03B	1161.73	----	----
W04A	1162.32	----	----
W04B	1162.33	----	----
W05	1162.01	----	----
W06R	1163.21	----	----
W07	1161.95	----	----
W08	1170.56	----	----
W09	1162.24	----	----
W10A	1161.25	----	----
W10B	1161.24	----	----
W11	1161.05	----	----
W12	1160.65	----	----
W13	1161.65	----	----
W14	1160.93	----	----
W16	1161.77	----	----
W17	1161.2	----	----
W18	1161.41	----	----
W19	1162.73	----	----

TABLE 3 (continued)

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

<u>Well</u>	<u>January 08, 2018</u> (ft msl)	<u>February 2018</u>	<u>March 2018</u>
W21	1161.04	----	----
W22	1161.01	----	----
W23	1160.95	----	----
W24A	1160.95	----	----
W25	1163.34	----	----
W26	1161.14	----	----
W27	1161.45	----	----
W28	1161.47	----	----
W29	1161.17	----	----
W30	1161.92	----	----
W31	1161.22	----	----
W32	1161.24	----	----
W33	1162.11	----	----
W34	1162.09	----	----
W35	1162.11	----	----
W36	1162.57	----	----
W39	1162.1	----	----
W40	1161.18	----	----
W41	1161.95	----	----
W42	1162.68	----	----
W44	1161.93	----	----
W45	1161.96	----	----
W46	1161.79	----	----
W47	1160.46	----	----
W48	1160.88	----	----
W49	1161.3	----	----
W66	1163.12	----	----
W67	1163.07	----	----
W68A	1163.13	----	----
W68B	1163.05	----	----
W69	1162.27	----	----
W70B	Abandoned	----	----
River	----	----	----
IW01	1161.96	----	----
IW01A	1161.98	----	----
FP01	1159.76	----	----
FP02	1160.06	----	----
FP03	1158.41	----	----
FP04	1160.16	----	----
3M Basin	Ice in both Basins	----	----
DFOWM 5	1162.82	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	1161.87	----	----
DFOWM 12	1162.63	----	----
W71	1164.85	----	----
W72	1163.54	----	----
W73	1162.57	----	----
W74	1162.17	----	----

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**

<u>Well</u>	January 08, 2018 (ft)	February 2018	March 2018
PW01	0.00	----	----
PW02	----	----	----
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	0.21	----	----
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 08, 2018 (ft)	February 2018	March 2018
W18	0.00	----	----
W19	0.00	----	----
W21	0.00	----	----
W22	0.00	----	----
W23	0.00	----	----
W24A	0.00	----	----
W25	0.00	----	----
W26	0.00	----	----
W27	0.00	----	----
W28	0.00	----	----
W29	0.00	----	----
W30	0.00	----	----
W31	0.00	----	----
W32	0.00	----	----
W33	0.00	----	----
W34	0.00	----	----
W35	0.22	----	----
W36	0.00	----	----
W39	0.00	----	----
W40	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	0.00	----	----
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	0.00	----	----
DFOWM 10A	0.00	----	----
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

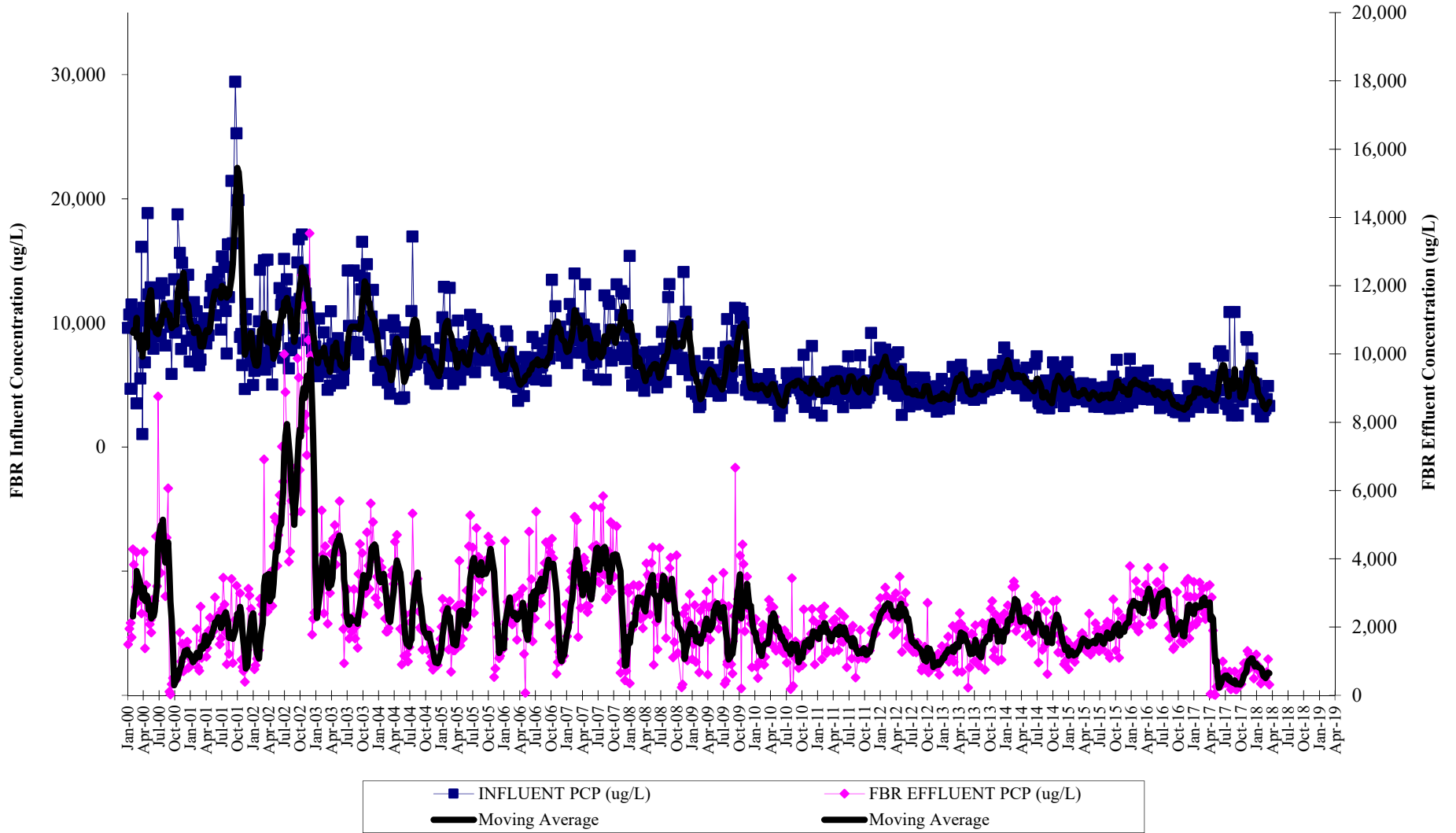
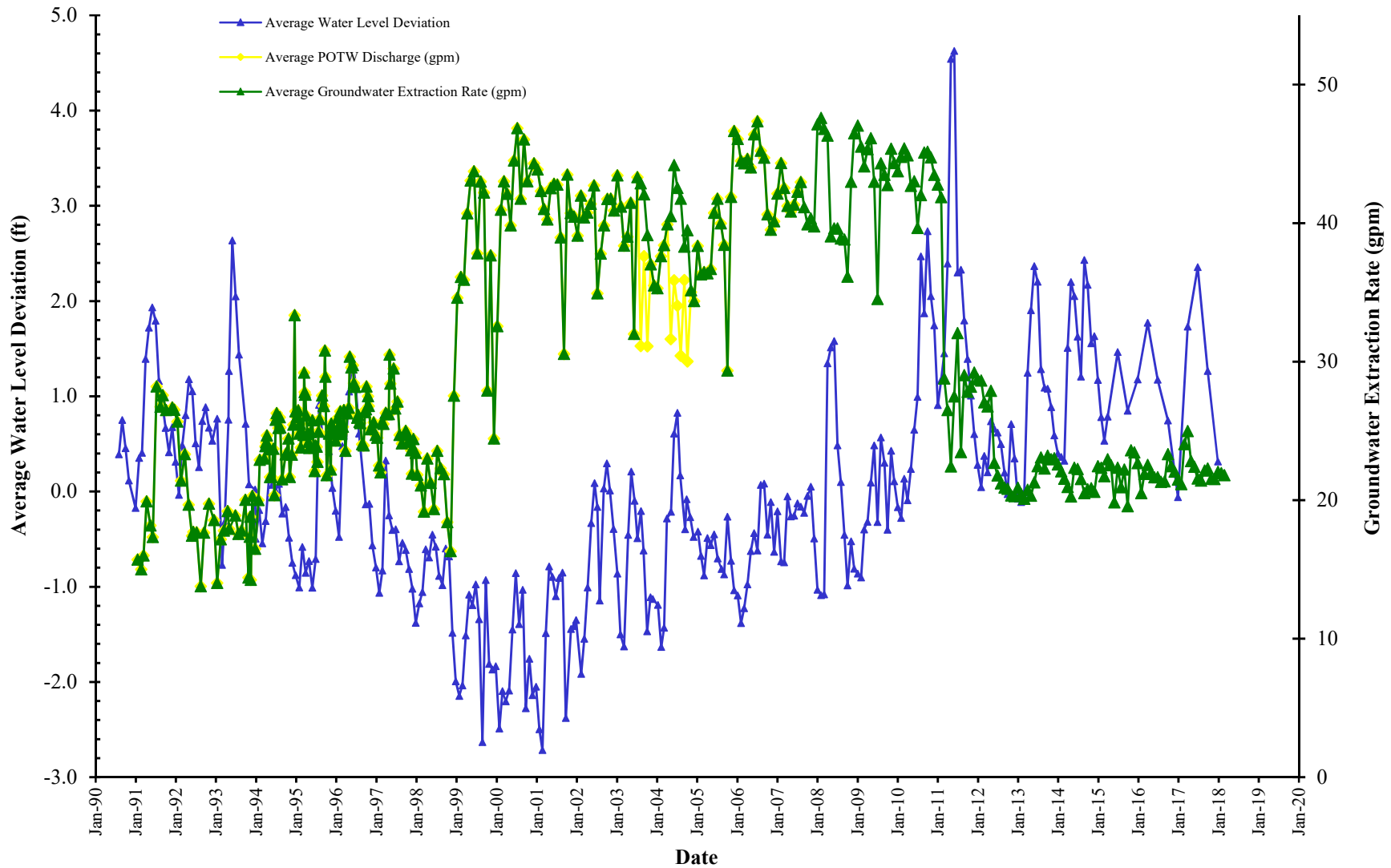
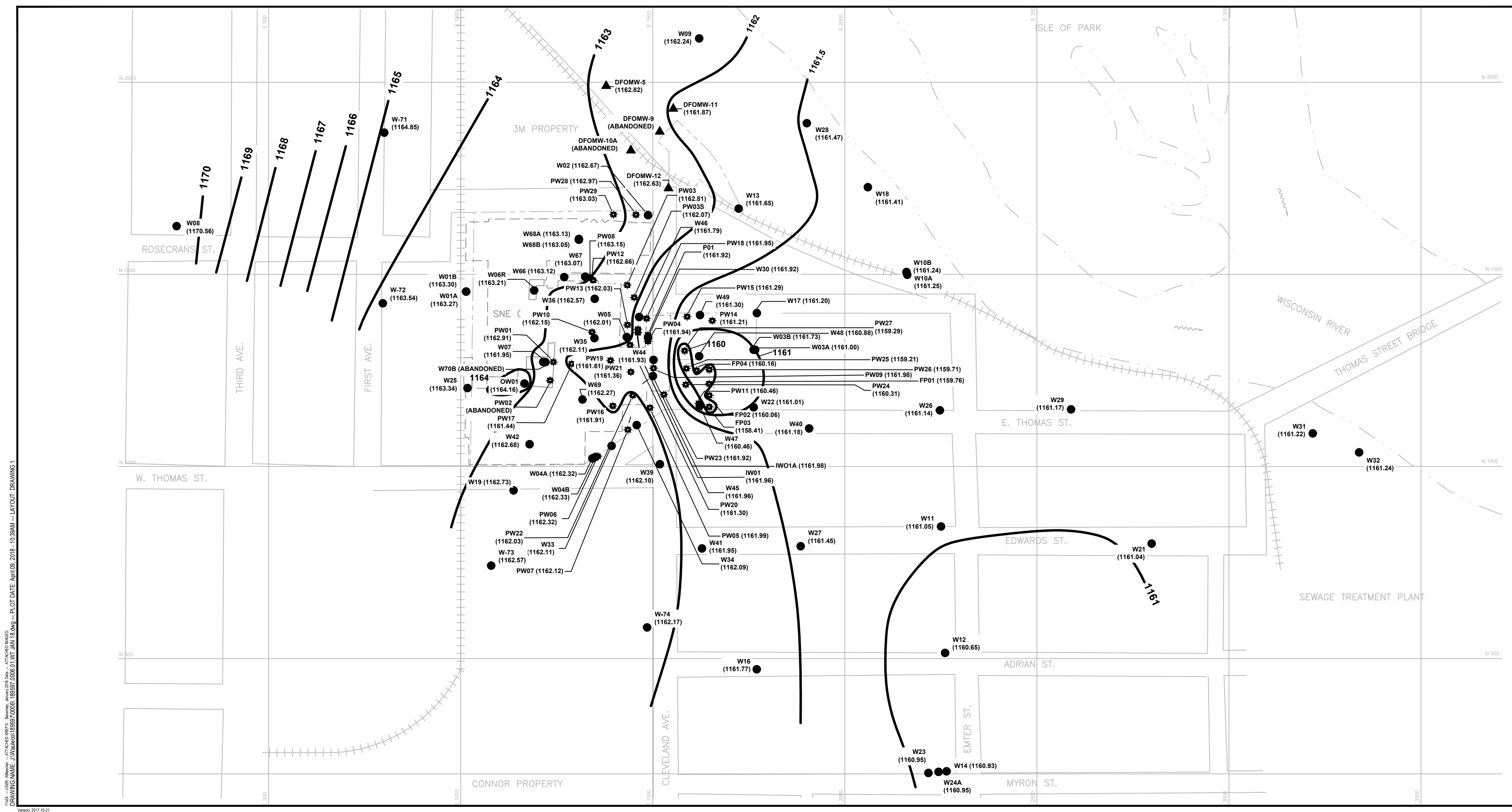


FIGURE 2

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

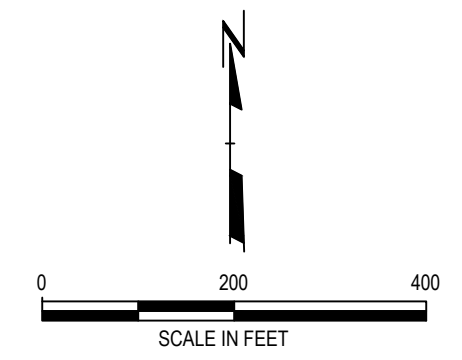


Note: The Average Groundwater Extraction Rate is a monthly average of the flow into the treatment system. The monthly average POTW discharge is less than the total extraction rate during the PPT pilot test due to the injection of treated water into IW01.



- LEGEND**
- W17 ● (1161.34) MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
 - PW12 ■ (1162.34) EXTRACTION WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
 - APPROXIMATE PROPERTY LINE
 - - - FORMER BUILDING OUTLINE
 - 1161 — WATER TABLE ELEVATION CONTOUR. CONTOUR INTERVAL VARIES (DASHED WHERE INFERRED)
 - 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 8, 2018. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 22.08 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. WELLS W07 AND W03B WERE NOT USED IN WATER LEVEL CONTOURING.



PROJECT:		WAULECO, INC. QUARTERLY REPORT WAUSAU, WISCONSIN	
TITLE:		WATER TABLE MAP JANUARY 8, 2018	
DRAWN BY:	L. STORMER	PROJ NO.:	189597.0006
CHECKED BY:	L. AJNER	DRAWING 1	
APPROVED BY:	K. QUINN		
DATE:	APRIL 2018		
FILE NO.:		189597.0006.01.WT JAN 18.dwg	

1164 - USER: Administrator - ATTACHED XREFS: Binnings - January 2018 Data - ATTACHED NAMES: DRAWING NAME: J:\Wauleco\189597\0006\189597.0006.01.WT JAN 18.dwg - PLOT DATE: April 09, 2018 - 10:39AM - LAYOUT: DRAWING 1
 Version: 2017-10-21