



2nd Quarter, 2011

(April, May, June)

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Summary of Activity

CEB = Central Environmental Building
C3 = C3 aquifer
D2 = D2 aquifer
E = E aquifer
SW = Southwest Property Area
Maple = Maple Road

Treatment Activities

04/06/11 - System 2A was shut down for maintenance.

04/08/11 - 04/09/11 - TW-18 (E) was shut down for maintenance.

04/11/11 - Treatment was shut down briefly for maintenance. TW-5 (D2), TW-2, TW-10, TW-20 (C3), PW-1 (Marshy), SW, and TW-18 (E) were shut down briefly to adjust the Pond level.

04/28/11 - System 1A was shut down briefly due to a DTE power outage in the area.

04/30/11 – 05/02/11 - LB-3 (D2) was shut down due to a DTE power outage in the area.

05/09/11-05/10/11 - TW-10 (C3) was shut down for well maintenance.

05/12/11 - HW-S (D2), TW-1 & TW-14 (C3), and TW-17 (E) were shut down due to flow rate reductions.

05/12/11 - TW-2 (C3) and System 2A were shut down for maintenance.

05/13/11 - System 1B was shut down for reduction in flow rates.

05/23/11 - LB-1 & LB-3 (D2) were shut down due to a DTE power outage in the area.

06/07/11-06/08/11 - LB-3 (D2) was shut down for maintenance.

06/08/11 - System 2A was shut down briefly for maintenance.

06/24/11-06/25/11 - System 1A was shut down for maintenance.

06/25/11 - TW-9 (D2), TW-10 (C3) and SW Extraction were shut down to adjust the Pond level.

Field Activities

04/08/11 Boring in Saginaw Forest

06/2011 Began connecting homes in the expanded PZ to City water/sewer services.

Submittals/Responses

- 04/18/11 PLS submitted Western Area Groundwater Monitoring Plan to DEQ
- 04/19/11 PLS submitted Monthly Monitoring Report (NPDES) to DEQ
PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
PLS submitted 2nd Quarter 2011 Report to DEQ
- 04/29/11 PLS submitted Little Lake Area System Groundwater Monitoring Plan to DEQ
- 05/18/11 PLS submitted Monthly Monitoring Report (NPDES) to DEQ
PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ
- 05/25/11 DEQ correspondence re: Western Area Groundwater Monitoring Plan
- 05/31/11 DEQ response to PLS Nov 3, 2010 Proposal to Reduce Batch Purging
- 06/14/11 PLS submitted Monthly Monitoring Report (NPDES) to DEQ
PLS submitted Discharge Monitoring Report (DMR) electronically to DEQ

Anticipated Major Activities for the Next Quarter

- Connect homes that fall under the expansion of the PZ area to City's water and sewer system.
- Complete the Western area monitoring plan
- Secure access and finalize the engineering plan to install the proposed Maple/Dexter pipeline.

Quarterly Performance Analysis

For the months of April, May, June 2011, over 462 pounds of 1,4-dioxane were removed and 120,660,688 gallons of water were extracted from the contaminated aquifers, treated and discharged. The total mass of 1,4-dioxane removed since May 1997 is over 85,000 pounds and the total volume of water discharged since May 1997 is over 6 billion gallons.

In general, the performance of the operation was as expected, purging and treating contaminated groundwater to the existing allowable capacities.

Mass Reduction

MASS REDUCTION SUMMARY
Mass Removed Per Month (lb)

A	B	C	D	E	F
Month	Mass Removed from Unit E Only	Mass Removed from Southwest Only	Mass Removed from Marshy Only	Mass Removed from Units C3 and D2 Only	Total Mass Removed from Units E, D2, C3, Southwest and Marshy
Aug-00	0	0	8	366	374
Sep-00	0	0	9	332	341
Oct-00	0	5	9	583	597
Nov-00	0	3	12	1160	1175
Dec-00	0	0	10	1040	1050
Jan-01	0	0	7	816	823
Feb-01	0	0	7	1056	1063
Mar-01	0	0	11	1379	1390
Apr-01	0	0	9	1140	1149
May-01	0	1	8	990	999
Jun-01	0	2	8	933	943
Jul-01	0	2	10	1121	1133
Aug-01	0	2	13	1018	1033
Sep-01	0	1	9	909	919
Oct-01	0	5	8	896	909
Nov-01	0	4	5	827	836
Dec-01	0	6	4	768	778
Jan-02	0	6	5	753	764
Feb-02	0	4	6	691	701
Mar-02	0	7	7	663	677
Apr-02	0	6	7	682	695
May-02	100	9	7	898	1014
Jun-02	94	9	6	889	998
Jul-02	56	10	7	640	713
Aug-02	53	8	6	745	812
Sep-02	51	8	6	860	925
Oct-02	33	6	4	603	646
Nov-02	57	8	5	880	950
Dec-02	48	9	5	842	904
Jan-03	45	8	6	839	898
Feb-03	37	6	6	767	816
Mar-03	44	8	7	763	822
Apr-03	39	8	3	716	766
May-03	36	13	5	725	779
Jun-03	34	15	5	683	737
Jul-03	29	15	5	678	727
Aug-03	31	15	6	676	728
Sep-03	27	16	5	644	692
Oct-03	34	17	5	701	757
Nov-03	26	12	5	663	706
Dec-03	29	14	6	635	684
Jan-04	28	15	6	667	716
Feb-04	8	11	5	485	509
Mar-04	23	14	7	573	617
Apr-04	27	15	6	537	585
May-04	16	10	5	439	470
Jun-04	21	11	5	499	536
Jul-04	36	12	5	506	559

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Aug-04	54	12	5	480	551
Sep-04	34	9	5	382	430
Oct-04	30	10	5	358	403
Nov-04	30	9	5	395	439
Dec-04	33	11	5	442	491
Jan-05	29	11	4	404	448
Feb-05	26	9	4	390	429
Mar-05	27	9	4	409	450
Apr-05	33	4	3	396	436
May-05	27	8	2	364	401
Jun-05	31	9	3	361	404
Jul-05	31	8	1	279	319
Aug-05	12	6	2	275	295
Sep-05	13	8	2	327	350
Oct-05	16	6	3	297	322
Nov-05	13	7	4	291	315
Dec-05	12	8	4	325	349
Jan-06	115	7	3	308	433
Feb-06	144	7	3	290	444
Mar-06	148	8	3	331	490
Apr-06	125	7	3	291	426
May-06	137	9	3	402	551
Jun-06	119	5	2	329	456
Jul-06	107	8	3	310	427
Aug-06	104	8	2	307	421
Sep-06	97	9	3	300	409
Oct-06	93	9	3	327	432
Nov-06	80	7	2	268	357
Dec-06	68	6	2	238	314
Jan-07	91	8	2	305	406
Feb-07	84	8	2	284	378
Mar-07	91	8	3	306	408
Apr-07	84	8	2	280	374
May-07	82	8	2	288	380
Jun-07	81	8	2	279	370
Jul-07	66	8	2	256	332
Aug-07	73	8	2	270	353
Sep-07	77	8	2	247	334
Oct-07	73	8	2	244	327
Nov-07	68	8	2	263	341
Dec-07	69	8	2	260	339
Jan-08	65	7	2	237	311
Feb-08	53	6	2	203	264
Mar-08	56	7	2	220	285
Apr-08	54	7	2	200	263
May-08	55	7	2	206	270
Jun-08	52	6	2	195	256
Jul-08	39	1	2	139	181

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Aug-08	50	7	2	198	256
Sep-08	43	5	2	177	227
Oct-08	45	5	2	187	239
Nov-08	45	7	2	197	251
Dec-08	45	5	2	187	239
Jan-09	39	8	2	124	173
Feb-09	34	8	2	122	164
Mar-09	35	8	2	122	166
Apr-09	32	6	1	119	158
May-09	45	7	2	201	254
Jun-09	39	5	1	157	202
Jul-09	38	5	1	152	196
Aug-09	39	7	2	202	250
Sep-09	36	6	2	223	267
Oct-09	36	8	2	206	251
Nov-09	32	7	1	167	208
Dec-09	32	8	1	171	212
Jan-10	34	8	1	175	219
Feb-10	30	7	1	161	198
Mar-10	33	7	1	173	214
Apr-10	33	7	1	175	216
May-10	33	7	1	176	217
Jun-10	29	6	1	130	165
Jul-10	20	7	1	171	200
Aug-10	23	7	1	188	220
Sep-10	21	6	1	148	177
Oct-10	24	7	2	185	218
Nov-10	18	6	2	151	176
Dec-10	26	6	2	164	198
Jan-11	25	6	2	163	195
Feb-11	25	7	2	165	198
Mar-11	27	8	2	174	209
Apr-11	22	6	1	143	171
May-11	20	5	1	138	164
Jun-11	17	5	1	104	127
Total to date	5288	953	505	57030	63775

MASS REDUCTION DETAIL BY AQUIFER

April 1 - April 30, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	1,646,093	38	0.0	1.5	107
TW-2 (Doiph)	2,068,900	48	0.0	1.1	64
TW-3	-	0	0.0	0.0	5
TW-6	-	0	0.0	0.0	66
TW-10	3,883,356	90	0.7	19.9	615
TW-14	4,102,027	95	0.1	3.6	107
TW-20	2,587,115	60	0.9	27.8	1286
MW-22	-	0.0	0.0	0.0	1706
<i>Sub-Totals</i>	<i>14,287,491</i>	<i>331</i>	<i>2</i>	<i>54</i>	
Marshy					
PW-1	146,214	3	0.0	1.2	952
<i>Sub-Totals</i>	<i>146,214</i>	<i>3</i>	<i>0</i>	<i>1</i>	
E					
TW-11	2,345,214	54	0.1	3.9	198
TW-12	-	0	0.0	0.0	23
TW-17	4,191,672	97	0.1	2.5	72
TW-18	5,658,787	131	0.5	15.5	327
MW-64	-	0	0.0	0.0	56
	<i>12,195,673</i>	<i>282</i>	<i>1</i>	<i>22</i>	
Southwest					
Active Wells	1,438,882	33	0.2	5.6	462
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	49
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	<i>1,438,882</i>	<i>33</i>	<i>0</i>	<i>6</i>	
D2					
LB-1	4,324,033	100	0.6	16.6	460
LB-3	1,699,423	39	0.2	6.2	441
HW-S	1,097,427	25	0.3	7.8	852
TW-5	3,447,989	80	0.7	21.8	757
TW-9	4,046,629	94	0.9	27.6	817
TW-21	5,660,581	131	0.3	8.8	192
MW-11D	-	0	0.0	0.0	180
<i>Sub-Totals</i>	<i>20,276,082</i>	<i>469</i>	<i>3</i>	<i>89</i>	
Overall Totals	48,344,342	1,119	5.7	171.3	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFIER

May 1 - May 31, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	614,858	14	0.0	0.5	97
TW-2 (Dolph)	1,426,063	32	0.0	0.8	68
TW-3	-	0	0.0	0.0	4
TW-6	-	0	0.0	0.0	66
TW-10	3,758,919	84	0.7	20.6	656
TW-14	1,533,757	34	0.1	1.6	130
TW-20	2,396,855	54	0.9	29.1	1454
MW-22	-	0.0	0.0	0.0	1286
<i>Sub-Totals</i>	9,730,452	218	2	53	
Marshy					
PW-1	157,809	4	0.0	1.2	906
<i>Sub-Totals</i>	157,809	4	0	1	
E					
TW-11	1,858,232	42	0.1	3.3	215
TW-12	-	0	0.0	0.0	23
TW-17	1,776,996	40	0.0	1.3	90
TW-18	5,828,436	131	0.5	15.4	317
MW-64	-	0	0.0	0.0	52
<i>Sub-Totals</i>	9,463,664	212	1	20	
Southwest					
Active Wells	1,369,326	31	0.2	5.3	465
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	129
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,369,326	31	0	5	
D2					
LB-1	3,323,180	74	0.5	15.6	563
LB-3	1,709,258	38	0.2	7.6	528
AE-3	-	0	0.0	0.0	131
HW-S	412,692	9	0.1	3.1	892
TW-5	3,576,370	80	0.8	24.5	821
TW-9	3,521,426	79	0.8	25.5	867
TW-21	5,913,517	132	0.3	9.0	188
MW-11D	-	0	0.0	0.0	156
<i>Sub-Totals</i>	18,456,443	413	3	85	
Overall Totals	39,177,694	878	5.3	164.4	

*SW Active = TW-8, TW-22

MASS REDUCTION DETAIL BY AQUIFER

June 1 - June 30, 2011

Extraction Well	Month To Date Gallons Extracted	Month To Date Average Daily Flow Rate GPM	Month To Date Average Daily Pounds Removed	Month To Date Pounds Removed	Month To Date Average Concentration ppb
C3					
TW-1	-	0	0.0	0.0	97
TW-2 (Dolph)	997,617	23	0.0	0.5	66
TW-3	-	0	0.0	0.0	3
TW-6	-	0	0.0	0.0	66
TW-10	3,075,016	71	0.6	17.2	672
TW-14	-	0	0.0	0.0	131
TW-20	2,162,364	50	0.9	25.5	1414
MW-22	-	0.0	0.0	0.0	838
<i>Sub-Totals</i>	6,234,997	144	1	43	
Marshy					
PW-1	181,778	4	0.0	1.4	942
<i>Sub-Totals</i>	181,778	4	0	1	
E					
TW-11	1,394,821	32	0.1	2.5	219
TW-12	-	0	0.0	0.0	23
TW-17	-	0	0.0	0.0	91
TW-18	5,366,768	124	0.5	14.5	324
MW-64	-	0	0.0	0.0	46
<i>Sub-Totals</i>	6,761,589	157	1	17	
Southwest					
Active Wells	1,195,455	28	0.2	4.8	479
MW-10d	-	0.0	0.0	0.0	1073
MW-75	-	0	0.0	0.0	135
MW-45d	-	0.0	0.0	0.0	335
<i>Sub-Totals</i>	1,195,455	28	0	5	
D2					
LB-1	2,580,023	60	0.2	6.5	300
LB-3	1,696,517	39	0.2	6.7	474
AE-3	-	0	0.0	0.0	131
HW-S	-	0	0.0	0.0	894
TW-5	3,547,189	82	0.5	15.2	514
TW-9	2,988,328	69	0.8	23.9	960
TW-21	5,453,420	126	0.3	8.4	190
MW-11D	-	0	0.0	0.0	123
<i>Sub-Totals</i>	16,265,477	377	2	61	
Overall Totals	30,639,296	709	4.2	127.2	

*SW Active = TW-8, TW-22