



Gelman Sciences, Inc. d/b/a  
Pall Life Sciences  
642 South Wagner Road  
Ann Arbor, MI 48103  
734.436.4025 phone  
734.436.4040 fax

April 9, 2019

Claire Dijak  
Surface Water Quality Division  
Michigan Department of Environmental Quality  
301 East Louis Glick Highway  
Jackson, Michigan 49201

**Re: Monitoring Report # 263  
March 1 – March 31, 2019**

Dear Ms. Dijak:

Pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit No. MI0048453, please find the enclosed Monitoring Report for the period of March 1 through March 31, 2019.

Should you have any questions or concerns regarding this report, please contact me at 386-562-0176.

Sincerely,

A handwritten signature in cursive script that reads "Lawrence J. Gelb".

Lawrence J. Gelb  
Sr. Director Global EHS

cc: Dan Hamel, MDEQ  
Supervisor, Scio Twp.  
City of Ann Arbor



## **EXTRACTION DATA**

- TABLE #1 - UNIT "D2" UPGRADIENT EXTRACTION DATA**
- TABLE #2 - UNIT "D2" DOWNGRADIENT EXTRACTION DATA**
- TABLE #3 - CORE AREA EXTRACTION DATA**
- TABLE #4 - MARSHY AREA EXTRACTION DATA**
- TABLE #5 - SOUTHWEST AREA EXTRACTION DATA**
- TABLE #6 - UNIT "E" EXTRACTION DATA**
- TABLE #7 - LITTLE LAKE AREA SYSTEM DATA**
- TABLE #8 - INDIVIDUAL PURGE WELL CONCENTRATIONS**
- TABLE #9 - RED POND DATA**
- TABLE #10 - RED POND CONCENTRATIONS**

## **OZONE OPERATION DATA**

- TABLE #11 - OZONE OPERATION REPORT**

## **DISCHARGE DATA**

- TABLE #12 - GREEN POND / DISCHARGE DATA**
- TABLE #13 - DAILY DISCHARGE MONITORING REPORT**

UNIT D2 UPGRADIENT EXTRACTION DATA

Month of: Mar-19

Date	Horizontal Well Extraction			TW-9			TW-5			TW-21			Daily Flow	Daily Total
	HW-S			TW-9			TW-5			TW-21			GPM	Gallons
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.		
Fri-3/1/19	-	-	-	-	-	-	-	-	-	86,285	60	24.00	60	86,285
Sat-3/2/19	-	-	-	-	-	-	-	-	-	86,299	60	24.00	60	86,299
Sun-3/3/19	-	-	-	-	-	-	-	-	-	86,185	60	24.00	60	86,185
Mon-3/4/19	-	-	-	-	-	-	-	-	-	86,166	60	24.00	60	86,166
Tue-3/5/19	-	-	-	-	-	-	-	-	-	86,188	60	24.00	60	86,188
Wed-3/6/19	-	-	-	-	-	-	-	-	-	86,193	60	24.00	60	86,193
Thu-3/7/19	-	-	-	-	-	-	-	-	-	86,253	60	24.00	60	86,253
Fri-3/8/19	-	-	-	-	-	-	-	-	-	86,280	60	24.00	60	86,280
Sat-3/9/19	-	-	-	-	-	-	-	-	-	86,296	60	24.00	60	86,296
Sun-3/10/19	-	-	-	-	-	-	-	-	-	86,322	60	24.00	60	86,322
Mon-3/11/19	-	-	-	-	-	-	-	-	-	86,328	60	24.00	60	86,328
Tue-3/12/19	-	-	-	-	-	-	-	-	-	86,313	60	24.00	60	86,313
Wed-3/13/19	-	-	-	-	-	-	-	-	-	86,348	60	24.00	60	86,348
Thu-3/14/19	-	-	-	-	-	-	-	-	-	86,366	60	24.00	60	86,366
Fri-3/15/19	-	-	-	-	-	-	-	-	-	86,328	60	24.00	60	86,328
Sat-3/16/19	-	-	-	-	-	-	-	-	-	86,338	60	24.00	60	86,338
Sun-3/17/19	-	-	-	-	-	-	-	-	-	86,309	60	24.00	60	86,309
Mon-3/18/19	-	-	-	-	-	-	-	-	-	86,333	60	24.00	60	86,333
Tue-3/19/19	-	-	-	-	-	-	-	-	-	86,342	60	24.00	60	86,342
Wed-3/20/19	-	-	-	-	-	-	-	-	-	86,325	60	24.00	60	86,325
Thu-3/21/19	-	-	-	-	-	-	-	-	-	86,312	60	24.00	60	86,312
Fri-3/22/19	-	-	-	-	-	-	-	-	-	86,358	60	24.00	60	86,358
Sat-3/23/19	-	-	-	-	-	-	-	-	-	86,347	60	24.00	60	86,347
Sun-3/24/19	-	-	-	-	-	-	-	-	-	86,354	60	24.00	60	86,354
Mon-3/25/19	-	-	-	-	-	-	-	-	-	86,320	60	24.00	60	86,320
Tue-3/26/19	-	-	-	-	-	-	-	-	-	86,317	60	24.00	60	86,317
Wed-3/27/19	-	-	-	-	-	-	-	-	-	86,381	60	24.00	60	86,381
Thu-3/28/19	-	-	-	-	-	-	-	-	-	86,385	60	24.00	60	86,385
Fri-3/29/19	-	-	-	-	-	-	-	-	-	86,337	60	24.00	60	86,337
Sat-3/30/19	-	-	-	-	-	-	-	-	-	86,277	60	24.00	60	86,277
Sun-3/31/19	-	-	-	-	-	-	-	-	-	86,289	60	24.00	60	86,289
<b>TOTALS</b>	-	-	-	-	-	-	-	-	-	<b>2,675,474</b>	<b>60</b>	<b>744.00</b>	<b>60</b>	<b>2,675,474</b>

TOTAL VOLUME EXTRACTED :	2,675,474 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	59.93 GPM

**UNIT D2 DOWNGRADIENT EXTRACTION DATA**

Month of: **Mar-19**

Date	LB-1			LB-4			Daily	Daily
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Fri-3/1/19	-	-	-	144,237	100	24.00	100	144,237
Sat-3/2/19	-	-	-	144,182	100	24.00	100	144,182
Sun-3/3/19	-	-	-	144,166	100	24.00	100	144,166
Mon-3/4/19	-	-	-	144,169	100	24.00	100	144,169
Tue-3/5/19	-	-	-	144,176	100	24.00	100	144,176
Wed-3/6/19	-	-	-	112,407	100	18.70	78	112,407
Thu-3/7/19	-	-	-	144,206	100	24.00	100	144,206
Fri-3/8/19	-	-	-	144,261	100	24.00	100	144,261
Sat-3/9/19	-	-	-	144,160	100	24.00	100	144,160
Sun-3/10/19	-	-	-	144,249	100	24.00	100	144,249
Mon-3/11/19	-	-	-	144,072	100	24.00	100	144,072
Tue-3/12/19	-	-	-	144,127	100	24.00	100	144,127
Wed-3/13/19	-	-	-	144,187	100	24.00	100	144,187
Thu-3/14/19	-	-	-	144,244	100	24.00	100	144,244
Fri-3/15/19	-	-	-	144,191	100	24.00	100	144,191
Sat-3/16/19	-	-	-	144,206	100	24.00	100	144,206
Sun-3/17/19	-	-	-	144,175	100	24.00	100	144,175
Mon-3/18/19	-	-	-	144,151	100	24.00	100	144,151
Tue-3/19/19	-	-	-	144,237	100	24.00	100	144,237
Wed-3/20/19	-	-	-	144,188	100	24.00	100	144,188
Thu-3/21/19	-	-	-	144,246	100	24.00	100	144,246
Fri-3/22/19	-	-	-	144,163	100	24.00	100	144,163
Sat-3/23/19	-	-	-	144,257	100	24.00	100	144,257
Sun-3/24/19	-	-	-	144,285	100	24.00	100	144,285
Mon-3/25/19	-	-	-	144,161	100	24.00	100	144,161
Tue-3/26/19	-	-	-	144,216	100	24.00	100	144,216
Wed-3/27/19	-	-	-	128,752	100	21.41	89	128,752
Thu-3/28/19	-	-	-	144,171	100	24.00	100	144,171
Fri-3/29/19	-	-	-	144,279	100	24.00	100	144,279
Sat-3/30/19	-	-	-	144,234	100	24.00	100	144,234
Sun-3/31/19	-	-	-	144,263	100	24.00	100	144,263
<b>TOTALS</b>	-	-	-	<b>4,423,018</b>	<b>100</b>	<b>736.11</b>	<b>99</b>	<b>4,423,018</b>

TOTAL VOLUME EXTRACTED :	<b>4,423,018 GALLONS</b>
DAYS IN MONTH :	<b>31 DAYS</b>
MONTHLY AVERAGE FLOW RATE :	<b>99.08 GPM</b>

03/06/19 - LB-4 was down due to a DTE Energy power outage in the area.  
 03/27/19 - LB-4 was down briefly due to a DTE Energy power outage in the area.

TABLE #3

CORE AREA EXTRACTION DATA

Month of: Mar-19

Core Area Well Extraction															Daily	Daily				
Date	TW-1			TW-2 (Dolph)			TW-3			TW-10			TW-14			TW-20			Flow	Total
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-3/1/19	-	-	-	17,778	12	24.00	-	-	-	-	-	-	43,135	30	24.00	-	-	-	42	60,913
Sat-3/2/19	-	-	-	18,032	13	24.00	-	-	-	-	-	-	42,882	30	24.00	-	-	-	42	60,914
Sun-3/3/19	-	-	-	17,172	12	24.00	-	-	-	-	-	-	43,400	30	24.00	-	-	-	42	60,572
Mon-3/4/19	-	-	-	17,558	12	24.00	-	-	-	-	-	-	43,520	30	24.00	-	-	-	42	61,078
Tue-3/5/19	-	-	-	17,927	12	24.00	-	-	-	-	-	-	43,428	30	24.00	-	-	-	43	61,355
Wed-3/6/19	-	-	-	18,327	13	24.00	-	-	-	-	-	-	43,281	30	24.00	-	-	-	43	61,608
Thu-3/7/19	-	-	-	18,722	13	24.00	-	-	-	-	-	-	42,989	30	24.00	-	-	-	43	61,711
Fri-3/8/19	-	-	-	18,716	13	24.00	-	-	-	-	-	-	43,188	30	24.00	-	-	-	43	61,904
Sat-3/9/19	-	-	-	18,228	13	24.00	-	-	-	-	-	-	43,237	30	24.00	-	-	-	43	61,465
Sun-3/10/19	-	-	-	18,712	13	24.00	-	-	-	-	-	-	43,282	30	24.00	-	-	-	43	61,994
Mon-3/11/19	-	-	-	18,934	13	24.00	-	-	-	-	-	-	43,215	30	24.00	-	-	-	43	62,149
Tue-3/12/19	-	-	-	17,825	12	24.00	-	-	-	-	-	-	43,116	30	24.00	-	-	-	42	60,941
Wed-3/13/19	-	-	-	18,143	13	24.00	-	-	-	-	-	-	43,103	30	24.00	-	-	-	43	61,246
Thu-3/14/19	-	-	-	18,495	13	24.00	-	-	-	-	-	-	43,304	30	24.00	-	-	-	43	61,799
Fri-3/15/19	-	-	-	18,741	13	24.00	-	-	-	-	-	-	43,204	30	24.00	-	-	-	43	61,945
Sat-3/16/19	-	-	-	18,654	13	24.00	-	-	-	-	-	-	43,183	30	24.00	-	-	-	43	61,837
Sun-3/17/19	-	-	-	18,295	13	24.00	-	-	-	-	-	-	43,205	30	24.00	-	-	-	43	61,500
Mon-3/18/19	-	-	-	18,587	13	24.00	-	-	-	-	-	-	43,152	30	24.00	-	-	-	43	61,739
Tue-3/19/19	-	-	-	18,709	13	24.00	-	-	-	-	-	-	43,097	30	24.00	-	-	-	43	61,806
Wed-3/20/19	-	-	-	18,977	13	24.00	-	-	-	-	-	-	43,048	30	24.00	-	-	-	43	62,025
Thu-3/21/19	-	-	-	18,861	13	24.00	-	-	-	-	-	-	43,305	30	24.00	-	-	-	43	62,166
Fri-3/22/19	-	-	-	18,881	13	24.00	-	-	-	-	-	-	43,303	30	24.00	-	-	-	43	62,184
Sat-3/23/19	-	-	-	18,360	13	24.00	-	-	-	-	-	-	43,048	30	24.00	-	-	-	43	61,408
Sun-3/24/19	-	-	-	18,378	13	24.00	-	-	-	-	-	-	42,881	30	24.00	-	-	-	43	61,259
Mon-3/25/19	-	-	-	18,501	13	24.00	-	-	-	-	-	-	42,886	30	24.00	-	-	-	43	61,387
Tue-3/26/19	-	-	-	18,578	13	24.00	-	-	-	-	-	-	43,175	30	24.00	-	-	-	43	61,753
Wed-3/27/19	-	-	-	18,790	13	24.00	-	-	-	-	-	-	42,944	30	24.00	-	-	-	43	61,734
Thu-3/28/19	-	-	-	18,800	13	24.00	-	-	-	-	-	-	42,761	30	24.00	-	-	-	43	61,561
Fri-3/29/19	-	-	-	18,967	13	24.00	-	-	-	-	-	-	43,426	30	24.00	-	-	-	43	62,393
Sat-3/30/19	-	-	-	19,006	13	24.00	-	-	-	-	-	-	43,403	30	24.00	-	-	-	43	62,409
Sun-3/31/19	-	-	-	18,497	13	24.00	-	-	-	-	-	-	43,091	30	24.00	-	-	-	43	61,588
<b>TOTALS</b>	-	-	-	<b>572,151</b>	<b>13</b>	<b>744.00</b>	-	-	-	-	-	-	<b>1,338,192</b>	<b>30</b>	<b>744.00</b>	-	-	-	<b>43</b>	<b>1,910,343</b>

TOTAL VOLUME EXTRACTED :	1,910,343 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	42.79 GPM

MARSHY AREA EXTRACTION DATA

Month of: Mar-19

Marshy Well Extraction				Daily Flow	Daily Total
Date	PW-1 Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-3/1/19	1,714	1	24.00	1	1,714
Sat-3/2/19	1,726	1	24.00	1	1,726
Sun-3/3/19	1,731	1	24.00	1	1,731
Mon-3/4/19	1,740	1	24.00	1	1,740
Tue-3/5/19	1,743	1	24.00	1	1,743
Wed-3/6/19	1,733	1	24.00	1	1,733
Thu-3/7/19	1,726	1	24.00	1	1,726
Fri-3/8/19	1,725	1	24.00	1	1,725
Sat-3/9/19	1,714	1	24.00	1	1,714
Sun-3/10/19	1,719	1	24.00	1	1,719
Mon-3/11/19	1,604	1	23.03	1	1,604
Tue-3/12/19	1,567	1	21.37	1	1,567
Wed-3/13/19	1,560	1	21.45	1	1,560
Thu-3/14/19	1,542	1	19.63	1	1,542
Fri-3/15/19	1,531	1	17.08	1	1,531
Sat-3/16/19	1,509	2	13.78	1	1,509
Sun-3/17/19	1,516	2	14.60	1	1,516
Mon-3/18/19	1,501	2	13.10	1	1,501
Tue-3/19/19	1,471	2	12.05	1	1,471
Wed-3/20/19	1,523	2	15.28	1	1,523
Thu-3/21/19	1,520	2	14.73	1	1,520
Fri-3/22/19	1,528	2	16.00	1	1,528
Sat-3/23/19	1,497	2	15.40	1	1,497
Sun-3/24/19	1,585	1	21.20	1	1,585
Mon-3/25/19	1,584	1	21.18	1	1,584
Tue-3/26/19	1,611	1	22.75	1	1,611
Wed-3/27/19	1,628	1	23.63	1	1,628
Thu-3/28/19	780	1	10.93	1	780
Fri-3/29/19	1,249	1	15.77	1	1,249
Sat-3/30/19	1,678	1	24.00	1	1,678
Sun-3/31/19	1,637	1	24.00	1	1,637
<b>TOTALS</b>	<b>48,892</b>	<b>1</b>	<b>620.98</b>	<b>1</b>	<b>48,892</b>

TOTAL VOLUME EXTRACTED :	48,892 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	1.10 GPM

PW-1 was shut down intermittently due to flow fluctuations

**SOUTHWEST AREA EXTRACTION DATA**

Month of: **Mar-19**

SouthWest Well Extraction				Daily Flow	Daily Total
Date	ACTIVE WELLS			GPM	Gallons
	Gallons	GPM	Run Hrs.		
Fri-3/1/19	40,251	28	24.00	28	40,251
Sat-3/2/19	40,161	28	24.00	28	40,161
Sun-3/3/19	40,106	28	24.00	28	40,106
Mon-3/4/19	40,042	28	24.00	28	40,042
Tue-3/5/19	39,972	28	24.00	28	39,972
Wed-3/6/19	39,849	28	24.00	28	39,849
Thu-3/7/19	39,851	28	24.00	28	39,851
Fri-3/8/19	39,813	28	24.00	28	39,813
Sat-3/9/19	39,715	28	24.00	28	39,715
Sun-3/10/19	39,631	28	24.00	28	39,631
Mon-3/11/19	39,514	27	24.00	27	39,514
Tue-3/12/19	39,521	27	24.00	27	39,521
Wed-3/13/19	39,476	27	24.00	27	39,476
Thu-3/14/19	39,421	27	24.00	27	39,421
Fri-3/15/19	39,315	27	24.00	27	39,315
Sat-3/16/19	39,230	27	24.00	27	39,230
Sun-3/17/19	39,211	27	24.00	27	39,211
Mon-3/18/19	39,178	27	24.00	27	39,178
Tue-3/19/19	39,137	27	24.00	27	39,137
Wed-3/20/19	39,116	27	24.00	27	39,116
Thu-3/21/19	39,049	27	24.00	27	39,049
Fri-3/22/19	38,982	27	24.00	27	38,982
Sat-3/23/19	38,906	27	24.00	27	38,906
Sun-3/24/19	38,885	27	24.00	27	38,885
Mon-3/25/19	38,854	27	24.00	27	38,854
Tue-3/26/19	38,814	27	24.00	27	38,814
Wed-3/27/19	38,794	27	24.00	27	38,794
Thu-3/28/19	38,753	27	24.00	27	38,753
Fri-3/29/19	38,723	27	24.00	27	38,723
Sat-3/30/19	37,948	26	24.00	26	37,948
Sun-3/31/19	3	-	-	<2	3
<b>TOTALS</b>	<b>1,180,221</b>	<b>27</b>	<b>720.00</b>	<b>27</b>	<b>1,180,221</b>

TOTAL VOLUME EXTRACTED :	1,180,221 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	26.44 GPM

Note: ACTIVE WELLS = TW-8, TW-22

03/31/19 - SW extraction was shut down due to a DTE Energy power outage.

TABLE #6

UNIT "E" EXTRACTION DATA

Month of: Mar-19

Date	TW-11			TW-12			TW-17			TW-18			TW-19			TW-23			Daily Flow GPM	Daily Total Gallons
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.		
Fri-3/1/19	-	-	-	-	-	-	-	-	219,296	152	24.00	44,395	31	24.00	99,394	69	24.00	252	363,085	
Sat-3/2/19	-	-	-	-	-	-	-	-	219,207	152	24.00	44,362	31	24.00	99,412	69	24.00	252	362,981	
Sun-3/3/19	-	-	-	-	-	-	-	-	219,278	152	24.00	44,356	31	24.00	99,405	69	24.00	252	363,039	
Mon-3/4/19	-	-	-	-	-	-	-	-	219,333	152	24.00	44,345	31	24.00	99,394	69	24.00	252	363,072	
Tue-3/5/19	-	-	-	-	-	-	-	-	219,355	152	24.00	44,347	31	24.00	99,467	69	24.00	252	363,169	
Wed-3/6/19	-	-	-	-	-	-	-	-	219,303	152	23.98	35,019	31	18.83	78,066	69	18.85	231	332,388	
Thu-3/7/19	-	-	-	-	-	-	-	-	219,280	152	24.00	44,027	31	23.65	98,400	69	23.77	251	361,707	
Fri-3/8/19	-	-	-	-	-	-	-	-	219,280	152	24.00	44,488	31	24.00	99,443	69	24.00	252	363,211	
Sat-3/9/19	-	-	-	-	-	-	-	-	219,111	152	24.00	44,482	31	24.00	99,500	69	24.00	252	363,093	
Sun-3/10/19	-	-	-	-	-	-	-	-	219,250	152	24.00	44,414	31	24.00	99,410	69	24.00	252	363,074	
Mon-3/11/19	-	-	-	-	-	-	-	-	219,260	152	24.00	44,024	31	23.95	99,133	69	23.93	252	362,417	
Tue-3/12/19	-	-	-	-	-	-	-	-	219,263	152	24.00	44,059	31	24.00	99,335	69	24.00	252	362,657	
Wed-3/13/19	-	-	-	-	-	-	-	-	219,263	152	24.00	43,998	31	24.00	99,329	69	24.00	252	362,590	
Thu-3/14/19	-	-	-	-	-	-	-	-	219,247	152	24.00	43,936	31	24.00	99,307	69	24.00	252	362,490	
Fri-3/15/19	-	-	-	-	-	-	-	-	219,263	152	24.00	43,864	30	24.00	99,358	69	24.00	252	362,485	
Sat-3/16/19	-	-	-	-	-	-	-	-	219,256	152	24.00	43,814	30	24.00	99,367	69	24.00	252	362,437	
Sun-3/17/19	-	-	-	-	-	-	-	-	219,234	152	24.00	43,817	30	24.00	99,356	69	24.00	252	362,407	
Mon-3/18/19	-	-	-	-	-	-	-	-	219,203	152	24.00	43,791	30	24.00	99,403	69	24.00	252	362,397	
Tue-3/19/19	-	-	-	-	-	-	-	-	219,243	152	24.00	43,728	30	24.00	99,392	69	24.00	252	362,363	
Wed-3/20/19	-	-	-	-	-	-	-	-	219,271	152	24.00	43,722	30	24.00	99,440	69	24.00	252	362,433	
Thu-3/21/19	-	-	-	-	-	-	-	-	219,124	152	23.98	43,709	30	24.00	99,411	69	24.00	252	362,244	
Fri-3/22/19	-	-	-	-	-	-	-	-	219,210	152	24.00	43,696	30	24.00	99,371	69	24.00	252	362,277	
Sat-3/23/19	-	-	-	-	-	-	-	-	219,210	152	24.00	43,653	30	24.00	99,433	69	24.00	252	362,296	
Sun-3/24/19	-	-	-	-	-	-	-	-	219,233	152	24.00	43,948	31	24.00	99,381	69	24.00	252	362,562	
Mon-3/25/19	-	-	-	-	-	-	-	-	219,218	152	24.00	44,405	31	24.00	99,326	69	24.00	252	362,949	
Tue-3/26/19	-	-	-	-	-	-	-	-	219,089	152	24.00	44,372	31	24.00	99,428	69	24.00	252	362,889	
Wed-3/27/19	-	-	-	-	-	-	-	-	219,268	152	24.00	39,296	31	21.32	88,333	69	21.33	241	346,897	
Thu-3/28/19	-	-	-	-	-	-	-	-	230,905	160	24.00	44,113	31	24.00	99,387	69	24.00	260	374,405	
Fri-3/29/19	-	-	-	-	-	-	-	-	221,673	154	24.00	44,121	31	24.00	99,306	69	24.00	254	365,100	
Sat-3/30/19	-	-	-	-	-	-	-	-	219,138	152	24.00	44,168	31	23.98	99,375	69	23.98	252	362,681	
Sun-3/31/19	-	-	-	-	-	-	-	-	219,016	152	24.00	44,388	31	24.00	99,295	69	24.00	252	362,699	
<b>TOTALS</b>	-	-	-	-	-	-	-	-	<b>6,810,280</b>	<b>153</b>	<b>743.97</b>	<b>1,352,857</b>	<b>31</b>	<b>735.73</b>	<b>3,047,357</b>	<b>69</b>	<b>735.86</b>	<b>251</b>	<b>11,210,494</b>	

TOTAL VOLUME EXTRACTED :	11,210,494 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	251.13 GPM

03/06/19 - TW-19 & TW-23 were down due to a DTE Energy power outage in the area.  
 03/27/19 - TW-19 & TW-23 were down due to a DTE Energy power outage in the area.



**Little Lake Area System**

MW-53i	
Date	1,4-Dioxane ug/L
12/03/18	77
01/14/19	26
02/05/19	37
03/11/19	30

A2 Cleaning Supply Well	
Date	1,4-Dioxane ug/L
01/29/19	73
02/06/19	65
03/08/19	61
03/15/19	93

Date	Gallons Purged
3/15/2019	12,000

**TABLE #8**

**INDIVIDUAL PURGE WELL CONCENTRATIONS**

<b>SAMPLE ID</b>	<b>Date Sampled</b>	<b>1,4-DIOXANE (ppb)</b>
DOLPH-03-14-19-08:45-1	03/14/19	120
DOLPH-03-15-19-08:24-1	03/15/19	120
TW-20-03-07-19-10:11-1	03/07/19	840
LB-4-03-07-19-09:39-1	03/07/19	420
TW-21-03-07-19-09:34-1	03/07/19	220
TW-18-03-07-19-09:25-1	03/07/19	220
TW-19-03-07-19-09:41-1	03/07/19	460
TW-23-03-07-19-10:01-1	03/07/19	400
PW-1-03-07-19-09:19-1	03/07/19	790
TW-22-03-07-19-09:06-1	03/07/19	440
TW-28-03-07-19-09:05-1	03/07/19	620

RED POND DATA

Month of: Mar-19

Date	Time	Notes	Red Pond				
			Pond	Level	Aeration	Influent	Influent
			Visual Chk	Feet	Hours	Hours	GPM
Fri-3/1/19	04:00:00		Y	4.9	-	24.00	484
Sat-3/2/19	04:00:00	(1)		4.8	-	24.00	484
Sun-3/3/19	04:00:00	(1)		4.7	-	24.00	483
Mon-3/4/19	04:00:00		Y	4.6	-	24.00	484
Tue-3/5/19	04:00:00		Y	4.5	-	24.00	484
Wed-3/6/19	04:00:00		Y	4.4	-	24.00	440
Thu-3/7/19	04:00:00		Y	4.9	-	23.90	485
Fri-3/8/19	04:00:00		Y	5.2	-	24.00	484
Sat-3/9/19	04:00:00	(1)		5.1	-	24.00	484
Sun-3/10/19	04:00:00	(1)		5.1	-	24.00	484
Mon-3/11/19	04:00:00		Y	5.0	-	24.00	483
Tue-3/12/19	04:00:00		Y	4.9	-	24.00	483
Wed-3/13/19	04:00:00		Y	4.8	-	24.00	483
Thu-3/14/19	04:00:00		Y	4.7	-	24.00	483
Fri-3/15/19	04:00:00		Y	5.0	-	24.00	483
Sat-3/16/19	04:00:00	(1)		5.6	-	24.00	483
Sun-3/17/19	04:00:00	(1)		5.9	-	24.00	483
Mon-3/18/19	04:00:00		Y	5.8	-	24.00	483
Tue-3/19/19	04:00:00		Y	5.7	-	24.00	483
Wed-3/20/19	04:00:00		Y	5.6	-	24.00	483
Thu-3/21/19	04:00:00		Y	5.5	-	24.00	483
Fri-3/22/19	04:00:00		Y	5.6	-	24.00	483
Sat-3/23/19	04:00:00	(1)		5.5	-	24.00	482
Sun-3/24/19	04:00:00	(1)		5.4	-	24.00	483
Mon-3/25/19	04:00:00		Y	5.3	-	24.00	483
Tue-3/26/19	04:00:00		Y	5.2	-	24.00	483
Wed-3/27/19	04:00:00		Y	5.1	-	24.00	461
Thu-3/28/19	04:00:00		Y	4.7	-	24.00	490
Fri-3/29/19	04:00:00		Y	6.1	-	24.00	485
Sat-3/30/19	04:00:00	(1)		6.0	-	24.00	483
Sun-3/31/19	04:00:00	(1)		6.3	-	24.00	456
<b>TOTALS</b>			-		-	744	

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

**TABLE #10**

**RED POND CONCENTRATIONS**

Concentrations of 1,4-Dioxane found in the Red Pond

<b>SAMPLE ID</b>	<b>Date Sampled</b>	<b>1,4-DIOXANE (ppb)</b>
Red Pond-03-04-19-12:10-1	3/4/2019	360
Red Pond-03-11-19-07:18-1	3/11/2019	350
Red Pond-03-18-19-08:20-1	3/18/2019	370
Red Pond-03-26-19-07:31-1	3/26/2019	390

Analyte value quantified from a dilution, reporting limit is raised to reflect dilution

**OZONE OPERATION REPORT**

Month of: **Mar-19**

Date	Time	Notes	SYSTEM-1A		SYSTEM-1B		SYSTEM-2A		SYSTEM-2B	
			Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours
2019-03-01	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-02	04:00:00	(1)	240	24.00	0	0.00	240	24.00	0	0.00
2019-03-03	04:00:00	(1)	240	24.00	0	0.00	240	24.00	0	0.00
2019-03-04	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-05	04:00:00		240	24.00	0	0.00	241	24.00	0	0.00
2019-03-06	04:00:00		240	20.08	0	0.00	240	23.80	0	0.00
2019-03-07	04:00:00		1	17.63	0	0.00	241	23.72	0	0.00
2019-03-08	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-09	04:00:00	(1)	240	24.00	0	0.00	239	24.00	0	0.00
2019-03-10	04:00:00	(1)	240	24.00	0	0.00	240	24.00	0	0.00
2019-03-11	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-12	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-13	04:00:00		239	24.00	0	0.00	240	24.00	0	0.00
2019-03-14	04:00:00		240	23.02	0	0.00	240	23.00	0	0.00
2019-03-15	04:00:00		240	4.03	0	0.00	240	23.58	0	0.00
2019-03-16	04:00:00	(1)	240	24.00	0	0.00	240	22.27	0	0.00
2019-03-17	04:00:00	(1)	240	22.55	0	0.00	240	24.00	0	0.00
2019-03-18	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-19	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-20	04:00:00		240	24.00	0	0.00	239	24.00	0	0.00
2019-03-21	04:00:00		240	23.42	0	0.00	241	23.43	0	0.00
2019-03-22	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-03-23	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-03-24	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-03-25	04:00:00		240	24.02	0	0.00	238	24.00	0	0.00
2019-03-26	04:00:00		239	24.00	0	0.00	237	24.00	0	0.00
2019-03-27	04:00:00		240	24.00	0	0.00	235	24.00	0	0.00
2019-03-28	04:00:00		240	19.98	0	0.00	236	19.10	0	0.00
2019-03-29	04:00:00		240	24.02	0	0.00	240	24.00	0	0.00
2019-03-30	04:00:00	(1)	240	24.00	0	0.00	240	23.60	0	0.00
2019-03-31	04:00:00	(1)	240	22.87	0	0.00	241	23.35	0	0.00

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

- 03/06/19 - 03/07/19 - System 1A was shut down to adjust the Pond level during DTE Energy power outage.
- 03/15/19 - System 1A was shut down for maintenance.
- 03/16/19 - System 2A was shut down briefly due to a DTE Energy power fluctuation.
- 03/17/19 - System 1A was shut down briefly due to a DTE Energy power fluctuation.
- 03/28/19 - Treatment was shut down for maintenance in Green Pumphouse.
- 03/31/19 - System 1A was shut down briefly due to a DTE Energy power outage in the area.

**TABLE #12**

**GREEN POND / DISCHARGE DATA**

Month of: **Mar-19**

Date	Time	Notes	Green Pond																	
			Pond		Level	Aeration	Influent	Influent	Pond Discharge			Bypass Discharge			Recirc Thru UV to Pond			Recirc Thru UV to Disch		
			Visual Chk	Feet	Hours	Hours	GPM	GPM	Gallons	GPM	Gallons	Hours	GPM	Gallons	Hours	GPM	Gallons	Hours		
Fri-3/1/19	04:00:00		Y	-	-						497	715,363	24.00	-	-	-	-	-	-	
Sat-3/2/19	04:00:00	(1)		-	-						497	715,354	24.00	-	-	-	-	-	-	
Sun-3/3/19	04:00:00	(1)		-	-						497	715,307	24.00	-	-	-	-	-	-	
Mon-3/4/19	04:00:00		Y	-	-						497	715,192	24.00	-	-	-	-	-	-	
Tue-3/5/19	04:00:00		Y	-	-						497	715,153	24.00	-	-	-	-	-	-	
Wed-3/6/19	04:00:00		Y	-	-						454	653,129	24.00	-	-	-	-	-	-	
Thu-3/7/19	04:00:00		Y	-	-						432	613,991	23.67	-	-	-	-	-	-	
Fri-3/8/19	04:00:00		Y	-	-						497	715,531	24.00	-	-	-	-	-	-	
Sat-3/9/19	04:00:00	(1)		-	-						497	715,345	24.00	-	-	-	-	-	-	
Sun-3/10/19	04:00:00	(1)		-	-						496	714,934	24.00	-	-	-	-	-	-	
Mon-3/11/19	04:00:00		Y	-	-						497	714,988	24.00	-	-	-	-	-	-	
Tue-3/12/19	04:00:00		Y	-	-						497	715,624	24.00	-	-	-	-	-	-	
Wed-3/13/19	04:00:00		Y	-	-						497	715,930	24.00	-	-	-	-	-	-	
Thu-3/14/19	04:00:00		Y	-	-						497	680,474	22.82	-	-	-	-	-	-	
Fri-3/15/19	04:00:00		Y	-	-						461	650,495	23.50	-	-	-	-	-	-	
Sat-3/16/19	04:00:00	(1)		-	-						494	666,474	22.50	-	-	-	-	-	-	
Sun-3/17/19	04:00:00	(1)		-	-						498	716,461	24.00	-	-	-	-	-	-	
Mon-3/18/19	04:00:00		Y	-	-						498	716,424	24.00	-	-	-	-	-	-	
Tue-3/19/19	04:00:00		Y	-	-						497	716,364	24.00	-	-	-	-	-	-	
Wed-3/20/19	04:00:00		Y	-	-						497	716,364	24.00	-	-	-	-	-	-	
Thu-3/21/19	04:00:00		Y	-	-						497	697,259	23.38	-	-	-	-	-	-	
Fri-3/22/19	04:00:00		Y	-	-						497	715,833	24.00	-	-	-	-	-	-	
Sat-3/23/19	04:00:00	(1)		-	-						497	715,907	24.00	-	-	-	-	-	-	
Sun-3/24/19	04:00:00	(1)		-	-						497	716,354	24.00	-	-	-	-	-	-	
Mon-3/25/19	04:00:00		Y	-	-						496	714,767	24.00	-	-	-	-	-	-	
Tue-3/26/19	04:00:00		Y	-	-						495	712,684	24.00	-	-	-	-	-	-	
Wed-3/27/19	04:00:00		Y	-	-						494	711,642	24.00	-	-	-	-	-	-	
Thu-3/28/19	04:00:00		Y	-	-						490	570,670	19.42	-	-	-	-	-	-	
Fri-3/29/19	04:00:00		Y	-	-						497	716,281	24.00	-	-	-	-	-	-	
Sat-3/30/19	04:00:00	(1)		-	-						497	701,522	23.52	-	-	-	-	-	-	
Sun-3/31/19	04:00:00	(1)		-	-						497	693,146	23.27	-	-	-	-	-	-	
<b>TOTALS</b>				-	-							<b>21,664,962</b>	<b>734</b>	-	-	-	-	-	-	

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

