Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Joe Branch
Site Manager
Direct Dial (231) 670-6809

7601 Old Channel Trail
Montague, MI 49437

January 31, 2018

Reference No. 001069

Ms. Gloria M. Sosa
USEPA
Region II, Site Investigation & Compliance Branch
290 Broadway, 20th Floor
New York, NY 10007-1866

Mr. Brian P. Sadowski
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Sosa and Mr. Sadowski:

Re: Quarterly Operations Report – Fourth Quarter 2017
Hyde Park Remedial Program
Bedrock and Overburden Monitoring Programs
NYSDEC Site No. 932021

In accordance with the July 2006 "Performance Monitoring Plan" (PMP), the following is the Quarterly Operations Report for the Hyde Park Remedial Program for the period October 1, 2017 through December 31, 2017. A total of 5.7 million gallons of aqueous phase liquid (APL) was collected, treated, and discharged in compliance with the Site's City of Niagara Falls Publicly Owned Treatment Works (POTW) Significant Industrial Users Wastewater Discharge Permit #49. No non-aqueous phase liquid (NAPL) was shipped for disposal this quarter. The potentiometric contours are consistent with previous interpretations. Flow Zones 6, 7, and 9 have dewatered areas between the landfill and the gorge face. The current data continue to support the interpretation of effective hydraulic containment and inward gradients.

The performance monitoring data are presented as follows:

- Figures 1-9: Showing the potentiometric surface for the bedrock flow zones and overburden
- Figure 10: Showing continuously recorded water levels at flow zone 9 piezometer PMW-1M-09
- Table 1: Water level elevation summary
- Tables 2, 3, and 4: Daily, weekly, and quarterly treatment system effluent monitoring data
- Attachment A: Purge well performance graphs indicating daily level and flow information

The pumping wells are operational and functioning as designed. The pumps are operated to maintain a water level between a typical range of 2.5 feet above (pump on) and 2.5 feet below (pump off) a specific setpoint in accordance with the setpoint range defined in the Operation & Maintenance Manual. The following minor operational and setpoint issues were investigated or resolved during the fourth quarter of 2017:

- The water level in APW-2 exceeded setpoint range from October 9 to October 16 due to heavy rains. The water level returned to within setpoint range on October 17. The water level in APW-2 exceeded

setpoint range again on October 30 due to heavy rains. The water level returned to within setpoint range on October 31.

- The water level in PW-6MR exceeded setpoint range on October 2 due to a pump issue. The pump was reset and the water level returned to within setpoint range on October 3 The water level in PW-6MR exceeded setpoint range on October 24 due to a blown fuse in the control system. The fuse was replaced and the water level returned to within setpoint range on October 25.
- The water level in PW-8U exceeded setpoint range from December 18 to December 31 due to a pump issue causing low flow. The pump was plugged with sludge and the pump and motor were replaced on January 9, 2018 but stopped working due to plugging shortly thereafter. The well is scheduled to be cleaned out and repaired on February 12.

If you have any questions, please feel free to contact me at (231) 670-6809 or by email at joseph_branch@oxy.com.

Very truly yours,

GLENN SPRINGS HOLDINGS, INC.

JBranch

Joe Branch
Site Manager
231-670-6809 Cell

JB/eew/31
Encl.
cc: C. Babcock, GSH
D. Hettrick, NYSDOH
J. Pentilchuk, GHD
S. Sasnow, GHD
G. May, NYSDEC
D. Hoyt, GHD
M. Popek, GHD

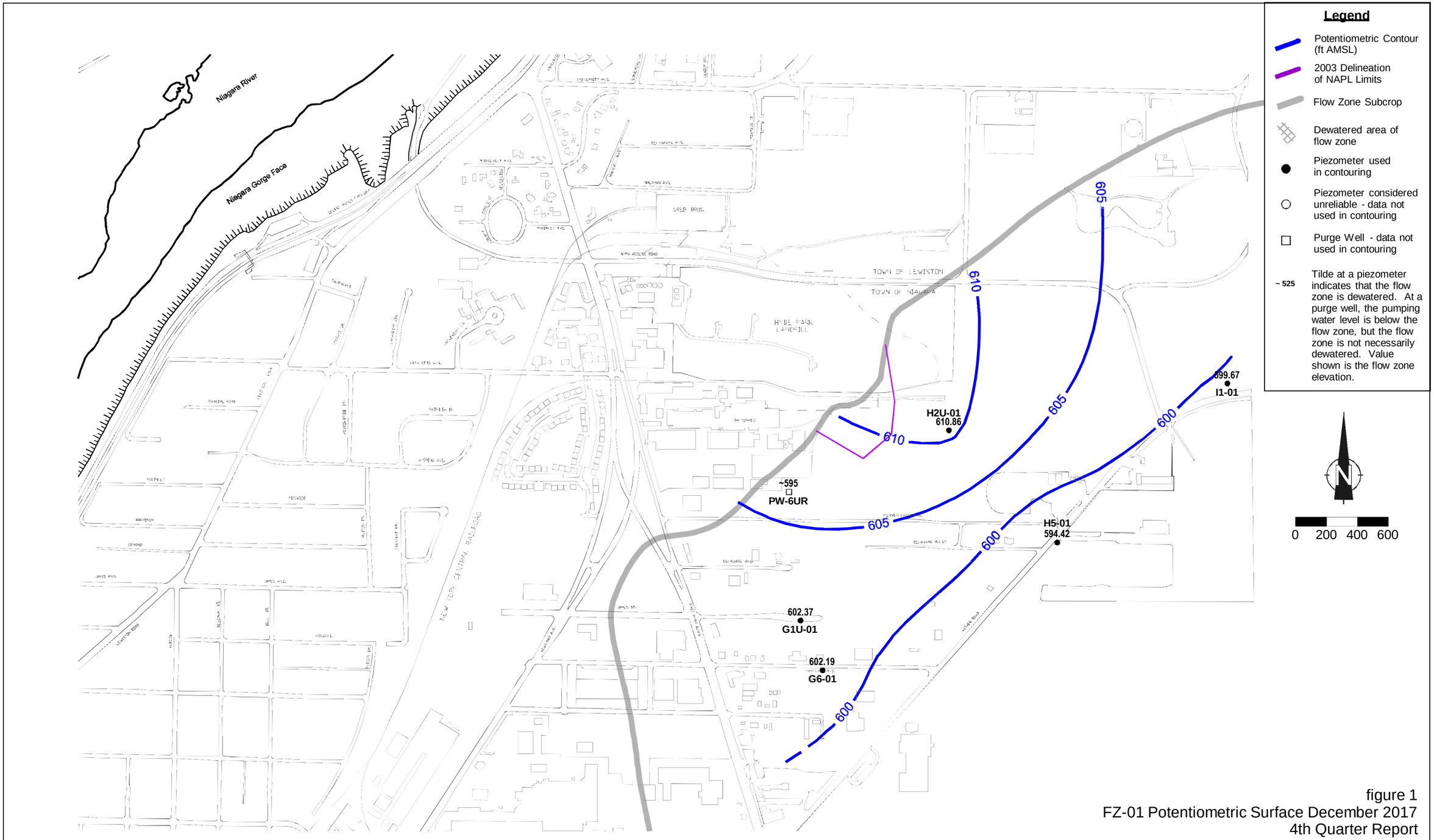
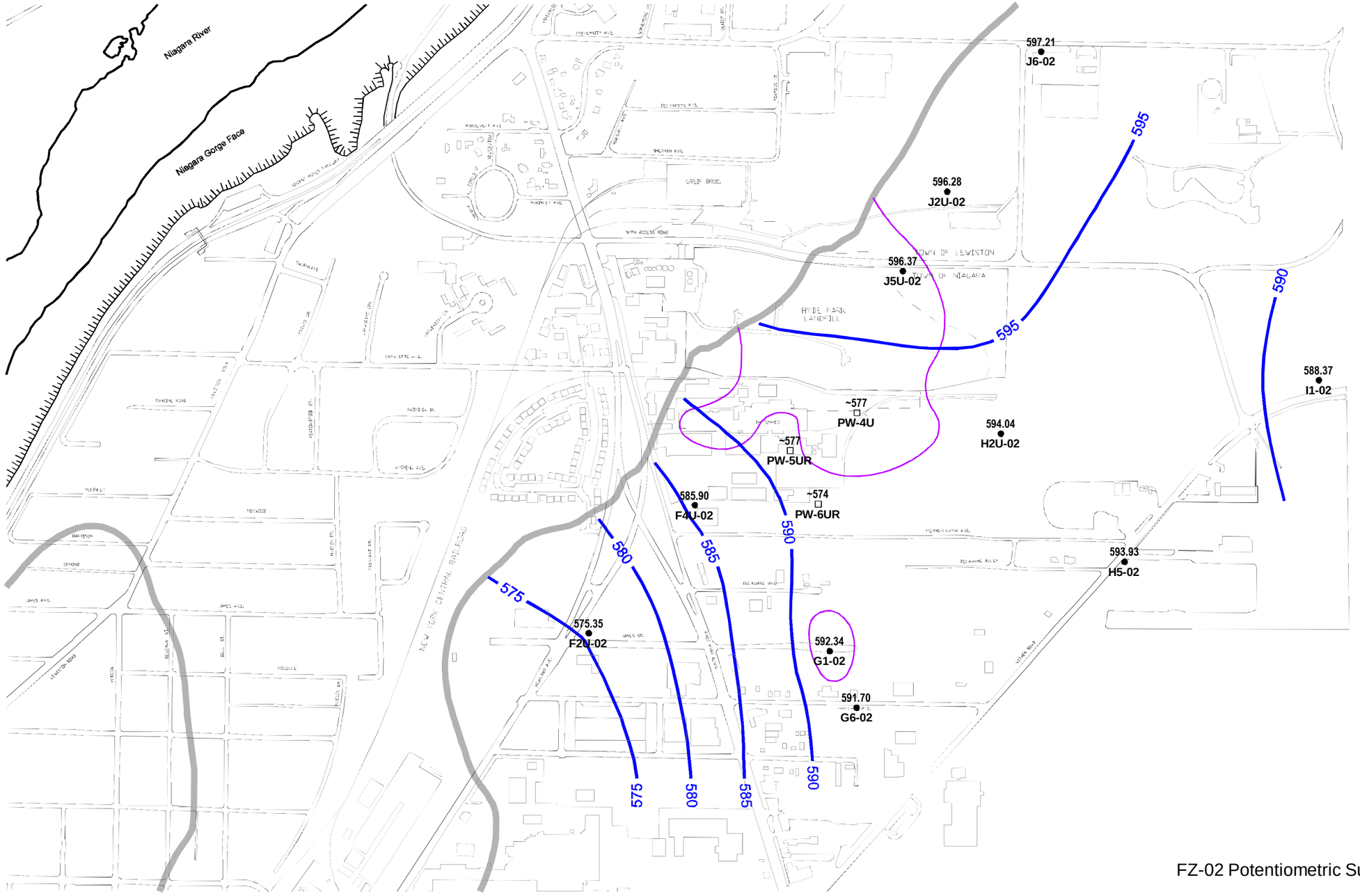


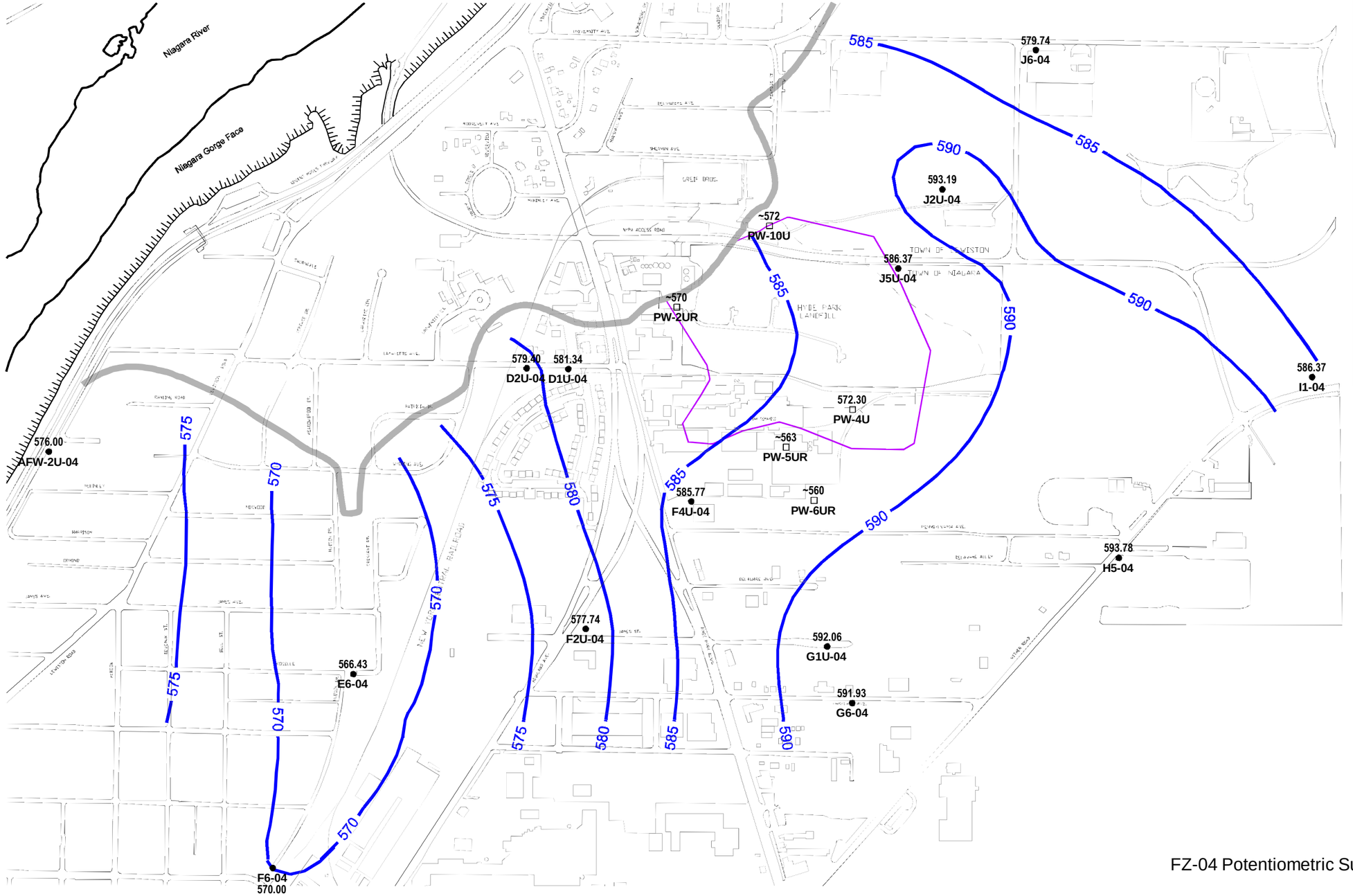
figure 1
FZ-01 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

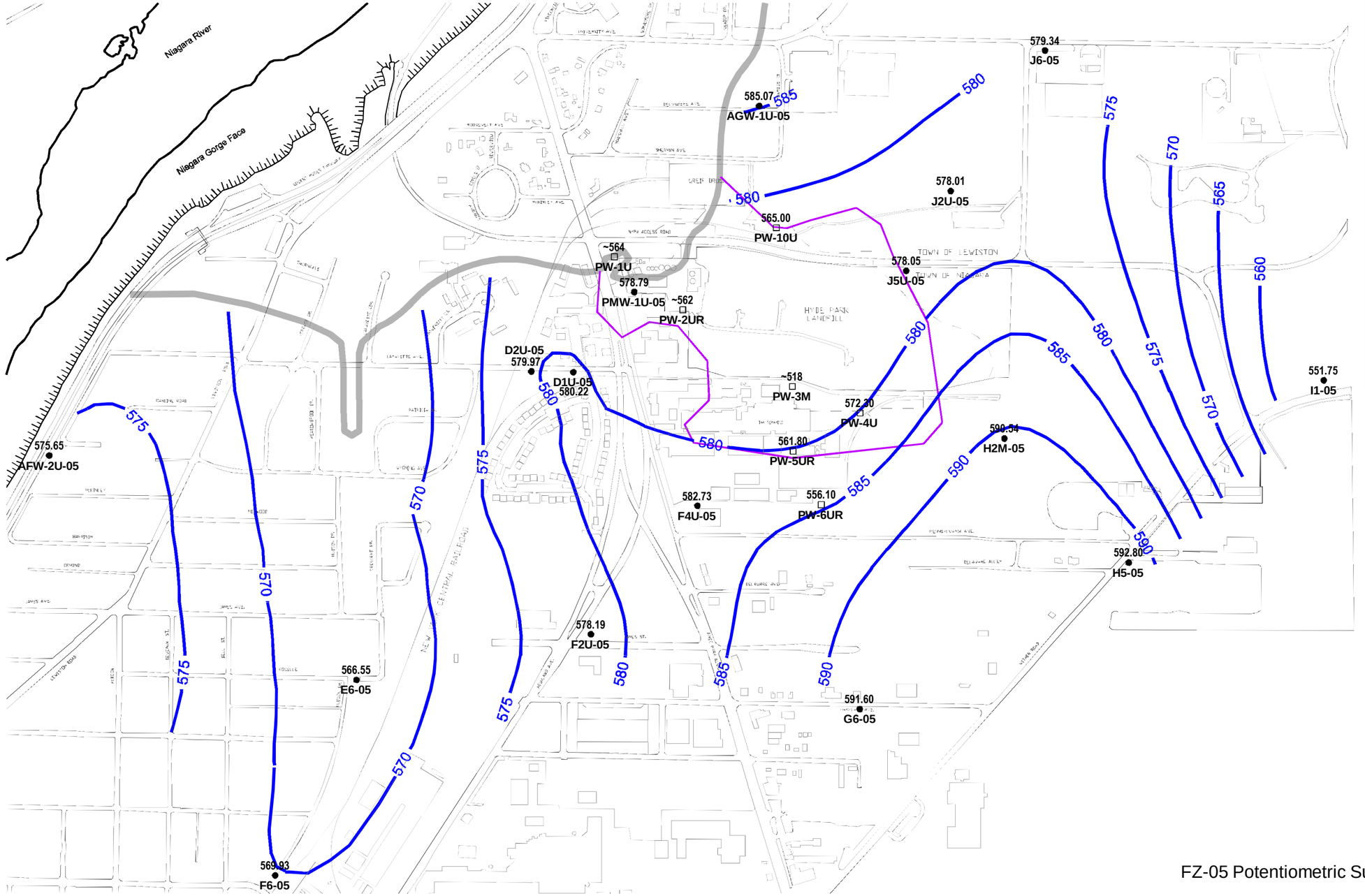
figure 2
FZ-02 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

figure 3
FZ-04 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York

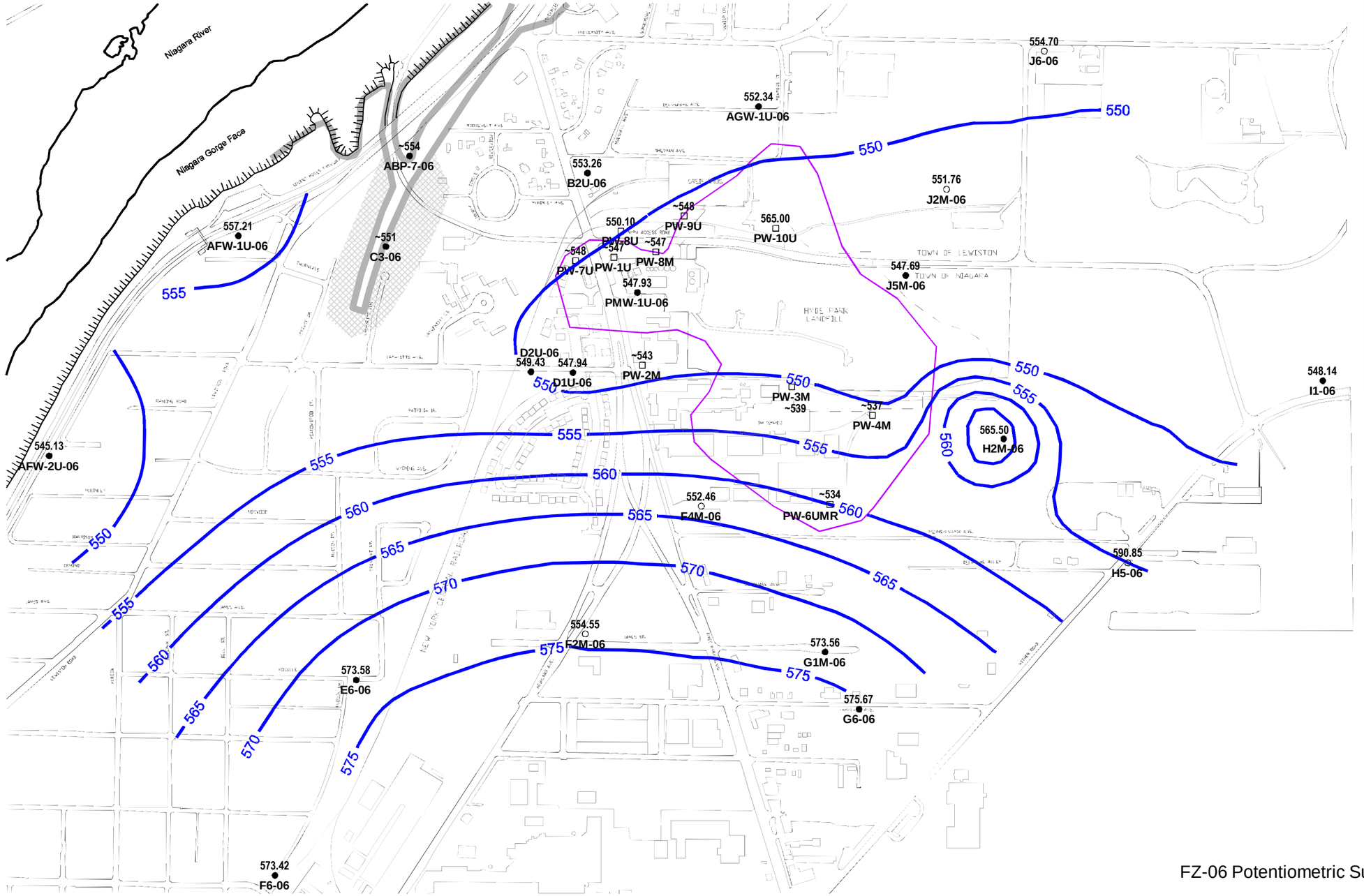


Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- Piezometer used in contouring
- Piezometer considered unreliable - data not used in contouring
- Purge Well - data not used in contouring
- ~ 525 — Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

figure 4
FZ-05 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York

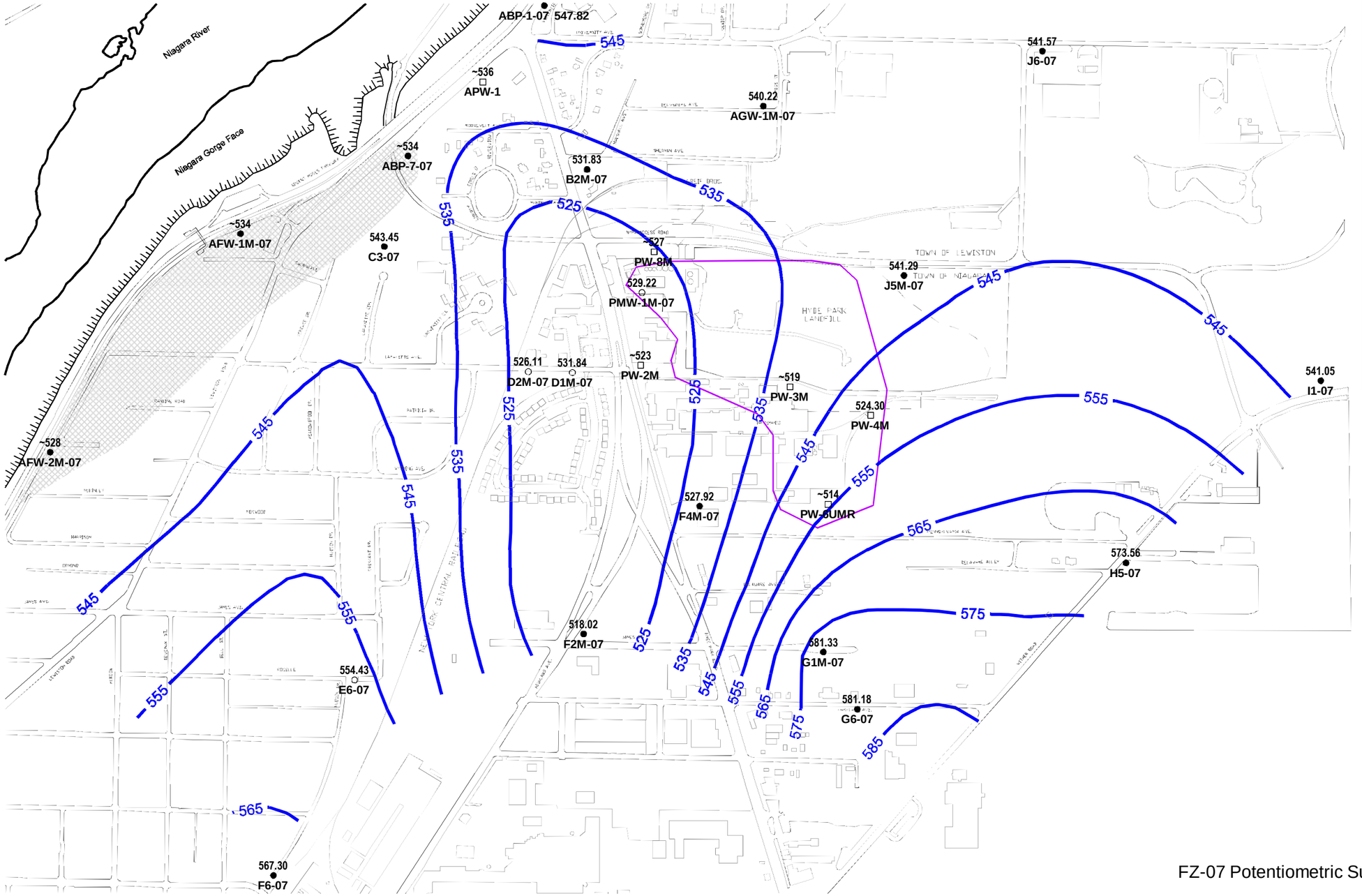
Glenn Springs Holdings, Inc.



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

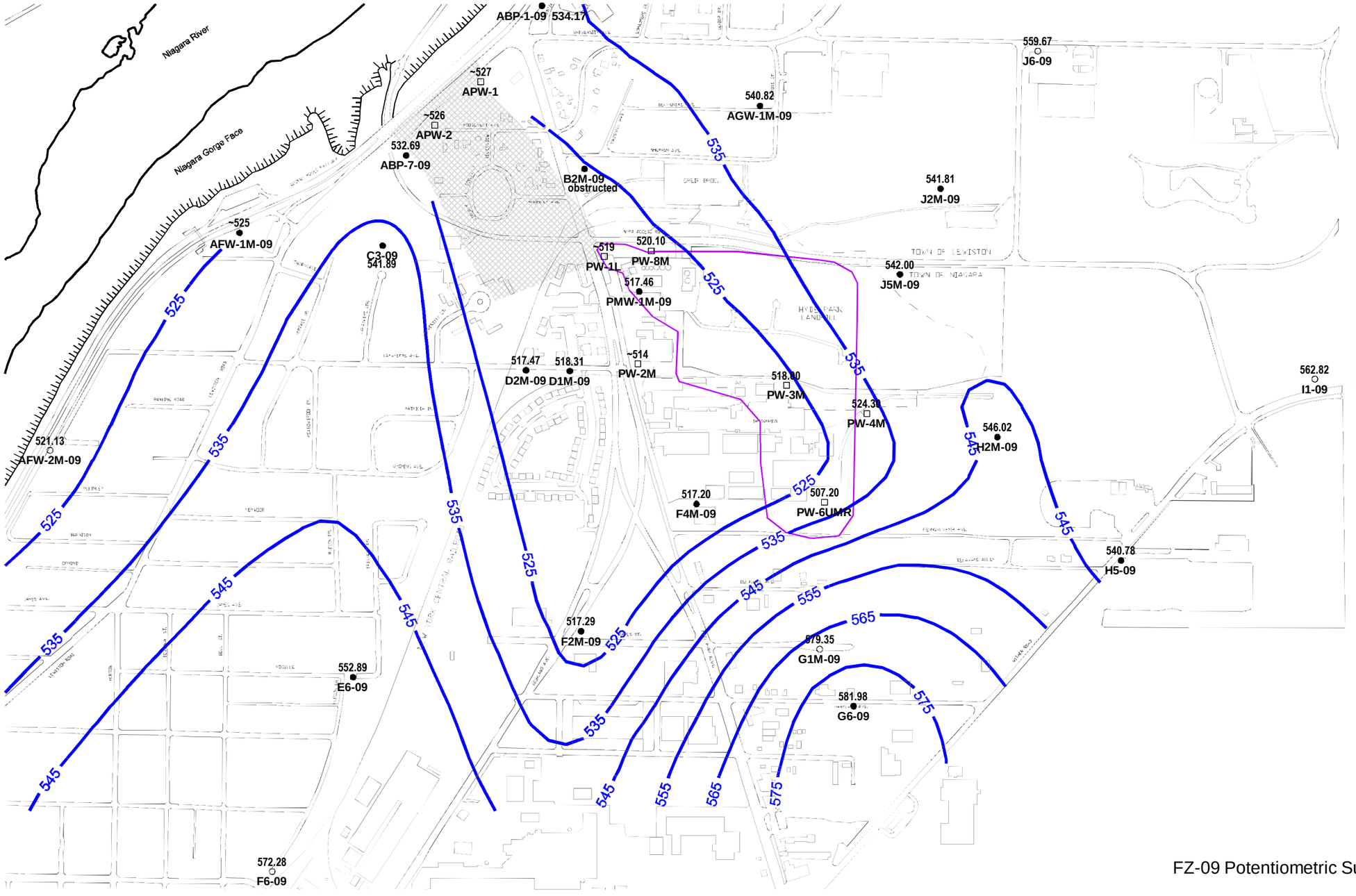
figure 5
FZ-06 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

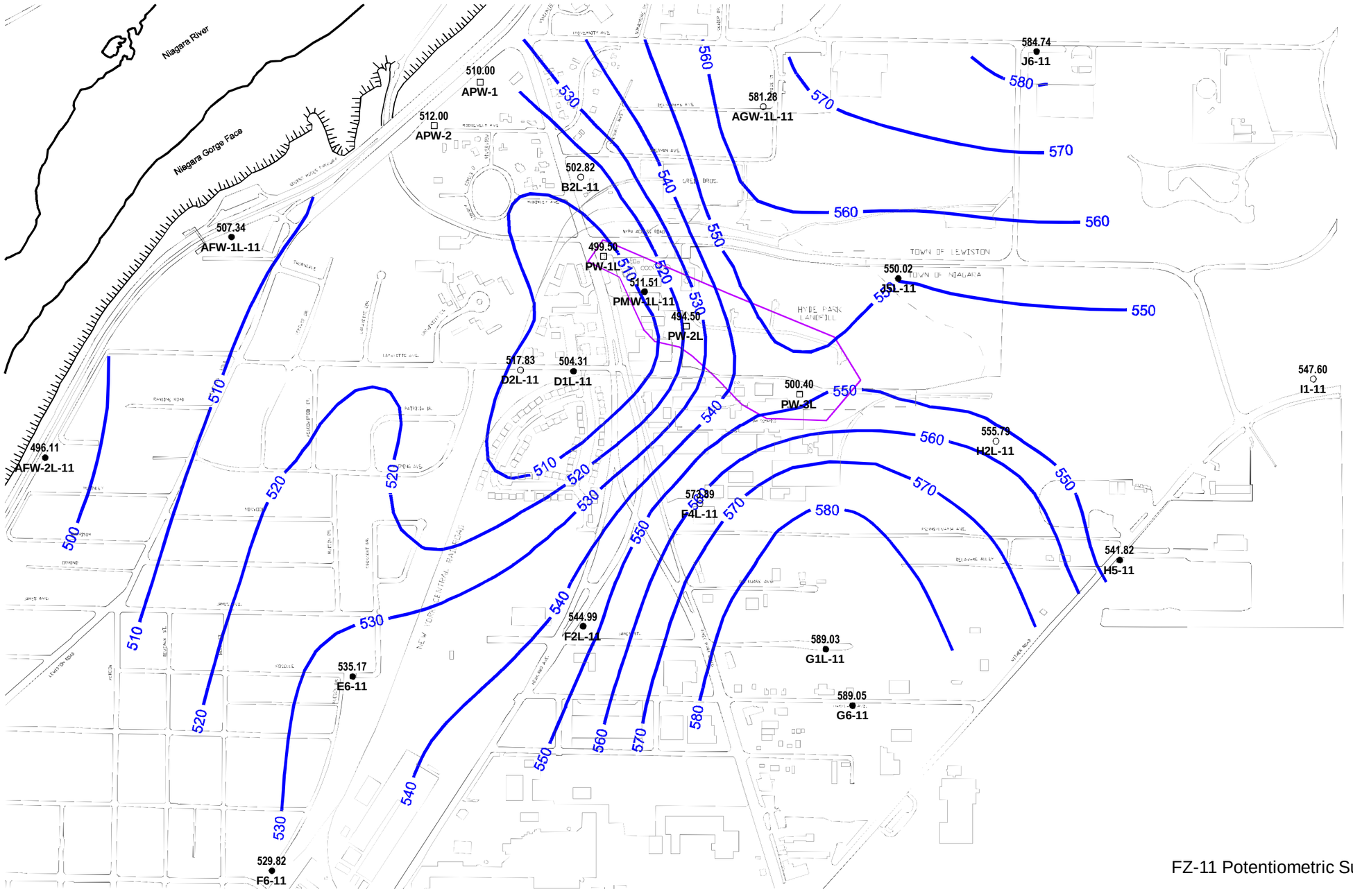
figure 6
FZ-07 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

figure 7
FZ-09 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York



Legend

- Potentiometric Contour (ft AMSL)
- 2003 Delineation of NAPL Limits
- Flow Zone Subcrop
- Dewatered area of flow zone
- ● Piezometer used in contouring
- ○ Piezometer considered unreliable - data not used in contouring
- □ Purge Well - data not used in contouring
- ~ 525 Tilde at a piezometer indicates that the flow zone is dewatered. At a purge well, the pumping water level is below the flow zone, but the flow zone is not necessarily dewatered. Value shown is the flow zone elevation.

figure 8
FZ-11 Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York

Niagara River

Niagara Gorge Face

571.28
CMW-10OB

585.49
OMW-6

589.27
CMW-2OB

585.56
OMW-5R

585.44
OMW-7

585.76
OMW-8R2

sp.583
WW-C

589.00
OMW-3

589.74
OMW-4R

573.50
CMW-12OB

572.33
CMW-3OB

587.47
OMW-9

586.36
OMW-10R

sp.580
WW-D

599.69
OMW-1

602.60
OMW-2

Well Surcharged
CMW-4OB

592.85
OMW-12R

OMW-11R
592.10

591.65
OMW-13R

593.54
OMW-14R

602.36
OMW-15

603.38
OMW-16R

Well Surcharged
CMW-5OB

Dry
CMW-9OB

571.68
CMW-6OB

569.95
CMW-11OB

Dry
CMW-8OB

Dry
CMW-7OB

570 575 580 585 590 595 600

TOWN OF LEWISTON

TOWN OF NIAGARA

HYDE PARK LANDFILL

BELVIDERE AVE

SHERMAN AVE

MCKINLEY AVE

THORNDALE

LAFAYETTE AVE

NORWOOD

JAMES AVE.

PENNSYLVANIA AVE.

DELAWARE ALLEY

DELAWARE AVE.

JAMES ST.

NOTELLE

N

0ft. 200ft. 400ft. 600ft.

Legend

- Potentiometric Contour (ft AMSL)
- Existing Barrier Collection System
- Overburden Barrier Collection System
- ● Well used in contouring
- ○ Well considered unreliable - data not used in contouring
- ■ OBCWS Wet Wells pumped for recovery. Posted levels indicate the pumping setpoints. Setpoint levels were used for contouring.
- Dry — Indicates the well is dry.

Note: Data values may overlap. If illegible, refer to tabulated data in the report.

Glenn Springs Holdings, Inc.

figure 9
Overburden Potentiometric Surface December 2017
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.
Niagara Falls, New York

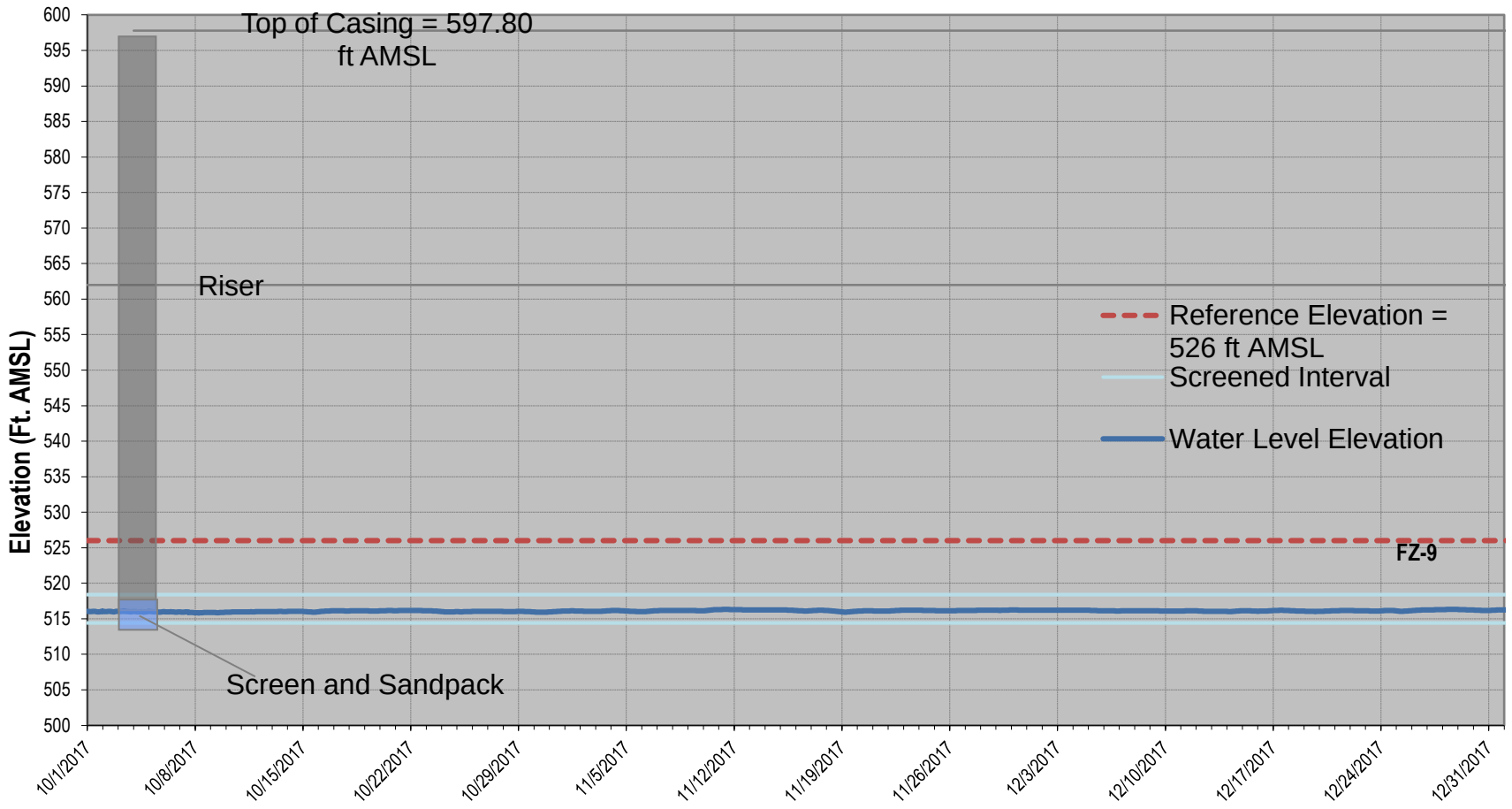


figure 10

PMW-1M-09 4th Quarter 2017 - Hourly Water Level Elevation
4th Quarter Report
Hyde Park Landfill Site
Glenn Springs Holdings, Inc.

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Table 1

Water Level Elevation Summary
Fourth Quarter - 2017
Hyde Park RRT Program

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Water Level Elevation (ft AMSL)
Overburden			
CMW-2OB	590.79	1.52	589.27
CMW-3OB	582.13	9.80	572.33
CMW-4OB	574.28	Surcharged	Surcharged
CMW-5OB	583.43	Surcharged	Surcharged
CMW-6OB	571.89	0.21	571.68
CMW-7OB	611.00	Dry	Dry
CMW-8OB	616.11	Dry	Dry
CMW-9OB	571.76	Dry	Dry
CMW-1OB	576.80	5.52	571.28
CMW-11OB	572.85	2.90	569.95
CMW-12OB	594.74	21.24	573.50
MH20	605.87	4.71	601.16
MH21	599.77	6.08	593.69
MH22	593.37	6.98	586.39
MH23	587.05	12.14	574.91
MH24	582.57	7.68	574.89
MH25	583.82	7.24	576.58
MH26	584.48	8.43	576.05
MH27	586.12	10.69	575.43
MH28	585.23	16.42	568.81
MH29	604.58	14.96	589.62
MH30	599.49	10.09	589.40
MH31	590.10	9.55	580.55
MH32	592.01	9.68	582.33
MH33	592.51	8.75	583.76
MH34	598.34	7.15	591.19
MH35	605.69	6.58	599.11
MH35A	605.69	7.19	598.50
OMW-1	605.28	5.59	599.69
OMW-2	605.99	3.39	602.60
OMW-3	598.63	9.63	589.00
OMW-4R	601.17	11.43	589.74
OMW-5R	591.31	5.81	585.50
OMW-6	587.62	2.13	585.49
OMW-7	592.74	7.30	585.44
OMW-8R2	594.67	8.91	585.76
OMW-9	595.27	7.80	587.47
OMW-10R	595.13	8.77	586.36
OMW-11R	597.52	5.42	592.10
OMW-12R	597.20	4.35	592.85
OMW-13R	601.50	9.85	591.65
OMW-14R	599.64	6.10	593.54
OMW-15	607.48	5.12	602.36
OMW-16R	607.62	4.24	603.38
SC-2	625.61	22.83	602.78
SC-3	638.72	40.69	598.03
SC-4	639.35	38.94	600.41
SC-5	634.07	31.48	602.59
SC-6	631.15	23.89	607.26

Table 1

Water Level Elevation Summary
Fourth Quarter - 2017
Hyde Park RRT Program

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Water Level Elevation (ft AMSL)
Shallow Bedrock			
CMW-1SH	576.11	11.98	564.13
CMW-2SH	590.51	18.28	572.23
CMW-3SH	581.91	33.47	548.44
CMW-4SH	574.16	7.29	566.87
CMW-5SH	583.36	7.51	575.85
CMW-6SH	572.05	10.35	561.70
CMW-7SH	610.58	11.35	599.23
CMW-8SH	615.95	8.08	607.87
CMW-9SH	571.96	12.00	559.96
CMW-11SH	573.21	8.31	564.90
CMW-12SH	597.02	25.69	571.33
Flow Zone 1			
G1U-01	617.08	14.71	602.37
G6-01	609.24	7.05	602.19
H2U-01	620.92	10.06	610.86
H5-01	617.61	23.19	594.42
I1-01	625.58	25.91	599.67
Flow Zone 2			
F2U-02	599.89	24.54	575.35
F4U-02	602.32	16.42	585.90
G1-02	616.86	24.52	592.34
G6-02	608.65	16.95	591.70
H2U-02	620.88	26.84	594.04
H5-02	617.47	23.54	593.93
I1-02	625.47	37.10	588.37
J2U-02	609.66	13.38	596.28
J5U-02	606.21	9.84	596.37
J6-02	609.23	12.02	597.21
Flow Zone 4			
AFW-2U-04	593.48	17.48	576.00
D1U-04	593.77	12.43	581.34
D2U-04	590.65	11.25	579.40
E6-04	578.23	11.80	566.43
F2U-04	599.76	22.02	577.74
F4U-04	602.19	16.42	585.77
F6-04	588.06	18.06	570.00
G1U-04	616.96	24.90	592.06
G6-04	609.15	17.22	591.93
H5-04	617.40	23.62	593.78
I1-04	625.30	38.93	586.37
J2U-04	609.42	16.23	593.19
J5U-04	606.05	19.68	586.37
J6-04	609.12	29.38	579.74

Table 1

Water Level Elevation Summary
Fourth Quarter - 2017
Hyde Park RRT Program

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Water Level Elevation (ft AMSL)
Flow Zone 5			
AFW-2U-05	593.33	17.68	575.65
AGW-1U-05	591.80	6.73	585.07
D1U-05	593.51	13.29	580.22
D2U-05	590.56	10.59	579.97
E6-05	578.04	11.49	566.55
F2U-05	599.64	21.45	578.19
F4U-05	602.06	19.33	582.73
F6-05	587.85	17.92	569.93
G6-05	609.13	17.53	591.60
H2M-05	621.59	31.05	590.54
H5-05	617.31	24.51	592.80
I1-05	625.25	73.50	551.75
J2U-05	609.30	31.29	578.01
J5U-05	605.87	27.82	578.05
J6-05	609.02	29.68	579.34
PMW-1U-05	598.00	19.21	578.79
Flow Zone 6			
ABP-7-06	575.78	Dry	Dry
AFW-1U-06	571.83	14.62	557.21
AFW-2U-06	593.22	48.09	545.13
AGW-1U-06	591.66	39.32	552.34
B2U-06	589.29	36.03	553.26
C3-06	585.78	Dry	Dry
D1U-06	593.25	45.31	547.94
D2U-06	590.38	40.95	549.43
E6-06	577.99	4.41	573.58
F2M-06	599.06	44.51	554.55
F4M-06	602.05	49.59	552.46
F6-06	587.84	14.42	573.42
G1M-06	616.75	43.19	573.56
G6-06	609.09	33.42	575.67
H2M-06	621.42	55.92	565.50
H5-06	617.17	26.32	590.85
I1-06	625.15	77.01	548.14
J2M-06	608.94	57.18	551.76
J5M-06	606.22	58.53	547.69
J6-06	608.93	54.23	554.70
PMW-1U-06	597.92	49.99	547.93

Table 1

Water Level Elevation Summary
Fourth Quarter - 2017
Hyde Park RRT Program

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Water Level Elevation (ft AMSL)
Flow Zone 7			
ABP-1-07	576.44	28.62	547.82
ABP-7-07	575.73	41.62	534.11
AFW-1M-07	571.41	Dry	Dry
AFW-2M-07	593.44	66.78	526.66
AGW-1M-07	592.91	52.69	540.22
B2M-07	589.52	57.69	531.83
C3-07	585.62	42.17	543.45
D1M-07	594.15	62.31	531.84
D2M-07	590.77	64.66	526.11
E6-07	577.91	23.48	554.43
F2M-07	598.91	80.89	518.02
F4M-07	601.91	73.99	527.92
F6-07	587.68	20.38	567.30
G1M-07	616.68	35.35	581.33
G6-07	609.06	27.88	581.18
H5-07	617.05	43.49	573.56
I1-07	625.14	84.09	541.05
J5M-07	606.07	64.78	541.29
J6-07	608.85	67.28	541.57
PMW-1M-07	598.50	69.28	529.22
Flow Zone 9			
ABP-1-09	575.49	41.32	534.17
ABP-7-09	575.67	42.98	532.69
AFW-1M-09	571.12	46.41	524.71
AFW-2M-09	593.32	72.19	521.13
AGW-1M-09	592.75	51.93	540.82
B2M-09	589.34	Obstructed	Obstructed
C3-09	585.00	43.11	541.89
D1M-09	594.02	75.71	518.31
D2M-09	590.66	73.19	517.47
E6-09	577.82	24.93	552.89
F2M-09	598.71	81.42	517.29
F4M-09	601.79	84.59	517.20
F6-09	587.53	15.25	572.28
G1M-09	616.58	37.23	579.35
G6-09	608.98	27.00	581.98
H2M-09	621.32	75.30	546.02
H5-09	616.93	76.15	540.78
I1-09	624.91	62.09	562.82
J2M-09	608.77	66.96	541.81
J5M-09	605.82	63.82	542.00
J6-09	608.76	49.09	559.67
PMW-1M-09	598.34	80.88	517.46

Table 1

Water Level Elevation Summary
Fourth Quarter - 2017
Hyde Park RRT Program

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Water Level Elevation (ft AMSL)
Flow Zone 11			
AFW-1L-11	572.10	64.76	507.34
AFW-2L-11	593.43	97.32	496.11
AGW-1L-11	592.71	11.43	581.28
B2L-11	589.65	86.83	502.82
D1L-11	593.80	89.49	504.31
D2L-11	590.21	72.38	517.83
E6-11	577.72	42.55	535.17
F2L-11	598.94	53.95	544.99
F4L-11	602.22	28.33	573.89
F6-11	587.40	57.58	529.82
G1L-11	616.84	27.81	589.03
G6-11	608.89	19.84	589.05
H2L-11	620.73	64.94	555.79
H5-11	616.81	74.99	541.82
I1-11	624.75	77.15	547.60
J5L-11	607.20	57.18	550.02
J6-11	608.68	23.94	584.74
PMW-1L-11	598.84	87.33	511.51
Purge Wells			
APW-1	564.98	54.98	510.00
APW-2	569.89	57.89	512.00
PW-1L	593.16	93.66	499.50
PW-1U	593.16	50.96	542.20
PW-2L	597.29	102.79	494.50
PW-2M	596.61	84.41	512.20
PW-2UR	594.75	36.15	558.60
PW-3L	599.05	98.65	500.40
PW-3M	597.79	79.79	518.00
PW-4M	606.93	82.63	524.30
PW-4U	604.85	32.55	572.30
PW-5UR	601.31	39.51	561.80
PW-6UMR	609.31	102.11	507.20
PW-6UR	608.47	52.37	556.10
PW-7U	592.47	52.77	539.70
PW-8M	592.67	72.57	520.10
PW-8U	589.27	39.17	550.10
PW-9U	587.47	45.57	541.90
PW-10U	593.54	28.54	565.00

Notes:

ft AMSL	- Feet above mean sea level
Dry	- No water present at the time of measurement
Surcharge	- Well surcharged
Obstructed	- Well obstructed at 59.89 ft below top of well

Table 2

Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2017
Hyde Park RRT Program

	Effluent	
Date	**pH**	**Flow**
	(su)	(gal)
10/01/17	--	--
10/02/17	7.0	101,000
10/03/17	7.0	94,000
10/04/17	7.0	29,000
10/05/17	--	--
10/06/17	7.0	71,000
10/07/17	--	--
10/08/17	--	--
10/09/17	7.0	88,000
10/10/17	7.0	109,000
10/11/17	7.0	119,000
10/12/17	7.0	262,000
10/13/17	--	--
10/14/17	--	--
10/15/17	--	--
10/16/17	7.0	106,000
10/17/17	7.0	95,000
10/18/17	7.0	17,000
10/19/17	7.0	40,000
10/20/17	--	--
10/21/17	--	--
10/22/17	--	--
10/23/17	7.1	104,000
10/24/17	7.0	97,000
10/25/17	7.0	78,000
10/26/17	7.0	46,000
10/27/17	--	--
10/28/17	--	--
10/29/17	--	--
10/30/17	7.0	112,000
10/31/17	7.0	93,000
11/01/17	--	--
11/02/17	7.2	91,000
11/03/17	7.1	89,000
11/04/17	--	--
11/05/17	--	--
11/06/17	7.1	122,000
11/07/17	7.0	98,000

Table 2

Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2017
Hyde Park RRT Program

	Effluent	
Date	**pH**	**Flow**
	(su)	(gal)
11/08/17	7.0	270,000
11/09/17	--	--
11/10/17	7.0	20,000
11/11/17	--	--
11/12/17	--	--
11/13/17	7.6	99,000
11/14/17	7.1	115,000
11/15/17	7.0	114,000
11/16/17	7.0	58,000
11/17/17	7.1	78,000
11/18/17	--	--
11/19/17	--	--
11/20/17	7.1	256,000
11/21/17	7.1	131,000
11/22/17	7.1	83,000
11/23/17	--	--
11/24/17	--	--
11/25/17	--	--
11/26/17	7.1	272,000
11/27/17	--	--
11/28/17	--	--
11/29/17	7.0	105,000
11/30/17	7.0	287,000
12/01/17	--	--
12/02/17	--	--
12/03/17	--	--
12/04/17	7.0	119,000
12/05/17	7.0	82,000
12/06/17	7.0	94,000
12/07/17	7.1	101,000
12/08/17	7.1	74,000
12/09/17	--	--
12/10/17	--	--
12/11/17	7.5	118,000
12/12/17	7.4	107,000
12/13/17	7.5	65,000
12/14/17	7.7	49,000
12/15/17	--	--
12/16/17	--	--

Table 2

Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2017
Hyde Park RRT Program

	Effluent	
Date	**pH**	**Flow**
	(su)	(gal)
12/17/17	--	--
12/18/17	7.9	117,000
12/19/17	7.2	114,000
12/20/17	7.1	108,000
12/21/17	7.5	93,000
12/22/17	--	--
12/23/17	--	--
12/24/17	--	--
12/25/17	--	--
12/26/17	7.3	266,000
12/27/17	6.9	143,000
12/28/17	6.9	50,000
12/29/17	6.9	30,000
12/30/17	--	--
12/31/17	--	--
	Total	5,679,000

Notes:

"--"	- Not measured-no flow
su	- Standard Unit
gal	- Gallons

Table 3

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Fourth Quarter - 2017
Hyde Park RRT Program

Effluent

Parameter	Units	10/04/17	10/11/17	10/18/17	10/25/17	10/31/17	11/08/17	11/15/17
Volatiles								
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	5.6	6.7	0.99 J	12	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	2.1	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	4.0 U	4.0 U	4.0 U	4.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	240	250	250	220	1.0 U	1.0 U	2.4
Xylenes (total)	µg/L	6.0 U	6.0 U	6.0 U	6.0 U	3.0 U	3.0 U	3.0 U
General Chemistry								
Phenolics (total)	mg/L	0.0249	0.0125	0.0139	0.0172	0.0015 J	0.0050 U	0.0052

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
µg/L - Microgram per liter

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Fourth Quarter - 2017
Hyde Park RRT Program

Effluent

Parameter	Units	11/22/17	11/29/2017	12/6/2017	12/13/2017	12/20/2017	12/29/2017
Volatiles							
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.6
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	0.26 J	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.43 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	1.7	1.6	1.0 U	3.1	1.0 U	0.83 J
Xylenes (total)	µg/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
General Chemistry							
Phenolics (total)	mg/L	0.0026 J	0.0026 J	0.0029 J	0.0076	0.0081	0.0045 J

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
µg/L - Microgram per liter

Analytical Results Summary
Quarterly Sampling - Leachate Treatment System
Fourth Quarter - 2017
Hyde Park RRT Program

Sample Location:		**EFFLUENT**	**EFFLUENT**
Sample ID:		**HP 122017 EFF**	**HP 122017 EFF**
Sample Date:		**12/20/2017**	**12/20/2017**
Parameters	**Units**		
Volatile Organic Compounds			
Vinyl chloride	µg/L	0.61 J	--
General Chemistry			
Phosphorus	mg/L	--	0.195

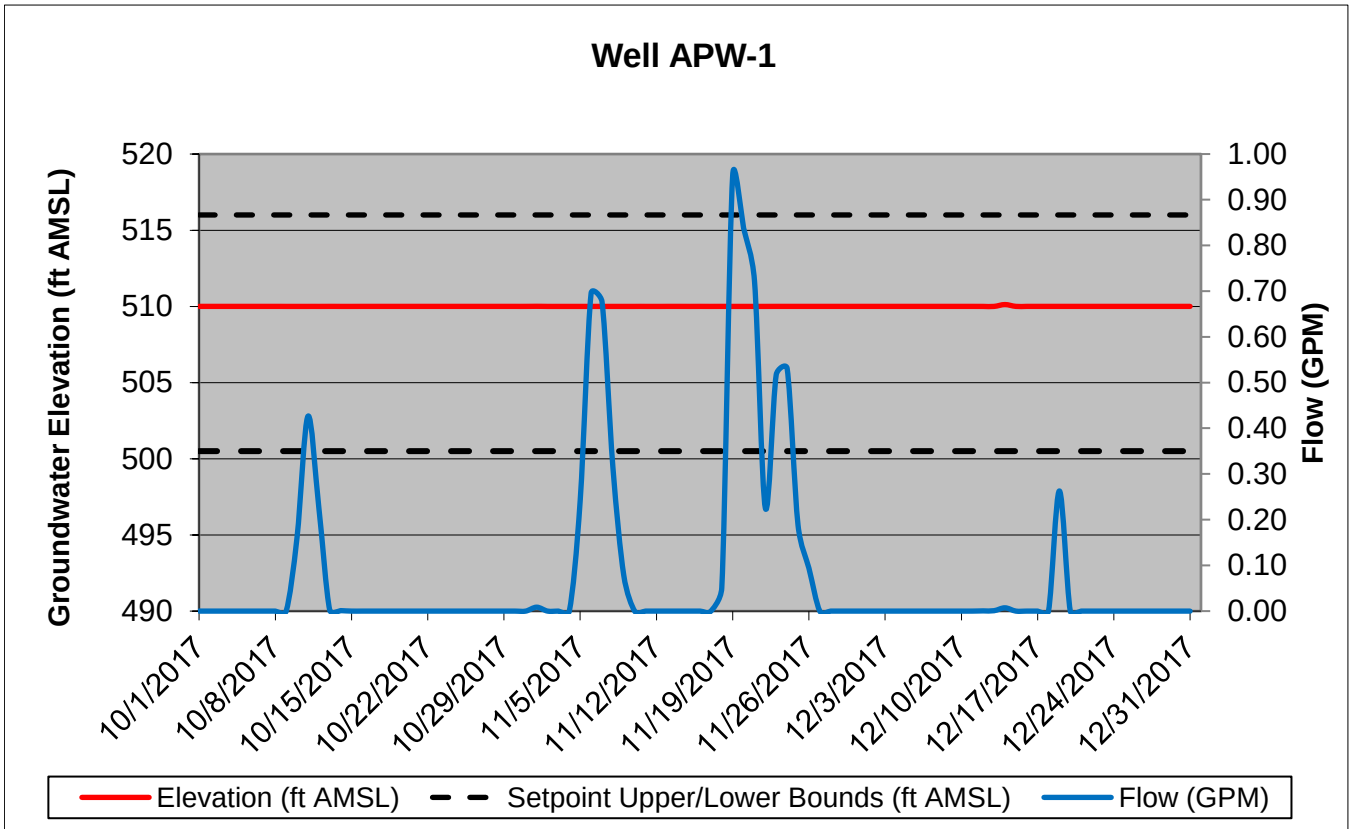
Notes:

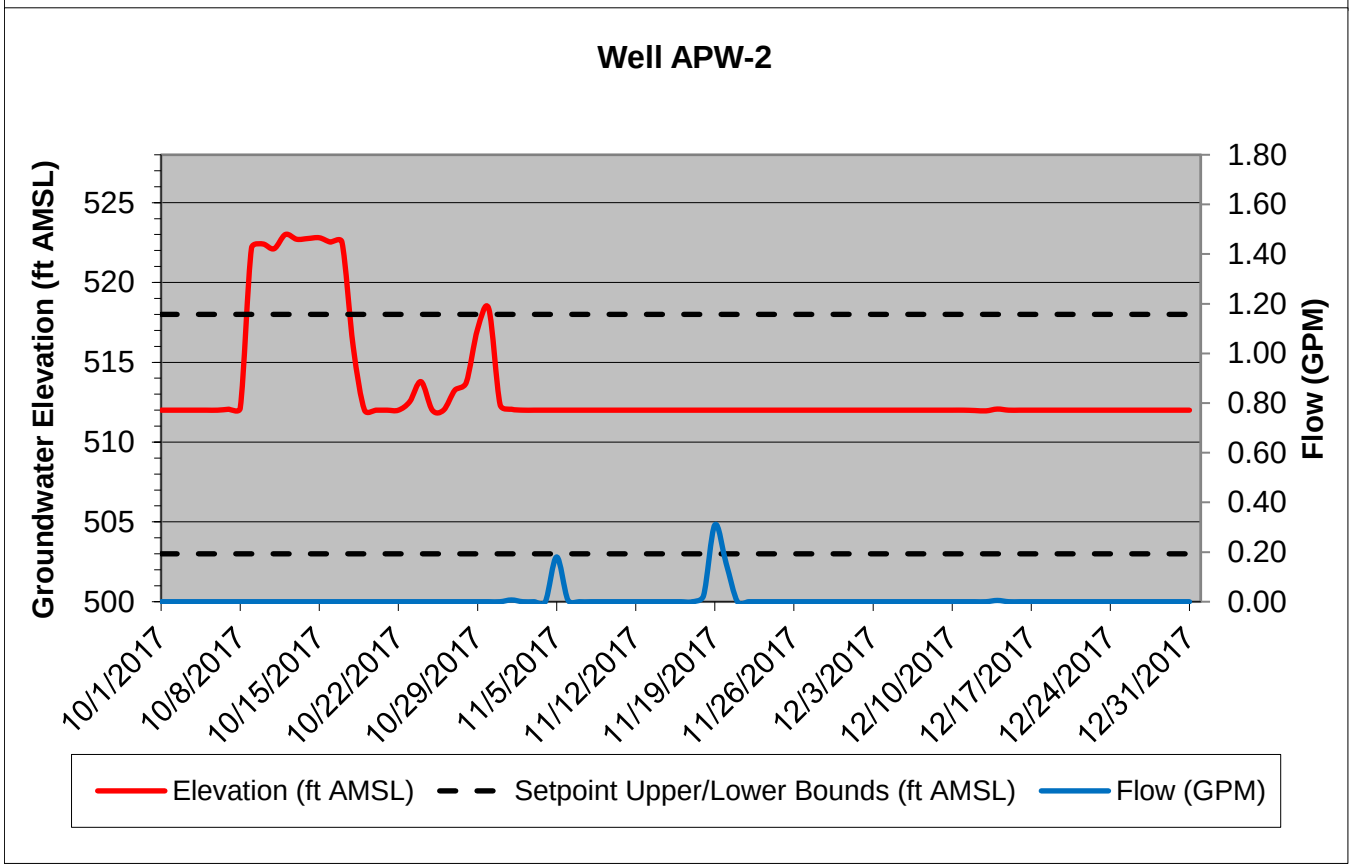
"--" - Not applicable

Attachment A

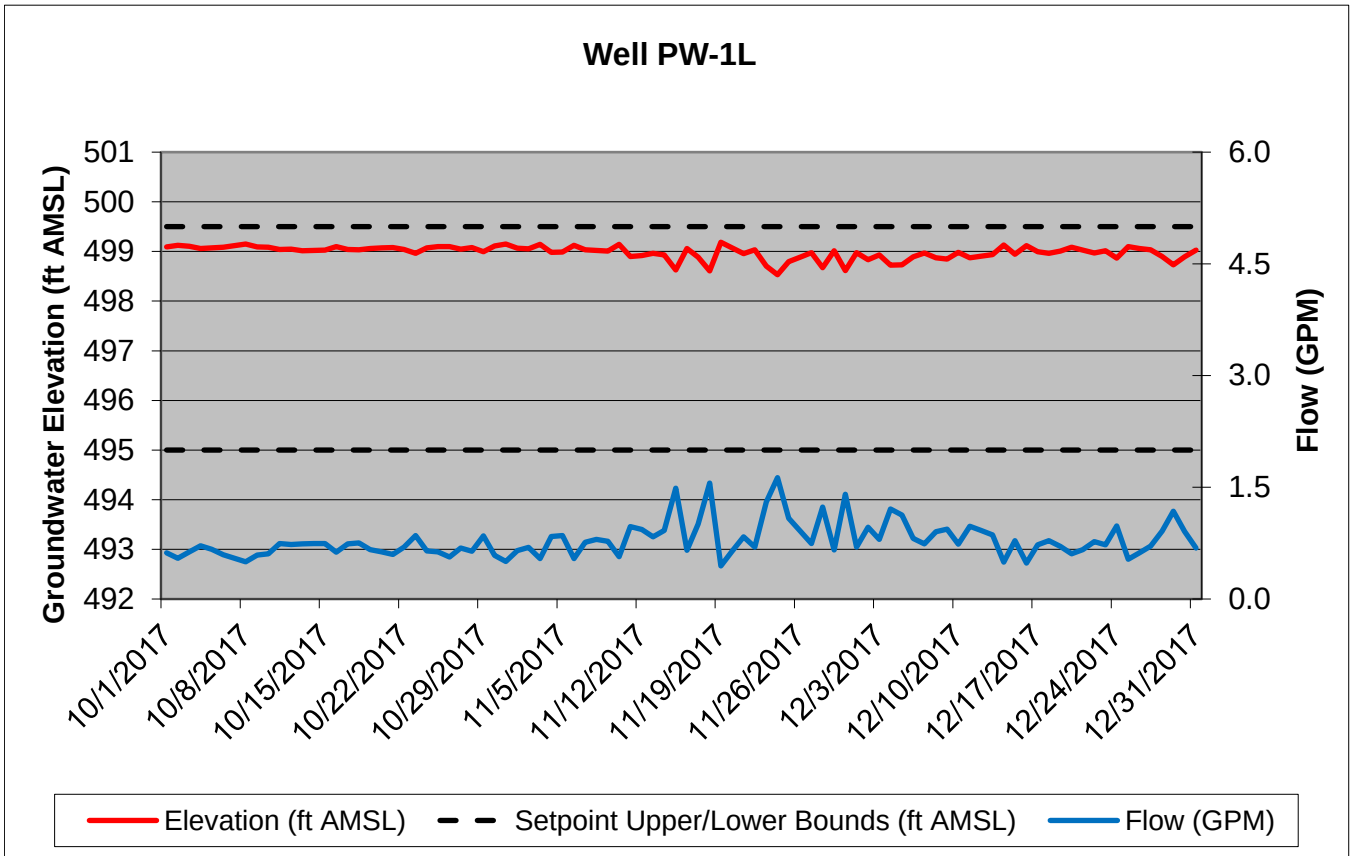
Fourth Quarter 2017
Pumping Well Performance Graphs

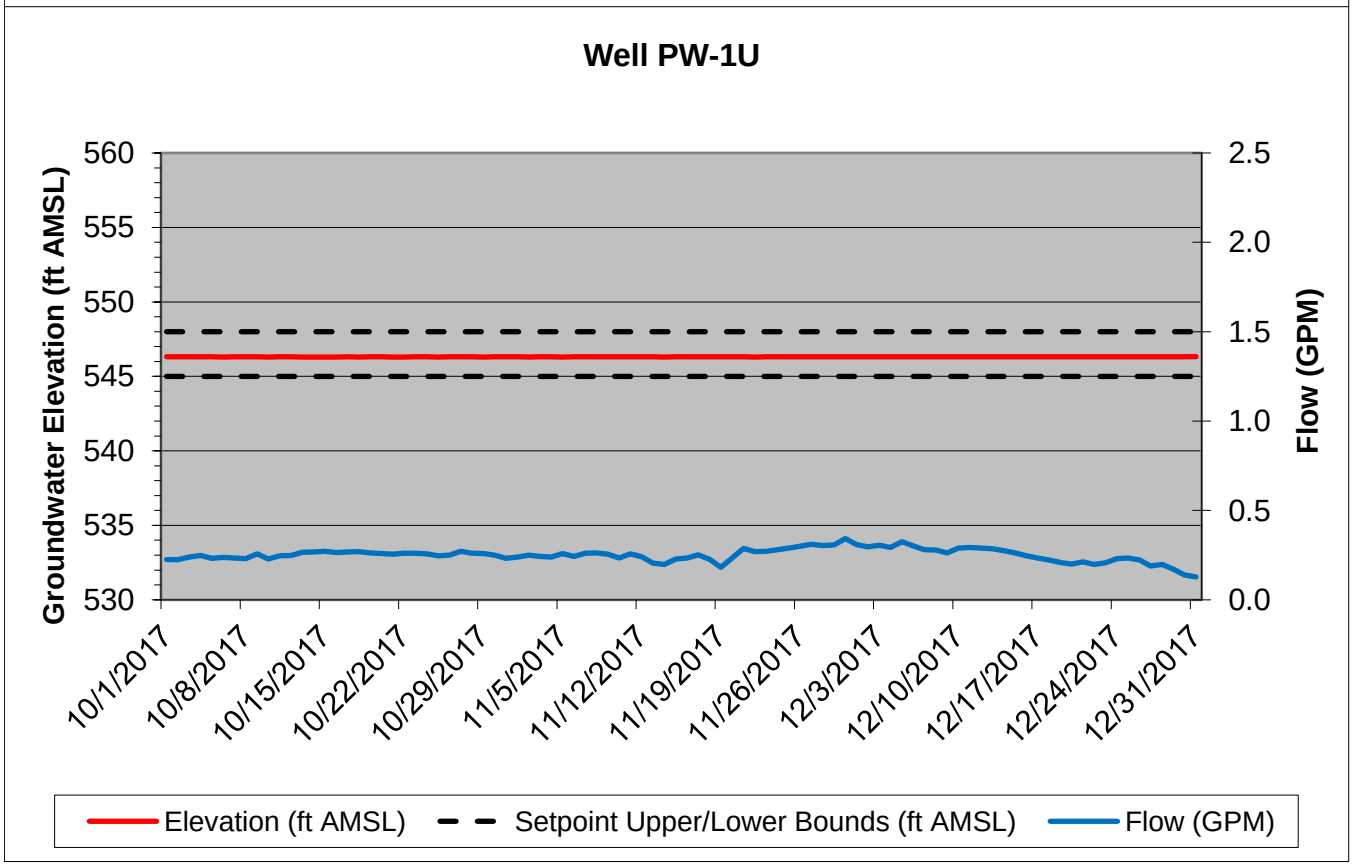
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



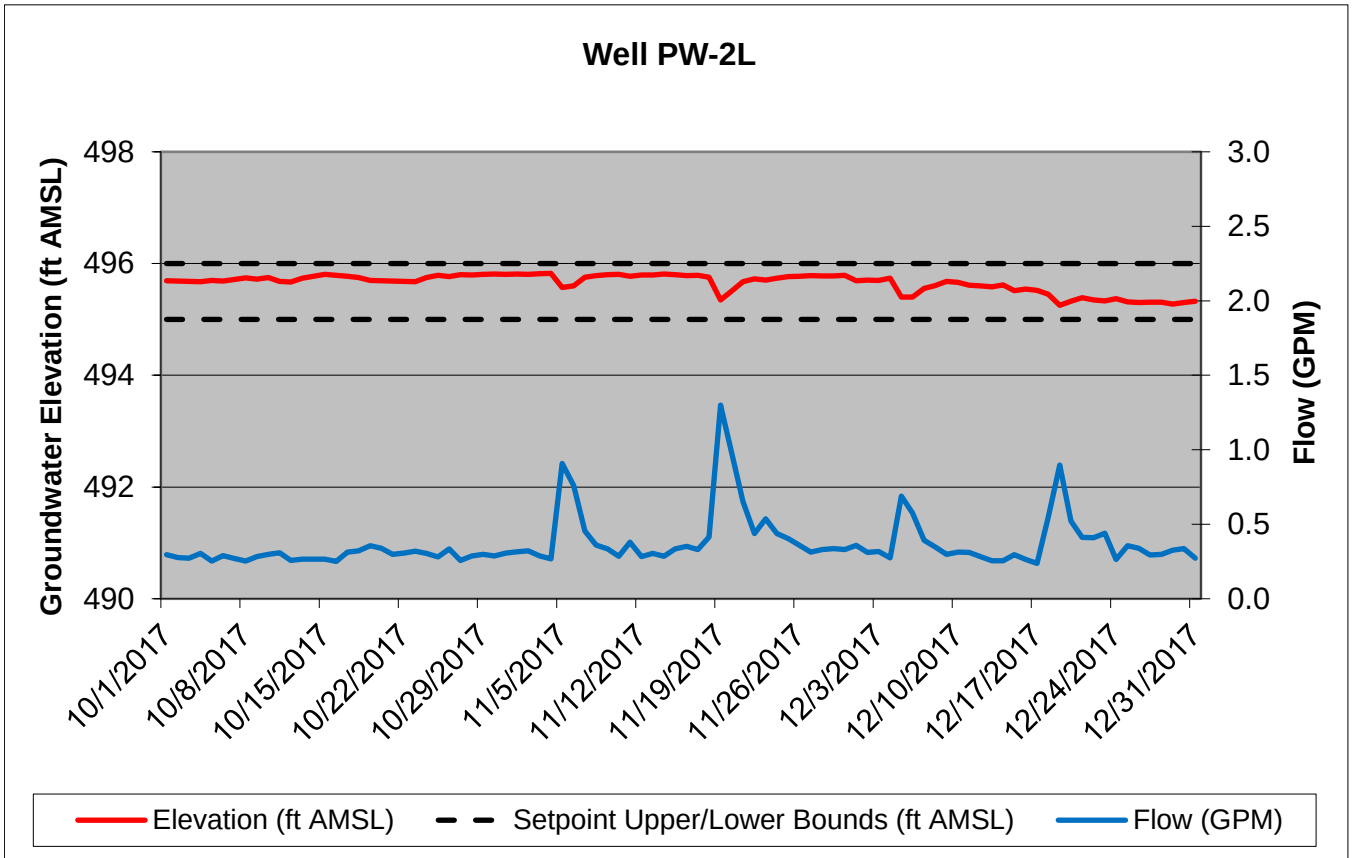


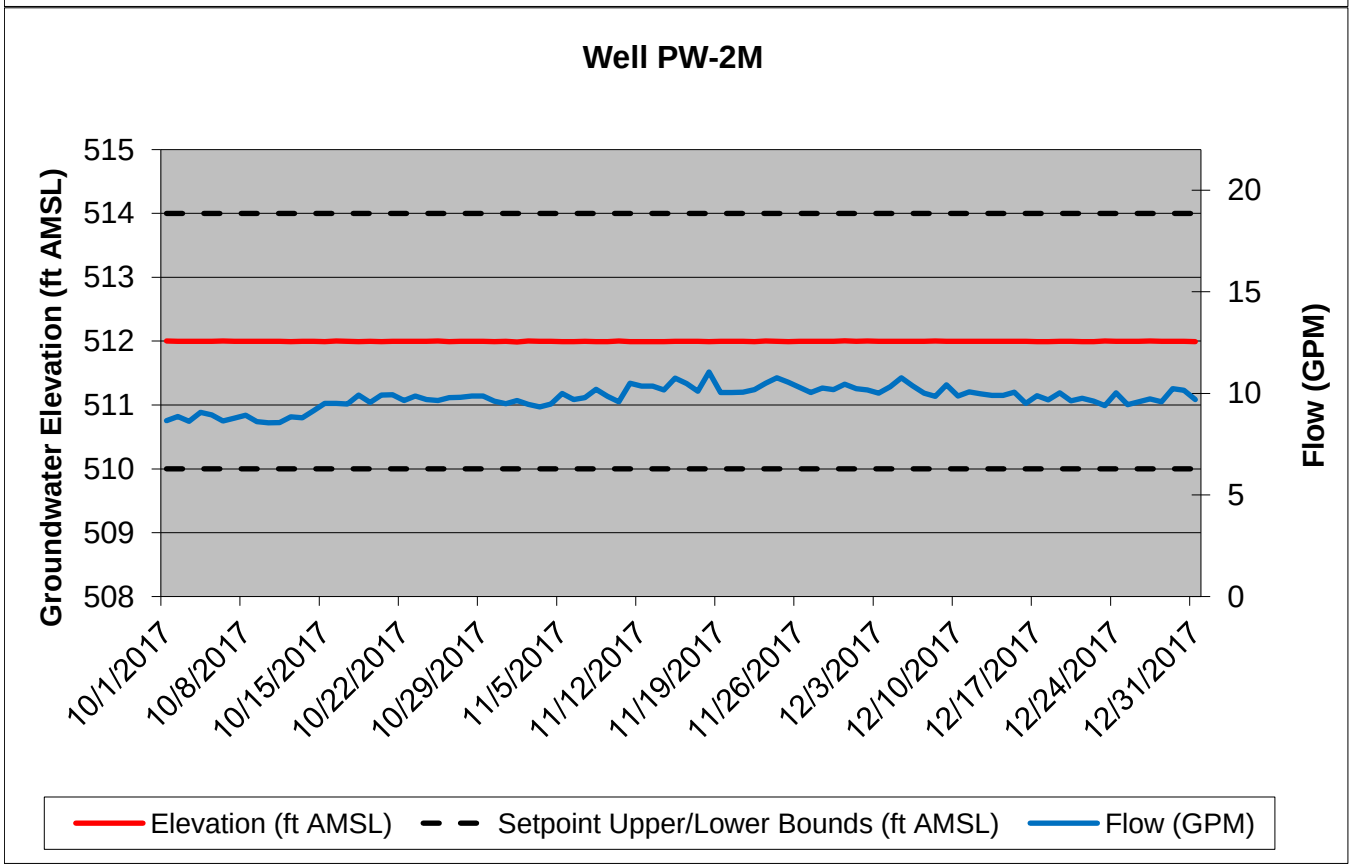
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



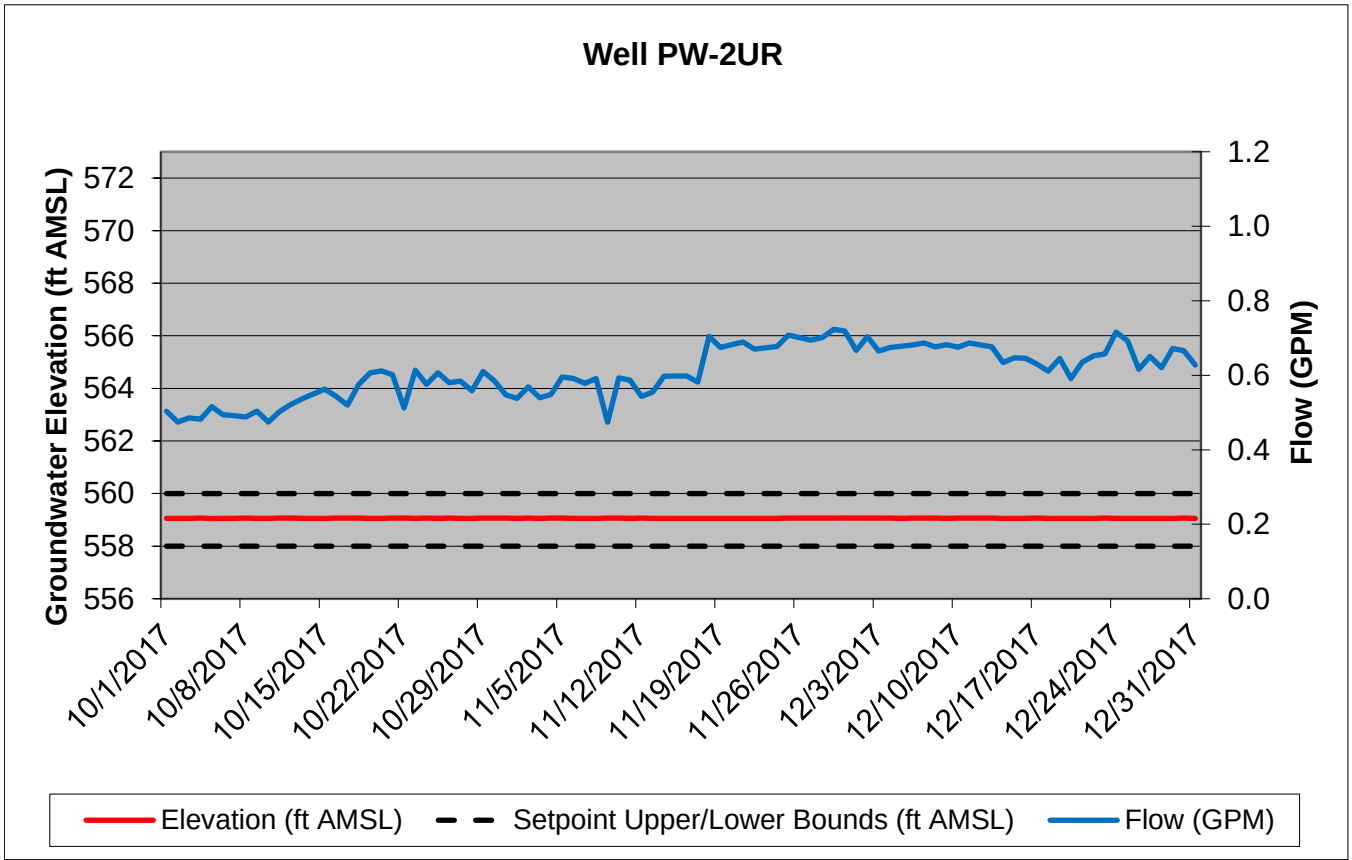


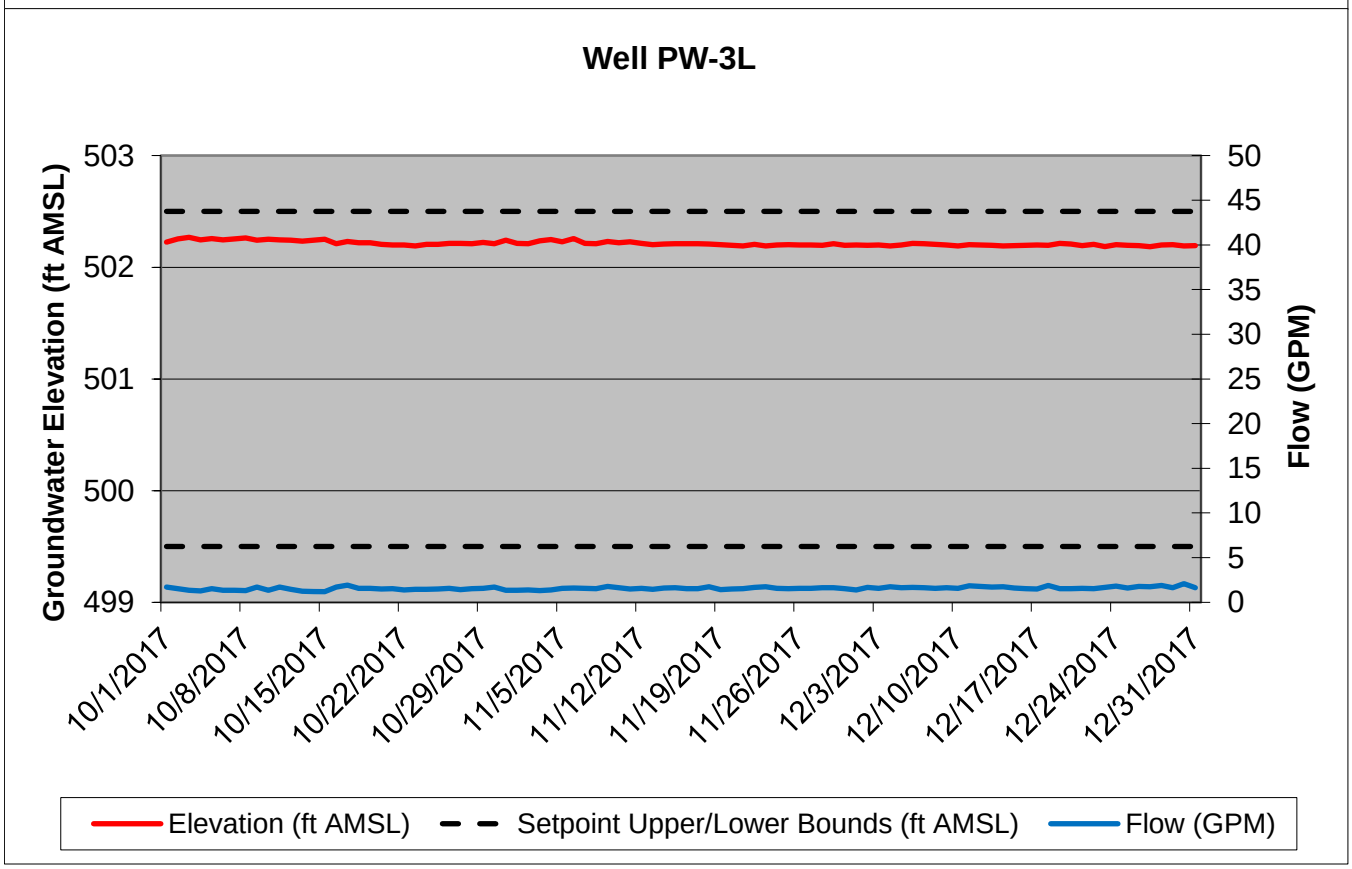
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



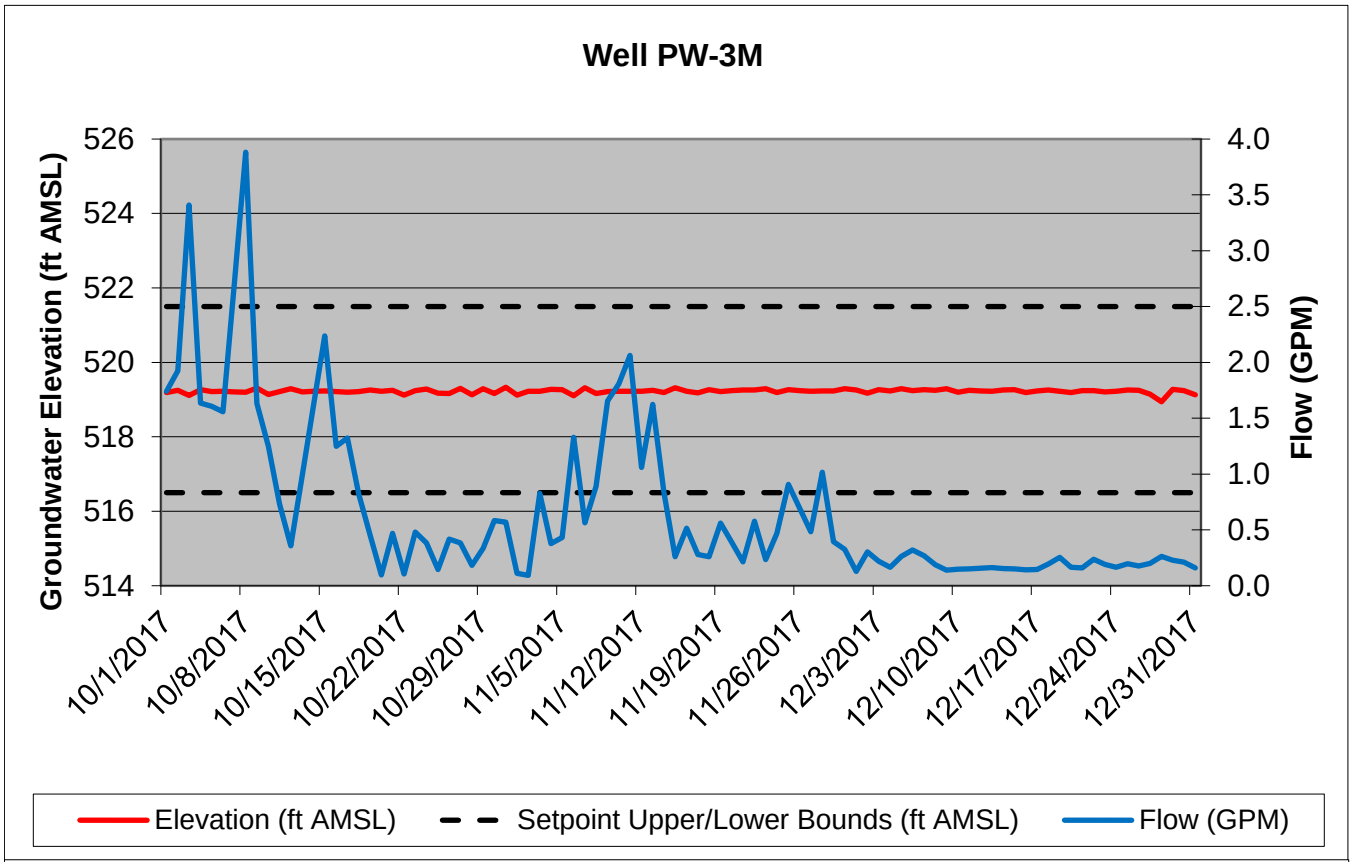


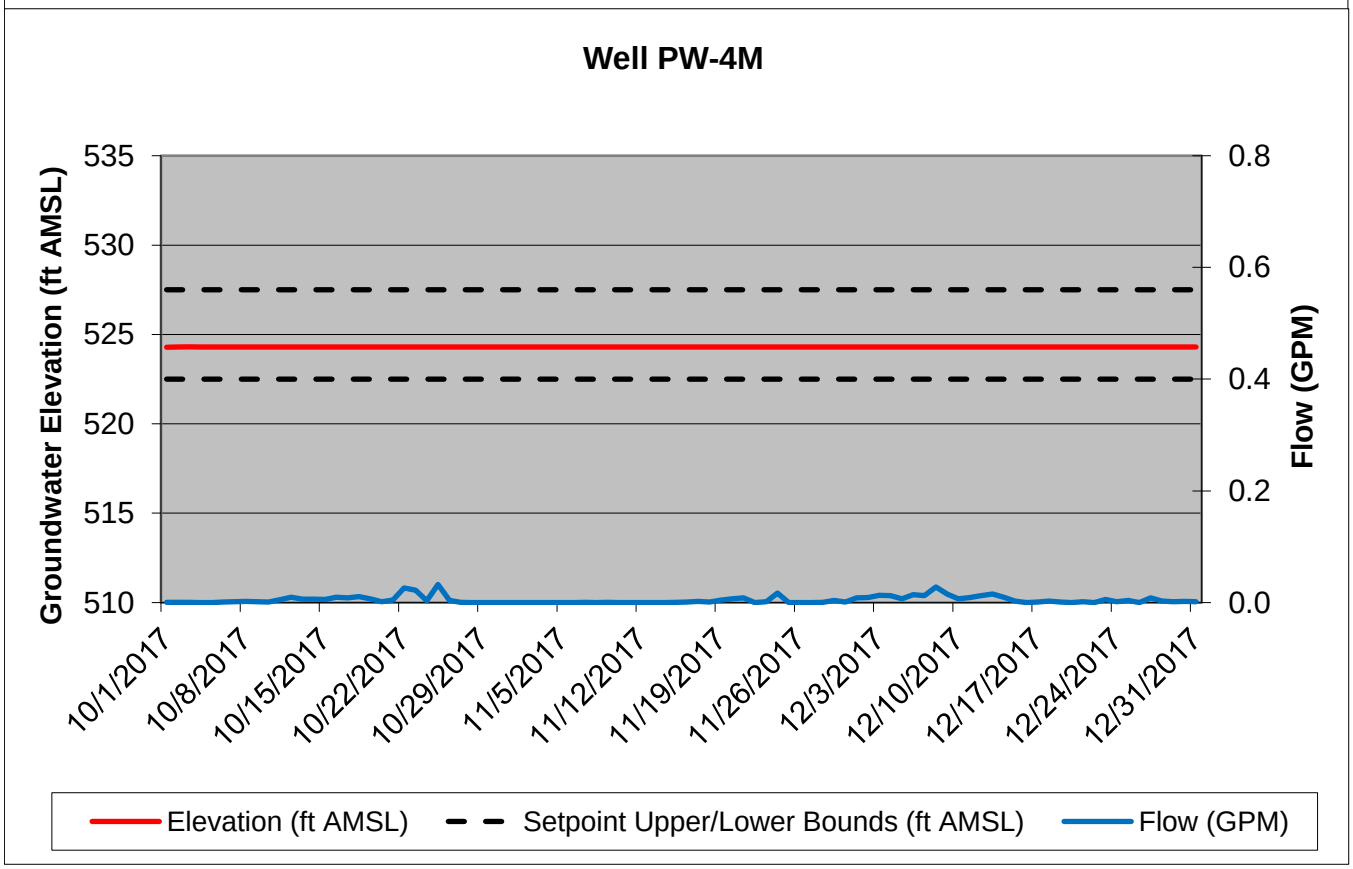
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



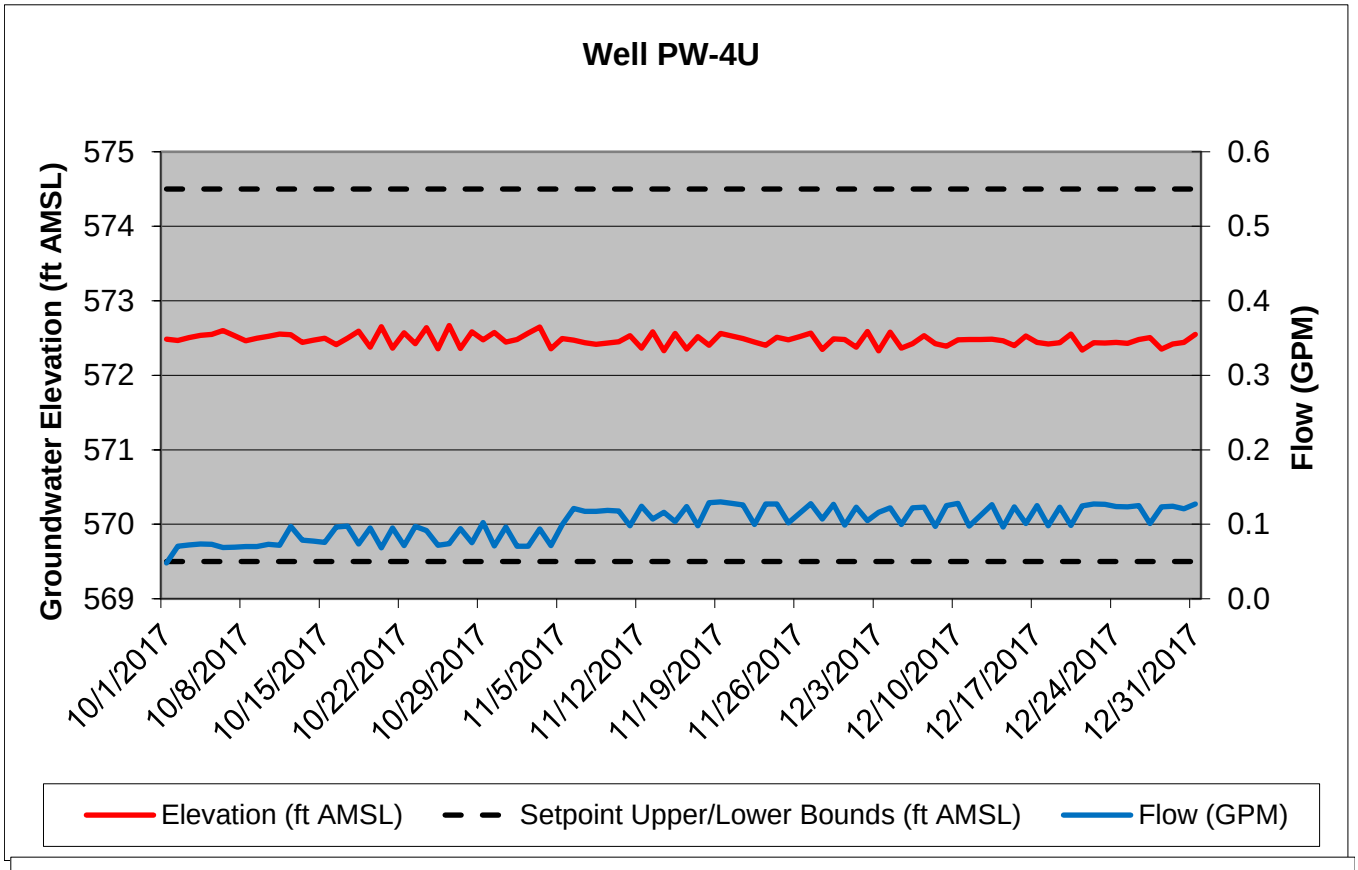


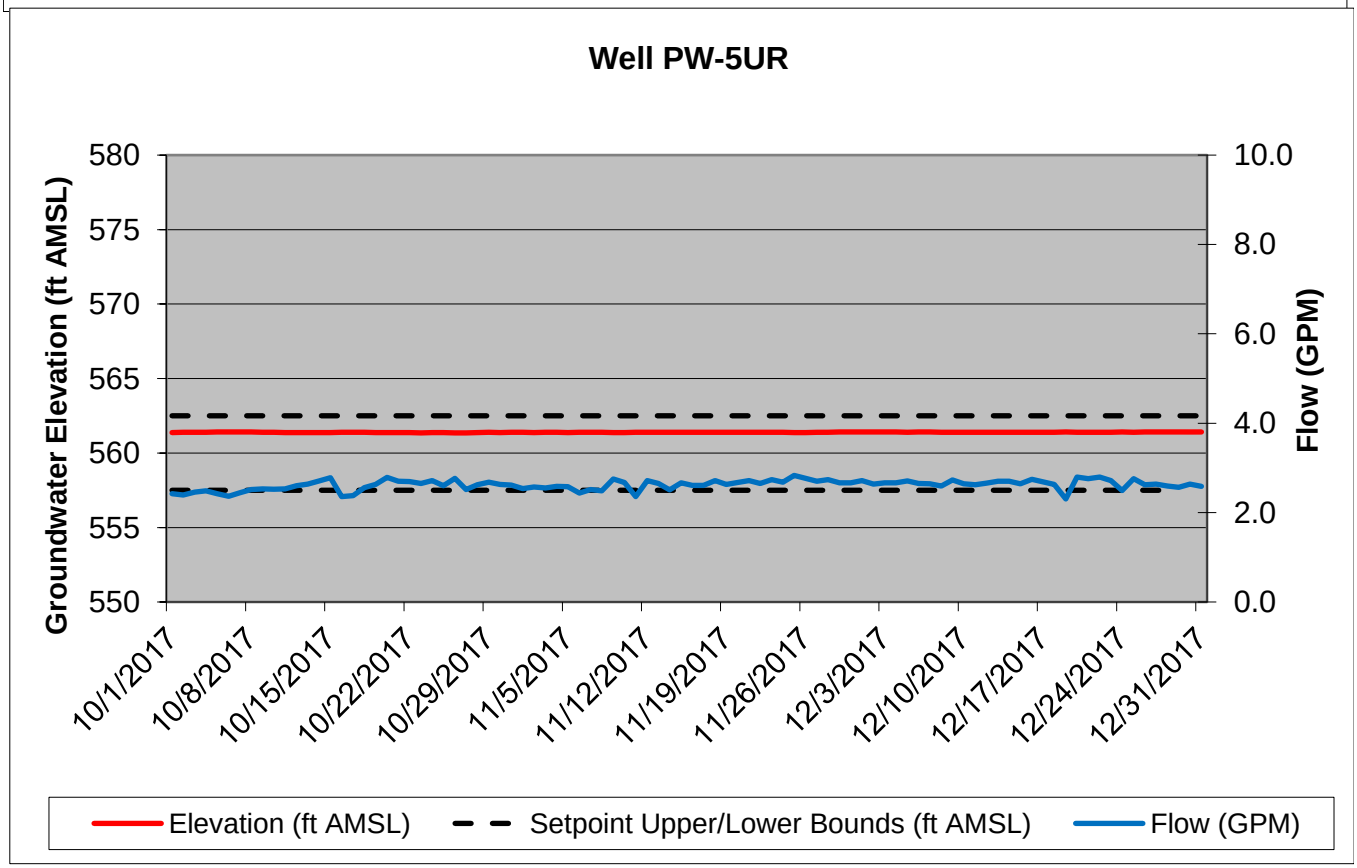
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



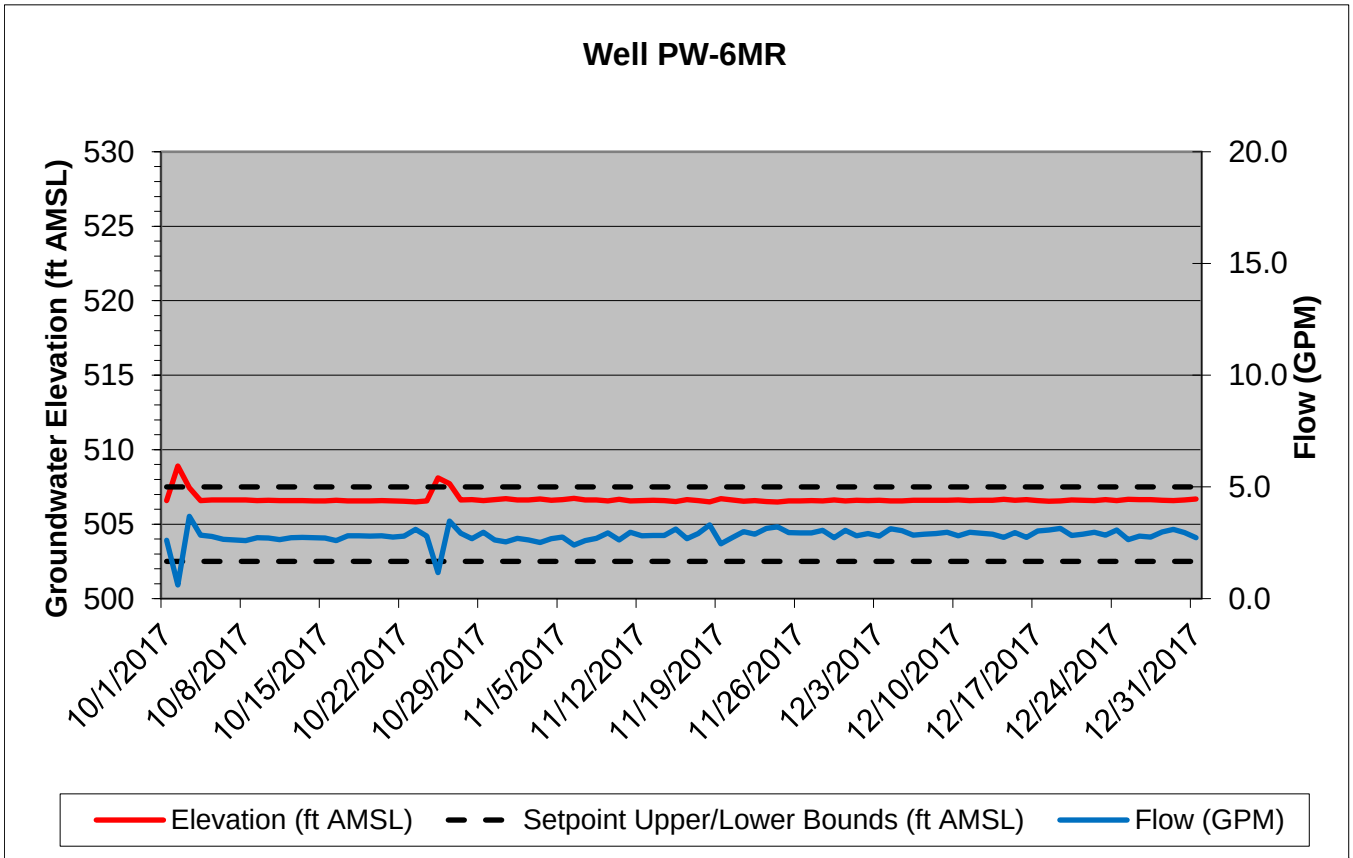


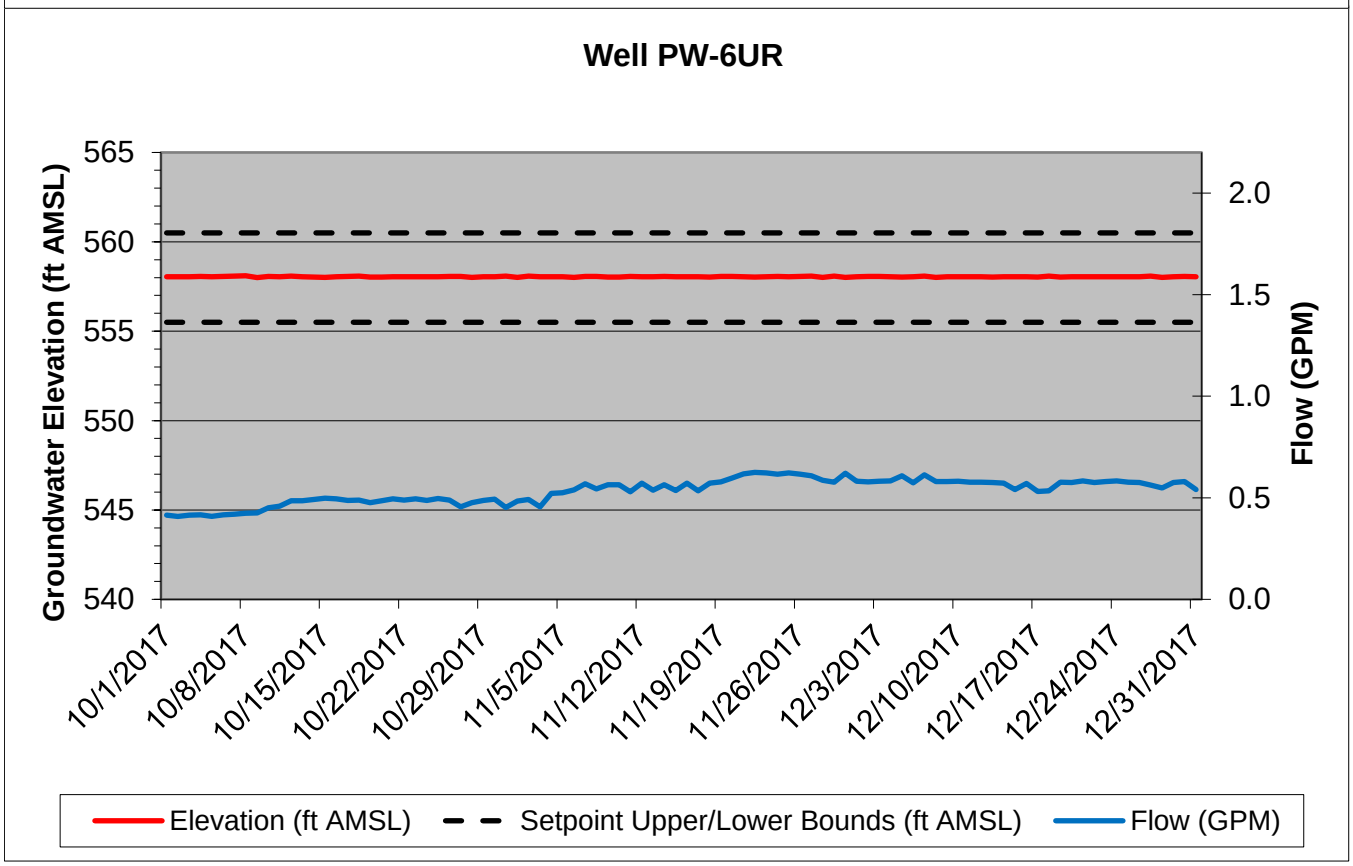
FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK





FOURTH QUARTER 2017 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK





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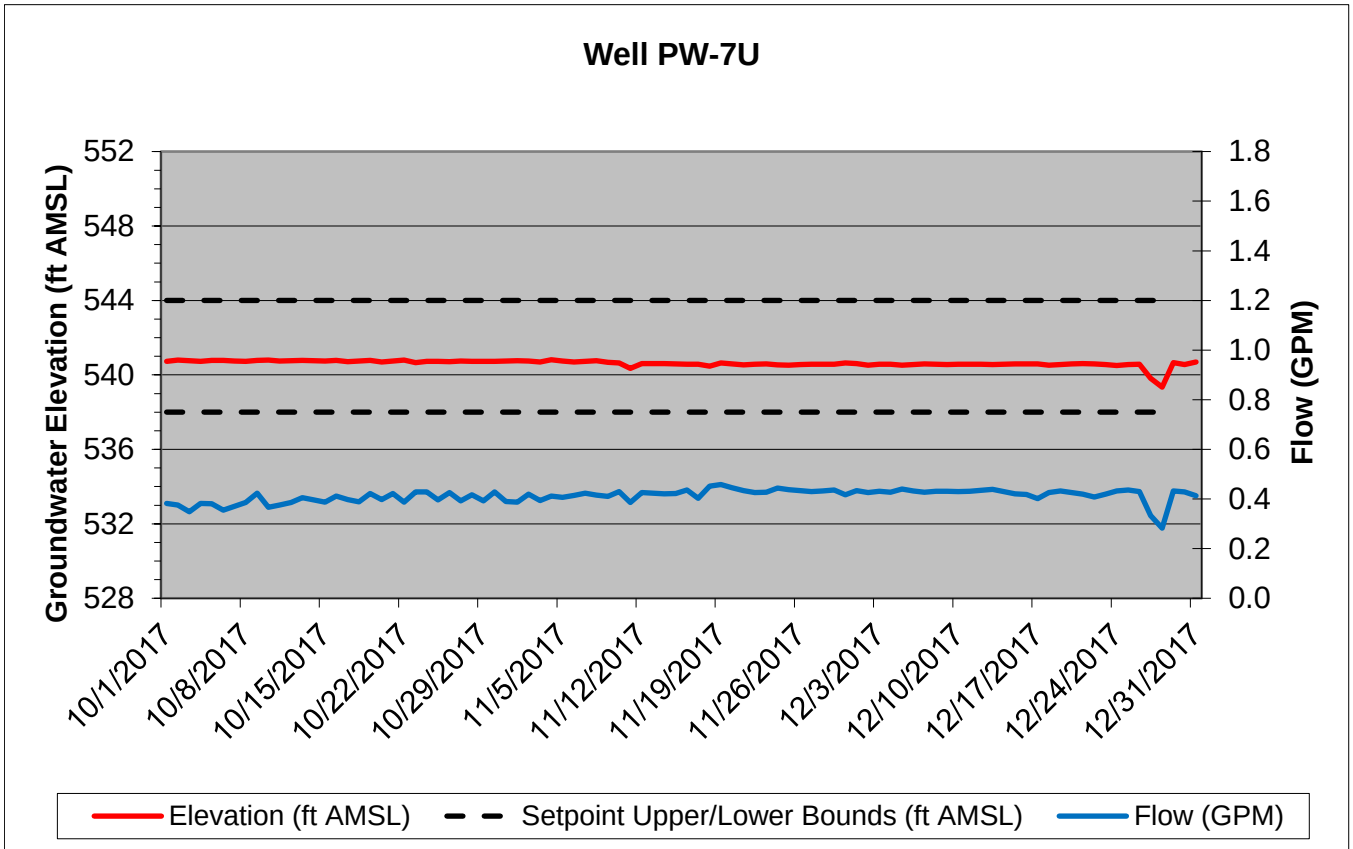

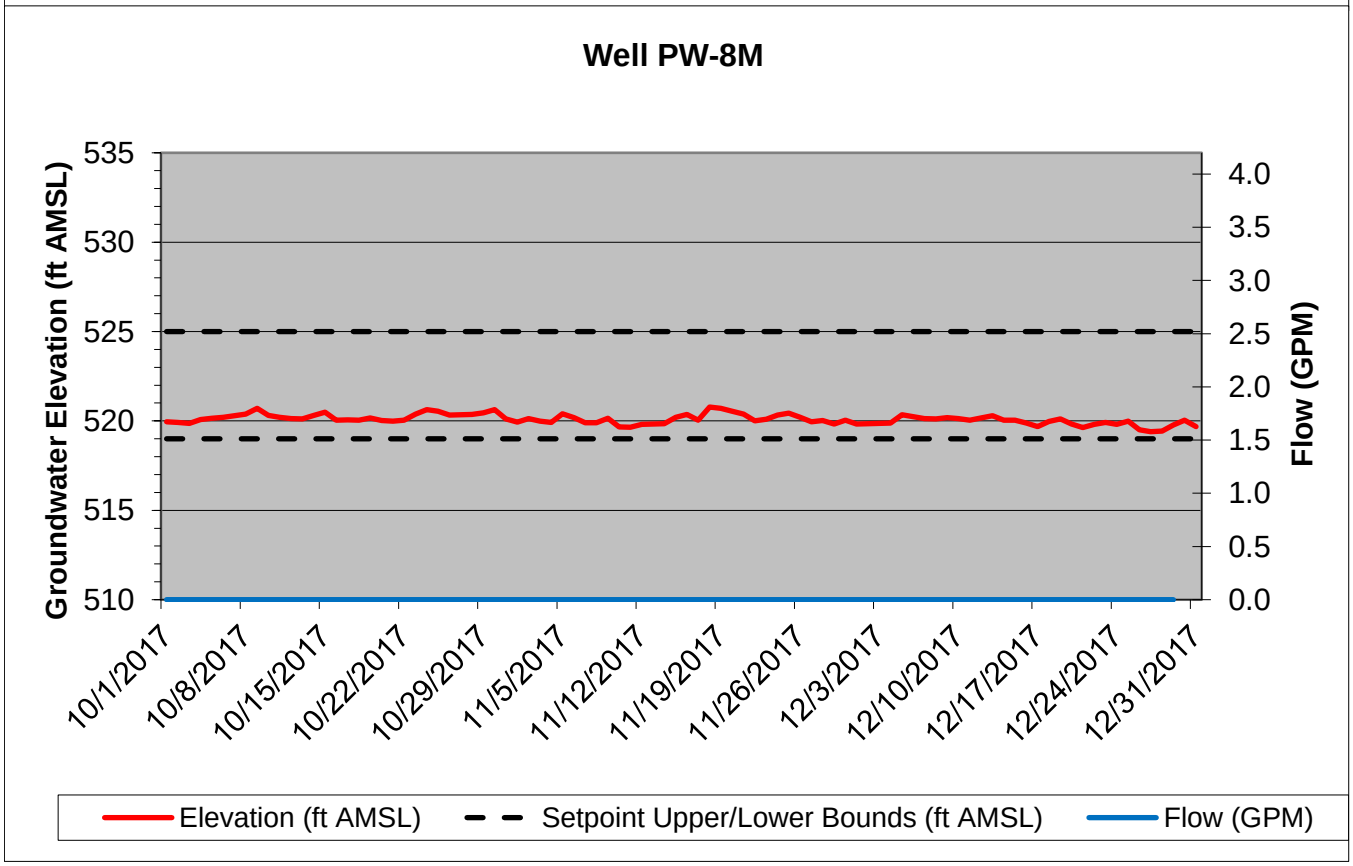

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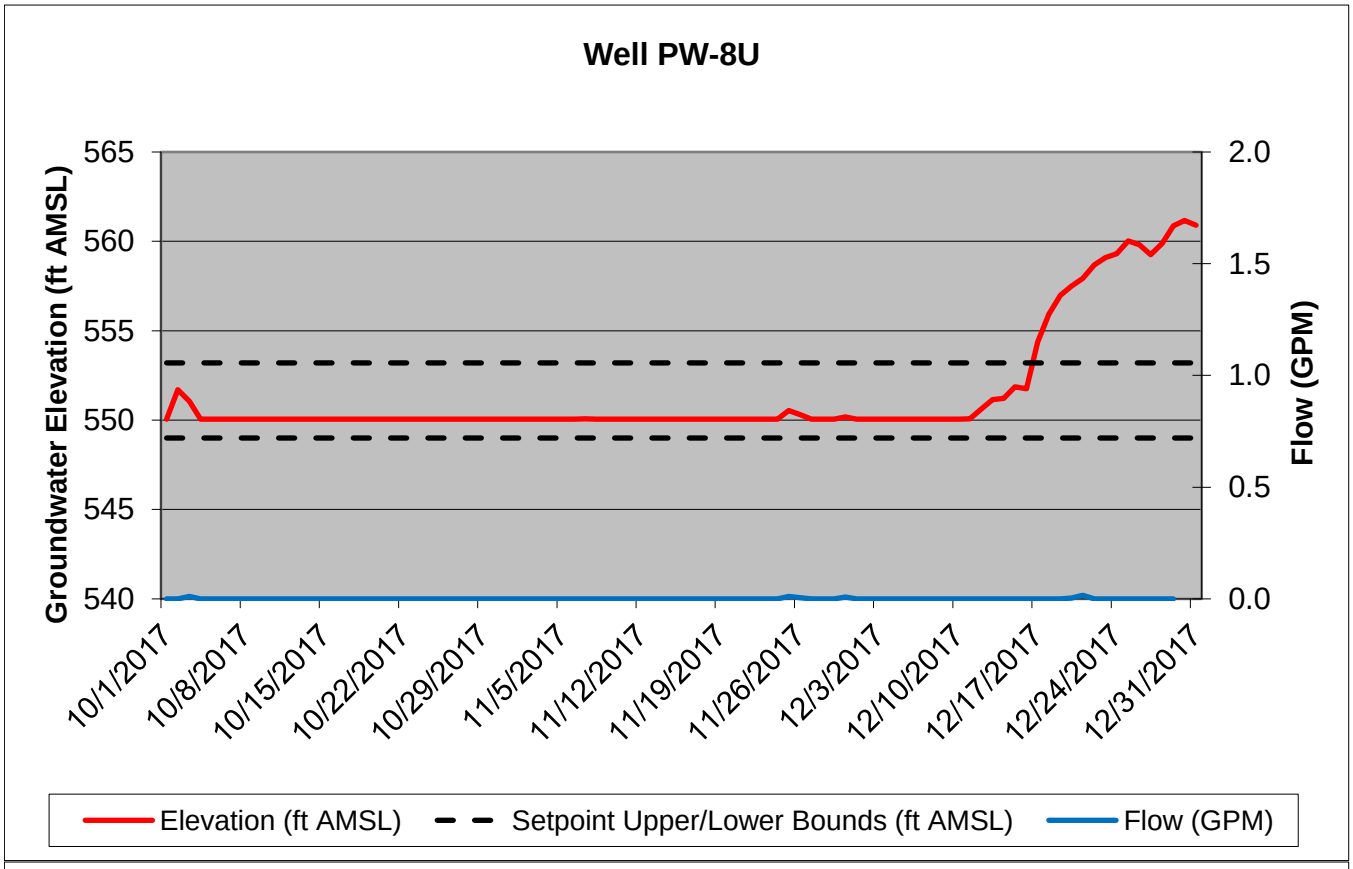

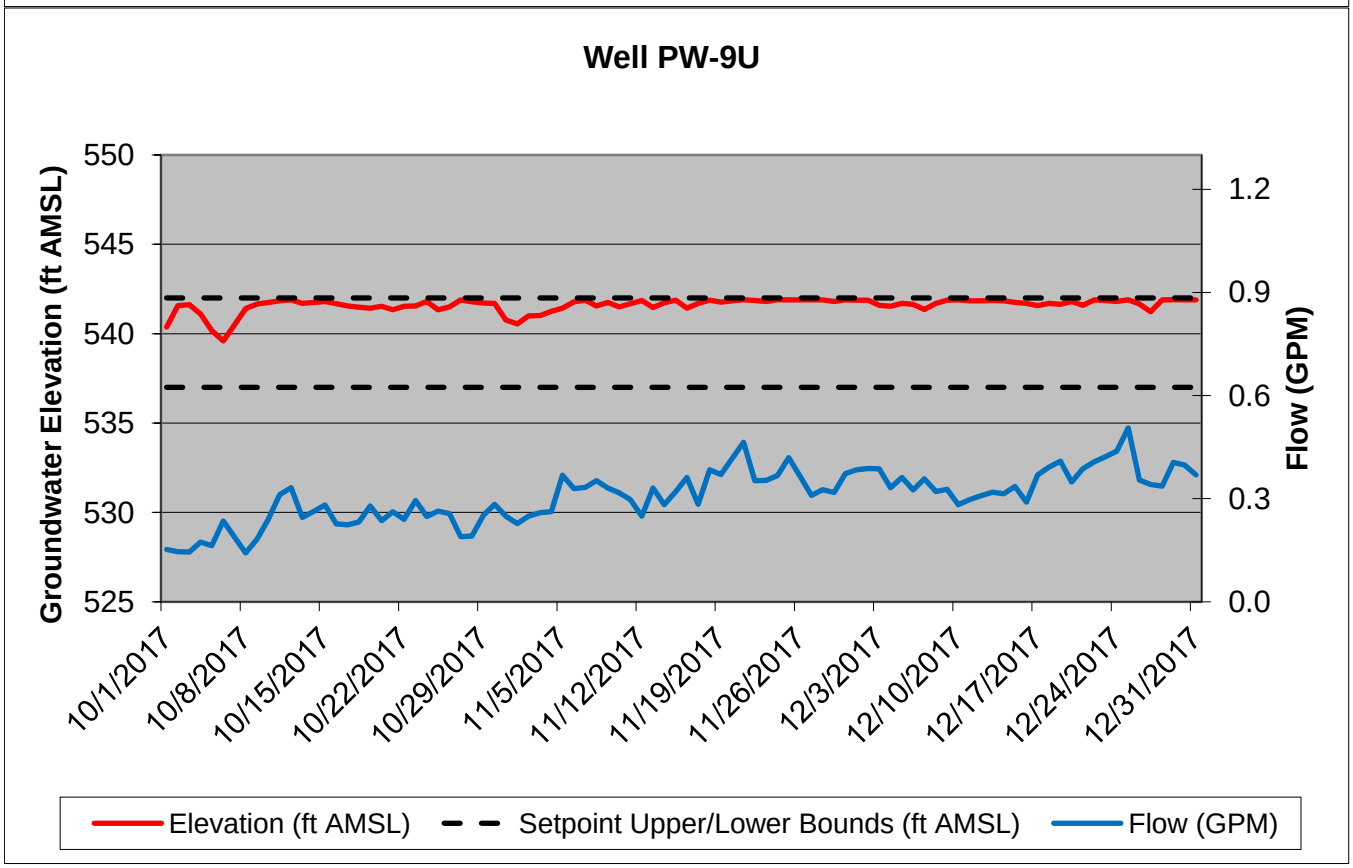

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