Monitoring Report Submittal Transmittal Form

Attn: Guy Childs (916) 464-4648
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Discharger:	The Morning Star Packing Company, LP and Fred Gobel
Name of Facility:	Williams Facility
WDRs Order Number:	R5-2013-0144
WDID:	5A062005001
County:	Colusa

I am hereby submitting to the Central Valley Water Board the following information:

Check all that apply:

Monthly Monitoring Report for the month of _____

1st / 2nd / 3rd / 4th (**circle one**) Quarterly Monitoring Report for the year of_____

1st / 2nd (**circle one**) Semi-annual Monitoring Report for the year __2015_____

Annual Monitoring Report for the year _____

Violation Notification

During the monitoring period, there were / were not (circle one) any violations of the WDRs.

1. The violations were: (*add extra pages as needed*)

Settling pond was drained by November 1, 2014, however, accumulated sludge and sediment cannot be removed until May/June 2015.

2. Have the violations been corrected? Yes / No If no, what will be done to correct the violations: (*add extra pages as needed*)

The settling pond will be excavated and applied to LAA in May/June 2015.

Certification Statement

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature: _____ Phone: _(530) 219-6892_____

Printed Name: _Hilary Reinhard, PE____ Date: __April 28, 2015____

Hilary Armstrong Reinhard, P.E.
P.O. Box 365
Madison, CA 95653

April 28, 2015

Mr. Guy Childs
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Subject: Letter Report, First Half-Semi Annual 2015 Groundwater Monitoring Report, Morning Star Packing Company, LP

Dear Mr. Childs:

Enclosed is the semi-annual groundwater monitoring report prepared in accordance with Order No. R5-2013-0144. Although groundwater sampling is only required twice annually under the Monitoring and Reporting Program, Morning Star has continued with quarterly groundwater monitoring. Quarterly groundwater monitoring provides additional information regarding groundwater quality and enables the use or more robust analysis of conditions and trends.

The following items were requested in the Semi-Annual Groundwater Monitoring and Reporting Program:

1. Results of semi-annual monitoring of the groundwater in tabular format.

The results of groundwater monitoring activities for the monitoring wells are included as **Attachment A**.

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.

Field logs for the sampling activities are included as **Attachment B**. Prior to sampling, the groundwater elevations are measured. The monitoring wells are then purged a minimum of three well volumes or until temperature, pH and electrical conductivity have stabilized. Samples are collected and returned to the certified lab and tested for the different constituents.

3. Calculation of groundwater elevations, determination of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

Groundwater elevations for the wells are shown in Table 1.

Table 1. Groundwater Elevations on February 2015

Monitoring Well Number	Elevation
MW1	88.43
MW2	86.73
MW3	86.22
MW4	88.18
MW5	83.27
MW6	83.34
MW7	79.45
MW8	73.95
MW9	74.41

Groundwater sampling for this quarter was generally consistent with historic results. Groundwater in the vicinity of the processing facility usually flows toward the north and slightly east. This quarter, the results are consistent with historical results. Gradients for the four monitoring wells located near the settling pond are presented in Table 2.

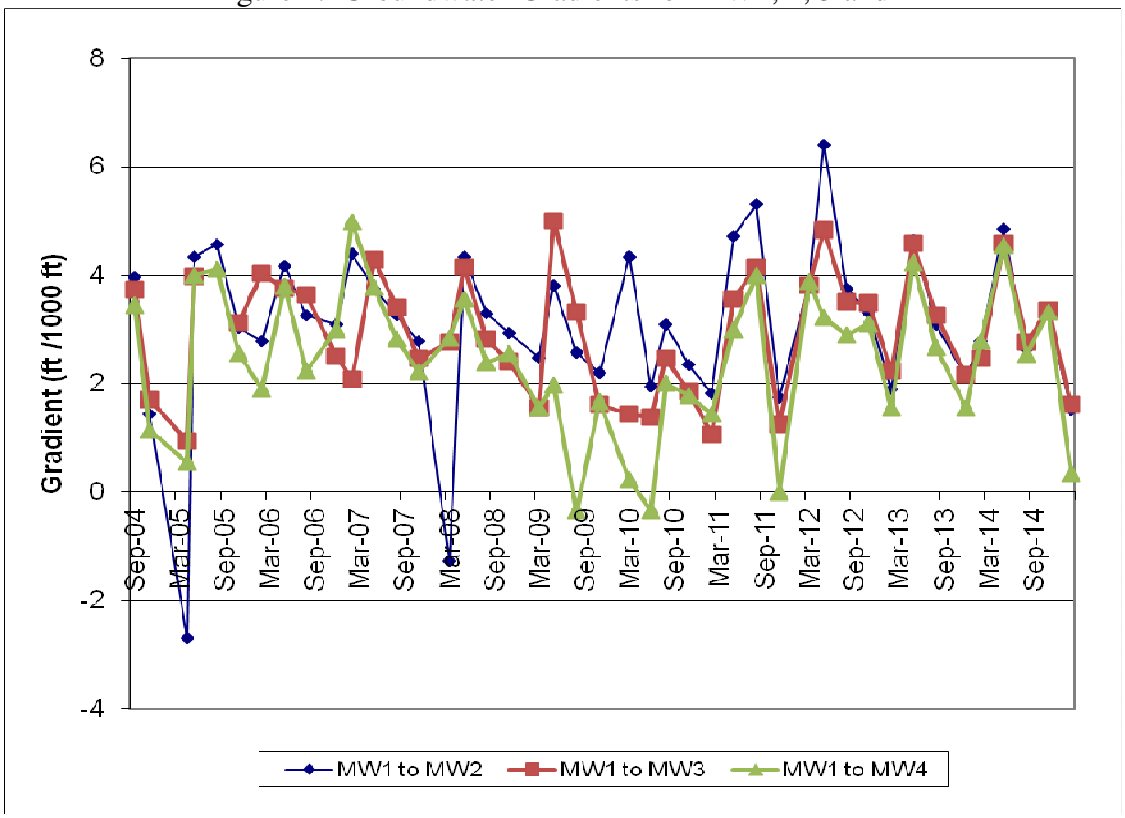
Table 2. Groundwater Gradients in MW 1, 2, 3 and 4

	Gradient (ft/1000ft)		
Date	MW1 to MW2	MW1 to MW3	MW1 to MW4
2/21/07	4.40	2.09	4.99
5/23/07	3.75	4.28	3.77
8/17/07	3.25	3.40	2.83
11/29/07	2.79	2.47	2.23
3/7/08	NA	2.77	2.84
5/20/08	4.32	4.16	3.56
8/30/08	3.31	2.83	2.39
11/17/08	2.93	2.41	2.56
3/6/09*	2.49	1.56	1.56
5/22/09	3.80	5.00	1.97
8/25/09	2.57	3.32	-0.33
11/23/09	2.20	1.61	1.67
3/16/10	4.35	1.43	0.23
6/7/10	1.95	1.73	-0.33
8/26/10	3.08	2.47	2.00
11/17/10	2.35	1.86	1.77
2/20/11	1.82	1.07	1.44
5/4/11	4.72	3.56	3.00
8/11/11	5.31	4.16	4.00
11/22/11	1.75	1.25	0.00
3/9/12	3.83	3.80	3.89
5/14/12	6.42	4.83	3.21
8/7/12	3.75	3.50	2.89
11/12/12	3.31	3.49	3.11
2/18/13	1.90	2.23	1.56
5/15/13	4.64	4.59	4.23
8/5/13	3.08	3.26	2.67
12/2/13	2.12	2.16	1.55
2/17/14	2.79	2.47	2.79
5/12/14	4.86	4.58	4.55
8//14	2.64	2.76	2.55
11//14	3.28	3.35	3.32
2/19/15	1.51	1.61	0.33

** Measurements from MW2 and MW3 taken on 3/13/2009.*

Groundwater gradients continue to appear to be highest during the summer and lowest during the winter months. Figure 1 below provides a graph of gradients for MW1, 2, 3, and 4.

Figure 1. Groundwater Gradients for MW1, 2, 3 and 4



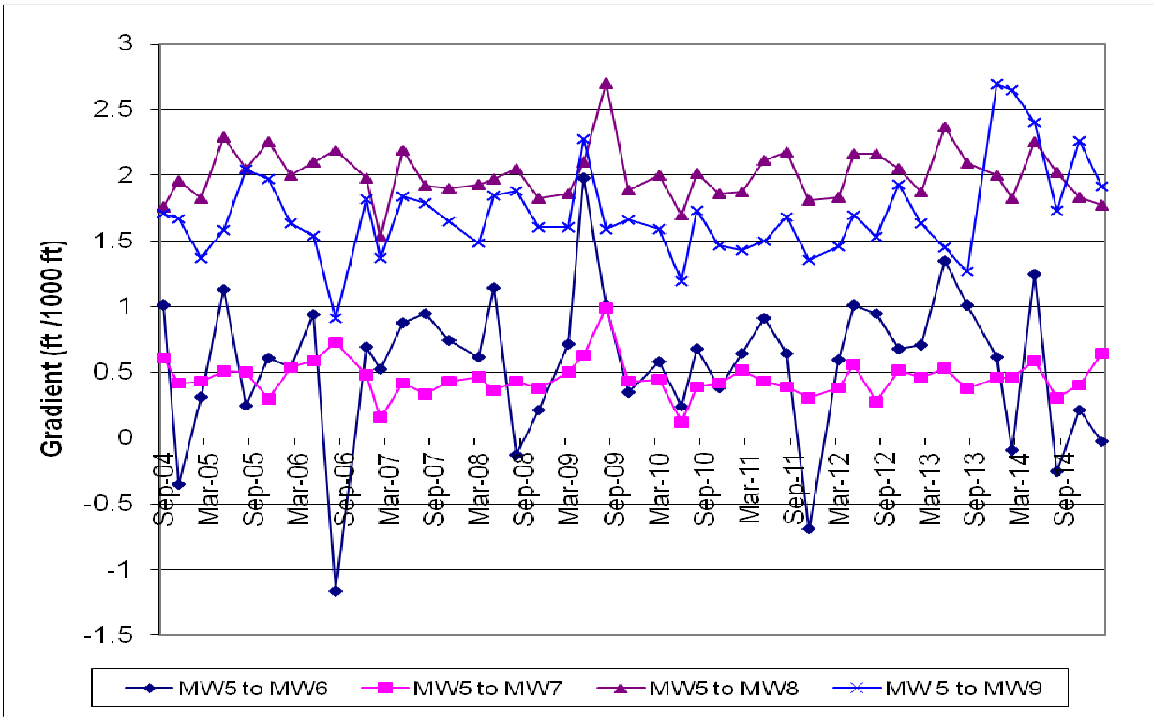
Groundwater in the cropped area north of the processing facility generally moves toward the northeast. This quarter, groundwater gradients are consistent with historical results. Groundwater gradients for these wells are included as Table 4.

Table 3. Groundwater Gradients in MW 5, 6, 7, 8, and 9

	Gradient (ft/1000ft)			
Date	MW5 to MW6	MW5 to MW7	MW5 to MW8	MW 5 to MW9
2/21/07	0.52	0.16	1.53	1.37
5/23/07	0.94	0.33	1.92	1.97
11/27/07	0.74	0.43	1.90	1.64
3/7/08	0.61	0.46	1.93	1.48
5/20/08	1.15	0.36	1.97	1.84
8/30/08	(0.12)	0.43	2.05	1.88
11/17/08	0.21	0.37	1.82	1.61
3/6/09	0.71	0.50	1.86	1.61
5/22/09	1.98	0.63	2.10	2.27
8/25/09	1.01	0.99	2.70	1.59
11/23/09	0.34	0.43	1.89	1.66
3/16/10	0.58	0.44	2.00	1.59
6/7/10	0.24	0.12	1.70	1.19
8/26/10	0.68	0.39	2.02	1.73
11/17/10	0.68	0.42	1.86	1.46
2/20/11	0.64	0.52	1.87	1.43
5/4//11	0.91	0.43	2.11	1.50
8/11//11	0.64	0.39	2.17	1.68
11/22/11	-0.69	0.30	1.81	1.36
3/9/12	0.60	0.38	1.83	1.45
5/14/12	1.01	0.56	2.16	1.70
8/7/12	0.94	0.28	2.16	1.54
11/12/12	0.68	0.52	1.05	1.93
2/18/13	0.71	0.46	1.87	1.63
5/15/13	1.35	0.53	2.37	1.45
8/5/13	1.01	0.37	2.09	1.26
12/2/13	0.61	0.46	2.00	2.69
2/17/14	-0.09	0.46	1.82	2.65
5/12/14	1.24	0.58	2.25	2.40
8//14	-0.26	0.30	2.02	1.73
11//14	0.21	0.40	1.83	2.26
2/19/15	-0.03	0.64	1.78	1.92

No clear seasonal trends are evident in the groundwater gradients in the cropped area. A graph of the gradients is provided below in Figure 2.

Figure 2. Groundwater Gradients for MW5, 6, 7, 8 and 9



Groundwater flow direction was calculated using the EPA OnSite Hydraulic Gradient Calculator. Results from this analysis are provided **Attachment C** and summarized in Table 5:

Table 4. Site Groundwater Flow Direction Results

Date	Flow Direction (degrees from North)
2/19/15	21.90

4. Summary data tables of historical and current groundwater conditions.

Summary data tables and graphs of the sampling results for each monitoring well have been included as **Attachment A.**

5. A scaled map showing relevant structures and features of the facility, land application areas, locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;

See **Attachment D**. The elevation from MW4 was not used in the gradient analysis.

6. Copies of laboratory analytical report(s) for groundwater monitoring.

See **Attachment E**.

Respectfully,

Hilary A. Reinhard, P.E.

Attachment A

MORNING STAR PACKING COMPANY
GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #1	#1	#1	#1	#1	#1	#1	#1
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Aug-95	8.3	92.66	6.86	234				0.2
Sep-95	7.9	92.30	7.22					
Oct-95	8.1	92.41	7.11	177				0.2
Nov-95	7.3	91.74	7.78					
Jan-96	8.0	90.16	9.36					
Feb-96	8.0	90.66	8.86					
Mar-96	7.5	91.87	7.65					
Apr-96	7.9	91.51	8.01					
May-96	8.0	94.39	5.13					
Jun-96	7.9	94.15	5.37					
Jul-96	8.0	92.80	6.72	164				0.4
Aug-96	8.3	91.66	7.86					
Sep-96	7.7	91.04	8.48					
Oct-96	8.0	90.63	8.89	160				0.3
Nov-96	7.7	89.54	9.98					
Dec-96	8.1	89.28	10.24					
Jan-97	7.7	89.89	9.63					
Feb-97	7.6	90.65	8.87					
Mar-97	7.9	91.06	8.46					
Apr-97	7.5	91.76	7.76					
May-97	7.9	92.74	6.78					
Jun-97	7.8	92.82	6.70					
Jul-97	7.9	92.74	6.78	159				0.6
Aug-97	7.6	90.93	8.59					
Sep-97	8.2	91.41	8.11					
Oct-97	8.8	90.54	8.98	166				0.5
Nov-97	7.5	89.74	9.78					
Dec-97	7.4	89.77	9.75					
Jan-98	7.6	89.50	10.02					
Feb-98	7.4	94.18	5.34					
Mar-98	7.3	93.12	6.40					
Apr-98	7.4	93.68	5.84					
May-98	7.5	93.80	5.72					
Jun-98	7.6	94.19	5.33					
Jul-98	7.5	93.18	6.34					
Aug-98	7.5	93.09	6.43	224				1.2
Sep-98	7.6	92.23	7.29					
Oct-98	7.8	91.67	7.85	215				0.8
Nov-98	7.4	90.33	9.19					
Dec-98	7.4	88.76	10.76					
Jan-99	7.3	88.92	10.60					
Feb-99	7.6	91.14	8.38					
Mar-99	7.5	91.98	7.54					
Apr-99	7.7	91.92	7.60					
May-99	7.8	94.55	4.97					
Jun-99	7.6	93.18	6.34					

MORNING STAR PACKING COMPANY
GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #1	#1	#1	#1	#1	#1	#1	#1
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Jul-99	7.5	93.12	6.40					
Aug-99	7.6	92.31	7.21	181				0.7
Sep-99	7.9	91.31	8.21					
Oct-99	7.6	91.98	7.54	174				0.6
Nov-99	7.5	90.32	9.20					
Dec-99	7.1	89.79	9.73					
Jan-00	7.1	88.54	10.98					
Feb-00	7.6	89.73	9.79					
Mar-00	7.6	90.50	9.02					
Apr-00	7.7	92.78	6.74					
May-00	7.7	93.25	6.27					
Jun-00	7.6	93.42	6.10					
Jul-00	7.6	92.17	7.35	148				1.0
Aug-00	7.6	91.42	8.10					
Sep-00	7.6	91.30	8.22					
Oct-00	6.8	91.21	8.31	173				1.0
Nov-00	7.2	90.73	8.79					
Dec-00	7.1	89.86	9.66					
Jan-01	7.0	89.20	10.32					
Feb-01	6.9	89.29	10.23					
Mar-01	7.1	90.03	9.49					
Apr-01								
May-01	7.5	92.55	6.97					
Jun-01	7.1	92.81	6.71					
Jul-01	6.9	92.89	6.63					
Aug-01	7.4	91.99	7.53	166				1.0
Sep-01	7.3	91.33	8.19					
Oct-01	7.5	91.11	8.41	143				1.1
Nov-01	7.5	90.01	9.51					
Dec-01	7.4	89.92	9.60					
Jan-02	7.6	91.29	8.23					
Feb-02	7.4	90.71	8.81					
Mar-02	7.7	90.09	9.43					
Apr-02	7.6	92.95	6.57					
May-02	7.4	93.01	6.51					
Jun-02	7.6	93.07	6.45					
Jul-02	7.7	92.67	6.85					
Aug-02	7.5	91.88	7.64	166				2.1
Sep-02	7.8	91.30	8.22					
Oct-02	7.1	90.41	9.11	156				1.1
Nov-02	6.9	89.44	10.08					
Dec-02		89.41	10.11					
Jan-03		90.30	9.22					
Feb-03		90.32	9.20					
Mar-03	7.9	90.08	9.44					
Apr-03	6.0	92.42	7.10					

MORNING STAR PACKING COMPANY
GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #1	#1	#1	#1	#1	#1	#1	#1
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03	6.5	92.26	7.26					
Jun-03	7.0	92.56	6.96					
Jul-03	7.6	92.12	7.40					
Aug-03	6.8	91.42	8.10	127				2.2
Sep-03	7.5	91.12	8.40					
Oct-03	7.7	90.56	8.96	150				1.4
Nov-03	7.0	89.72	9.80	133	0.2	40.0	0.00	1.0
Dec-03	8.0	89.62	9.90	0	0.4	197.0	0.00	1.1
Mar-04	7.7	91.42	8.10	158	0.0	0.0	0.00	6.2
May-04	7.7	94.44	5.08	222	0.4	0.8	0.00	6.7
Aug-04	7.6	93.48	6.00	192	0.0	0.1	0.00	7.9
Sep-04	7.6	92.40	7.08	162	0.0	0.2	0.00	5.8
Nov-04	7.6	90.48	9.00	208	0.0	0.2	0.00	7.1
Feb-05	7.6	91.48	8.00	187	0.0	5.4	0.16	10.0
May-05	7.8	93.31	6.17	185	0.0	1.0	0.00	5.6
Aug-05	7.7	94.48	5.00	170	0.2	1.6	0.00	3.0
Nov-05	7.4	91.48	8.00	137	0.0	0.4	0.00	3.4
Feb-06	7.4	90.90	8.58	134	0.0	0.3	0.00	2.3
May-06	7.5	92.96	6.52	171	0.0	0.0	0.00	5.7
Aug-06	7.6	93.14	6.34	183	0.7	0.0	0.00	4.9
Dec-06	7.6	91.40	8.08	174	0.0	0.0	0.00	2.1
Feb-07	7.8	89.45	10.03	169	0.0	0.0	0.00	5.8
May-07	7.7	94.48	5.00	142	0.8	0.2	0.00	1.2
Aug-07	7.9	93.52	5.96	184	0.9	0.0	0.00	1.6
Nov-07	7.7	90.90	8.58	210	0.5	0.0	0.00	2.2
Mar-08	7.8	91.65	7.83	198	0.1	0.0	0.00	3.7
May-08	7.8	94.15	5.33	222	0.5	0.0	0.00	1.4
Aug-08	8.1	93.23	6.25	212	0.5	0.0	0.00	1.6
Nov-08	8.0	91.23	8.25	210	0.0	0.0	0.00	2.7
Mar-09	7.9	89.40	10.08	181	0.0	0.0	0.00	2.6
May-09	7.4	93.88	5.60	210	0.7	0.0	0.00	2.2
Aug-09	7.9	92.82	6.66	178	0.0	0.0	0.00	1.6
Nov-09	7.5	89.81	9.67	170	0.0	0.0	0.00	1.1
Mar-10	7.6	90.40	9.08	143	0.4	0.0	0.00	0.6
Jun-10	7.6	91.15	8.33	155	1.4	0.0	0.00	1.1
Aug-10	7.6	93.31	6.17	158	0.4	0.0	0.00	3.2
Nov-10	7.5	90.48	9.00	145	0.4	0.0	0.00	2.1
Feb-11	7.7	89.56	9.92	151	0.6	0.0	0.00	3.3
May-11	7.6	92.90	6.58	141	0.4	0.0	0.00	1.7
Aug-11	7.7	96.23	3.25	190	0.4	0.0	0.00	2.9
Nov-11	7.4	91.23	8.25	208	0.3	0.4	0.00	1.7
Mar-12	7.8	91.15	8.33	157	0.2	0.0	0.00	2.2
May-12	8.0	93.81	5.67	136	0.2	0.0	0.00	2.4
Aug-12	7.2	92.73	6.75	151	0.0	0.0	0.00	1.0
Nov-12	7.5	91.56	7.92	144	0.1	0.0	0.00	1.7
Feb-13	7.5	89.40	10.08	150	0.0	0.0	0.00	1.1

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #1	#1	#1	#1	#1	#1	#1	#1
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.5	94.15	5.33	144	0.0	0.0	0.00	1.2
Aug-13	7.7	93.32	6.16	145	0.0	0.0	0.00	0.0
Dec-13	7.1	89.73	9.75	167	0.2	0.0	0.00	0.0
Feb-14	7.8	89.82	9.66	160	0.0	0.0	0.00	0.0
May-14	7.5	93.48	6.00	155	0.1	0.0	0.00	3.5
Aug-14	7.7	92.95	6.53	160	0.0	0.0	0.00	0.3
Nov-14	7.6	90.43	9.05	150	0.0	0.0	0.00	0.2
Feb-15	7.6	88.43	11.05	160	0.0	0.0	0.00	0.2
Averages	7.6	91.63	7.88	168	0.2	5.2	0.00	2.2
Min	6.0	88.43	3.25	0	0.0	0.0	0.00	0.0
Max	8.8	96.23	11.05	234	1.4	197.0	0.16	10.0

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #2	#2	#2	#2	#2	#2	#2	#2
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Aug-95	8.1	90.96	11.09	484				11.1
Sep-95	7.6	90.53	11.52					
Oct-95	7.6	90.05	12.00	422				10.6
Nov-95	7.6	88.07	13.98					
Jan-96	7.7	87.49	14.56					
Feb-96	7.9	88.01	14.04					
Mar-96	7.5	88.23	13.82					
Apr-96	7.7	87.95	14.10					
May-96	7.9	89.83	12.22					
Jun-96	8.0	89.31	12.74					
Jul-96	7.7	89.36	12.69	391				7.3
Aug-96	7.7	87.91	14.14					
Sep-96	7.3	88.74	13.31					
Oct-96	7.8	88.81	13.24	399				7.9
Nov-96	7.5	86.71	15.34					
Dec-96	7.9	86.39	15.66					
Jan-97	7.6	88.89	13.16					
Feb-97	7.4	88.05	14.00					
Mar-97	7.7	87.34	14.71					
Apr-97	7.3	89.57	12.48					
May-97	7.7	93.44	8.61					
Jun-97	7.6	89.63	12.42					
Jul-97	7.7	89.51	12.54	384				11.5
Aug-97	7.3	89.57	12.48					
Sep-97	7.9	89.62	12.43					
Oct-97	8.5	88.23	13.82	403				11.3
Nov-97	7.4	86.78	15.27					
Dec-97	7.3	87.60	14.45					
Jan-98	7.3	87.58	14.47					
Feb-98	7.1	90.46	11.59					
Mar-98	7.2	88.93	13.12					
Apr-98	7.4	88.79	13.26					
May-98	7.3	89.54	12.51					
Jun-98	7.5	90.43	11.62					
Jul-98	7.3	90.33	11.72					
Aug-98	7.4	89.21	12.84	401				8.9
Sep-98	7.4	89.41	12.64					
Oct-98	7.6	87.06	14.99	417				8.2
Nov-98	7.6	87.38	14.67					
Dec-98	7.5	87.08	14.97					
Jan-99	7.2	86.50	15.55					
Feb-99	7.5	88.45	13.60					
Mar-99	7.3	87.85	14.20					
Apr-99	7.5	88.09	13.96					
May-99	7.4	89.17	12.88					
Jun-99	7.4	89.15	12.90					

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #2	#2	#2	#2	#2	#2	#2	#2
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Jul-99	7.4	89.27	12.78					
Aug-99	7.2	88.92	13.13	400				8.9
Sep-99	7.7	88.60	13.45					
Oct-99	7.4	88.69	13.36	406				8.8
Nov-99	7.3	88.29	13.76					
Dec-99	7.2							
Jan-00	7.1	86.37	15.68					
Feb-00	7.4	88.37	13.68					
Mar-00	7.1	88.23	13.82					
Apr-00	7.3	89.81	12.24					
May-00	7.5	89.66	12.39					
Jun-00	7.3	89.76	12.29					
Jul-00	7.4	88.81	13.24	412				7.4
Aug-00	7.5	88.95	13.10					
Sep-00	7.2	89.42	12.63					
Oct-00	7.0	88.91	13.14	404				9.0
Nov-00	7.2	87.96	14.09					
Dec-00	7.1	87.08	14.97					
Jan-01	7.0	87.42	14.63					
Feb-01	7.0	87.05	15.00					
Mar-01	7.3	87.90	14.15					
Apr-01								
May-01	7.5	89.38	12.67					
Jun-01	7.4	88.83	13.22					
Jul-01	7.3	88.20	13.85					
Aug-01	6.9	89.60	12.45	405				7.9
Sep-01	7.1	89.76	12.29					
Oct-01	7.1	89.91	12.14	412				7.9
Nov-01	7.4	87.45	14.60					
Dec-01								
Jan-02								
Feb-02	7.1	88.66	13.39					
Mar-02	7.6	87.11	14.94					
Apr-02	7.3	89.32	12.73					
May-02	7.0	89.60	12.45					
Jun-02	7.0	88.85	13.20					
Jul-02	7.0	89.14	12.91					
Aug-02	7.3	88.54	13.51	386				7.1
Sep-02	7.4	89.21	12.84					
Oct-02	7.3	88.30	13.75	418				6.8
Nov-02	6.9	86.95	15.10					
Dec-02		87.86	14.19					
Jan-03		88.77	13.28					
Feb-03	6.9	81.50	20.55					
Mar-03	7.6	88.67	13.38					
Apr-03		88.15	13.90					

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #2	#2	#2	#2	#2	#2	#2	#2
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03	6.5	89.21	12.84					
Jun-03	6.8	89.79	12.26					
Jul-03	7.4	88.03	14.02					
Aug-03	6.7	93.70	8.35	359				5.1
Sep-03	7.4	89.85	12.20					
Oct-03	7.3	88.05	14.00	394				5.5
Nov-03	6.9	86.95	15.10	423	0.0	0.0	0.00	6.1
Dec-03	7.4	88.19	13.86	426	0.0	0.0	0.00	5.6
Mar-04	7.0	91.93	10.12	460	0.0	0.0	0.00	10.5
May-04	7.3	90.05	12.00	448	0.5	0.4	0.00	9.5
Aug-04	6.9	91.60	10.16	479	0.0	0.0	0.00	8.2
Sep-04	7.0	87.93	13.83	426	0.0	0.0	0.00	7.2
Nov-04	7.5	88.86	12.90	354	0.0	0.2	0.00	8.2
Feb-05	7.0	94.51	7.25	476	0.2	2.4	0.00	9.0
May-05	7.6	88.43	13.33	445	0.0	0.7	0.00	8.8
Aug-05	7.0	89.34	12.42	445	0.0	1.3	0.00	3.9
Nov-05	6.8	88.06	13.70	428	0.0	0.3	0.00	5.7
Feb-06	7.0	87.76	14.00	463	0.0	0.5	0.00	5.5
May-06	7.5	88.26	13.50	517	0.0	0.0	0.00	5.5
Aug-06	6.9	89.47	12.29	531	0.7	0.0	0.00	6.7
Dec-06	6.8	87.93	13.83	538	0.0	0.0	0.00	2.2
Feb-07	7.2	86.60	15.16	407	0.0	0.0	0.00	9.7
May-07	7.1	90.26	11.50	353	0.6	0.0	0.00	3.9
Aug-07	7.1	89.86	11.90	493	0.9	0.0	0.00	5.0
Nov-07	7.1	87.76	14.00	469	0.6	0.0	0.00	5.0
Mar-08	7.0	93.09	8.67	445	0.2	0.0	0.00	5.0
May-08	7.3	89.26	12.50	451	0.4	0.0	0.00	3.0
Aug-08	7.7	89.51	12.25	502	0.6	0.0	0.00	3.2
Nov-08	7.5	87.93	13.83	524	0.2	0.0	0.00	4.6
Mar-09	7.1	86.60	15.16	530	0.0	0.0	0.00	6.7
May-09	7.4	89.60	12.16	544	0.0	0.3	0.00	7.7
Aug-09	7.2	89.93	11.83	450	0.9	0.0	0.00	6.1
Nov-09	6.9	87.34	14.42	540	0.0	0.0	0.00	2.4
Mar-10	6.9	85.51	16.25	449	0.0	0.0	0.00	2.6
Jun-10	7.2	88.96	12.80	405	0.6	0.0	0.00	3.4
Aug-10	7.2	89.84	11.92	463	0.3	0.0	0.00	9.4
Nov-10	7.0	87.84	13.92	501	0.3	0.0	0.00	3.2
Feb-11	7.2	87.51	14.25	459	0.6	0.0	0.00	3.9
May-11	7.2	87.59	14.17	393	0.3	0.0	0.00	2.6
Aug-11	7.3	90.26	11.50	528	0.3	0.0	0.00	5.8
Nov-11	6.9	89.26	12.50	534	0.4	0.3	0.00	4.6
Mar-12	7.0	86.84	14.92	463	0.3	0.0	0.00	4.9
May-12	7.4	86.59	15.17	446	0.4	0.0	0.00	3.7
Aug-12	6.8	88.51	13.25	560	0.0	0.0	0.00	4.6
Nov-12	7.4	87.84	13.92	438	0.4	0.0	0.00	2.2
Feb-13	7.1	87.26	14.50	460	0.0	0.0	0.00	2.3

MORNING STAR PACKING COMPANY

GroundWater Samples Lab-Test Results

	Groundwater Sample Locations & Constituents							
Location	Well #2	#2	#2	#2	#2	#2	#2	#2
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.4	88.93	12.83	466	0.0	0.0	0.00	2.2
Aug-13	7.2	89.85	11.91	440	0.0	0.0	0.00	1.4
Dec-13	7.3	87.35	14.41	508	0.2	0.0	0.00	3.0
Feb-14	8.0	86.68	15.08	540	0.0	0.3	0.00	5.0
May-14	7.1	88.01	13.75	498	0.7	0.0	0.00	1.2
Aug-14	7.2	89.98	11.78	420	0.0	0.0	0.00	1.3
Nov-14	7.0	87.74	14.02	410	0.0	0.0	0.00	2.4
Feb-15	6.9	86.73	15.03	440	0.0	0.0	0.00	2.8
Averages	7.3	88.66	13.30	450	0.2	0.1	0.00	5.9
Min	6.5	81.50	7.25	353	0.0	0.0	0.00	1.2
Max	8.5	94.51	20.55	560	0.9	2.4	0.00	11.5

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #3	#3	#3	#3	#3	#3	#3	#3
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Aug-95	8.0	91.17	2.87	494				10.1
Sep-95	7.6	89.99	4.05					
Oct-95	7.6	89.32	4.72	486				10.3
Nov-95	7.5	87.87	6.17					
Jan-96	7.7	87.49	6.55					
Feb-96	7.8	87.55	6.49					
Mar-96	7.6	87.55	6.49					
Apr-96	7.6	87.44	6.60					
May-96	7.8	88.86	5.18					
Jun-96	7.9	88.83	5.21					
Jul-96	7.7	88.51	5.53	419				9.4
Aug-96	8.0	87.30	6.74					
Sep-96	7.4	87.78	6.26					
Oct-96	7.8	87.97	6.07	454				9.2
Nov-96	7.4	86.12	7.92					
Dec-96	7.8	85.86	8.18					
Jan-97	7.5	88.28	5.76					
Feb-97	7.4	87.37	6.67					
Mar-97	7.8	86.80	7.24					
Apr-97	7.3	88.77	5.27					
May-97	7.6	87.50	6.54					
Jun-97	7.6	88.46	5.58					
Jul-97	7.6	88.70	5.34	415				10.8
Aug-97	7.3	88.87	5.17					
Sep-97	7.9	88.84	5.20					
Oct-97	8.4	87.44	6.60	428				10.8
Nov-97	7.4	86.37	7.67					
Dec-97	7.3	87.04	7.00					
Jan-98	7.4	87.52	6.52					
Feb-98	7.2	89.56	4.48					
Mar-98	7.3	88.38	5.66					
Apr-98	7.5	87.96	6.08					
May-98	7.4	88.61	5.43					
Jun-98	7.5	88.79	5.25					
Jul-98	7.3	89.16	4.88					
Aug-98	7.4	89.04	5.00	443				13.8
Sep-98	7.4	88.51	5.53					
Oct-98	7.6	88.30	5.74	439				11.8
Nov-98	7.7	82.90	11.14					
Dec-98	7.6	86.64	7.40					
Jan-99	7.4	86.06	7.98					
Feb-99	7.6	87.90	6.14					
Mar-99	7.4	87.19	6.85					
Apr-99	7.5	87.16	6.88					
May-99	7.5	88.14	5.90					
Jun-99	7.4	88.31	5.73					

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #3	#3	#3	#3	#3	#3	#3	#3
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
Jul-99	7.4	88.19	5.85					
Aug-99	7.4	88.20	5.84	480				13.6
Sep-99	8.0	88.05	5.99					
Oct-99	7.5	88.14	5.90	451				13.4
Nov-99	7.3	87.68	6.36					
Dec-99	7.2							
Jan-00	7.3	86.06	7.98					
Feb-00								
Mar-00	7.4	87.70	6.34					
Apr-00	7.5	88.68	5.36					
May-00	7.3	88.46	5.58					
Jun-00	7.5	88.41	5.63					
Jul-00	7.5	87.94	6.10	452				13.3
Aug-00	7.5	87.54	6.50					
Sep-00	7.4	88.73	5.31					
Oct-00	7.4	88.64	5.40	466				13.9
Nov-00	7.4	87.30	6.74					
Dec-00	7.3	86.44	7.60					
Jan-01	7.3	86.97	7.07					
Feb-01	7.4	86.58	7.46					
Mar-01	7.8	87.44	6.60					
Apr-01								
May-01	7.5	87.79	6.25					
Jun-01	7.4	88.12	5.92					
Jul-01	7.3	87.94	6.10					
Aug-01	7.4	88.65	5.39	498				13.2
Sep-01	7.2	88.73	5.31					
Oct-01	7.2	88.07	5.97	470				13.7
Nov-01	7.6	86.88	7.16					
Dec-01								
Jan-02								
Feb-02	7.2	87.92	6.12					
Mar-02	7.4	86.53	7.51					
Apr-02	7.2	88.28	5.76					
May-02	7.3	88.35	5.69					
Jun-02	7.4	88.05	5.99					
Jul-02	7.6	88.14	5.90					
Aug-02	7.3	87.85	6.19	452				8.8
Sep-02	7.4	88.23	5.81					
Oct-02	7.3	87.47	6.57	463				6.5
Nov-02	7.3	86.27	7.77					
Dec-02		87.57	6.47					
Jan-03		88.29	5.75					
Feb-03								
Mar-03	7.8	87.04	7.00					
Apr-03		85.43	8.61					

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #3	#3	#3	#3	#3	#3	#3	#3
Date	pH	Elevation	Depth to GroundWater	TDS	TKN	Iron	Manganese	Nitrate Nitrogen
May-03	6.7	88.02	6.02					
Jun-03	7.0	88.26	5.78					
Jul-03	7.6	85.14	8.90					
Aug-03	6.9	85.48	8.56	410				8.7
Sep-03	7.4	88.82	5.22					
Oct-03	7.7	87.12	6.92	432				10.0
Nov-03	7.1	86.44	7.60	454	0.0	0.0	0.00	11.0
Dec-03	7.7	88.80	5.24	462	0.7	0.0	31.00	11.7
Mar-04	7.4	88.08	5.96	487	0.0	0.0	0.00	19.8
May-04	7.6	88.96	5.08	492	0.0	0.8	0.00	21.0
Aug-04	7.3	87.84	6.00	499	0.0	0.1	0.00	17.1
Sep-04	7.4	87.26	6.58	446	0.2	0.0	0.00	15.2
Nov-04	7.7	88.14	5.70	396	0.0	0.0	0.00	18.1
Feb-05	7.3	89.18	4.66	522	0.6	20.0	0.64	18.5
May-05	7.5	87.38	6.46	516	0.0	0.7	0.00	27.2
Aug-05	7.5	88.59	5.25	480	0.9	0.0	0.35	18.4
Nov-05	7.1	87.18	6.66	473	0.0	0.6	0.00	6.4
Feb-06	7.1	85.34	8.50	488	0.0	0.7	0.00	10.8
May-06	7.1	87.80	6.04	633	0.0	0.1	0.00	12.9
Aug-06	7.2	88.14	5.70	576	0.8	0.0	0.00	9.3
Dec-06	7.2	87.97	5.87	510	0.0	0.0	0.00	11.9
Feb-07	7.3	88.68	5.16	537	0.0	0.0	0.00	15.0
May-07	7.5	88.59	5.25	360	0.8	0.0	0.00	10.3
Aug-07	7.5	88.84	5.00	555	1.0	0.0	0.00	10.8
Nov-07	7.4	87.51	6.33	495	0.5	0.0	0.00	15.1
Mar-08	7.4	87.84	6.00	253	0.1	0.0	0.00	3.9
May-08	7.6	88.43	5.41	463	0.5	0.0	0.00	6.4
Aug-08	7.9	89.34	4.50	479	0.5	0.0	0.00	8.6
Nov-08	7.9	87.92	5.92	549	0.0	0.0	0.00	12.1
Mar-09	7.3	87.26	6.58	432	0.0	0.0	0.00	12.3
May-09	7.4	87.01	6.83	420	0.2	0.2	0.00	10.8
Aug-09	7.6	88.26	5.58	540	0.0	0.0	0.00	8.7
Nov-09	7.3	87.59	6.25	517	0.3	0.0	0.00	8.9
Mar-10	7.4	88.43	5.41	406	0.0	0.0	0.00	15.1
Jun-10	7.2	89.26	4.58	388	0.4	0.0	0.00	7.7
Aug-10	7.3	89.92	3.92	536	0.5	0.0	0.00	51.4
Nov-10	7.3	87.92	5.92	456	0.3	0.0	0.00	16.4
Feb-11	7.5	88.09	5.75	524	0.9	0.0	0.00	12.2
May-11	7.4	88.01	5.83	431	0.7	0.0	0.00	20.0
Aug-11	7.5	90.51	3.33	560	0.6	0.0	0.00	27.4
Nov-11	7.3	89.51	4.33	630	0.6	0.5	0.00	30.8
Mar-12	7.4	85.92	7.92	498	0.6	0.0	0.00	18.0
May-12	7.6	87.17	6.67	534	0.7	0.0	0.00	26.3
Aug-12	7.1	87.92	5.92	520	0.0	0.0	0.00	20.6
Nov-12	7.4	86.76	7.08	477	0.6	0.0	0.00	11.1
Feb-13	7.3	86.34	7.50	515	0.0	0.0	0.00	21.3

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #3	#3	#3	#3	#3	#3	#3	#3
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.4	87.84	6.00	477	0.0	0.0	0.00	16.1
Aug-13	7.4	88.84	5.00	550	0.0	0.0	0.00	19.1
Dec-13	7.6	86.76	7.08	574	0.4	0.1	0.00	12.0
Feb-14	7.6	86.43	7.41	570	0.0	0.3	0.00	10.7
May-14	7.4	87.18	6.66	530	0.1	0.0	0.00	11.8
Aug-14	7.4	89.15	4.69	500	0.0	0.1	0.00	6.2
Nov-14	7.3	86.82	7.02	500	0.0	0.0	0.00	8.8
Feb-15	7.1	86.22	7.62	490	0.0	0.0	0.00	9.9
Averages	7.5	87.82	6.15	483	0.3	0.5	0.67	14.0
Min	6.7	82.90	2.87	253	0.0	0.0	0.00	3.9
Max	8.4	91.17	11.14	633	1.0	20.0	31.00	51.4

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #4	#4	#4	#4	#4	#4	#4	#4
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.4	89.81	7.42	348	0.0	0.0	0.00	5.2
Nov-04	7.6	89.63	7.60	352	0.0	0.2	0.00	6.8
Feb-05	7.3	90.07	7.16	438	0.4	83.0	2.80	7.1
May-05	7.7	90.31	6.92	506	0.3	0.8	0.00	5.2
Aug-05	7.5	91.40	5.83	298	0.0	3.3	0.00	2.7
Nov-05	7.4	89.57	7.66	296	0.0	0.2	0.00	8.3
Feb-06	7.2	89.48	7.75	367	0.0	1.3	0.00	5.8
May-06	7.4	90.11	7.12	481	0.0	0.0	0.00	3.9
Aug-06	7.2	91.47	5.76	305	0.8	0.0	0.00	3.8
Dec-06	7.5	89.15	8.08	365	0.0	0.0	0.00	4.2
Feb-07	7.4	87.81	9.42	414	0.0	0.0	0.00	10.8
May-07	7.4	91.65	5.58	309	0.7	0.0	0.00	4.1
Aug-07	7.5	91.40	5.83	327	0.9	0.0	0.00	3.9
Nov-07	7.4	89.23	8.00	385	0.3	0.0	0.00	5.8
Mar-08	7.4	89.52	7.71	378	0.1	0.0	0.00	4.2
May-08	7.5	91.48	5.75	371	0.3	0.0	0.00	4.8
Aug-08	8.0	91.44	5.79	351	0.5	0.0	0.00	5.4
Nov-08	7.6	89.31	7.92	360	0.0	0.0	0.00	7.5
Mar-09	7.8	88.23	9.00	373	0.0	0.0	0.00	6.6
May-09	7.6	92.40	4.83	347	0.0	0.2	0.00	7.1
Aug-09	7.8	93.07	4.16	420	0.5	0.0	0.00	4.4
Nov-09	7.3	88.56	8.67	327	0.4	0.0	0.00	2.1
Mar-10	7.4	90.23	7.00	324	0.3	0.0	0.00	2.1
Jun-10	7.7	91.40	5.83	344	0.8	0.0	0.00	4.1
Aug-10	7.5	91.81	5.42	290	0.6	0.0	0.00	9.4
Nov-10	7.3	89.15	8.08	286	0.5	0.0	0.00	4.8
Feb-11	7.5	88.48	8.75	323	0.7	0.0	0.00	4.6
May-11	7.5	90.65	6.58	275	0.4	0.0	0.00	5.8
Aug-11	7.6	93.23	4.00	355	0.5	0.0	0.00	7.2
Nov-11	7.4	91.23	6.00	320	0.5	0.4	0.00	6.1
Mar-12	7.5	88.23	9.00	319	0.6	0.0	0.00	5.6
May-12	7.9	91.40	5.83	298	0.5	0.0	0.00	7.2
Aug-12	7.0	90.56	6.67	350	0.0	0.0	0.00	7.7
Nov-12	7.3	89.23	8.00	306	0.5	0.0	0.00	5.0
Feb-13	7.6	88.23	9.00	290	0.0	0.0	0.00	4.1

NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

AND SAMPLED 4 SEPTEMBER 2004

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #4	#4	#4	#4	#4	#4	#4	#4
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.5	90.98	6.25	310	0.0	0.0	0.00	4.2
Aug-13	7.4	91.32	5.91	330	0.0	0.0	0.00	2.1
Dec-13	7.7	88.57	8.66	380	0.3	0.0	0.00	6.0
Feb-14	7.7	87.73	9.50	255	0.0	0.3	0.00	0.0
May-14	7.6	90.07	7.16	245	0.4	0.0	0.00	0.6
Aug-14	7.5	91.04	6.19	270	0.0	0.0	0.00	1.5
Nov-14	7.3	88.94	8.29	270	0.0	0.0	0.00	1.0
Feb-15	7.3	88.18	9.05	290	0.0	0.0	0.00	1.2
Averages	7.5	90.13	7.10	338	0.3	2.1	0.07	4.9
Min	7.0	87.73	4.00	245	0.0	0.0	0.00	0.0
Max	8.0	93.23	9.50	506	0.9	83.0	2.80	10.8

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #5	#5	#5	#5	#5	#5	#5	#5
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.3	84.05	4.25	704	0.3	0.0	0.00	42.3
Nov-04	7.8	84.14	4.16	528	0.0	0.2	0.00	7.1
Feb-05	7.7	85.05	3.25	462	0.3	88.0	2.40	9.0
May-05	7.8	84.01	4.29	488	0.0	1.0	0.00	7.6
Aug-05	7.8	84.72	3.58	469	0.0	5.5	0.10	4.4
Nov-05	7.8	82.93	5.37	533	0.0	0.2	0.00	6.2
Feb-06	7.6	84.05	4.25	572	0.0	1.7	0.00	5.8
May-06	7.8	84.47	3.83	697	0.0	0.1	0.00	5.1
Aug-06	7.6	81.45	6.85	627	0.7	0.0	0.00	5.9
Dec-06	7.9	84.59	3.71	610	0.0	0.0	0.00	6.2
Feb-07	7.7	82.17	6.13	655	0.0	0.0	0.00	9.3
May-07	7.7	84.97	3.33	563	0.9	0.0	0.00	3.9
Aug-07	7.7	84.55	3.75	524	1.0	0.0	0.00	4.2
Nov-07	7.7	83.55	4.75	484	0.4	0.0	0.00	3.8
Mar-08	7.8	84.13	4.17	533	0.3	0.0	0.00	4.8
May-08	7.8	84.64	3.66	617	0.5	0.0	0.00	3.3
Aug-08	8.2	84.63	3.67	585	0.5	0.0	0.00	4.1
Nov-08	7.9	83.80	4.50	670	0.0	0.0	0.00	5.8
Mar-09	8.1	84.72	3.58	663	0.2	0.0	0.00	8.5
May-09	7.9	84.64	3.66	624	0.3	0.2	0.14	8.8
Aug-09	7.9	83.22	5.08	608	0.8	0.0	0.00	4.2
Nov-09	7.6	84.13	4.17	571	0.3	0.0	0.00	5.4
Mar-10	7.5	84.64	3.66	582	0.5	0.0	0.00	7.1
Jun-10	8.0	82.55	5.75	566	1.2	0.0	0.00	6.9
Aug-10	7.7	85.05	3.25	498	0.5	0.0	0.00	15.2
Nov-10	7.5	84.30	4.00	487	0.5	0.0	0.00	7.4
Feb-11	7.7	85.30	3.00	545	0.8	0.0	0.00	12.5
May-11	7.6	84.72	3.58	553	0.8	0.0	0.00	25.3
Aug-11	7.7	85.80	2.50	779	0.9	0.0	0.00	54.1
Nov-11	7.6	84.39	3.91	760	0.9	0.4	0.00	40.2
Mar-12	7.7	84.09	4.21	628	0.9	0.0	0.00	25.3
May-12	8.1	83.47	4.83	602	0.9	0.0	0.00	22.4
Aug-12	7.3	84.30	4.00	930	0.0	0.0	0.00	83.7
Nov-12	7.6	83.30	5.00	638	0.9	0.0	0.00	26.3
Feb-13	7.6	83.22	5.08	520	0.0	0.0	0.00	11.2

NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

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MORNING STAR PACKING COMPANY

GroundWater Samples Lab-Test Results

	Groundwater Sample Locations & Constituents							
Location	Well #5	#5	#5	#5	#5	#5	#5	#5
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.5	84.89	3.41	566	0.0	0.0	0.00	10.4
Aug-13	7.6	84.55	3.75	638	0.0	0.0	0.00	5.7
Dec-13	7.8	83.55	4.75	680	0.2	0.0	0.00	10.5
Feb-14	8.0	83.38	4.92	565	0.0	0.3	0.00	5.0
May-14	7.6	84.47	3.83	610	0.2	0.0	0.00	3.0
Aug-14	7.5	84.31	3.99	570	0.0	0.0	0.03	2.2
Nov-14	7.5	82.90	5.40	570	0.0	0.0	0.03	2.0
Feb-15	7.5	83.27	5.03	610	0.0	0.0	0.01	2.6
Averages	7.7	84.07	4.23	597	0.4	2.3	0.06	12.7
Min	7.3	81.45	2.50	462	0.0	0.0	0.00	2.0
Max	8.2	85.80	6.85	930	1.2	88.0	2.40	83.7

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #6	#6	#6	#6	#6	#6	#6	#6
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.5	81.52	5.00	770	0.0	0.0	0.00	11.0
Nov-04	7.9	85.02	1.50	699	0.0	0.3	0.00	9.3
Feb-05	7.5	84.27	2.25	689	0.3	23.6	0.80	11.4
May-05	7.9	81.19	5.33	750	0.0	0.6	0.00	16.0
Aug-05	7.5	84.10	2.42	751	0.0	5.0	0.13	7.2
Nov-05	7.6	81.40	5.12	748	0.0	0.3	0.00	7.5
Feb-06	7.1	82.69	3.83	700	0.0	0.4	0.00	6.7
May-06	7.7	82.11	4.41	666	0.0	0.0	0.00	8.9
Aug-06	7.4	84.36	2.16	682	1.0	0.0	0.00	10.5
Dec-06	7.6	82.85	3.67	685	0.0	0.0	0.00	14.8
Feb-07	7.5	80.86	5.66	669	0.0	0.0	0.00	16.5
May-07	7.6	82.77	3.75	600	0.7	0.0	0.00	6.6
Aug-07	7.6	82.19	4.33	600	1.1	0.0	0.00	12.8
Nov-07	7.5	81.69	4.83	741	0.6	0.0	0.00	12.7
Mar-08	7.5	82.60	3.92	658	0.4	0.0	0.00	12.8
May-08	7.5	81.77	4.75	739	0.5	0.0	0.00	6.5
Aug-08	7.9	84.94	1.58	680	0.7	0.0	0.00	7.2
Nov-08	7.8	83.27	3.25	725	0.2	0.0	0.00	8.2
Mar-09	7.8	82.94	3.58	710	0.2	0.0	0.00	7.9
May-09	7.9	79.69	6.83	730	0.4	0.3	0.11	11.6
Aug-09	7.9	80.69	5.83	725	1.1	0.0	0.00	12.0
Nov-09	7.3	83.27	3.25	695	0.3	0.0	0.00	7.5
Mar-10	7.3	83.19	3.33	765	0.5	0.0	0.00	4.7
Jun-10	7.5	81.94	4.58	821	0.3	0.0	0.00	8.5
Aug-10	7.4	83.35	3.17	704	0.5	0.0	0.00	5.9
Nov-10	7.2	83.35	3.17	710	0.3	0.0	0.00	3.2
Feb-11	7.4	83.69	2.83	779	0.6	0.0	0.00	4.2
May-11	7.4	82.44	4.08	634	0.2	0.0	0.00	5.2
Aug-11	7.5	84.19	2.33	825	0.3	0.0	0.00	5.8
Nov-11	7.4	86.11	0.41	840	0.2	0.2	0.00	6.5
Mar-12	7.4	82.60	3.92	797	0.4	0.0	0.00	5.0
May-12	7.6	80.94	5.58	740	0.4	0.0	0.00	5.9
Aug-12	7.1	81.94	4.58	780	0.0	0.0	0.00	7.1
Nov-12	7.4	81.60	4.92	674	0.3	0.0	0.00	5.6
Feb-13	7.3	81.44	5.08	735	0.0	0.0	0.00	8.8

NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

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MORNING STAR PACKING COMPANY

GroundWater Samples Lab-Test Results

	Groundwater Sample Locations & Constituents							
Location	Well #6	#6	#6	#6	#6	#6	#6	#6
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.5	81.52	5.00	666	0.0	0.0	0.00	9.7
Aug-13	7.3	82.02	4.50	685	0.0	0.0	0.00	7.8
Dec-13	7.6	82.02	4.50	820	0.4	0.0	0.01	5.5
Feb-14	7.7	83.61	2.91	775	0.0	0.1	0.00	7.0
May-14	7.3	81.36	5.16	850	0.2	0.0	0.00	3.5
Aug-14	7.3	84.95	1.57	720	0.0	0.1	0.03	2.1
Nov-14	7.3	82.37	4.15	690	0.0	0.1	0.02	1.7
Feb-15	7.2	83.34	3.18	700	0.0	0.0	0.03	1.3
Averages	7.5	82.65	3.87	724	0.3	0.7	0.03	7.9
Min	7.1	79.69	0.41	600	0.0	0.0	0.00	1.3
Max	7.9	86.11	6.83	850	1.1	23.6	0.80	16.5

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #7	#7	#7	#7	#7	#7	#7	#7
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.5	80.41	4.75	534	0.0	0.0	0.00	11.0
Nov-04	7.5	81.66	3.50	542	0.0	0.2	0.22	9.9
Feb-05	7.4	82.50	2.66	531	0.0	56.0	2.20	11.8
May-05	7.9	80.99	4.17	536	0.3	0.8	0.13	11.5
Aug-05	7.6	81.74	3.42	528	0.0	1.8	0.34	7.0
Nov-05	7.5	81.16	4.00	554	0.0	0.3	0.14	8.6
Feb-06	7.2	80.83	4.33	563	0.0	0.6	0.00	7.5
May-06	7.6	80.96	4.20	616	0.0	0.0	0.00	8.4
Aug-06	7.3	77.12	8.04	619	0.7	0.0	0.00	6.8
Dec-06	7.2	81.74	3.42	647	0.0	0.0	0.14	4.3
Feb-07	7.4	81.24	3.92	742	0.0	0.0	1.00	13.1
May-07	7.5	82.49	2.67	624	0.8	0.1	0.00	6.2
Aug-07	7.5	82.58	2.58	615	1.0	0.0	0.00	7.9
Nov-07	7.4	81.00	4.16	694	0.5	0.0	0.14	5.2
Mar-08	7.4	81.37	3.79	607	0.2	0.0	0.00	13.8
May-08	7.5	82.50	2.66	591	0.5	0.0	0.00	3.7
Aug-08	8.0	82.08	3.08	613	0.5	0.0	0.00	7.0
Nov-08	8.0	81.58	3.58	710	0.2	0.0	0.00	9.9
Mar-09	7.5	81.75	3.41	698	0.5	0.0	0.11	12.4
May-09	7.7	80.91	4.25	655	0.4	0.0	0.15	14.6
Aug-09	7.9	77.33	7.83	680	0.9	0.0	0.00	10.4
Nov-09	7.3	81.58	3.58	678	0.3	0.0	0.00	2.4
Mar-10	7.3	82.00	3.16	652	0.4	0.0	0.14	4.2
Jun-10	7.5	81.83	3.33	665	0.3	0.0	0.00	4.3
Aug-10	7.4	82.74	2.42	584	0.2	0.0	0.08	4.7
Nov-10	7.3	81.83	3.33	620	0.2	0.0	0.00	3.1
Feb-11	7.4	82.24	2.92	696	0.5	0.1	0.16	3.8
May-11	7.4	82.16	3.00	567	0.5	0.0	0.00	4.8
Aug-11	7.6	83.49	1.67	710	0.6	0.0	0.00	6.5
Nov-11	7.3	82.58	2.58	830	0.5	0.3	0.33	5.5
Mar-12	7.4	81.83	3.33	675	0.5	0.0	0.72	5.8
May-12	7.6	80.16	5.00	659	0.5	0.0	0.78	4.4
Aug-12	7.0	82.66	2.50	710	0.0	0.0	0.00	5.0
Nov-12	7.4	80.24	4.92	653	0.5	0.0	0.56	1.1
Feb-13	7.3	80.50	4.66	644	0.0	0.0	0.00	2.5

NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

AND SAMPLED 4 SEPTEMBER 2004

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #7	#7	#7	#7	#7	#7	#7	#7
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.4	81.75	3.41	653	0.0	0.0	0.00	8.8
Aug-13	7.3	82.33	2.83	720	0.0	0.0	0.00	2.1
Dec-13	7.6	80.83	4.33	762	0.4	0.1	0.19	2.0
Feb-14	7.9	80.66	4.50	718	0.0	0.2	0.27	2.0
May-14	7.3	81.00	4.16	786	0.3	0.0	0.24	1.5
Aug-14	7.2	82.51	2.65	660	0.0	0.1	0.26	0.9
Nov-14	7.2	80.51	4.65	750	0.0	0.1	0.31	0.3
Feb-15	7.1	79.45	5.71	700	0.0	0.0	0.31	0.9
Averages	7.5	81.37	3.79	651	0.3	1.4	0.21	6.2
Min	7.0	77.12	1.67	528	0.0	0.0	0.00	0.3
Max	8.0	83.49	8.04	830	1.0	56.0	2.20	14.6

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #8	#8	#8	#8	#8	#8	#8	#8
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.3	74.81	2.66	512	0.0	0.0	0.00	0.0
Nov-04	7.5	73.87	3.60	732	0.0	0.3	1.24	2.2
Feb-05	7.2	75.47	2.00	755	0.4	35.2	1.90	0.4
May-05	7.4	72.01	5.46	699	0.6	0.5	0.87	0.0
Aug-05	7.7	73.97	3.50	729	0.0	2.6	0.00	8.8
Nov-05	7.3	71.14	6.33	737	0.0	0.2	1.13	0.5
Feb-06	7.0	73.56	3.91	721	0.0	0.5	0.36	0.3
May-06	7.3	73.47	4.00	787	0.0	0.0	0.00	0.9
Aug-06	7.1	69.93	7.54	700	1.0	0.0	0.00	2.1
Dec-06	7.5	74.22	3.25	753	0.0	0.0	0.00	1.4
Feb-07	7.2	74.13	3.34	934	0.0	0.0	0.00	2.7
May-07	7.2	73.47	4.00	645	0.8	0.7	0.43	0.3
Aug-07	7.3	74.47	3.00	776	0.8	0.0	0.00	4.7
Nov-07	7.2	73.56	3.91	850	0.7	0.0	0.48	1.3
Mar-08	7.2	74.01	3.46	820	0.1	0.0	0.00	9.0
May-08	7.2	74.31	3.16	963	0.5	0.0	0.65	1.7
Aug-08	7.7	73.89	3.58	942	0.5	0.0	0.56	4.1
Nov-08	7.5	74.22	3.25	815	0.2	0.0	0.15	4.0
Mar-09	7.5	74.97	2.50	712	0.3	0.0	0.21	4.0
May-09	7.7	73.64	3.83	718	0.3	0.0	0.32	6.5
Aug-09	8.1	69.06	8.41	780	0.9	0.0	0.00	6.9
Nov-09	7.1	74.22	3.25	776	0.5	0.0	0.00	3.5
Mar-10	7.1	74.14	3.33	820	0.3	0.0	0.70	0.4
Jun-10	7.8	73.65	3.82	735	0.5	0.0	0.00	5.5
Aug-10	7.3	74.47	3.00	748	0.0	0.0	0.49	3.5
Nov-10	7.0	74.55	2.92	747	0.2	0.0	0.35	1.1
Feb-11	7.2	75.47	2.00	937	0.4	0.3	0.86	5.3
May-11	7.1	73.64	3.83	809	0.3	0.0	0.00	1.9
Aug-11	7.3	74.39	3.08	1,017	0.2	0.0	0.00	0.0
Nov-11	7.2	74.89	2.58	996	0.5	1.1	0.47	2.0
Mar-12	7.3	74.47	3.00	842	0.3	0.0	1.15	2.2
May-12	7.4	72.14	5.33	855	0.4	0.0	1.21	2.7
Aug-12	6.8	72.97	4.50	966	0.0	0.0	0.00	1.3
Nov-12	7.1	72.55	4.92	876	0.3	0.0	0.85	0.9
Feb-13	7.3	73.39	4.08	800	0.0	0.0	0.00	2.5

NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

AND SAMPLED 4 SEPTEMBER 2004

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #8	#8	#8	#8	#8	#8	#8	#8
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.1	72.47	5.00	870	0.0	0.0	0.00	9.0
Aug-13	7.1	73.56	3.91	954	0.0	0.0	0.00	0.0
Dec-13	7.5	73.05	4.42	859	0.4	0.0	0.96	1.0
Feb-14	7.5	73.81	3.66	860	0.0	0.3	1.18	0.0
May-14	7.1	72.64	4.83	1,090	0.7	0.0	1.15	1.2
Aug-14	7.0	73.72	3.75	980	0.0	0.1	1.33	0.0
Nov-14	7.0	73.29	4.18	1,130	0.0	0.1	1.64	0.0
Feb-15	7.0	73.95	3.52	1,150	0.0	0.0	1.73	1.4
Averages	7.3	73.57	3.90	835	0.3	1.0	0.52	2.5
Min	6.8	69.06	2.00	512	0.0	0.0	0.00	0.0
Max	8.1	75.47	8.41	1,150	1.0	35.2	1.90	9.0

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #9	#9	#9	#9	#9	#9	#9	#9
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-03								
Jun-03								
Jul-03								
Aug-03								
Sep-03								
Oct-03								
Nov-03								
Dec-03								
Mar-04								
May-04								
Aug-04								
Sep-04	7.8	76.12	3.58	1,080	0.2	0.0	0.00	23.0
Nov-04	7.7	76.40	3.30	1,204	0.0	0.2	0.91	30.8
Feb-05	7.6	78.70	1.00	1,157	0.3	4.5	0.26	26.6
May-05	8.0	76.70	3.00	904	0.2	0.6	0.00	20.8
Aug-05	7.7	75.28	4.42	936	0.2	2.3	0.00	19.6
Nov-05	7.8	73.83	5.87	951	0.0	0.5	0.11	26.8
Feb-06	7.5	76.53	3.17	780	0.0	0.5	0.11	12.0
May-06	7.8	77.37	2.33	950	0.0	0.0	0.00	8.4
Aug-06	7.6	77.25	2.45	857	0.7	0.0	0.00	8.1
Dec-06	8.0	76.20	3.50	732	0.0	0.0	0.00	11.5
Feb-07	7.8	75.83	3.87	952	0.0	0.0	0.00	15.4
May-07	7.7	77.28	2.42	862	0.7	2.9	0.00	7.8
Aug-07	7.8	76.29	3.41	859	1.2	0.0	0.00	11.2
Nov-07	7.7	75.95	3.75	861	0.4	0.0	0.00	10.7
Mar-08	7.7	77.28	2.42	813	0.2	0.0	0.00	7.7
May-08	7.8	76.12	3.58	865	0.5	0.0	0.00	4.3
Aug-08	8.2	75.95	3.75	885	0.5	0.0	0.00	6.1
Nov-08	8.0	76.37	3.33	830	0.2	0.0	0.15	8.8
Mar-09	7.8	77.29	2.41	817	0.5	0.0	0.00	10.2
May-09	7.7	74.12	5.58	775	0.3	0.2	0.12	12.8
Aug-09	8.2	75.87	3.83	885	1.2	0.0	0.00	13.8
Nov-09	7.6	76.45	3.25	830	0.3	0.0	0.45	8.8
Mar-10	7.6	77.29	2.41	836	0.2	0.0	0.00	7.2
Jun-10	8.1	77.03	2.67	832	0.5	0.0	0.00	36.8
Aug-10	7.7	77.03	2.67	799	0.7	0.0	0.09	12.8
Nov-10	7.5	77.53	2.17	862	0.6	0.0	0.00	10.1
Feb-11	7.7	78.70	1.00	935	0.4	0.0	0.00	5.9
May-11	7.6	77.78	1.92	843	0.3	0.0	0.00	10.6
Aug-11	7.6	78.03	1.67	1,353	0.4	0.0	0.00	16.6
Nov-11	7.6	78.12	1.58	1,225	0.3	0.5	0.00	13.7
Mar-12	7.7	77.37	2.33	1,015	0.3	0.0	0.00	14.6
May-12	8.3	75.62	4.08	989	0.2	0.0	0.00	24.4
Aug-12	7.4	77.20	2.50	1,050	0.0	0.0	0.00	18.7
Nov-12	7.5	74.37	5.33	992	0.2	0.0	0.00	11.3
Feb-13	7.5	75.70	4.00	1,110	0.0	0.0	0.00	12.5

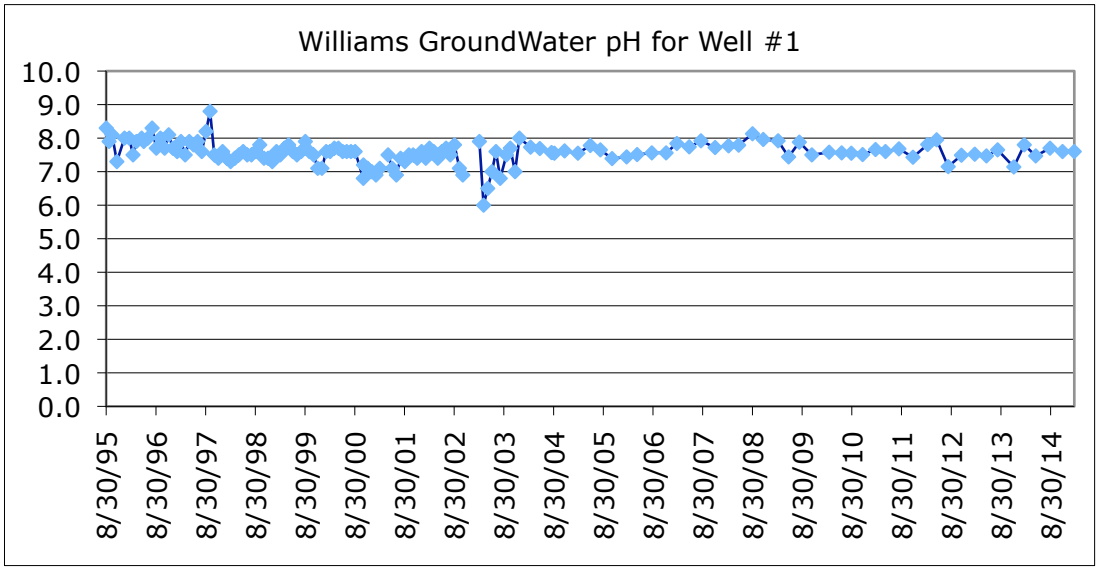
NEW MONITORING WELLS COMPLETED 19 AUGUST 2004

AND SAMPLED 4 SEPTEMBER 2004

MORNING STAR PACKING COMPANY

GROUNDWATER SAMPLES LAB-TEST RESULTS

	Groundwater Sample Locations & Constituents							
Location	Well #9	#9	#9	#9	#9	#9	#9	#9
Date	pH	Elevation	Depth to	TDS	TKN	Iron	Manganese	Nitrate
			GroundWater					Nitrogen
May-13	7.4	78.20	1.50	855	0.0	0.0	0.00	11.4
Aug-13	7.6	78.70	1.00	972	0.0	0.0	0.00	11.3
Dec-13	7.8	71.12	8.58	1,040	0.2	0.0	0.14	7.0
Feb-14	7.8	71.12	8.58	1,017	0.0	0.3	0.10	0.1
May-14	7.4	73.37	6.33	1,480	0.7	0.0	0.10	10.1
Aug-14	7.4	76.31	3.39	1,140	0.0	0.1	0.19	5.6
Nov-14	7.4	72.44	7.26	1,550	0.0	0.1	0.32	5.3
Feb-15	7.5	74.41	5.29	1,330	0.0	0.0	0.23	5.7
Averages	7.7	76.20	3.50	977	0.3	0.3	0.08	12.9
Min	7.4	71.12	1.00	732	0.0	0.0	0.00	0.1
Max	8.3	78.70	8.58	1,550	1.2	4.5	0.91	36.8


Williams GroundWater pH for Well #1
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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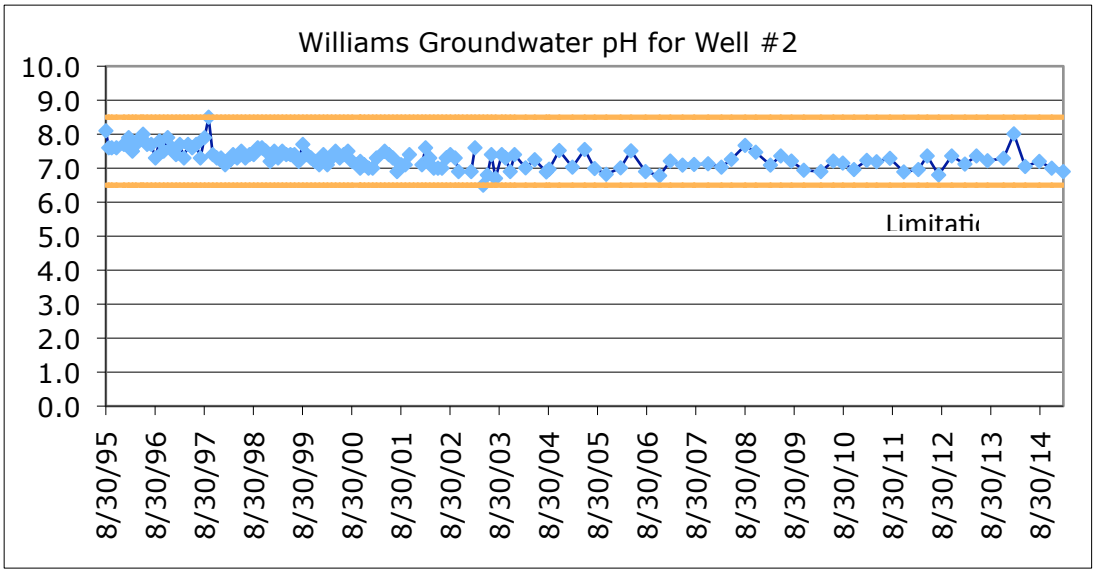
8/30/11
8/30/12
8/30/13
8/30/14


Williams Groundwater pH for Well #2
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitati
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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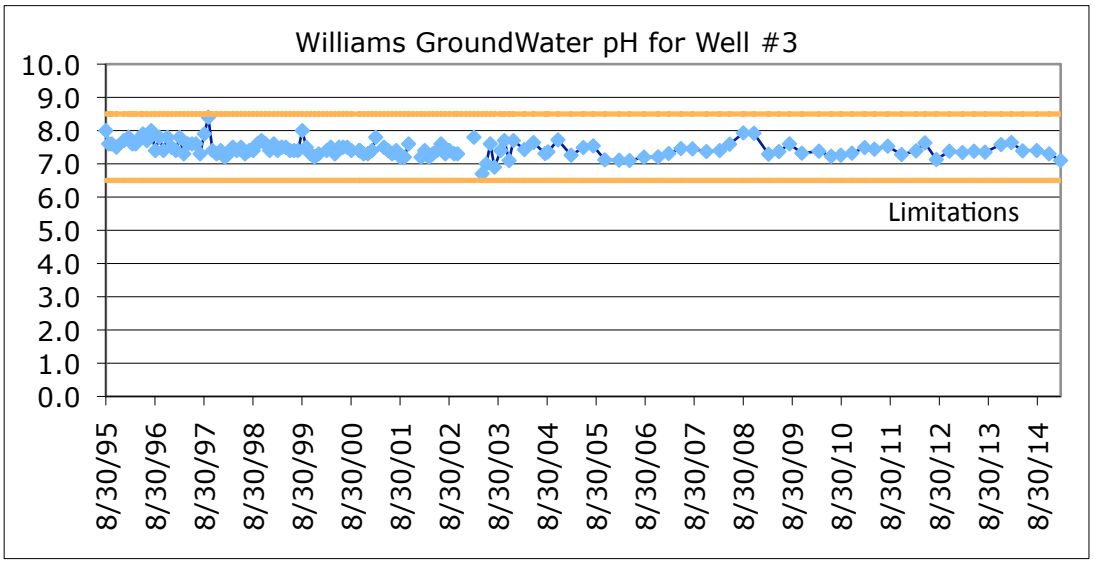
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #3
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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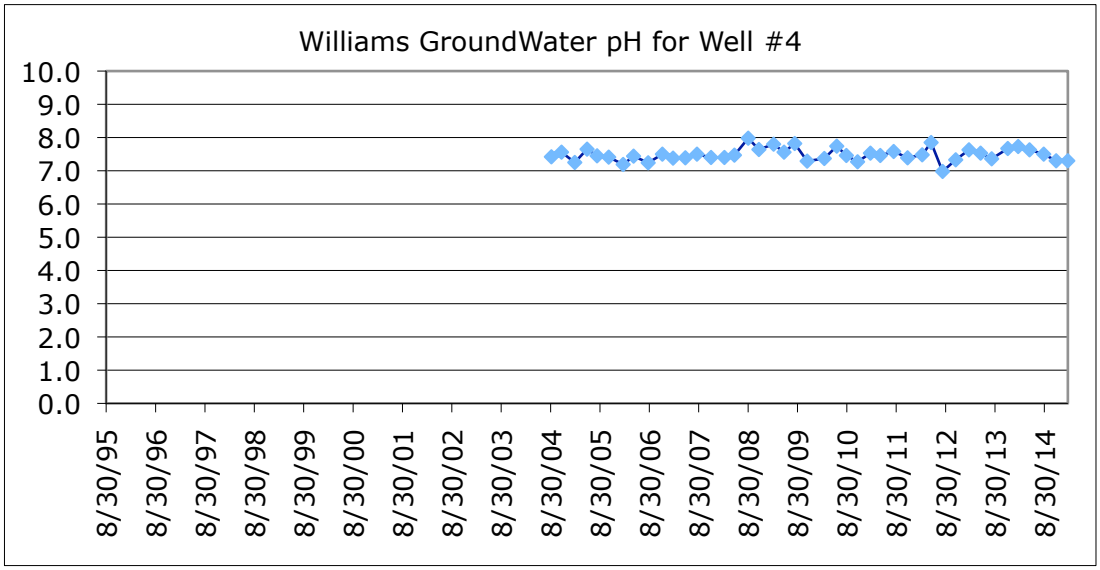
8/30/13
8/30/14


Williams GroundWater pH for Well #4
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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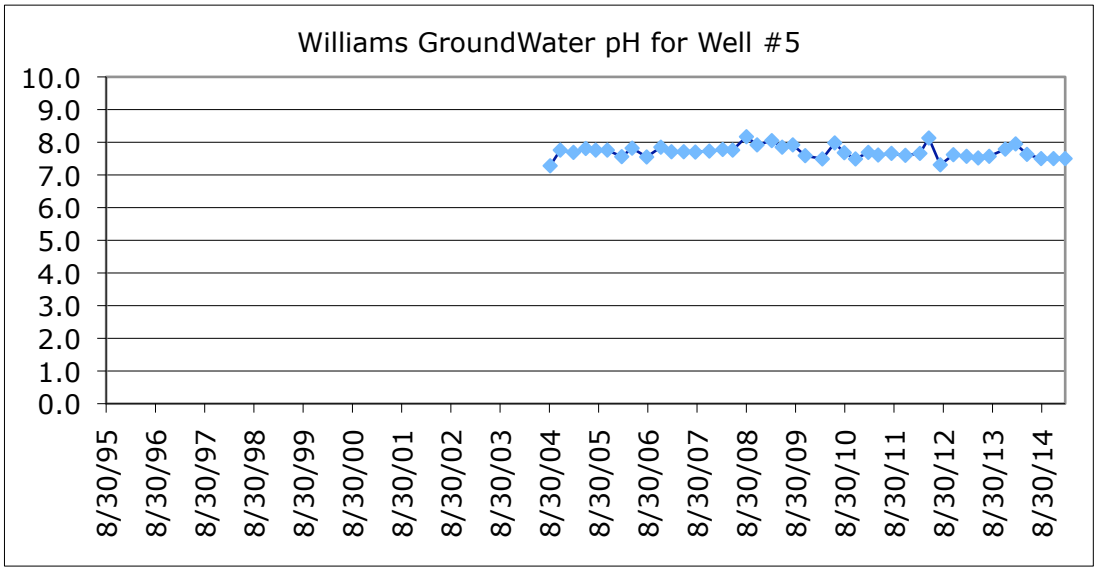
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #5
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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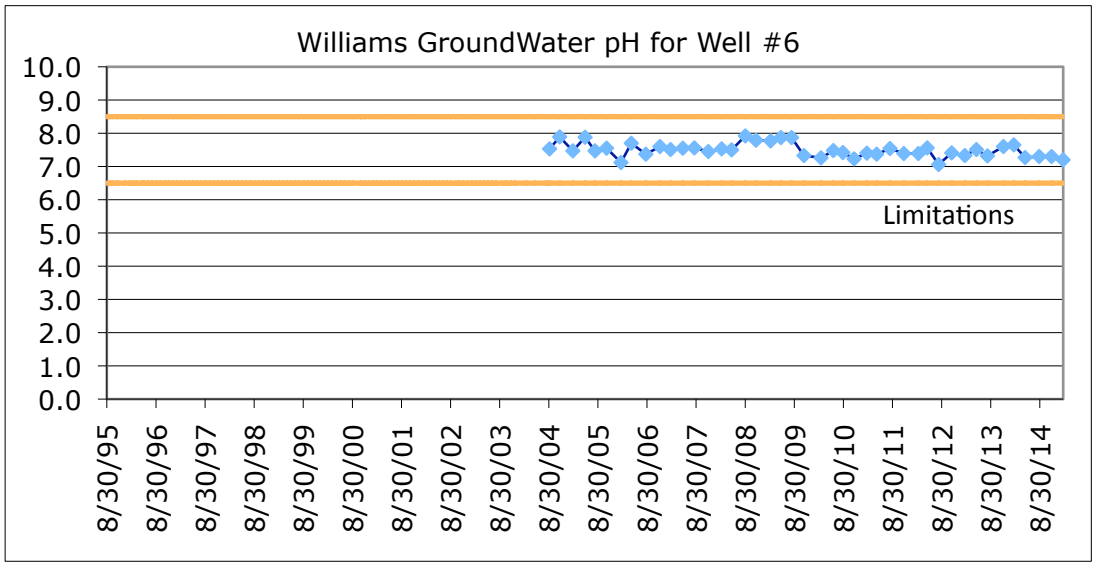
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #6
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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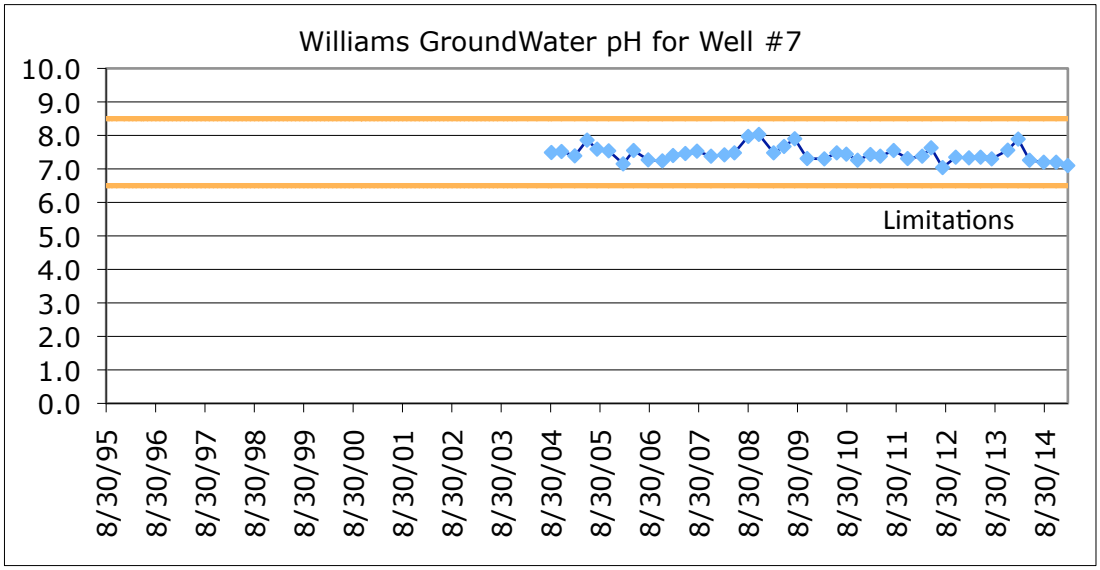
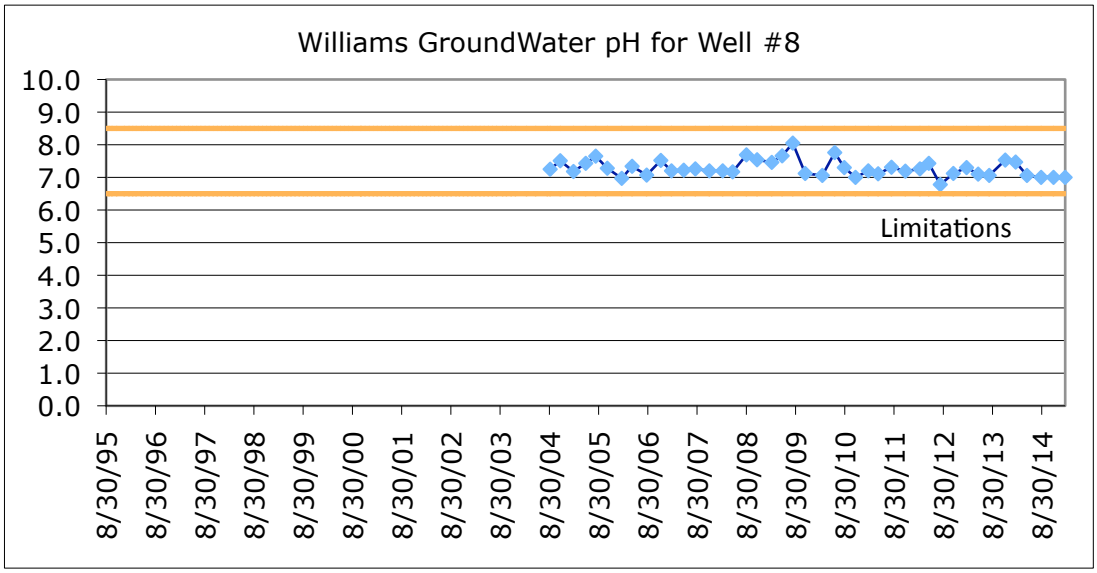
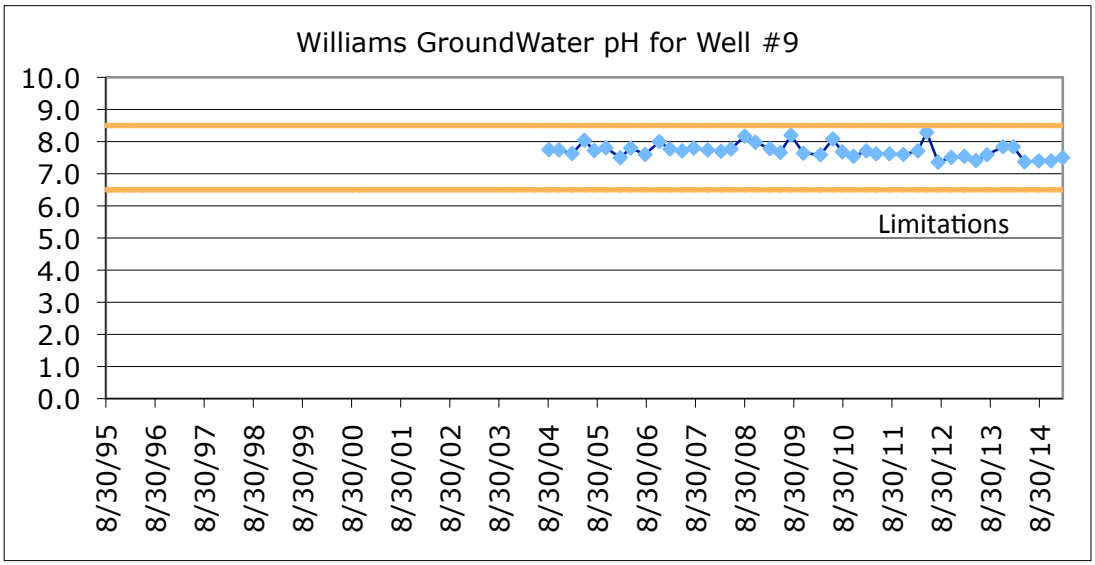
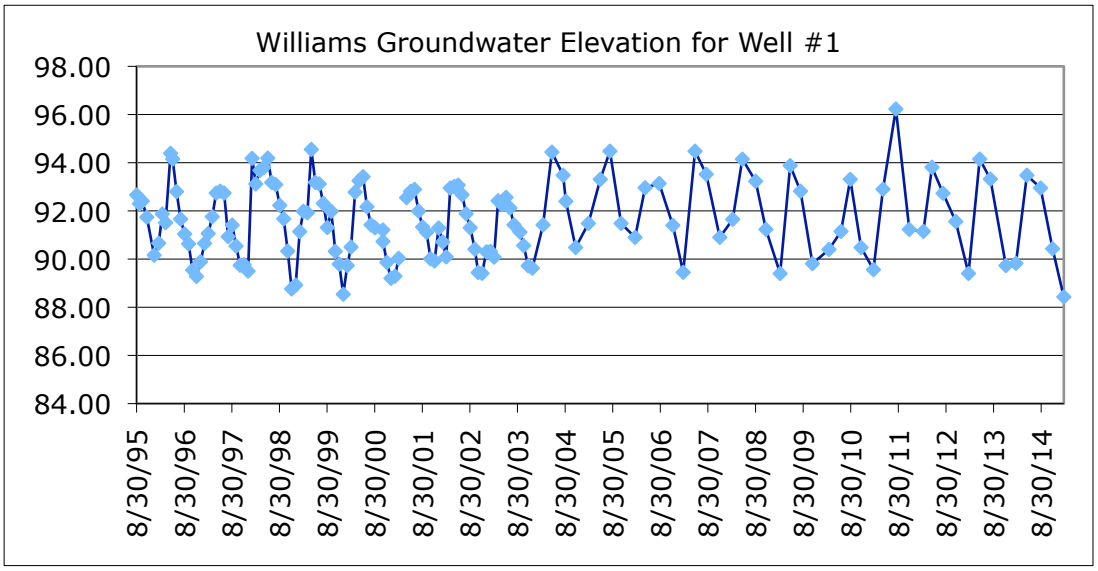
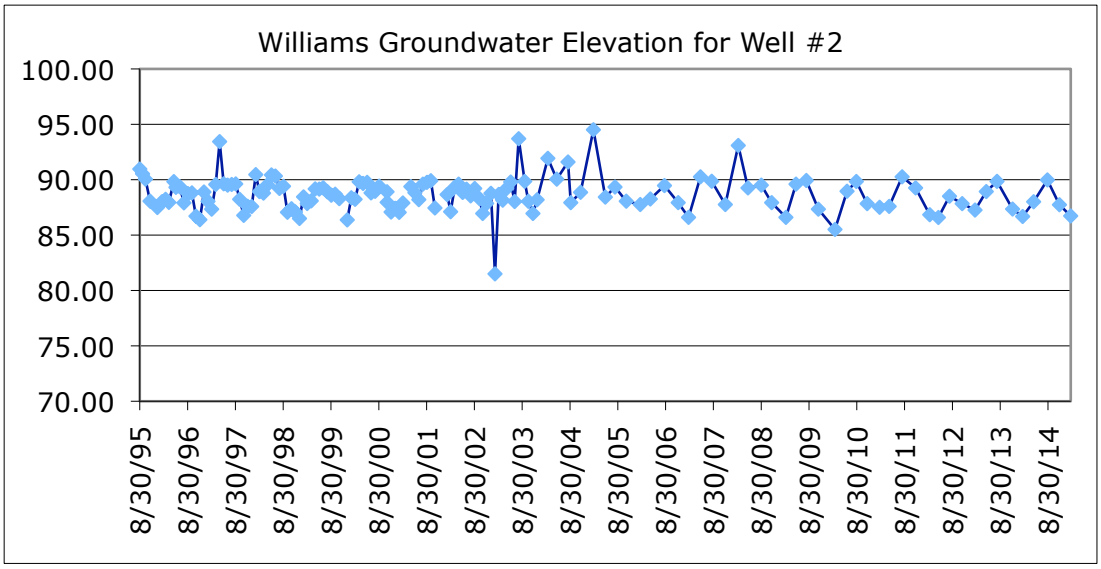
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #7
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #8
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater pH for Well #9
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams Groundwater Elevation for Well #1
98.00
96.00
94.00
92.00
90.00
88.00
86.00
84.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams Groundwater Elevation for Well #2
100.00
95.00
90.00
85.00
80.00
75.00
70.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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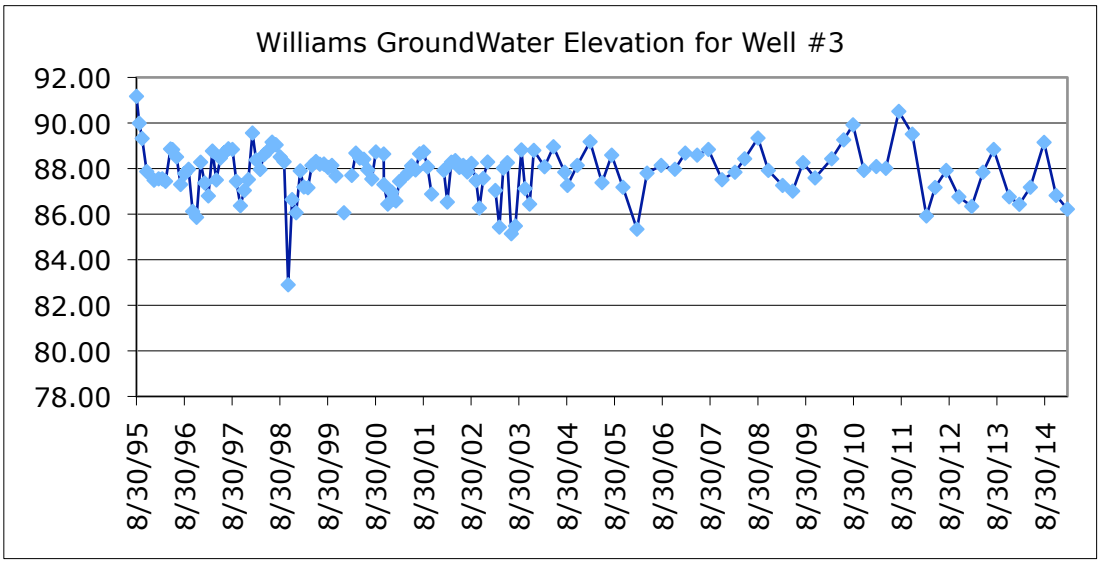
8/30/12
8/30/13
8/30/14


Williams GroundWater Elevation for Well #3
92.00
90.00
88.00
86.00
84.00
82.00
80.00
78.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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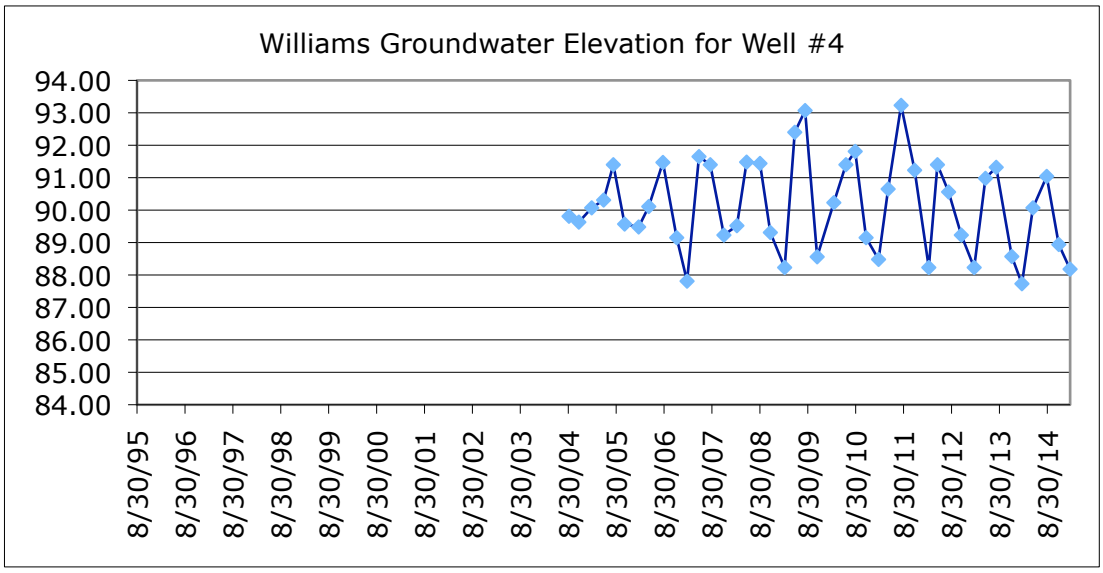
8/30/13
8/30/14


Williams Groundwater Elevation for Well #4
94.00
93.00
92.00
91.00
90.00
89.00
88.00
87.00
86.00
85.00
84.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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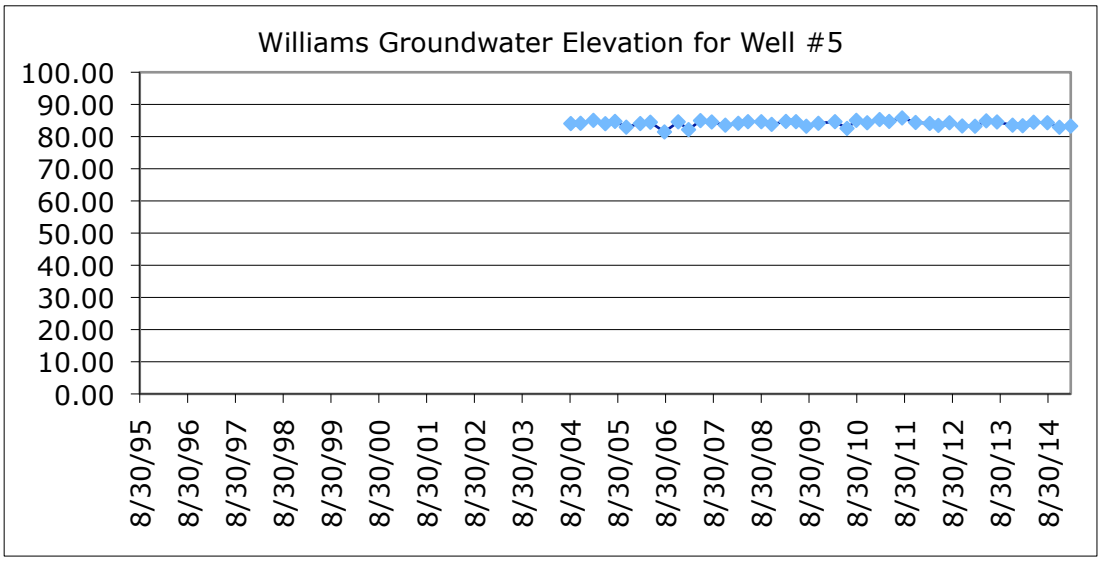
8/30/13
8/30/14


Williams Groundwater Elevation for Well #5
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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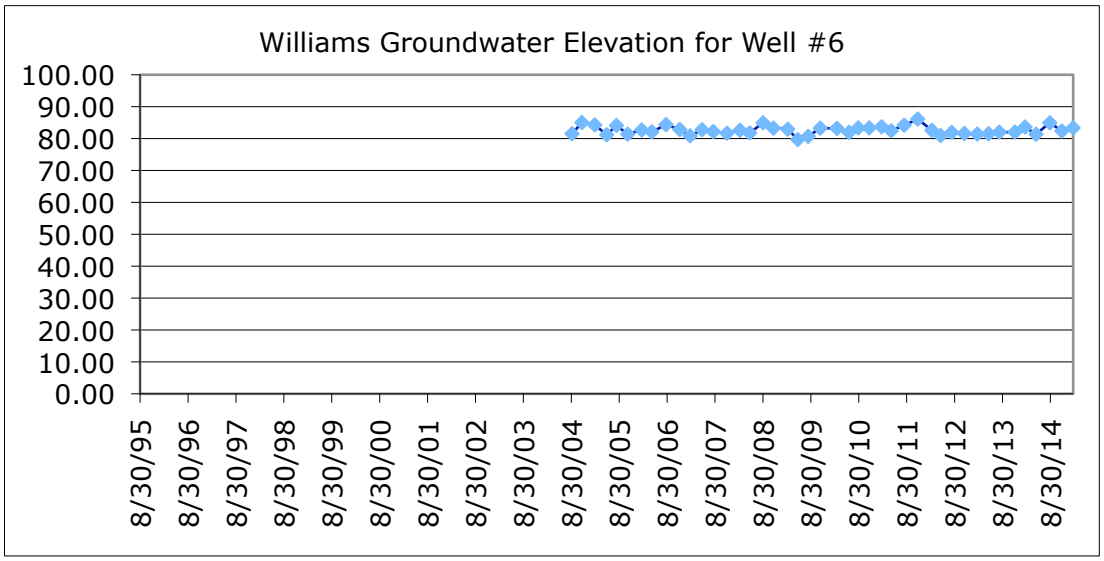
8/30/13
8/30/14


Williams Groundwater Elevation for Well #6
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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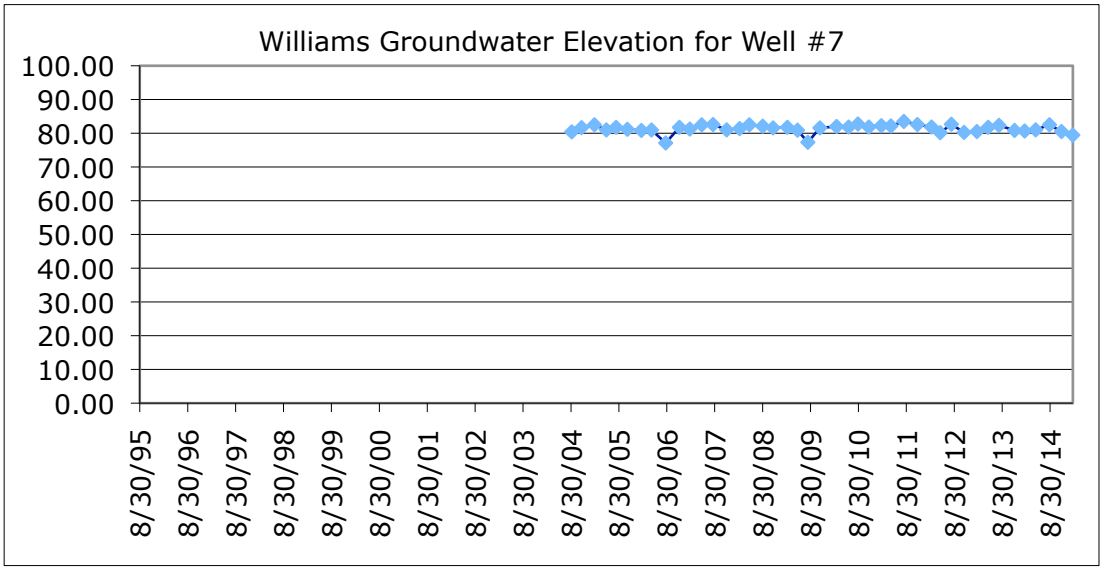
8/30/13
8/30/14


Williams Groundwater Elevation for Well #7
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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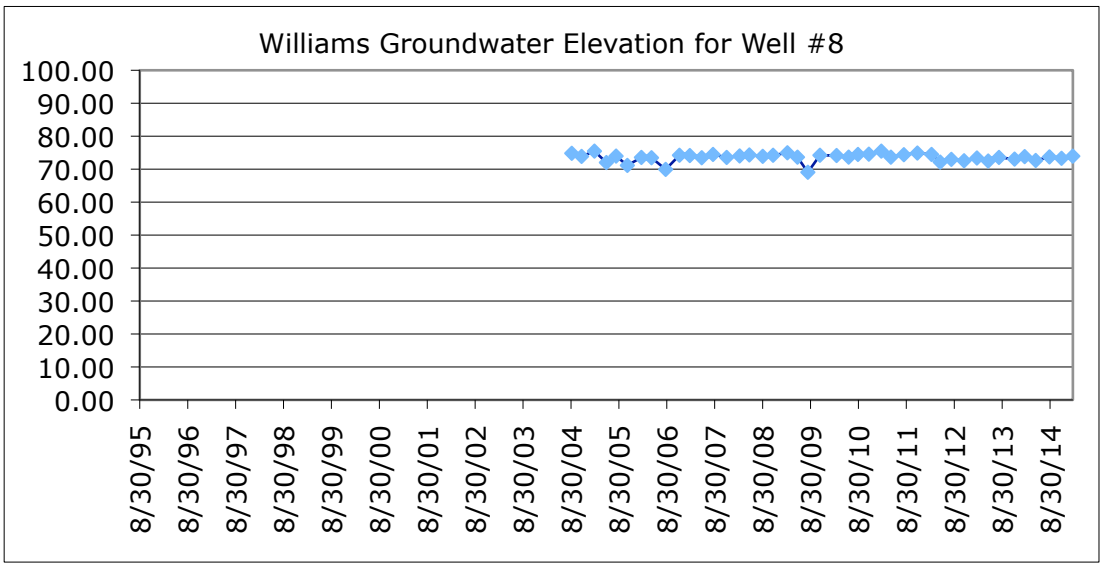
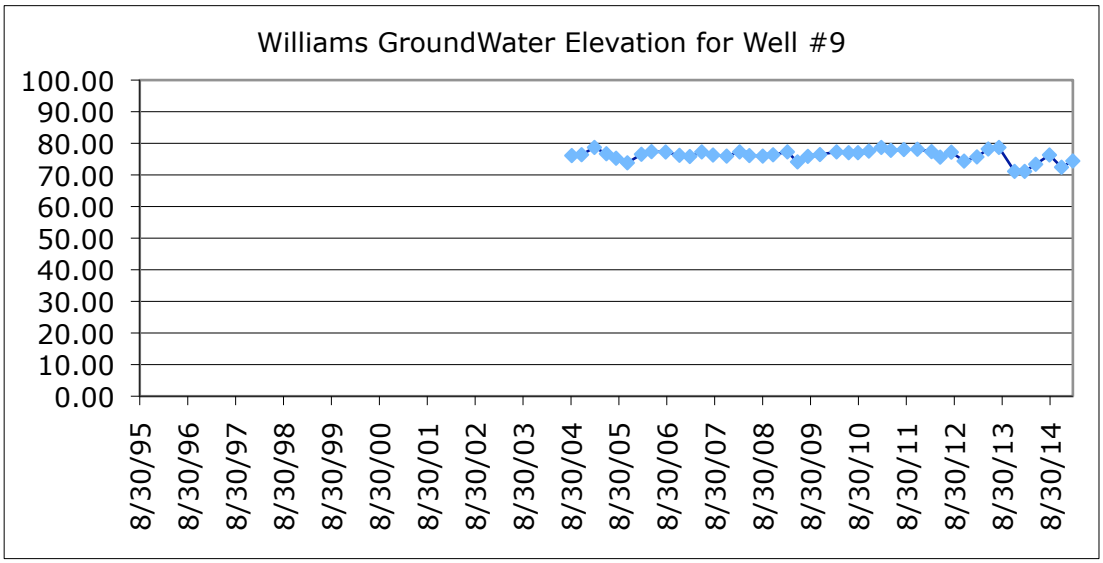
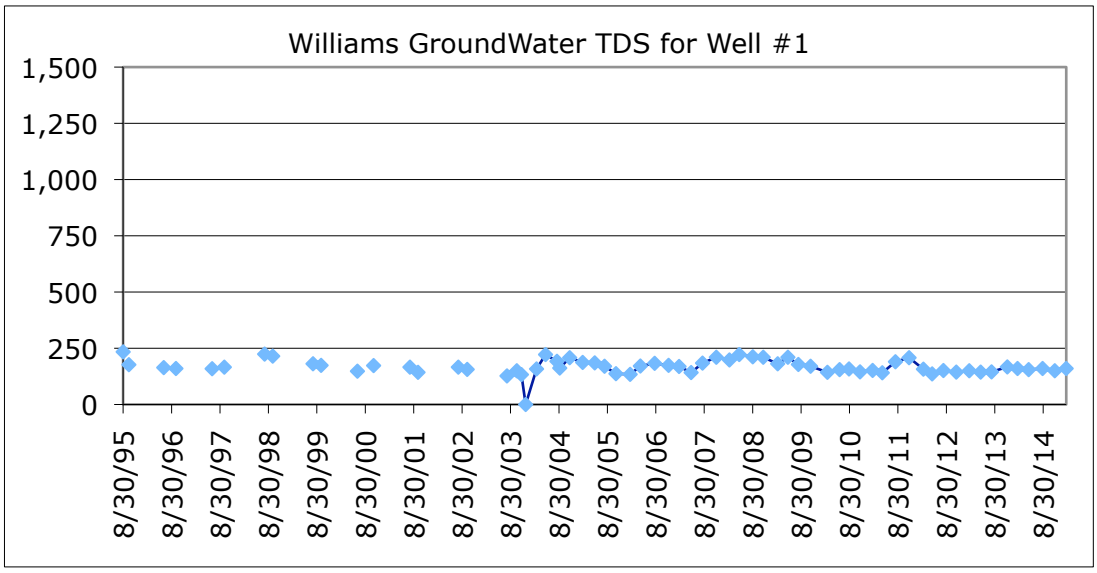
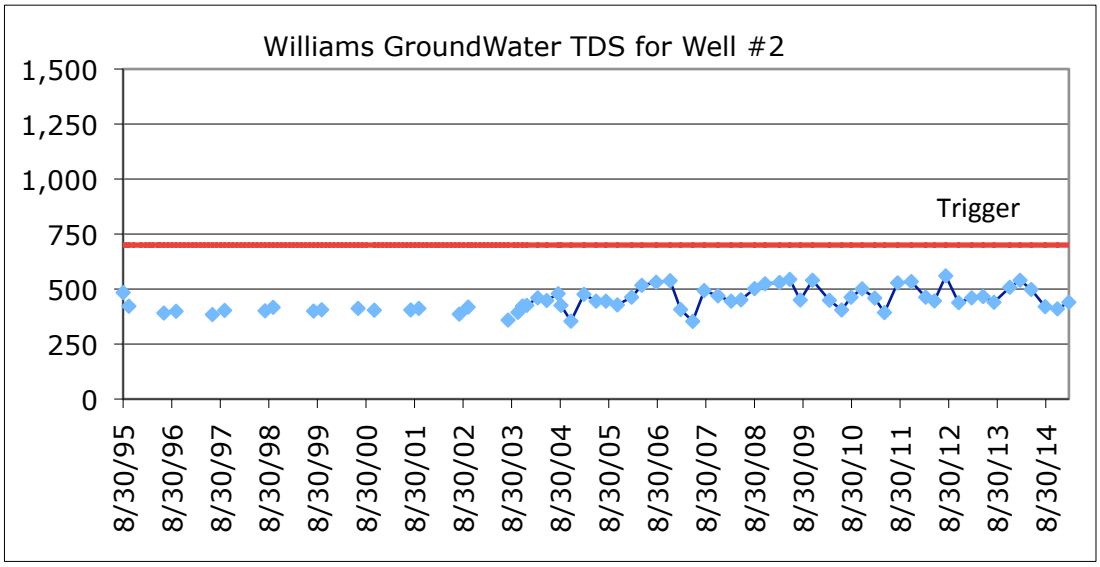
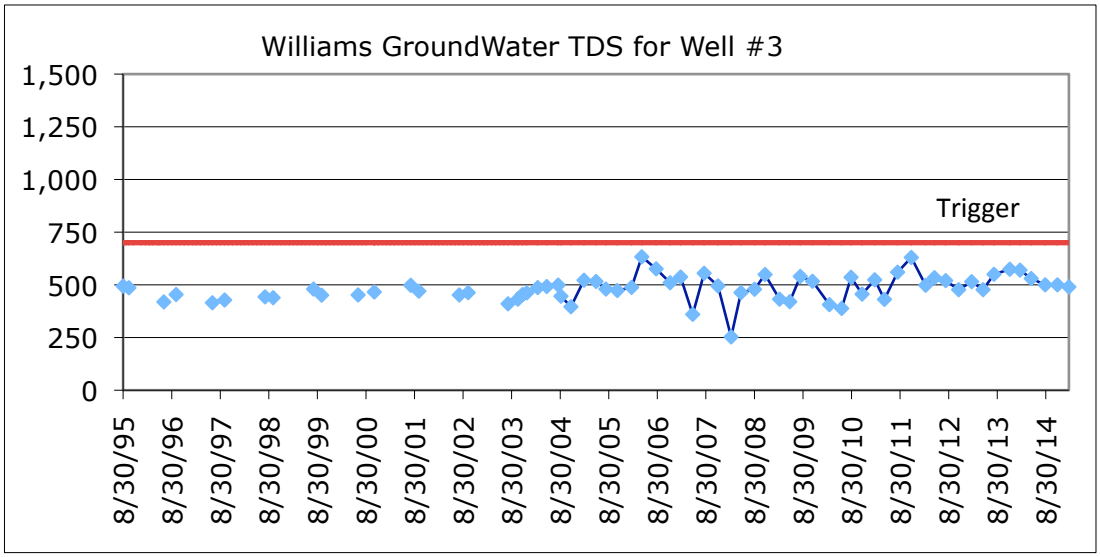
8/30/13
8/30/14

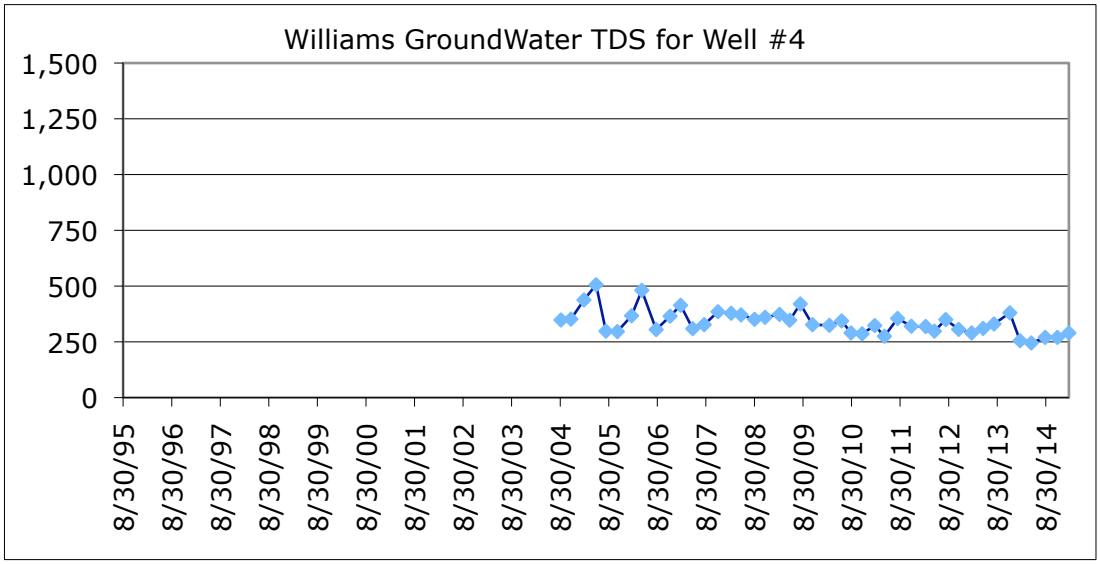

Williams Groundwater Elevation for Well #8
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

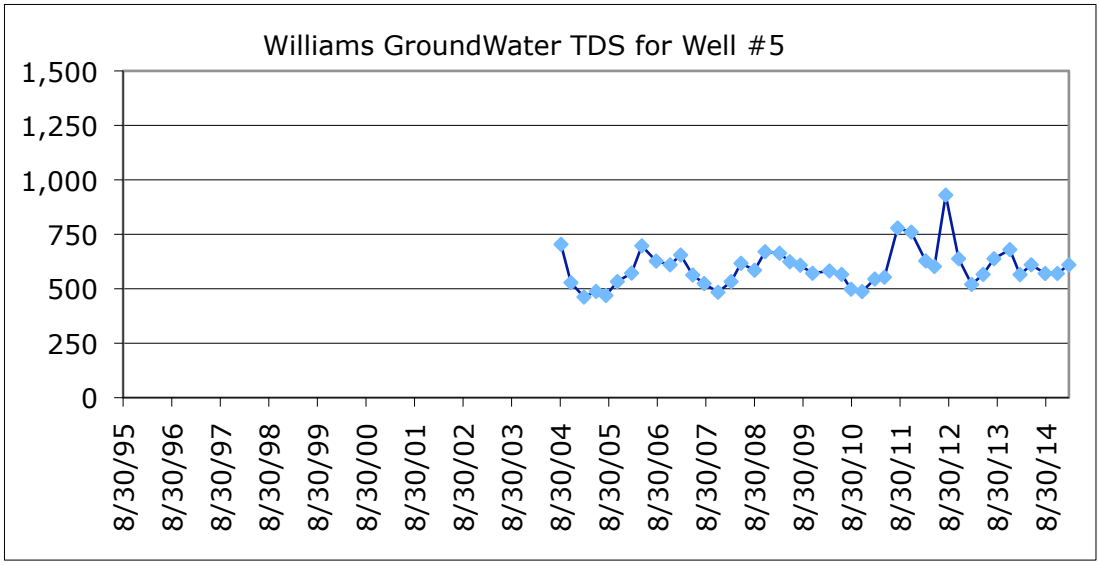

Williams GroundWater Elevation for Well #9
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #1
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #2
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #3
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #4
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #5
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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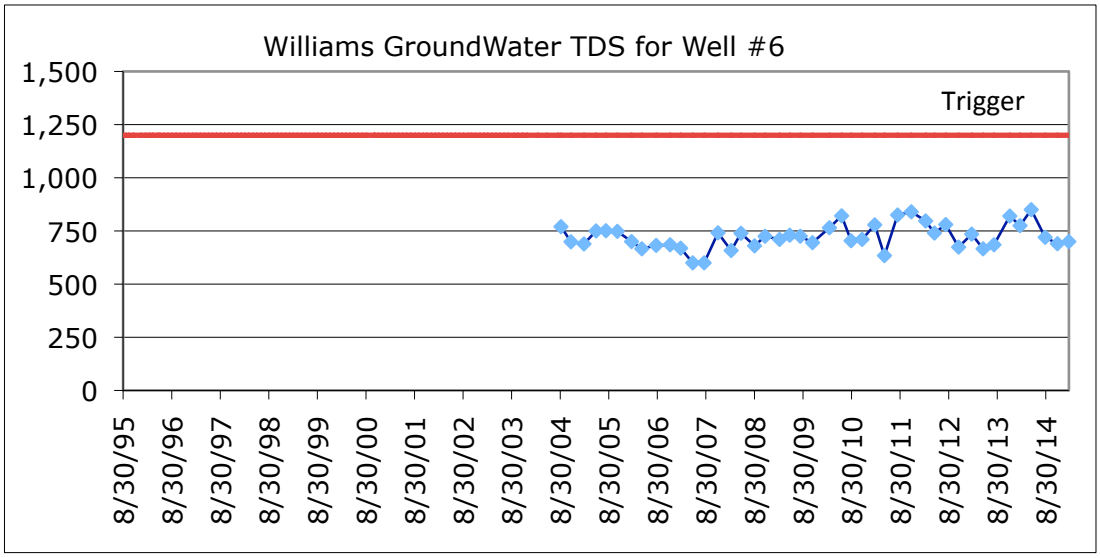
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #6
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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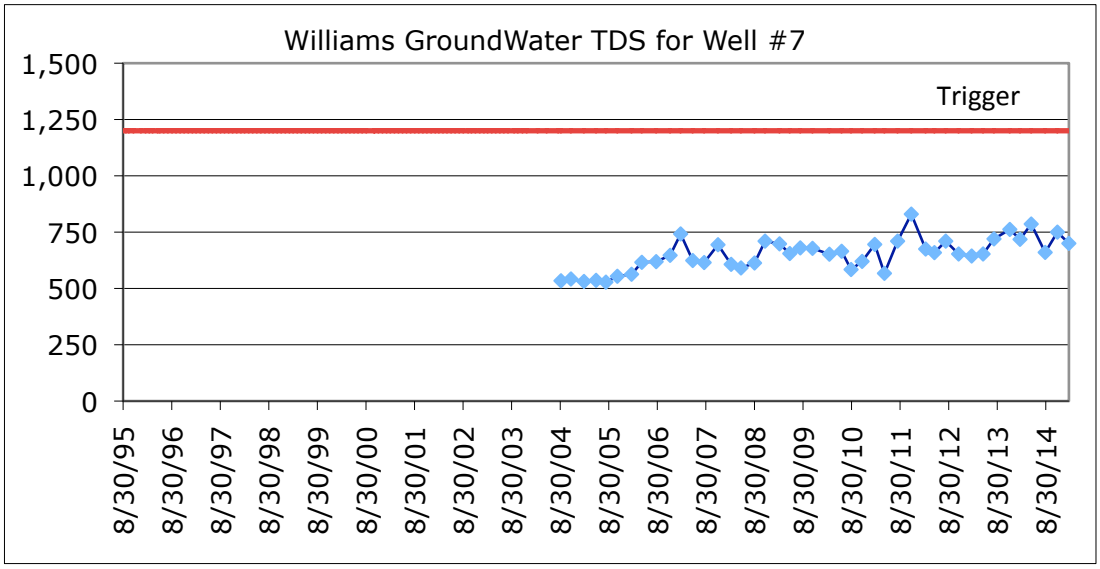
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #7
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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8/30/09
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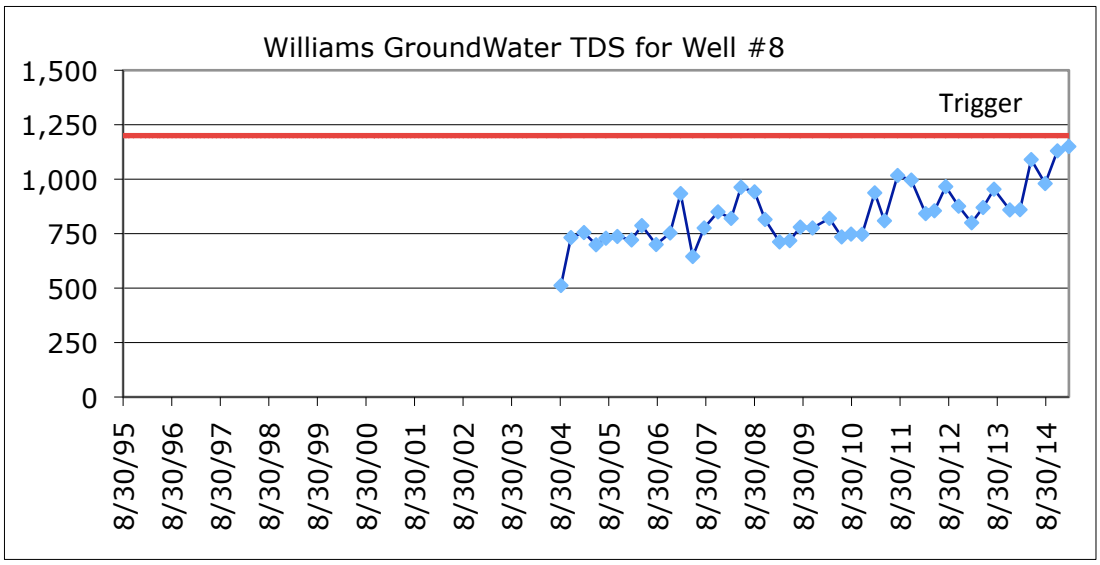
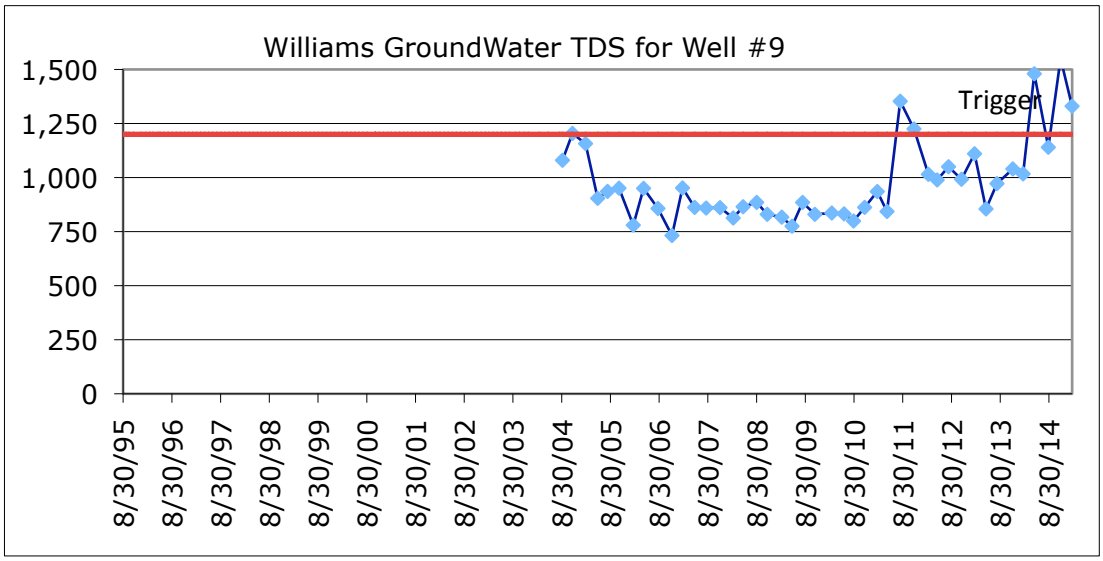
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #8
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TDS for Well #9
Trigger
1,500
1,250
1,000
750
500
250
0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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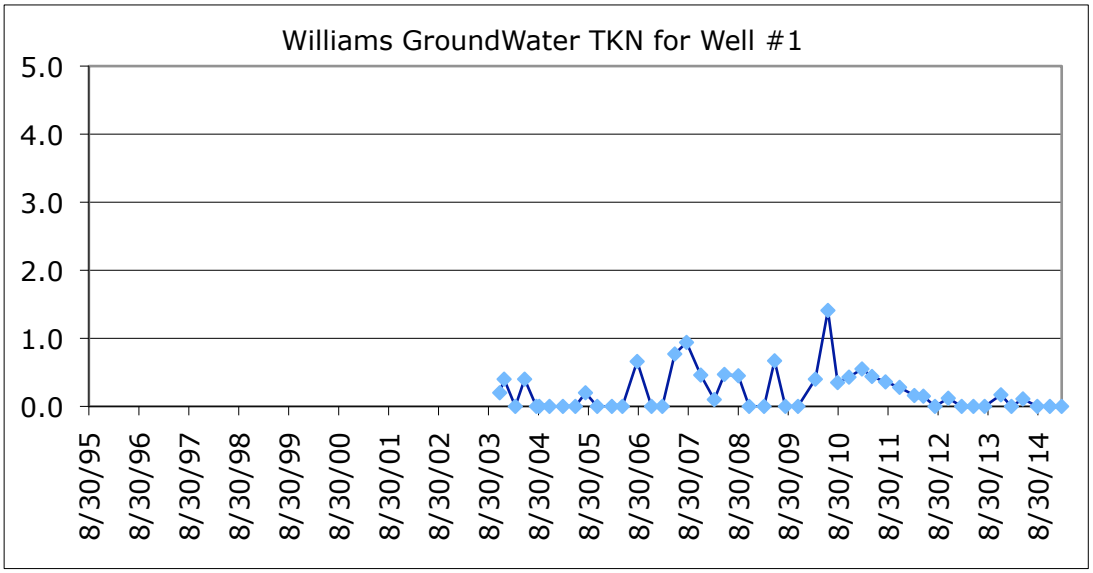
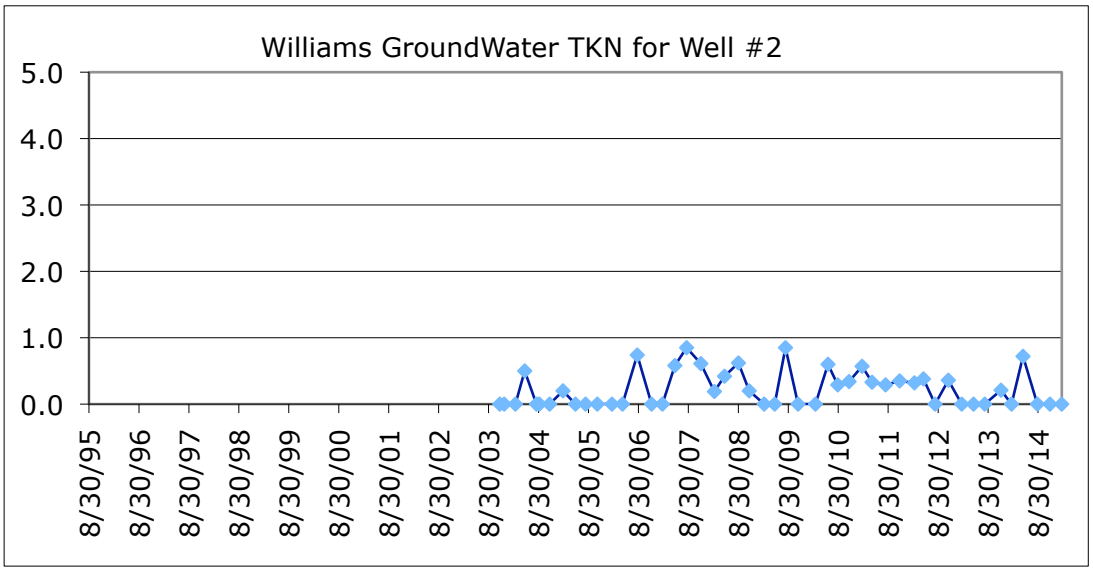
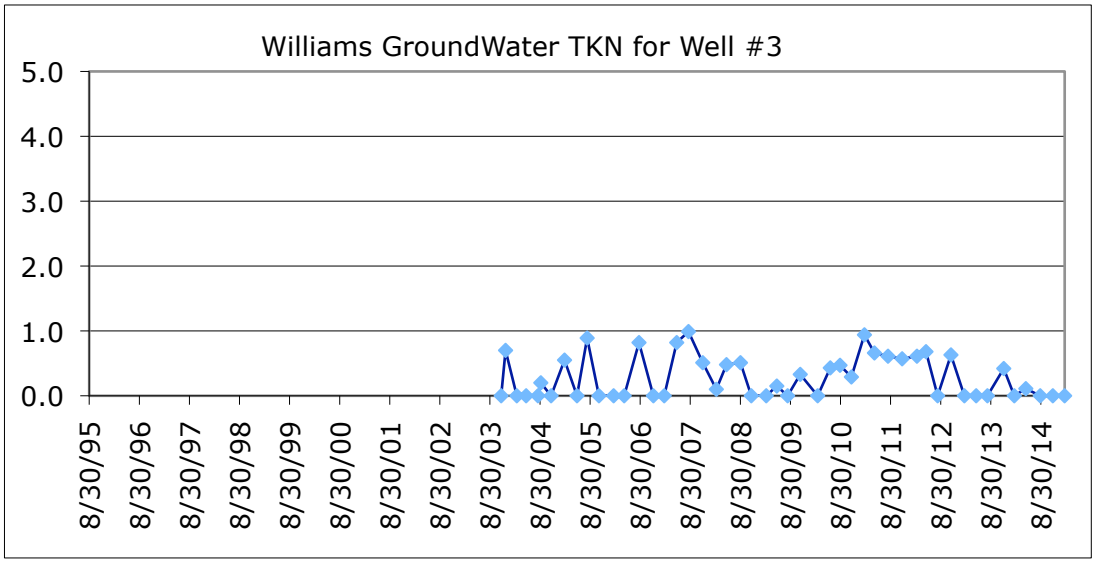
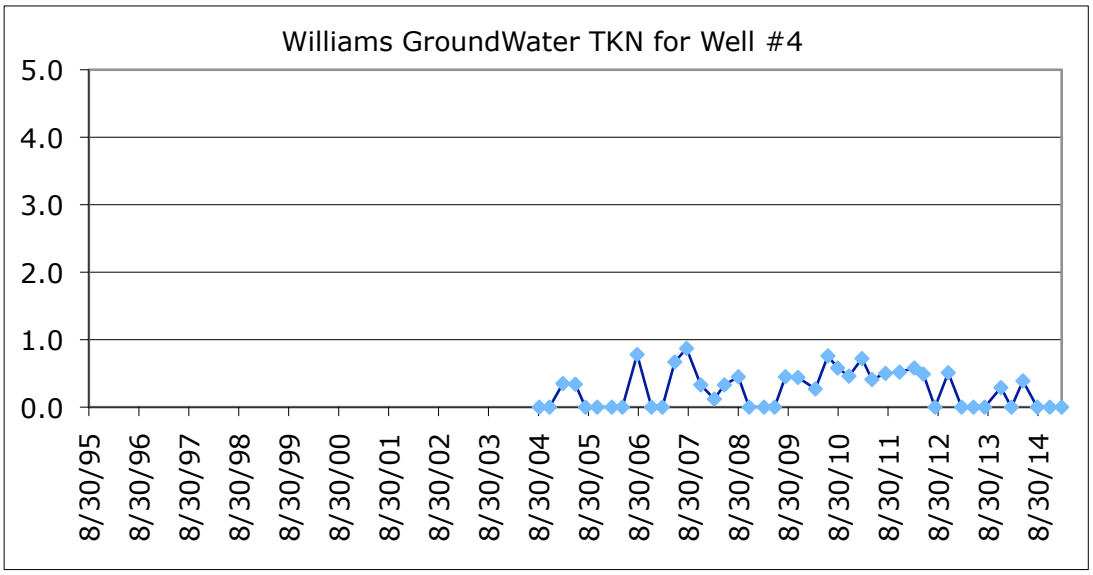
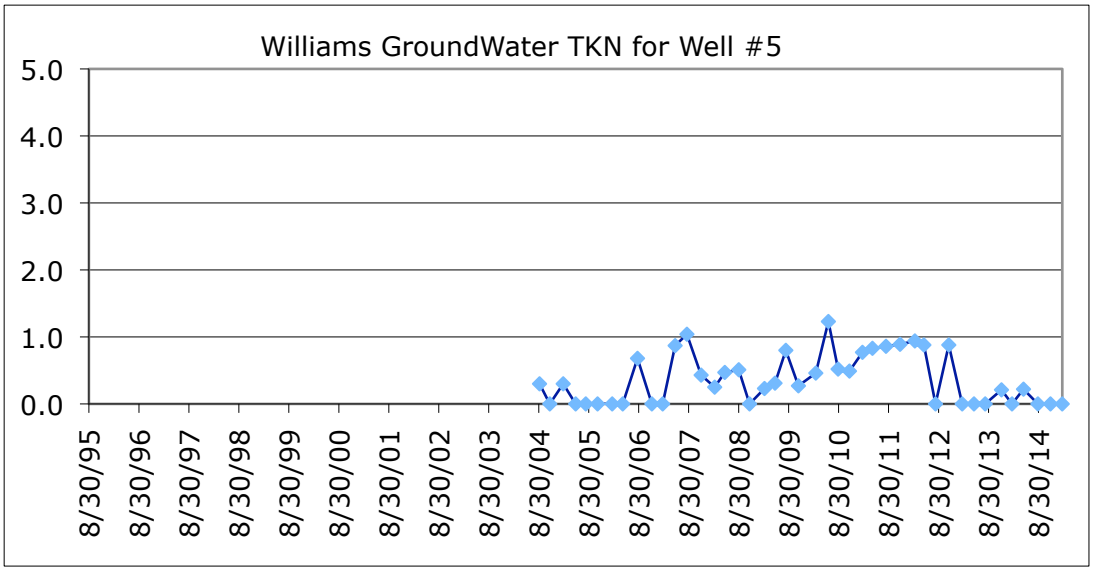
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

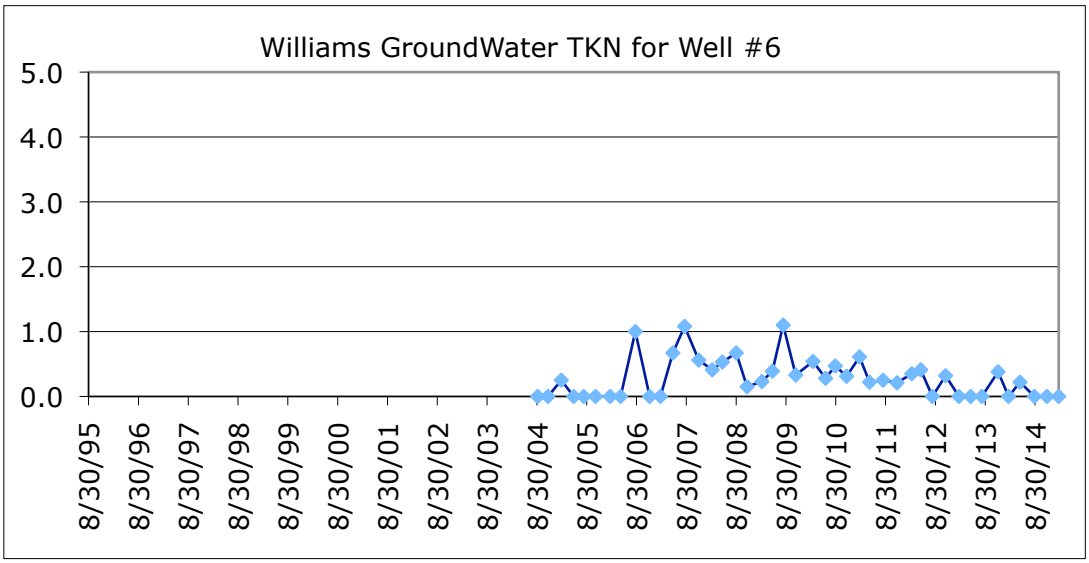

Williams GroundWater TKN for Well #1
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

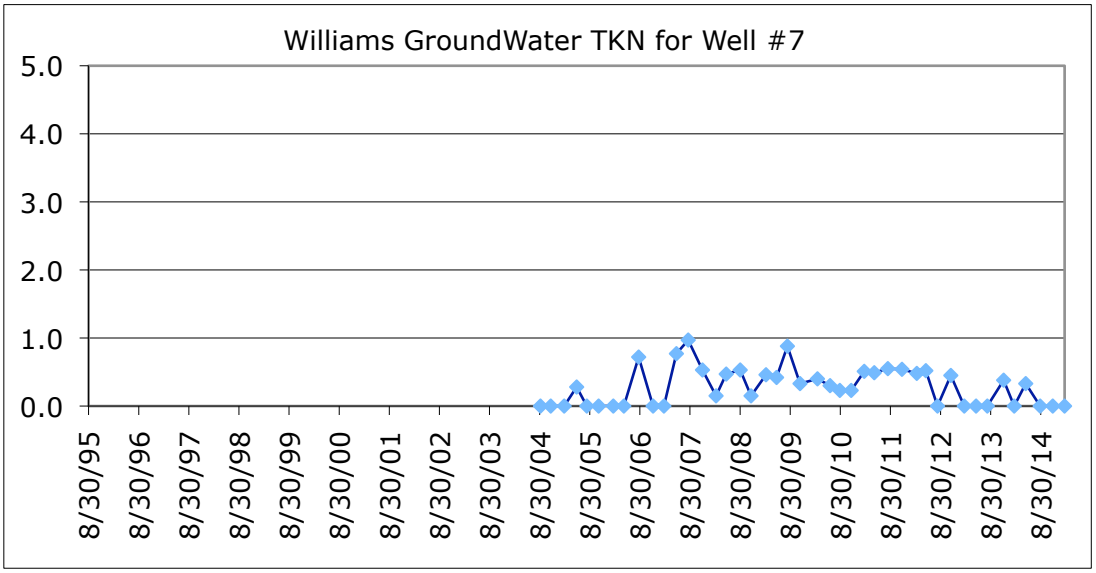

Williams GroundWater TKN for Well #2
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

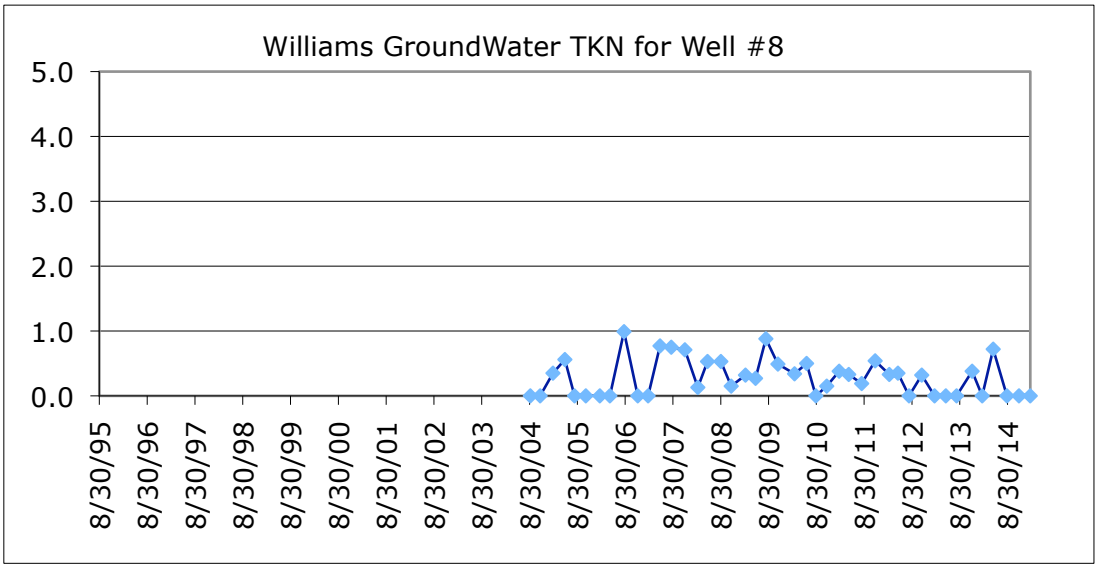

Williams GroundWater TKN for Well #3
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

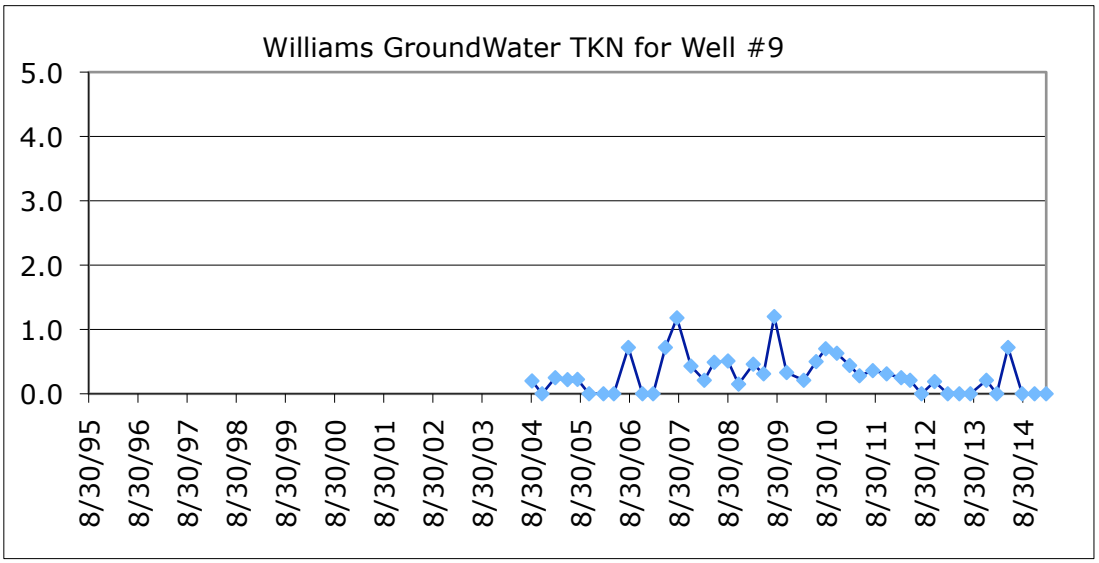

Williams GroundWater TKN for Well #4
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

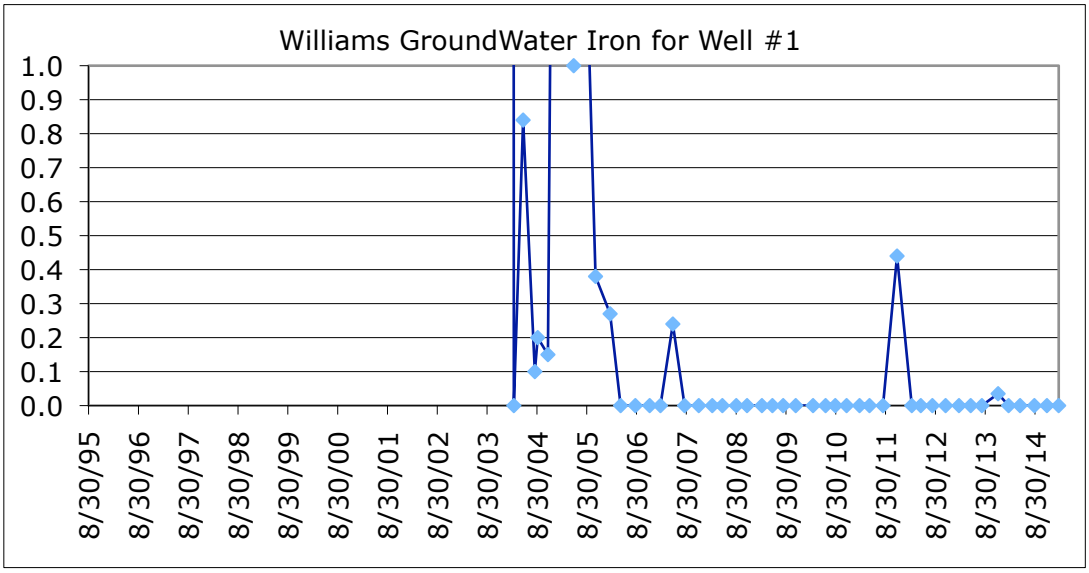

Williams GroundWater TKN for Well #5
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

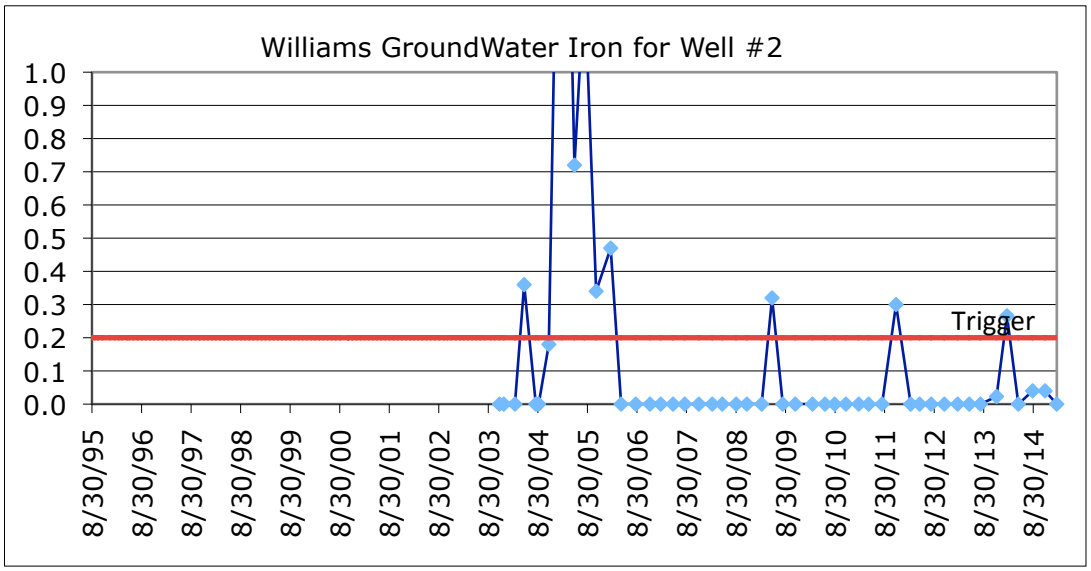

Williams GroundWater TKN for Well #6
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

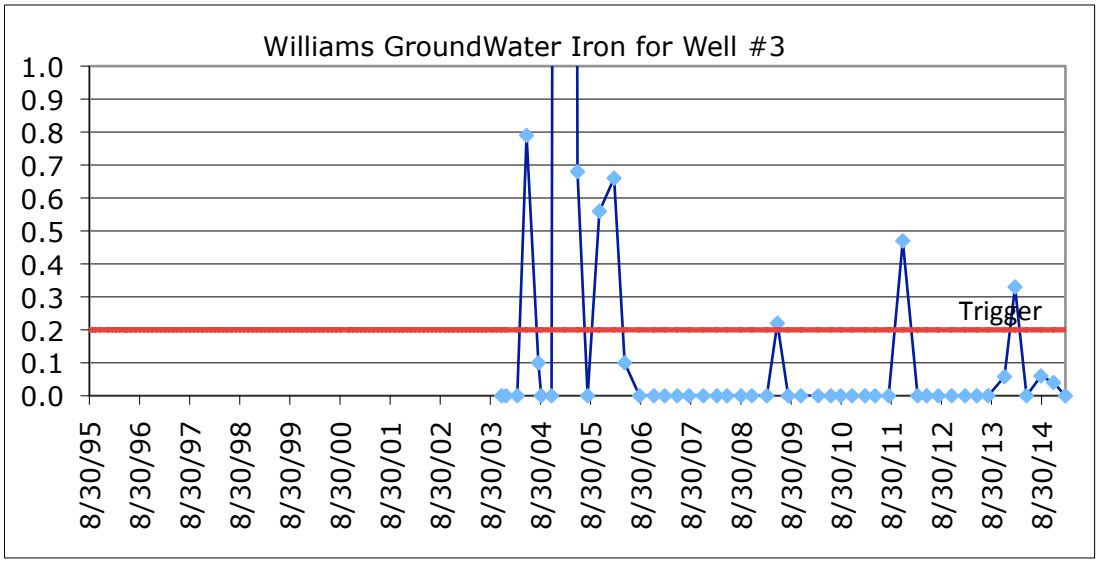

Williams GroundWater TKN for Well #7
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

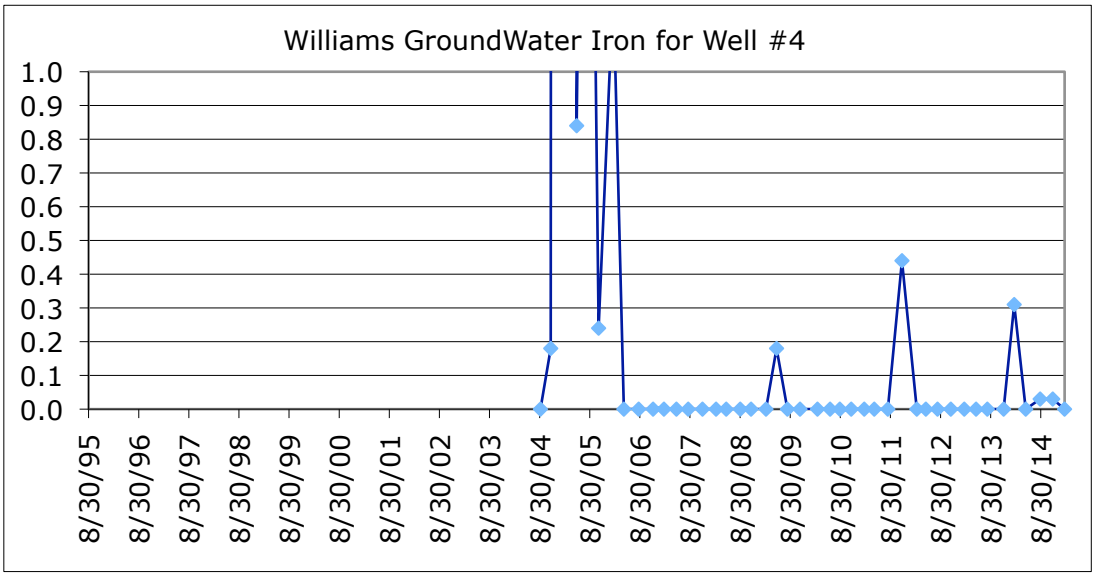

Williams GroundWater TKN for Well #8
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater TKN for Well #9
5.0
4.0
3.0
2.0
1.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #2
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #3
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #4
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
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8/30/09
8/30/10
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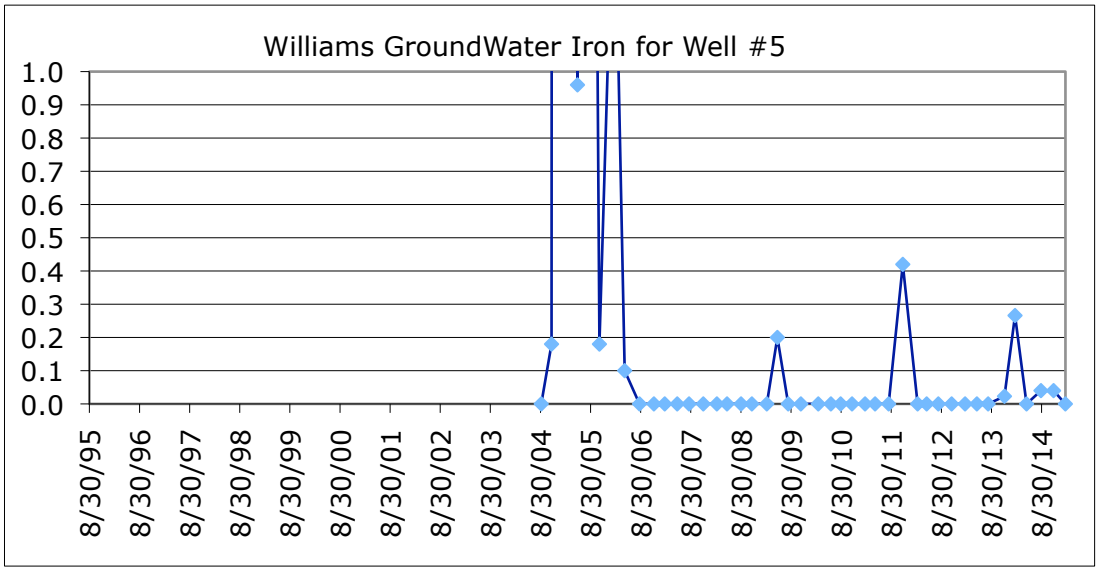
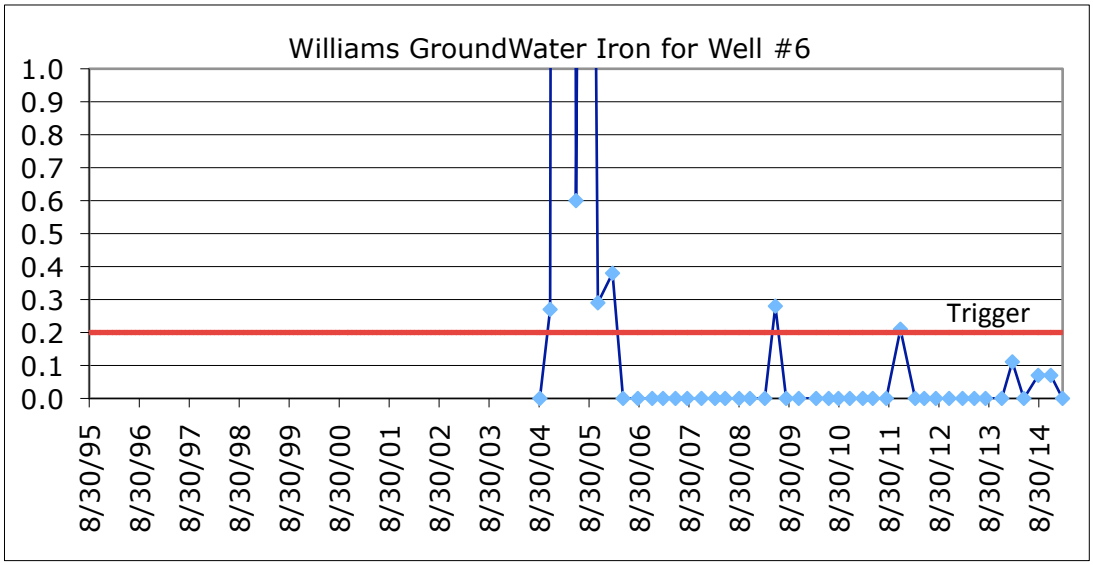
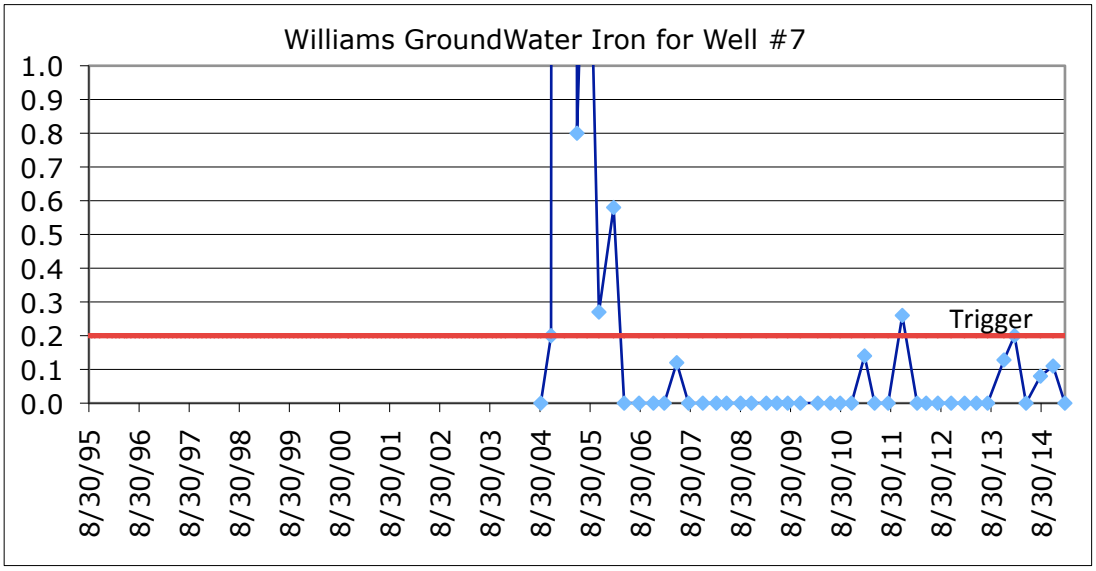
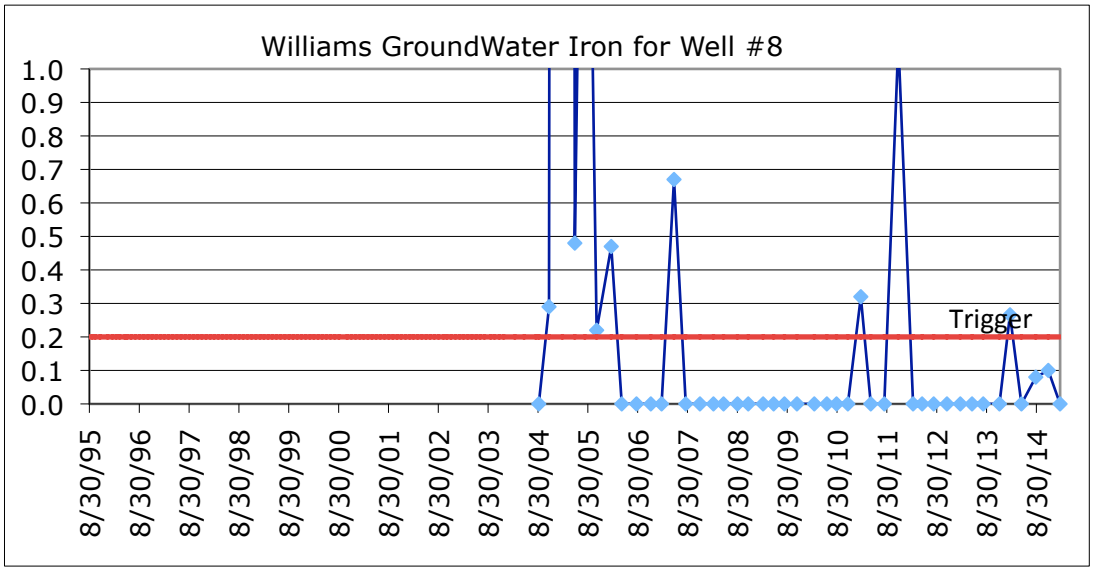
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #5
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #6
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Iron for Well #7
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14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0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
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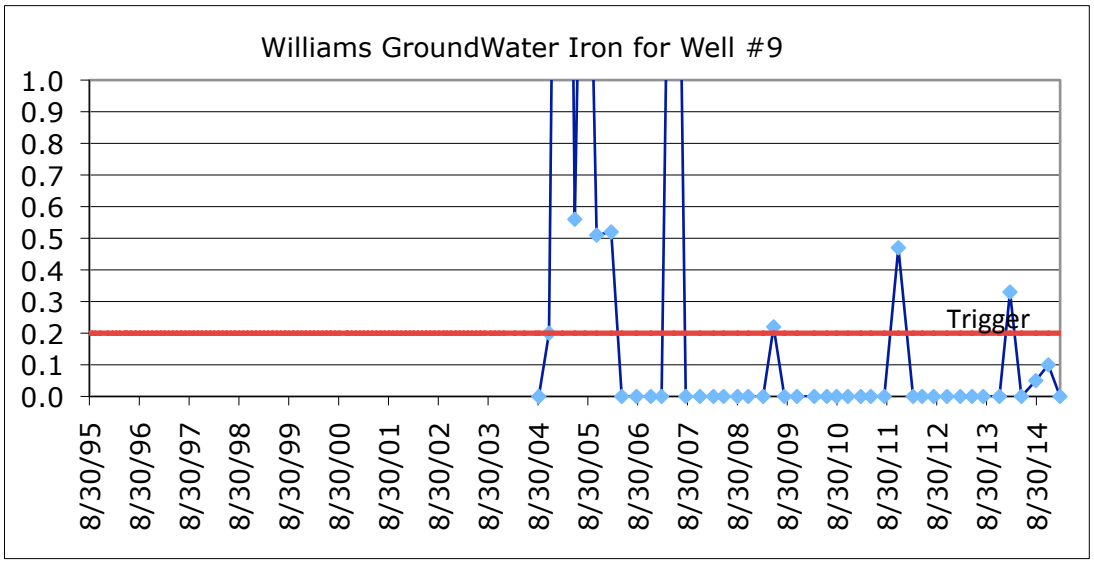
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14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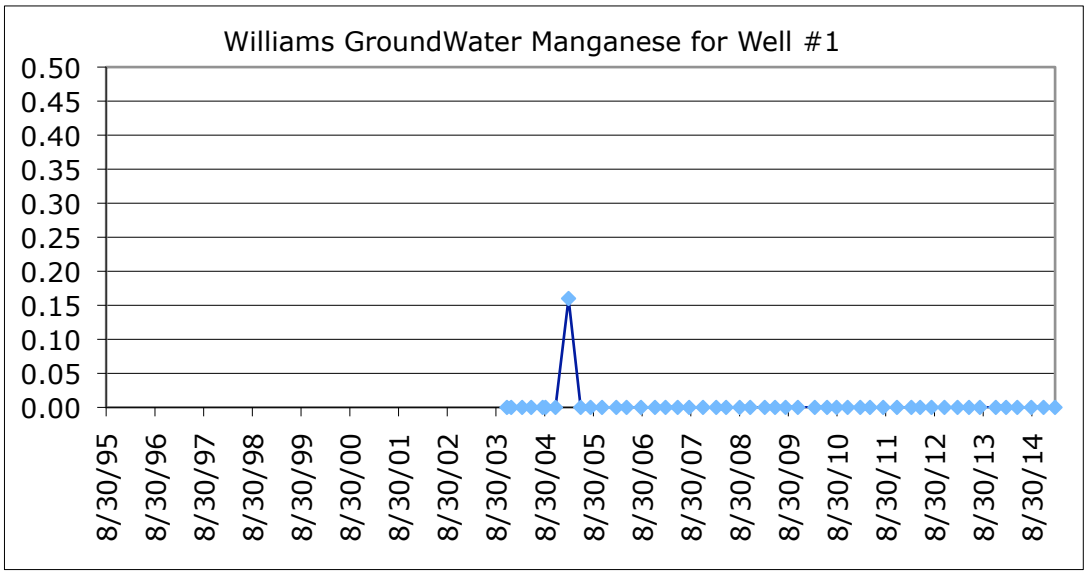
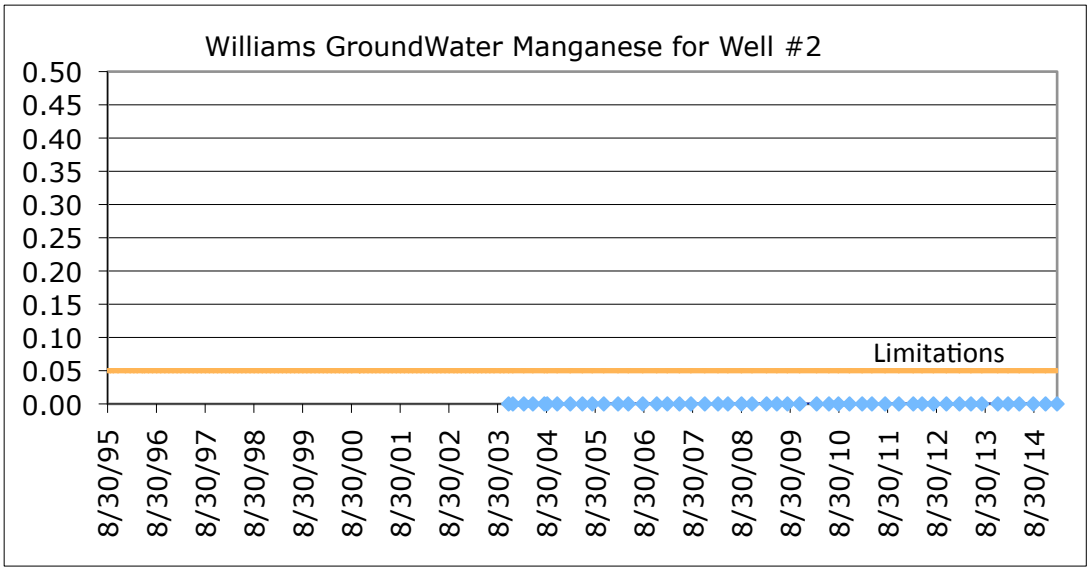
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Trigger
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Manganese for Well #1
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater Manganese for Well #2
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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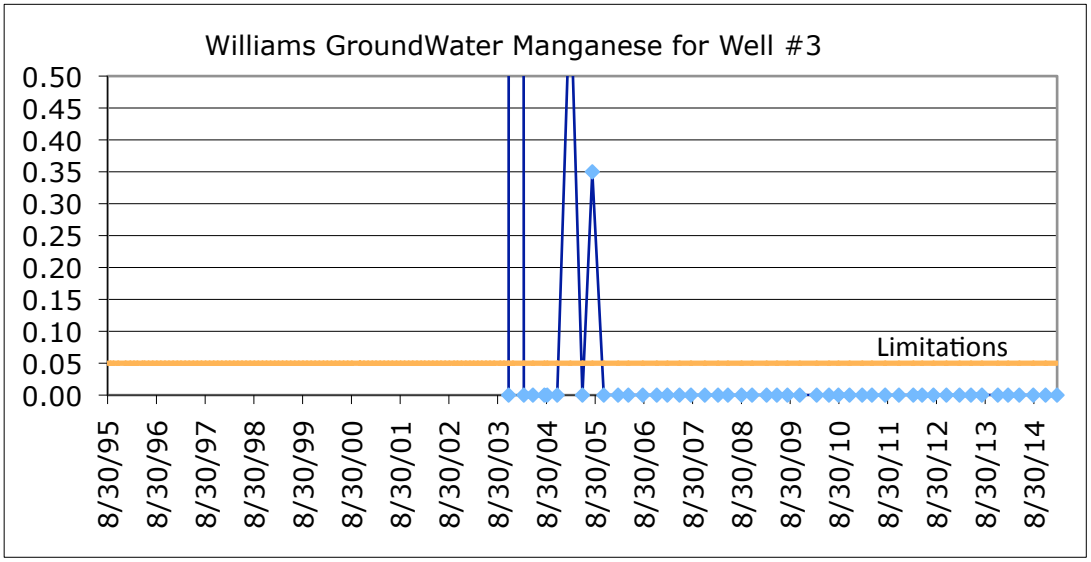
8/30/12
8/30/13
8/30/14


Williams GroundWater Manganese for Well #3
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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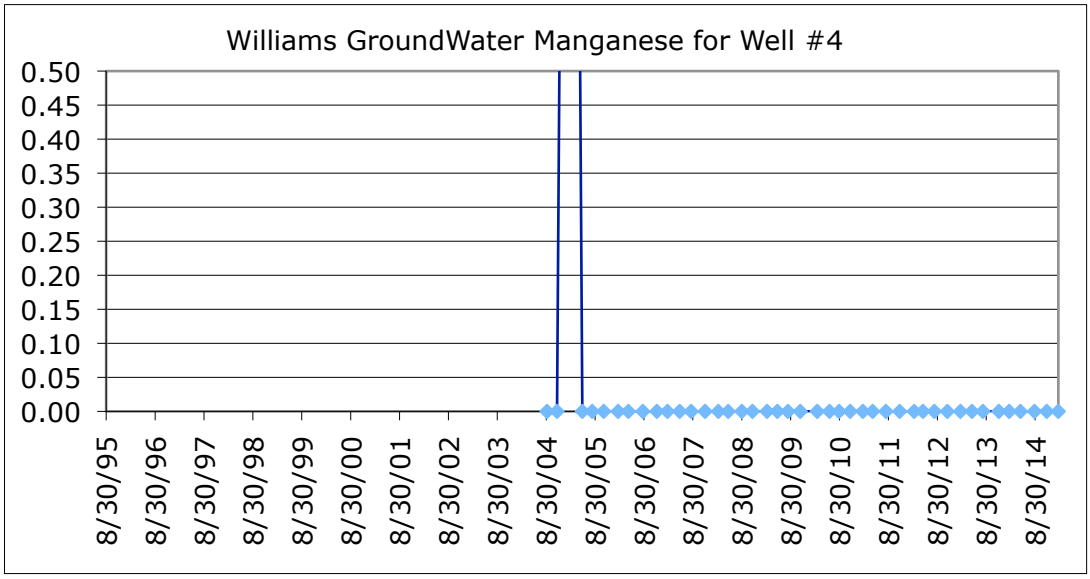
8/30/13
8/30/14


Williams GroundWater Manganese for Well #4
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0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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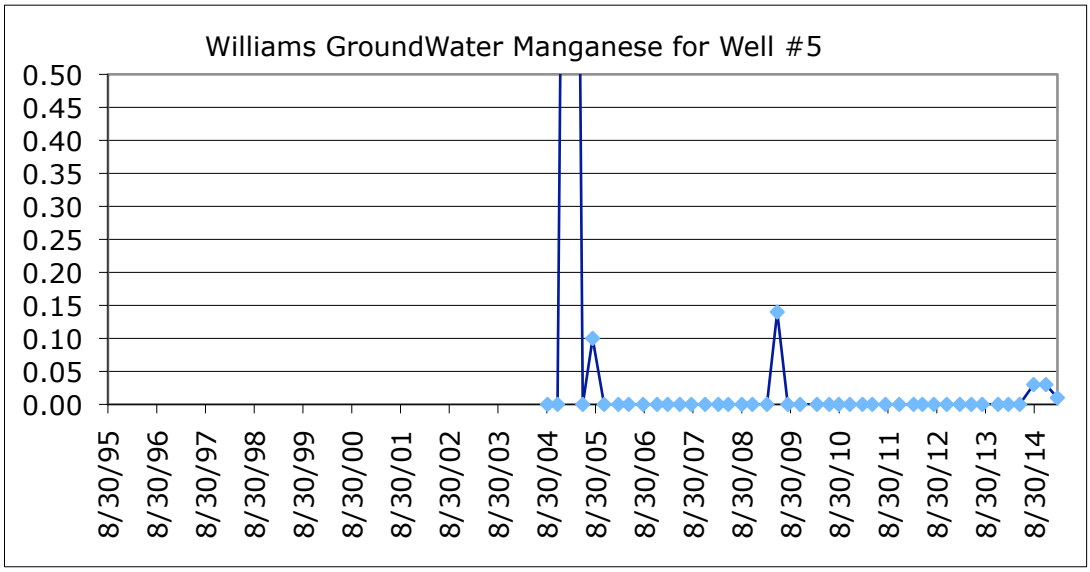
8/30/13
8/30/14


Williams GroundWater Manganese for Well #5
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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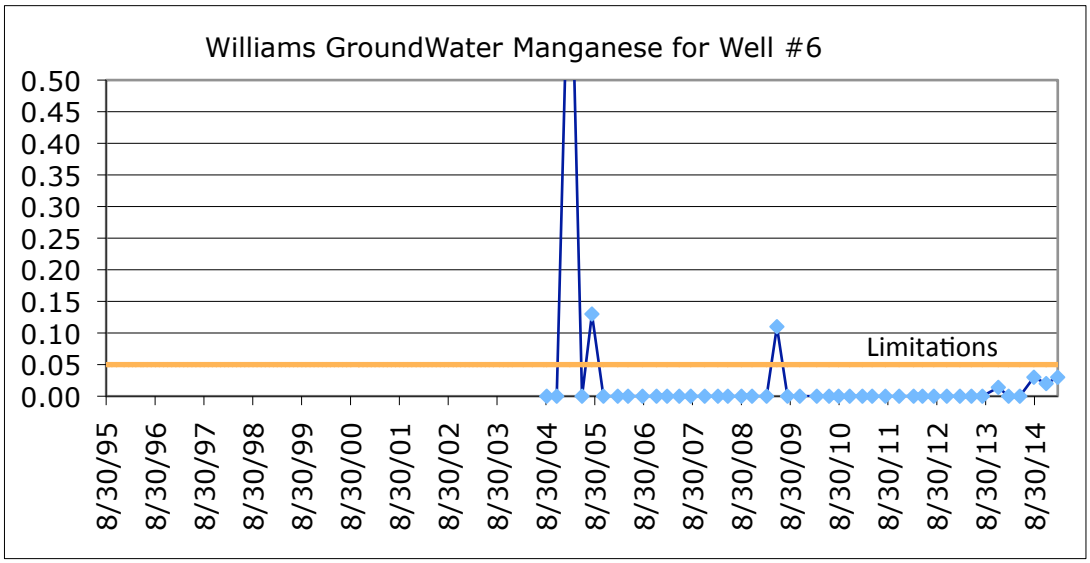
8/30/13
8/30/14


Williams GroundWater Manganese for Well #6
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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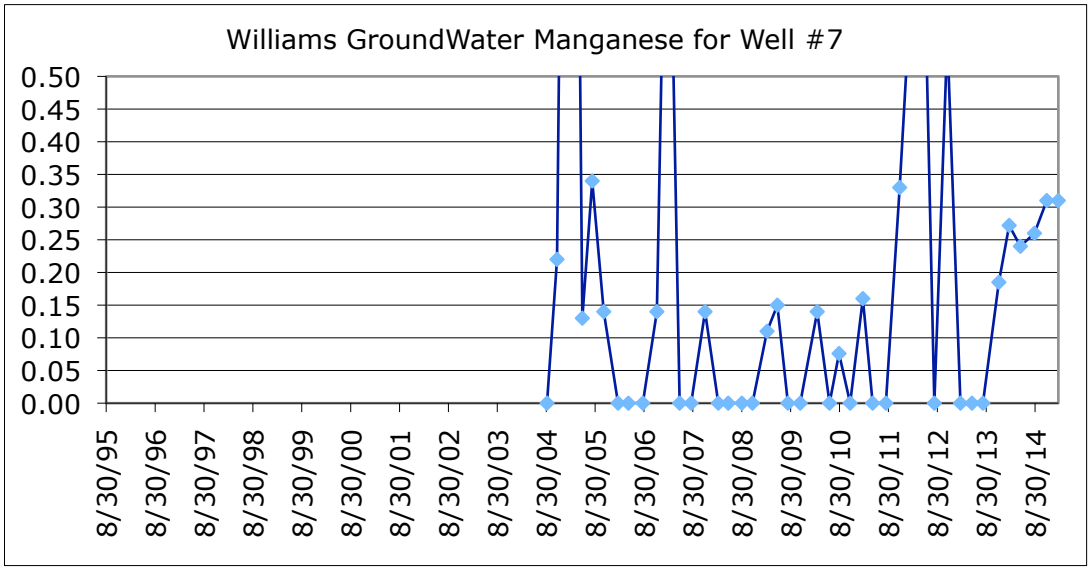
8/30/13
8/30/14


Williams GroundWater Manganese for Well #7
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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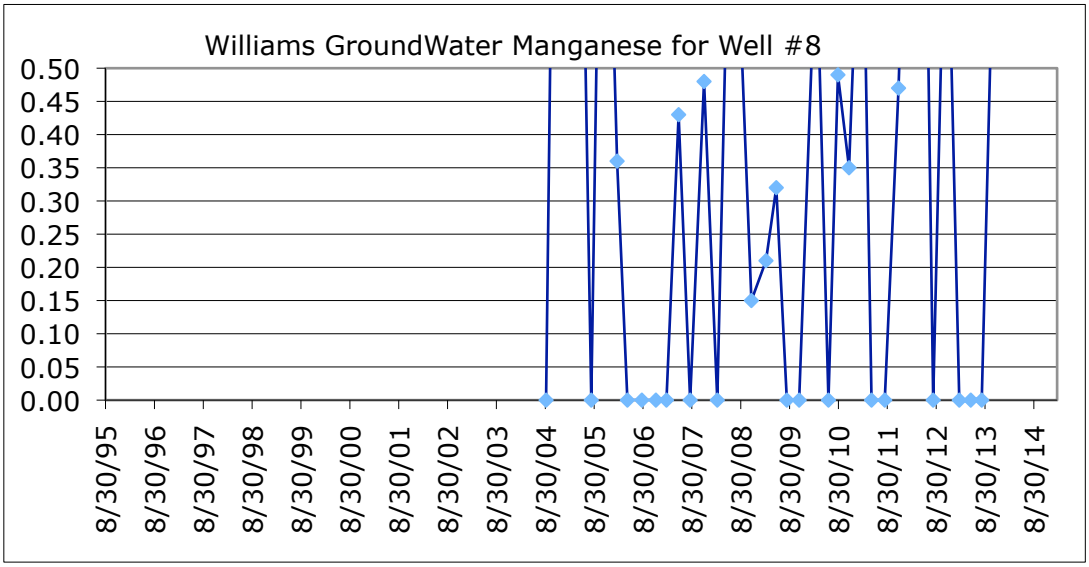
8/30/13
8/30/14


Williams GroundWater Manganese for Well #8
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
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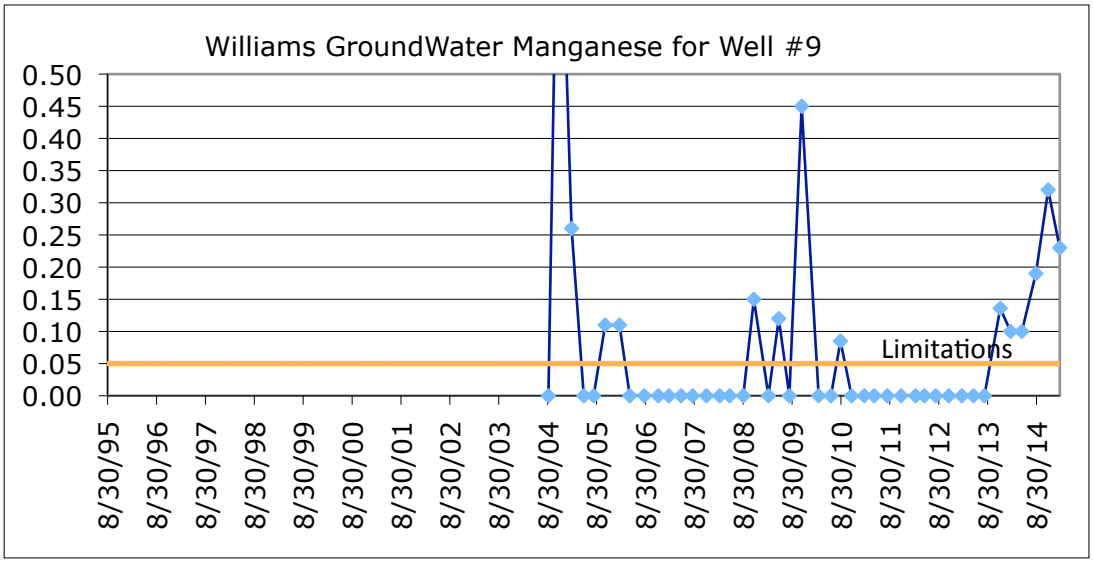
8/30/13
8/30/14


Williams GroundWater Manganese for Well #9
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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8/30/08
8/30/09
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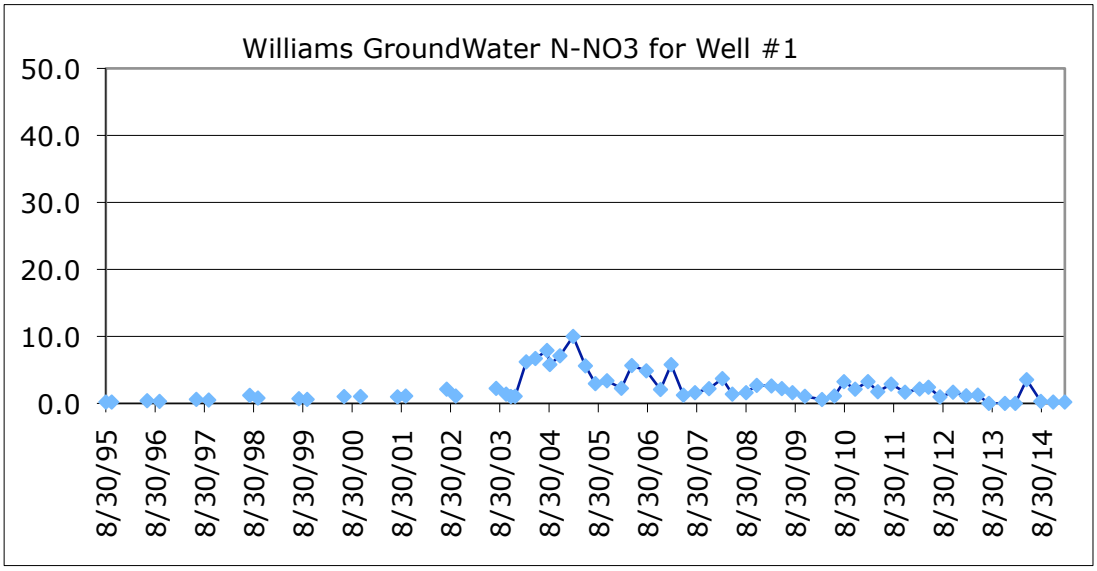
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #1
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30.0
20.0
10.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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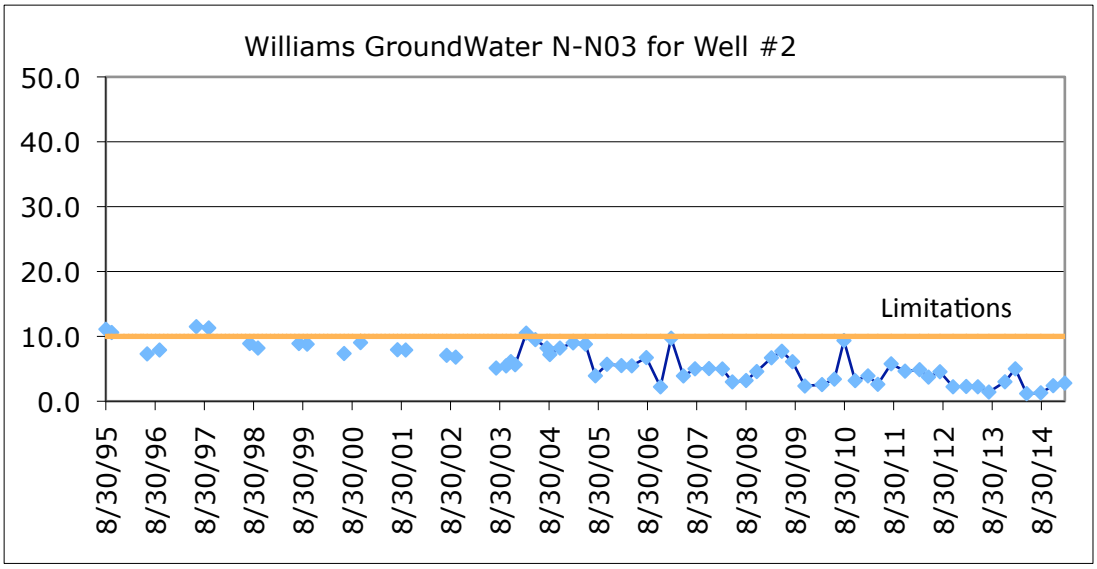
8/30/13
8/30/14


Williams GroundWater N-N03 for Well #2
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40.0
30.0
20.0
10.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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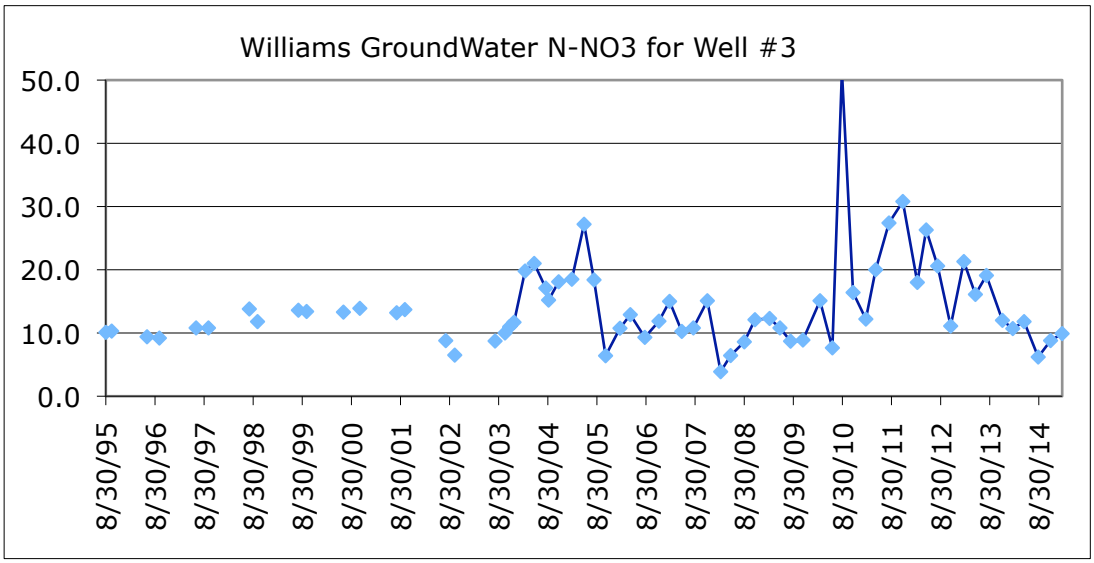
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #3
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40.0
30.0
20.0
10.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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8/30/09
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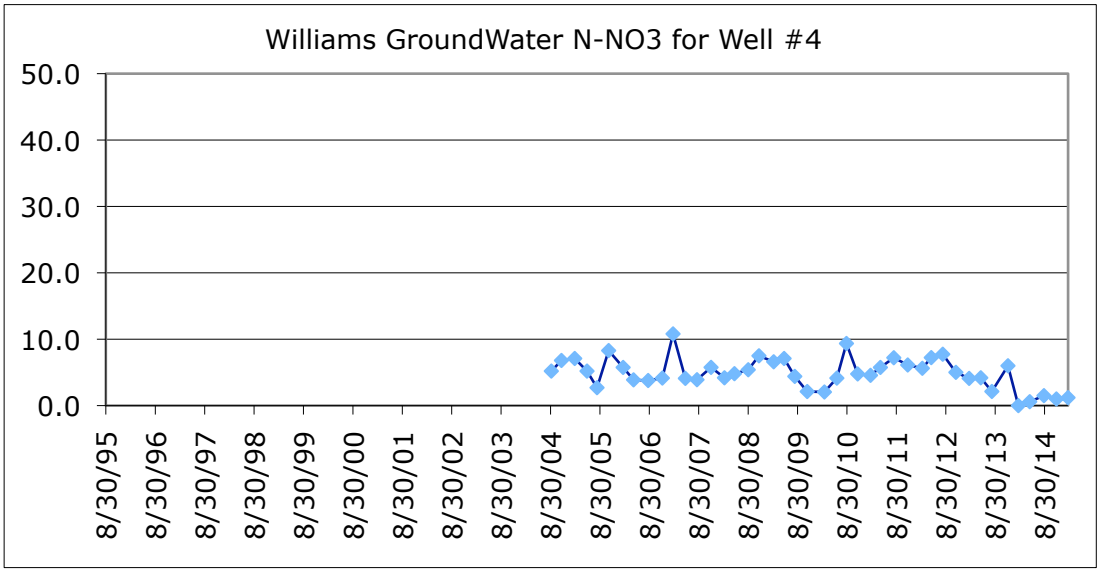
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #4
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40.0
30.0
20.0
10.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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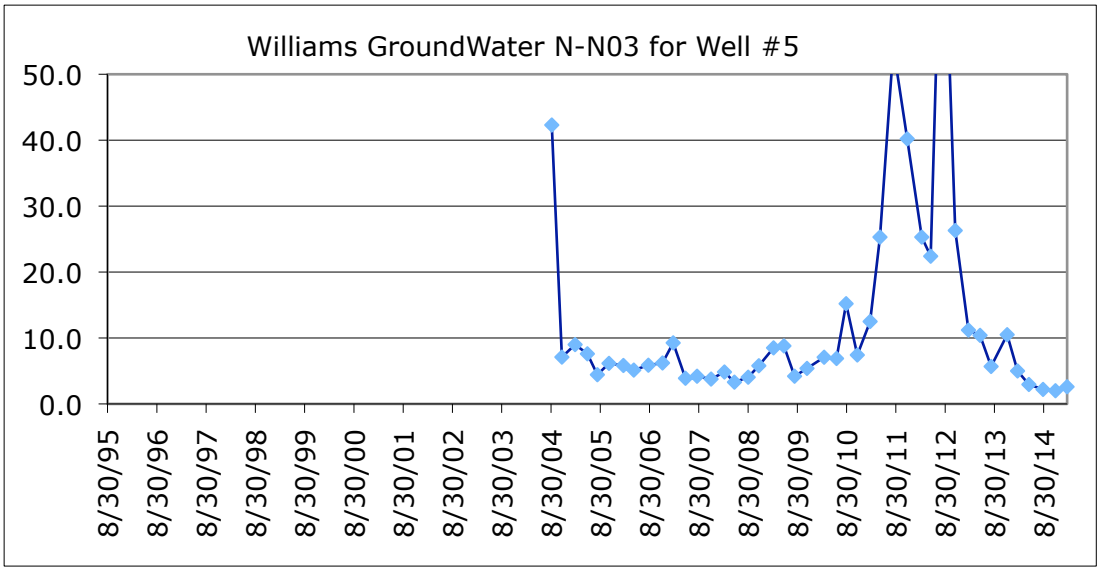
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater N-N03 for Well #5
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40.0
30.0
20.0
10.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
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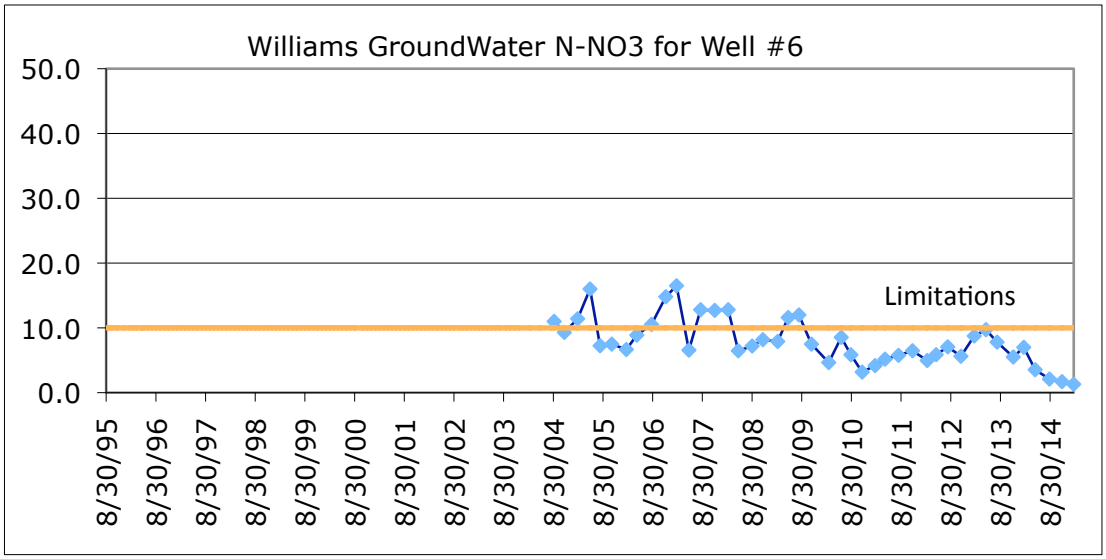
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #6
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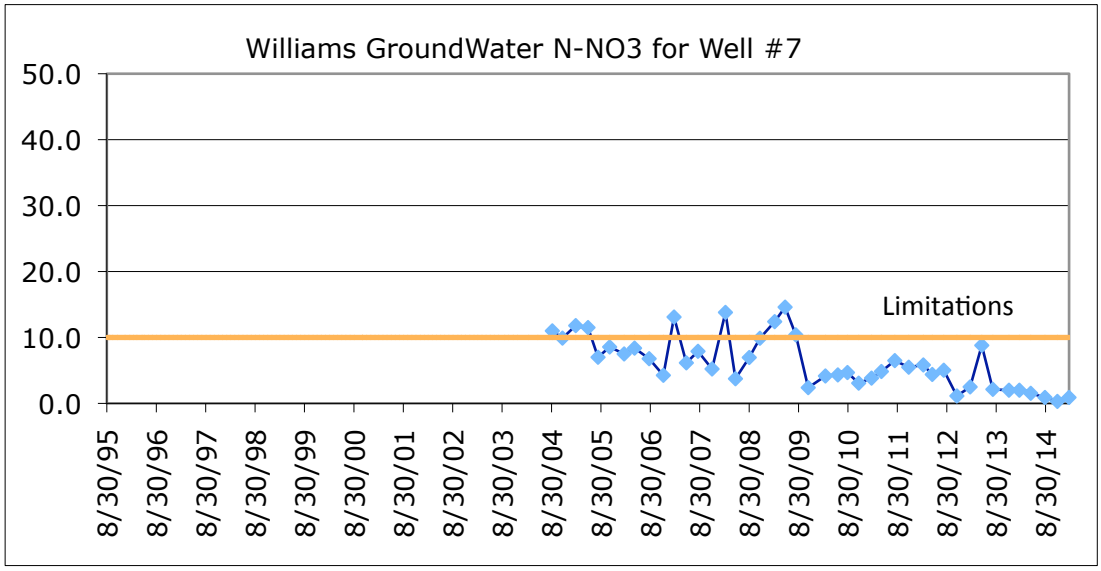
30.0
20.0
10.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #7
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40.0
30.0
20.0
10.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
8/30/04
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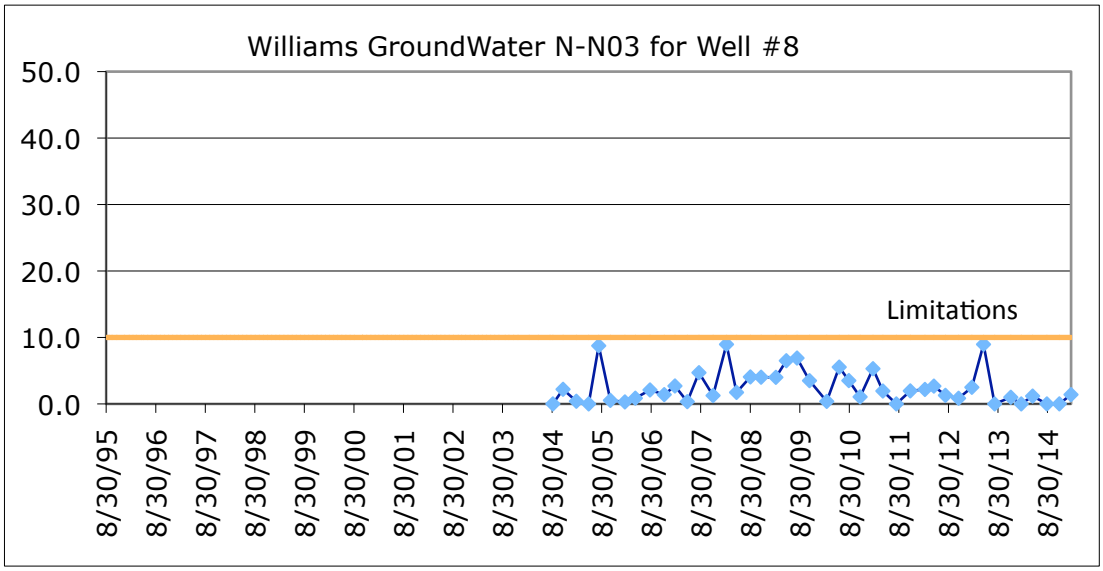
8/30/13
8/30/14


Williams GroundWater N-N03 for Well #8
50.0
40.0
30.0
20.0
10.0
0.0
Limitations
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
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8/30/05
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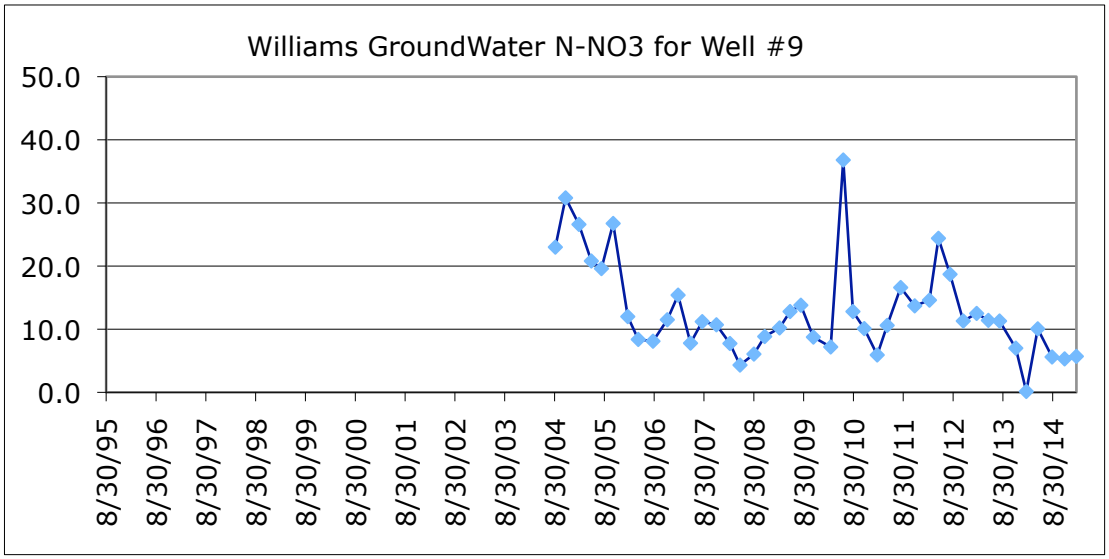
8/30/12
8/30/13
8/30/14


Williams GroundWater N-NO3 for Well #9
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40.0
30.0
20.0
10.0
0.0
8/30/95
8/30/96
8/30/97
8/30/98
8/30/99
8/30/00
8/30/01
8/30/02
8/30/03
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8/30/05
8/30/06
8/30/07
8/30/08
8/30/09
8/30/10
8/30/11
8/30/12
8/30/13
8/30/14

Attachment B

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-1 Well Completion Depth: 19.32 ft.

Depth to Water (sounded depth): 11.05 ft. Reference Point: North Side Top Casing

Height of Water Column: 8.27 ft. Casing Diameter: 2 in.

Casing Volume: 1.34 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 4.02 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1005	Start							
1006	2	7.59	276	20.01	-70.6	Clear		
1007	4	7.60	276	20.07	-65.0	Clear		
1008	6	7.62	276	20.10	-62.9	Clear		
1009	Sample							
1011	Finish							

Total Purge Time: 3 min Total Purge Volume: 6 gal

Recharge Depth: 11.10 ft. Time: 1016 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Well had some plant material floating in it. Water Elevation=88.43 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-2 Well Completion Depth: 24.05 ft.

Depth to Water (sounded depth): 15.03 ft. Reference Point: North Side Top Casing

Height of Water Column: 9.02 ft. Casing Diameter: 2 in.

Casing Volume: 1.47 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 4.41 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1053	Start							
1054	2	6.92	878	21.00	24.5	Clear		
1055	4	7.02	784	21.15	25.2	Clear		
1056	6	7.00	782	21.13	26.0	Clear		
1057	Sample							
1059	Finish							

Total Purge Time: 3 min Total Purge Volume: 6 gal

Recharge Depth: 18.87 ft. Time: 1104 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=86.73 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-3 Well Completion Depth: 13.20 ft.

Depth to Water (sounded depth): 7.62 ft. Reference Point: North Side Top Casing

Height of Water Column: 5.58 ft. Casing Diameter: 2 in.

Casing Volume: 0.90 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 2.70 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1120	Start							
1121	2	7.22	902	19.25	34.5	Clear		
1122	4	7.26	888	19.30	34.7	Clear		
1123	6	7.29	874	19.35	34.6	Clear		
1124	Sample							
1126	Finish							

Total Purge Time: 3 min Total Purge Volume: 6 gal

Recharge Depth: 11.05 ft. Time: 1131 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=86.22 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-4 Well Completion Depth: 18.08 ft.

Depth to Water (sounded depth): 9.05 ft. Reference Point: North Side Top Casing

Height of Water Column: 9.03 ft. Casing Diameter: 2 in.

Casing Volume: 1.47 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 4.41 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1030	Start							
1031	2	7.40	519	21.37	6.9	Clear		
1032	4	7.40	516	21.54	5.0	Clear		
1033	6	7.41	517	21.50	4.4	Clear		
1034	Sample							
1036	Finish							

Total Purge Time: 3 min Total Purge Volume: 6 gal

Recharge Depth: 9.55 ft. Time: 1041 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=88.18 ft (Well cap covered in mud also under cap and had to be scooped out before sampling)

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-5 Well Completion Depth: 19.40 ft.

Depth to Water (sounded depth): 5.03 ft. Reference Point: North Side Top Casing

Height of Water Column: 14.37 ft. Casing Diameter: 2 in.

Casing Volume: 2.34 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 7.02 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1323	Start							
1325	4	7.64	1015	18.77	39.2	Clear		
1326	6	7.63	1011	18.79	38.8	Clear		
1327	8	7.63	1004	18.80	37.5	Clear		
1328	Sample							
1330	Finish							

Total Purge Time: 4 min Total Purge Volume: 8 gal

Recharge Depth: 5.11 ft. Time: 1335 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=83.27 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-6 Well Completion Depth: 18.98 ft.

Depth to Water (sounded depth): 3.18 ft. Reference Point: North Side Top Casing

Height of Water Column: 15.80 ft. Casing Diameter: 2 in.

Casing Volume: 2.57 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 7.71 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1300	Start							
1302	4	7.29	1223	18.16	38.4	Clear		
1303	6	7.29	1219	18.18	37.6	Clear		
1304	8	7.29	1216	18.18	36.8	Clear		
1305	Sample							
1307	Finish							

Total Purge Time: 4 min Total Purge Volume: 8 gal

Recharge Depth: 3.50 ft. Time: 1312 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=86.52 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-7 Well Completion Depth: 19.00 ft.

Depth to Water (sounded depth): 5.71 ft. Reference Point: North Side Top Casing

Height of Water Column: 13.29 ft. Casing Diameter: 2 in.

Casing Volume: 2.16 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 6.48 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1146	Start							
1148	4	7.16	1202	17.05	43.4	Clear		
1149	6	7.17	1202	17.09	43.1	Clear		
1150	8	7.17	1202	17.11	42.3	Clear		
1151	Sample							
1153	Finish							

Total Purge Time: 4 min Total Purge Volume: 8 gal

Recharge Depth: 5.73 ft. Time: 1158 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=79.45 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-8 Well Completion Depth: 19.00 ft.

Depth to Water (sounded depth): 3.52 ft. Reference Point: North Side Top Casing

Height of Water Column: 15.48 ft. Casing Diameter: 2 in.

Casing Volume: 2.52 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 7.56 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1212	Start							
1214	4	7.02	1882	15.07	50.4	Clear		
1215	6	7.03	1875	15.09	59.0	Clear		
1216	8	7.03	1871	15.11	58.2	Clear		
1217	Sample							
1219	Finish							

Total Purge Time: 4 min Total Purge Volume: 8 gal

Recharge Depth: 3.62 ft. Time: 1224 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=73.95 ft

GROUNDWATER SAMPLING & PURGE LOG

Date: 2015-02-19 LabID# CH 1571155 Client: The Morningstar Packing Company

Tech. Name: John W Matthews Project Name/No: Quarterly

Well No: MW-9 Well Completion Depth: 18.69 ft.

Depth to Water (sounded depth): 5.29 ft. Reference Point: North Side Top Casing

Height of Water Column: 13.40 ft. Casing Diameter: 2 in.

Casing Volume: 2.18 gal = Height of Column x Volume/ft. (2"=0.163, 4"=0.650, 6"=1.43 gal/ft)

Amount to be purged: 6.54 gal = Casing Volume x 3 (volumes required)

Purge Rate: 2 gal Purge Method: P10250

Time	Purge Vol gal	pH	EC umhos/cm	Temp °C	ORP mV	Turb	D.O. mg/L	Comments
1234	Start							
1236	4	7.39	2068	17.50	50.3	Clear		
1237	6	7.40	2108	17.99	51.9	Clear		
1238	8	7.41	2111	18.07	51.5	Clear		
1239	Sample							
1241	Finish							

Total Purge Time: 4 min Total Purge Volume: 8 gal

Recharge Depth: 5.69 ft. Time: 1246 Sampling Method: Field Filtered

Decontamination Procedure:

Cleaned and disinfected at laboratory prior to use.

Notes: Water Elevation=74.41 ft

Attachment C

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EPA OnSite Calculators

Feedback

Hydraulic Gradient Calculator

Feedback

Acknowledgement

Gradient Calculation from fitting a plane to as many as fifteen points

$a x_1 + b y_1 + c = h_1$
$a x_2 + b y_2 + c = h_2$
$a x_3 + b y_3 + c = h_3$
. . .
$a x_{15} + b y_{15} + c = h_{15}$

where (x_i, y_i) are the coordinates of the well and
h_i is the head

i = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
The coefficients a, b, and c are calculated by a least-squares fitting of the the data to a plane

The gradient is calculated from the square root of $(a^2 + b^2)$ and the angle from the arctangent of a/b or b/a depending on the quadrant

Example Data Set 1 | Example Data Set 2 | Calculate | Clear

Site Name: Morning Star Williams

Date: 2/19/15 | Current Date

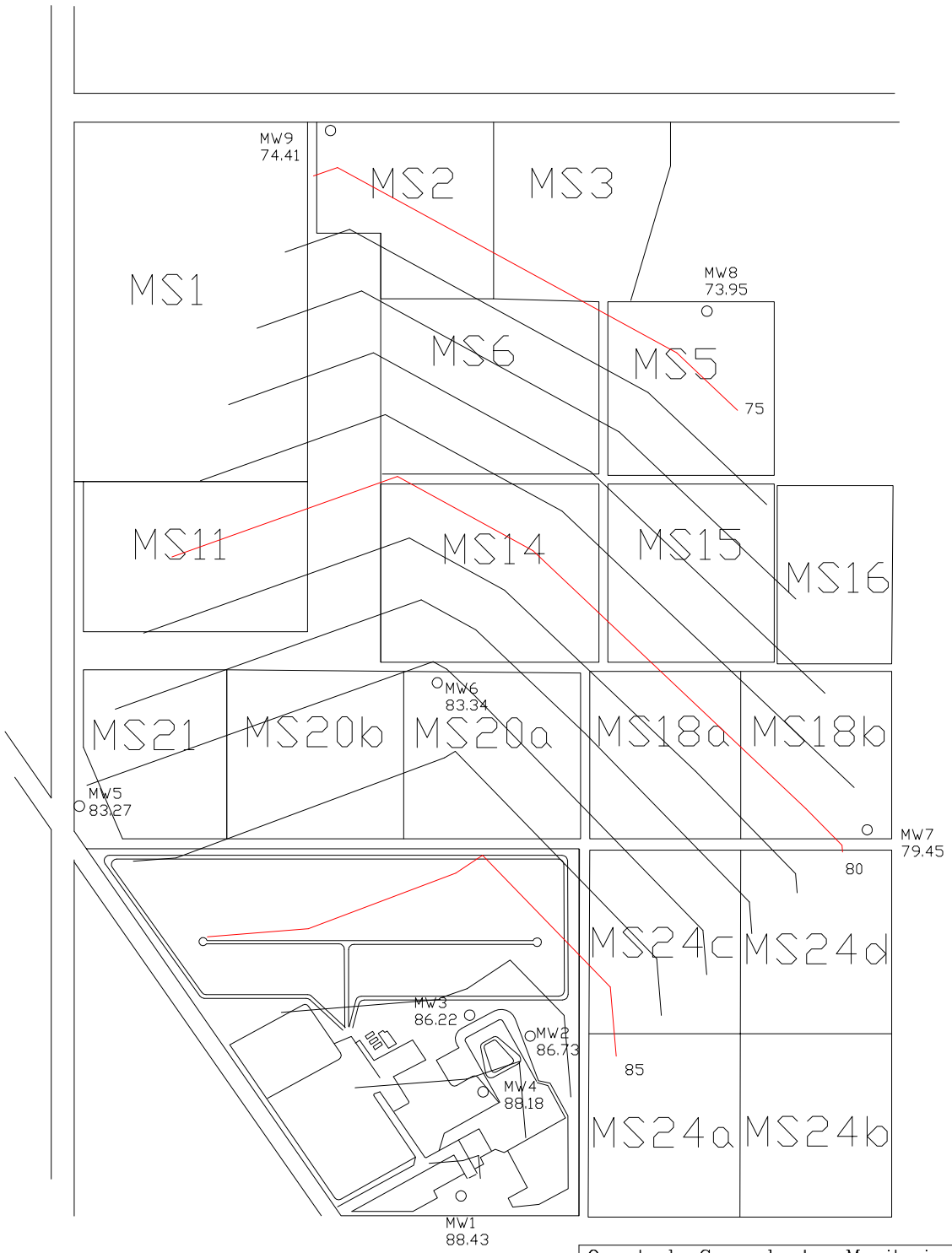
Calculation basis: Head

Coordinates ft			
I.D.	x-coordinate	y-coordinate	head ft
MW1	4217	1101	88.43
MW2	4729	2285	86.73
MW3	4281	2440	86.22
MW4	4380	1879	88.18
MW5	1391	3989	83.27
MW6	4041	4903	83.34
MW7	7223	3813	79.45
MW8	6038	7655	73.95
MW9	3251	8993	74.41

Number of Points Used in Calculation	9
Max. Difference Between Head Values	4.414
Gradient Magnitude (i)	0.002127
Flow direction as degrees from North (positive y axis)	21.90
Coefficient of Determination (R^2)	0.949

Top

Attachment D



Quarterly Groundwater Monitoring
Morning Star Packing
Williams Facility
Colusa County

FIRST QUARTER, 2015
GROUNDWATER ELEVATION MAP

DESIGN ENGINEER HILARY A. REINHARD
DATE 4/21/15 C.E. LICENSE NO. 64379

Job No. 1000.01	Date Revised				
Dwg. No. 1042	Approval				

SCALE 1"=1200'
DRAWN BY HAR
REVISED
USER_REVISED

SHEET 1 OF 1 SHEETS

Attachment E

February 26, 2015

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Lab ID : CH 1571155
Customer : 7-11617

Laboratory Report

Introduction: This report package contains total of 14 pages divided into 3 sections:

Case Narrative	(3 pages)	: An overview of the work performed at FGL.
Sample Results	(9 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
MW1	02/19/2015	02/19/2015	CH 1571155-001	MW
MW2	02/19/2015	02/19/2015	CH 1571155-002	MW
MW3	02/19/2015	02/19/2015	CH 1571155-003	MW
MW4	02/19/2015	02/19/2015	CH 1571155-004	MW
MW5	02/19/2015	02/19/2015	CH 1571155-005	MW
MW6	02/19/2015	02/19/2015	CH 1571155-006	MW
MW7	02/19/2015	02/19/2015	CH 1571155-007	MW
MW8	02/19/2015	02/19/2015	CH 1571155-008	MW
MW9	02/19/2015	02/19/2015	CH 1571155-009	MW

Sampling and Receipt Information: All samples were performed by FGL using the following methods (where applicable):

Bacteriological Sampling	- SOP:200900141
Grab sampling for liquids	- SOP:200900137
Composite sampling for liquids	- SOP:200900139
Grab sampling for solids	- SOP:200900142
Composite sampling for solids	- SOP:200900143

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
CH 1571155-001	pH	15	319.2 Minutes
CH 1571155-002	pH	15	273 Minutes
CH 1571155-003	pH	15	247.2 Minutes
CH 1571155-004	pH	15	298.2 Minutes
CH 1571155-005	pH	15	124.8 Minutes
CH 1571155-006	pH	15	151.2 Minutes
CH 1571155-008	pH	15	202.2 Minutes

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February 26, 2015 Lab ID : CH 1571155
The Morning Star Packing Co-WW Customer : 7-11617

Lab ID	Analyte/Method	Required Holding Time	Actual Holding Time
CH 1571155-009	pH	15	181.2 Minutes

All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Metals QC

200.7	02/22/2015:202822 All analysis quality controls are within established criteria.
	02/23/2015:202859 All analysis quality controls are within established criteria.
	02/20/2015:202078 All preparation quality controls are within established criteria, except: The following note applies to Iron, Manganese: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

Inorganic - Wet Chemistry QC

2540CE	02/23/2015:202145 All preparation quality controls are within established criteria, except: The following note applies to Solids, Total Dissolved: 440 Sample nonhomogeneity may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
351.2	02/23/2015:202107 All preparation quality controls are within established criteria.
	02/24/2015:202161 All preparation quality controls are within established criteria.
4500-H B	02/19/2015:710219 All preparation quality controls are within established criteria.
4500HB	02/19/2015:710311 All analysis quality controls are within established criteria.
4500NO3F	02/20/2015:202763 All analysis quality controls are within established criteria.
	02/20/2015:202068 All preparation quality controls are within established criteria.
EPA351.2	02/24/2015:202868 All analysis quality controls are within established criteria.
	02/25/2015:202945 All analysis quality controls are within established criteria.

February 26, 2015 Lab ID : CH 1571155
The Morning Star Packing Co-WW Customer : 7-11617

Certification:: I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2015-02-26

February 26, 2015

Lab ID : CH 1571155-001
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-10:09
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW1
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/22/15:202822
Manganese	ND	0.01	mg/L		200.7	02/20/15:202078	200.7	02/22/15:202822
Wet Chemistry[P:1]								
Nitrate Nitrogen	0.2	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.6	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	160	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-002
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-10:57
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW2
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/22/15:202822
Manganese	ND	0.01	mg/L		200.7	02/20/15:202078	200.7	02/22/15:202822
Wet Chemistry[P:1]								
Nitrate Nitrogen	2.8	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/23/15:202107	EPA351.2	02/24/15:202868
pH	6.9	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	440	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-003
Customer ID : 7-11617

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Attn: Ross Oliveira
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Woodland, CA 95695

Sampled On : February 19, 2015-11:24
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW3
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	ND	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	9.9	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.1	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	490	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-004
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-10:34
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW4
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	ND	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	1.2	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.3	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	290	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-005
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-13:28
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW5
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	0.01	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	2.6	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.5	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	610	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-006
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-13:05
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW6
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	0.03	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	1.3	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.2	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	700	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-007
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-11:51
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW7
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	0.31	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	0.9	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.1	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	700	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-008
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-12:17
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW8
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	1.73	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	1.4	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.0	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	1150	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015

Lab ID : CH 1571155-009
Customer ID : 7-11617

The Morning Star Packing Co-WW
Attn: Ross Oliveira
724 Main St
Woodland, CA 95695

Sampled On : February 19, 2015-12:39
Sampled By : John Matthews
Received On : February 19, 2015-15:10
Matrix : Monitoring Well

Description : MW9
Project : Groundwater Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Metals, Diss[P:1'5]								
Iron	ND	0.03	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Manganese	0.23	0.01	mg/L		200.7	02/20/15:202078	200.7	02/23/15:202859
Wet Chemistry[P:1]								
Nitrate Nitrogen	5.7	0.1	mg/L		4500NO3F	02/20/15:202068	4500NO3F	02/20/15:202763
Nitrogen, Total Kjeldahl	ND	1	mg/L		351.2	02/24/15:202161	EPA351.2	02/25/15:202945
pH	7.5	--	units		4500-H B	02/19/15:710219	4500HB	02/19/15:710311
Solids, Total Dissolved (TDS)	1330	20	mg/L		2540CE	02/23/15:202145	2540C	02/24/15:202867

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, HNO3 pH < 2 ‡Surrogate. * PQL adjusted for dilution.

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February 26, 2015 Lab ID : CH 1571155
The Morning Star Packing Co-WW Customer : 7-11617

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Iron	200.7		MS	ug/L	4000	115 %	75-125	
		(STK1531747-012)	MSD	ug/L	4000	116 %	75-125	
			MSRPD	ug/L	4000	0.3%	≤20.0	
			MS	ug/L	4000	0.02 %	75-125	435
		(CH 1571155-009)	MSD	ug/L	4000	-0.02 %	75-125	435
			MSRPD	ug/L	4000	1.5	≤30	
	200.7	02/22/15:202822AC	CCV	ppm	5.000	107 %	90-110	
			CCB	ppm		0.0003	0.03	
			CCV	ppm	5.000	103 %	90-110	
			CCB	ppm		0.001	0.03	
	200.7	02/23/15:202859AC	CCV	ppm	5.000	97.8 %	90-110	
			CCB	ppm		0.0048	0.03	
			CCV	ppm	5.000	105 %	90-110	
			CCB	ppm		0.0033	0.03	
Manganese	200.7		MS	ug/L	800.0	113 %	75-125	
		(STK1531747-012)	MSD	ug/L	800.0	114 %	75-125	
			MSRPD	ug/L	4000	0.8%	≤20.0	
			MS	ug/L	800.0	-28.9 %	75-125	435
		(CH 1571155-009)	MSD	ug/L	800.0	-28.9 %	75-125	435
			MSRPD	ug/L	4000	0.40	≤10	
	200.7	02/22/15:202822AC	CCV	ppm	1.000	105 %	90-110	
			CCB	ppm		0.000001	0.01	
			CCV	ppm	1.000	104 %	90-110	
			CCB	ppm		0.00006	0.01	
	200.7	02/23/15:202859AC	CCV	ppm	1.000	93.9 %	90-110	
			CCB	ppm		0.0009	0.01	
			CCV	ppm	1.000	98.6 %	90-110	
			CCB	ppm		0.0005	0.01	
Wet Chem								
Solids, Total Dissolved	2540CE	02/23/15:202145CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	1001	98.3 %	90-110	
		(STK1531735-001)	Dup	mg/L		6.7%	5	440
Nitrogen, Total Kjeldahl	351.2	02/23/15:202107jmg	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	78.6 %	73-124	
			MS	mg/L	12.00	76.4 %	54-136	
		(CC 1580558-001)	MSD	mg/L	12.00	76.7 %	54-136	
			MSRPD	mg/L	12.00	0.4%	≤27	
	351.2	02/24/15:202161jmg	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	90.0 %	73-124	
			MS	mg/L	12.00	86.1 %	54-136	
		(CH 1571155-001)	MSD	mg/L	12.00	86.7 %	54-136	
			MSRPD	mg/L	12.00	0.6%	≤27	
pH	4500-H B	(CH 1571155-001)	Dup	units		0.3%	4.80	
		(CH 1571155-006)	Dup	units		0.6%	4.80	
	4500HB	02/19/15:710311pkx	CCV	units		0.%	95-105	
			CCV	units		0.%	95-105	
			CCV	units		0.%	95-105	
Nitrate + Nitrite as N	4500NO3F		MS	mg/L	11.27	77.2 %	5-285	
		(SP 1501986-001)	MSD	mg/L	11.27	80.1 %	5-285	
			MSRPD	mg/L	11.27	3.4%	≤30.4	
	4500NO3F	02/20/15:202763CJJ	CCB	mg/L		0.067	0.1	
			CCV	mg/L	11.27	89.8 %	90-110	
			CCB	mg/L		0.058	0.1	
			CCB	mg/L		0.051	0.1	
			CCV	mg/L	11.27	90.0 %	90-110	

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February 26, 2015 | Lab ID : CH 1571155
The Morning Star Packing Co-WW | Customer : 7-11617

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Nitrate + Nitrite as N	4500NO3F	02/20/15:202763CJJ	CCB	mg/L		0.073	0.1	
			CCV	mg/L	11.27	91.4 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	02/24/15:202868AMB	ICB	mg/L		0.320	0.5	
			ICV	mg/L	5.000	97.0 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	104 %	90-110	
	EPA351.2	02/25/15:202945AMB	ICB	mg/L		0.323	0.5	
			ICV	mg/L	5.000	102 %	90-110	
			CCB	mg/L		0.178	0.5	
			CCV	mg/L	5.000	103 %	90-110	
			CCB	mg/L		0.033	0.5	
			CCV	mg/L	5.000	95.0 %	90-110	

Definition

ICV	: Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
ICB	: Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation

435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
440	: Sample nonhomogeneity may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.