

## Jennie Duncan

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**From:** Sarah Dvoracek <sarah.dvoracek@evart.org>  
**Sent:** Thursday, March 14, 2019 10:47 AM  
**To:** Jennifer Duncan  
**Subject:** FW: Updated Perchlorate Sampling Results through 2/22/19  
**Attachments:** 2016 - 2019 Perc.xlsx

Packets

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**From:** Foote, Greg <Greg.Foote@arcadis.com>

**Sent:** Monday, March 11, 2019 2:08 PM

**To:** Sarah J. Dvoracek (sarah.dvoracek@evart.org) <sarah.dvoracek@evart.org>; Mark Wilson (mark.wilson@evart.org) <mark.wilson@evart.org>; Patrick Muczynski <patrick.muczynski@evart.org>

**Subject:** Updated Perchlorate Sampling Results through 2/22/19

Hello Sarah, Mark, and Patrick-

Attached is a table summarizing the well and water tower perchlorate sampling results through 2/22/19. The results are similar to the past few rounds with stable or slightly declining trends in the wells and water towers. The highest concentration detected was 0.54 ug/L in Well 4. Please let me know if you have any questions.

Thanks

-Greg

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Sample ID	Laboratory Method	Analyte	Matrix	2016												Results Oct 4		
				Results March 3	Results March 10	Results March 16	Results April 1	Results April 12	Results April 27	Results May 13	Results May 23	Results June 7	Results July 8	Results July 22	Results August 5		Results August 26	Results Sept 9
West Tower	331	Perchlorate	Water	0.13	0.13	0.12	0.11	0.07	0.07	NS	0.17	0.11	0.11	0.08	0.09	0.13	0.17	0.32
North Tower	331	Perchlorate	Water	1.4	1.2	1.2	1.6	1.4	NS	2.4	2.7	1.4	0.87	0.56	0.53	0.5	0.85	1.1
Well-1	331	Perchlorate	Water	11	11	11	10	10	10	10	10	10	6.3	7.3	7.4	8.5	13	14
Well-2	331	Perchlorate	Water	8.2	7.9	8.4	7.9	11	16	18	19	18	NS	NS	20	22	33	36
Capitane (Well 2)	331	Perchlorate	Water	7.7	7.7	8	7.9	9.8	16	18	19	18	NS	NS	NS	NS	NS	NS
Well-3	331	Perchlorate	Water	7.4	6.1	6.3	7.8	11	15	21	26	28	24	21	22	22	12	7.3
Well-4	331	Perchlorate	Water	6.0	6.2	6.2	6.1	5.9	6.1	6.3	6.7	7.4	4.6	5.3	6.4	7.3	6.8	9.0
Well-6	331	Perchlorate	Water	0.73	0.66	0.61	0.55	0.66	0.72	0.74	0.82	0.74	1.1	1.7	1.6	1.6	1.4	1.3
Hydrant-1	331	Perchlorate	Water	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrant-2	331	Perchlorate	Water	6.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Capitane (Hydrant 2)	331	Perchlorate	Water	4.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrant-3	331	Perchlorate	Water	6.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrant-4	331	Perchlorate	Water	4.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample ID	Laboratory Method	Analyte	Matrix	2017												Detection Limit		
				Results Oct 21	Results Nov 4	Results Nov 18	Results Dec 2	Results Dec 16	Results Dec 29	Results Jan 13	Results Jan 27	Results Feb 10	Results Feb 24	Results Mar 10	Results Mar 24		Results April 7	Results April 21
West Tower	331	Perchlorate	Water	0.31	0.33	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.07	0.06	0.06	<0.05
North Tower	331	Perchlorate	Water	0.87	0.75	0.67	0.47	0.31	0.18	0.18	0.14	0.15	0.14	0.16	0.18	0.15	0.14	0.05
Well-1	331	Perchlorate	Water	8	6.9	5.8	5.0	4.4	3.8	3.3	3.1	2.8	2.9	3.1	3	2.6	2.3	2.2
Well-2	331	Perchlorate	Water	22	17	15	14	9.8	9	6.2	6.9	1	1.2	0.99	1.7	1.4	1.4	1.5
Well-3	331	Perchlorate	Water	4.1	3.1	2.9	2.7	2.4	2	1.8	1	1.3	1	1.4	1	1.2	1.3	1.3
Well-4	331	Perchlorate	Water	5.9	5.5	4.9	3.7	3.4	3.1	2.6	2.6	2.1	1.9	1.9	1.7	1.8	1.9	1.8
Well-6	331	Perchlorate	Water	0.78	0.33	0.39	0.21	0.21	0.12	0.13	0.07	0.57	0.56	0.28	0.97	0.74	0.63	0.58

Sample ID	Laboratory Method	Analyte	Matrix	2017												Detection Limit		
				Results May 17	Results May 30	Results June 16	Results June 27	Results July 14	Results July 27	Results Aug 11	Results Aug 24	Results Sept 8	Results Sept 22	Results Oct 6	Results Oct 20		Results Nov 3	Results Nov 17
West Tower	331	Perchlorate	Water	<0.05	0.06	0.07	0.09	0.12	0.17	0.19	0.23	0.23	0.23	0.09	0.10	0.12	0.15	0.16
North Tower	331	Perchlorate	Water	0.20	0.23	0.24	0.27	0.27	0.32	0.41	0.46	0.41	0.31	0.26	0.42	0.32	0.29	0.31
Well-1	331	Perchlorate	Water	2	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.1	1.1	1.1	1.0	0.98	0.87	0.83
Well-2	331	Perchlorate	Water	2	2.9	2.4	1.8	2.2	2.2	2	1.8	1.6	1.4	0.98	0.84	0.45	0.49	0.54
Well-3	331	Perchlorate	Water	1.9	3.5	2	1.4	2.4	2.7	2	1.8	1.7	1.4	1.1	0.84	0.60	0.52	0.62
Well-4	331	Perchlorate	Water	1.6	1.6	1.4	1.5	1.4	1.3	1.2	1.1	0.96	0.97	0.92	0.99	0.87	0.82	0.82
Well-6	331	Perchlorate	Water	1.5	2.3	2.2	1.2	1.8	2.0	1.5	1.6	1.4	1.1	0.96	0.44	0.23	0.28	0.25

DW - Drinking Water  
NS - Not Sampled  
North Tower not sampled (April 27, 2016) due to maintenance  
West Tower not sampled (May 13, 2016) due to maintenance  
Well 1 not sampled (May 23, 2016 and June 1, 2016) due to maintenance  
Well 2 not sampled (June 23, 2016 and July 8, 2016) due to maintenance  
Well 3 not sampled (April 20, 2016) due to maintenance

Sample ID	Laboratory Method	Analyte	Matrix	2018												Detection Limit		
				Results Dec 15	Results Dec 27	Results Jan 12	Results Jan 26	Results Feb 7	Results Feb 23	Results March 9	Results March 23	Results April 6	Results April 20	Results May 4	Results May 18		Results June 1	Results June 15
West Tower	331	Perchlorate	Water	0.24	0.18	0.38	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.14	0.19	0.13
North Tower	331	Perchlorate	Water	0.31	0.30	0.32	0.21	0.16	0.11	0.08	0.07	0.08	0.06	0.09	0.09	0.09	0.12	0.13
Well-1	331	Perchlorate	Water	0.74	0.67	0.63	0.61	0.60	0.74	0.67	0.62	0.62	0.46	0.41	0.40	0.39	0.37	0.34
Well-2	331	Perchlorate	Water	0.53	0.47	0.48	0.42	0.53	0.53	0.53	0.53	0.55	0.60	0.41	0.40	0.43	0.51	0.52
Well-3	331	Perchlorate	Water	0.55	0.56	0.56	0.53	0.62	1.4	1.7	1.4	0.80	NS	0.65	0.47	0.64	0.67	0.68
Well-4	331	Perchlorate	Water	0.71	0.72	0.86	0.76	0.80	0.76	0.78	0.77	0.76	0.73	0.65	0.60	0.57	0.54	0.57
Well-6	331	Perchlorate	Water	0.29	0.27	0.33	0.24	0.28	0.37	0.30	0.41	0.37	0.19	0.18	0.14	0.12	0.15	0.14

Sample ID	Laboratory Method	Analyte	Matrix	2019												Detection Limit		
				Results July 20	Results Aug 6	Results Aug 21	Results Sept 7	Results Sept 24	Results Oct 19	Results Nov 16	Results Dec 14	Results Jan 18	Results Feb 22	Results March 18	Results April 15		Results May 12	Results June 9
West Tower	331	Perchlorate	Water	0.15	0.20	0.26	0.37	0.17	NS	0.22	0.08	0.13	0.07					
North Tower	331	Perchlorate	Water	0.16	0.29	0.34	0.38	0.40	0.18	0.12	0.11	0.13	0.30					
Well-1	331	Perchlorate	Water	0.36	0.37	NS	0.34	NS	0.27	0.30	0.32	0.29	0.29					
Well-2	331	Perchlorate	Water	0.55	0.50	0.47	0.33	0.44	0.30	0.33	0.34	0.29	0.27					
Well-3	331	Perchlorate	Water	0.75	0.71	0.70	0.65	0.62	0.47	0.54	0.51	0.42	0.40					
Well-4	331	Perchlorate	Water	0.56	0.57	0.62	0.67	0.65	0.66	0.72	0.63	0.58	0.54					
Well-6	331	Perchlorate	Water	0.13	0.12	0.14	0.19	0.07	<0.05	<0.05	<0.05	<0.05	<0.05					

DW - Drinking Water  
NS - Not Sampled  
Well 1 not sampled (August 21, 2018 and September 24, 2018) due to maintenance  
Well 2 not sampled (October 19, 2019) due to maintenance