



Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

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

7601 Old Channel Trail
Montague, MI 49437

May 1, 2023

Reference No. 11230216

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

Mr. Andrew Zwack
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Kondrk and Mr. Zwack:

**Re: Quarterly Operations Report - First Quarter 2023
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 January 1, 2023 through March 31, 2023. A total of 11.3 million gallons of APL were collected, treated, and discharged in compliance with the Site's City of Niagara Falls Publicly Owned Treatment Works (POTW) Significant Industrial User (SIU) Wastewater Discharge Permit #49. One hundred and fourteen (114) drums (approximately 73,691 pounds) of non-aqueous phase liquid (NAPL) and fifteen drums (approximately 6,592 pounds) of personal protective equipment (PPE) and debris were 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: Groundwater 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 continuously recorded groundwater elevations for the flow zone 9 piezometer PMW-1M-09 for the first quarter 2023 are presented on Figure 10. These groundwater elevations were less than 526 feet above mean sea level (AMSL) through the entire quarter, indicating that the FZ-09 outcrop along the New York Power Authority (NYPA) access road was unsaturated throughout the entire quarter.

The pumping wells were operational and functioning as designed during the first quarter 2023, with the exception of the downtime periods discussed below. 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.

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Delivery lead times for equipment (such as pumps, motors, drives, etc.) has recently increased from several weeks to several months (3 to 5 months). Although some spares have always been kept on hand, replacement of the spares is taking significantly longer than anticipated which is affecting repair of the wells as described below. To address this recent change, additional spares to the extent practicable have been ordered to address this issue moving forward.

Well PW-2M was offline from the beginning of the quarter through January 29 awaiting a pump repair. The pump was repaired and the well returned to service on January 30. The water level in this well remained within setpoint range during this period.

Well PW-5UR was offline from the beginning of the quarter through February 7 awaiting a pump repair. The pump was repaired and the well returned to service on February 8. The water level in this well exceeded setpoint range from the beginning of the quarter through January 8 and on February 7. The water level returned to within setpoint range on January 9 and February 8, respectively.

PW-7U was offline from the beginning of the quarter through February 21 awaiting a pump repair. The pump was repaired and the well returned to service on February 22. The water level in this well exceeded setpoint range from the beginning of the quarter through February 22 and returned to within setpoint range on February 23.

PW-9U was offline during the entire quarter awaiting a pump repair. The water level in this well exceeded setpoint range throughout the entire quarter. Replacement is scheduled.

The following minor operational and setpoint issues were investigated and resolved during the first quarter of 2023:

- Due to a high storage alarm resulting from heavy rain and snowmelt, all purge wells temporarily stopped pumping on January 2 and resumed pumping on January 3. As a result, the water levels in all wells operating at the time except for PW-8M exceeded setpoint range on January 2. The water levels in APW-1 and APW-2 returned to within setpoint range on January 3. The water levels in the remaining wells continued to exceed setpoint range on January 3 as the wells pumped down following the downtime. The water levels in all wells except for PW-1L and PW-1U returned to within setpoint range on January 4.
- The water levels in APW-1, APW-2, PW-1L, and PW-1U exceeded setpoint range on January 4 due to heavy rain and snowmelt. The heavy rain and snowmelt triggered a leak detection alarm, which caused these wells to temporarily stop pumping on January 5. Water levels in these wells continued to exceed setpoint range on January 5. These wells resumed pumping on January 6. The water level in APW-1 returned to within setpoint range on January 6, while the water levels in the remaining wells continued to exceed setpoint range on January 6 as the wells pumped down following the downtime.
- On January 7 and January 8, the heavy rain and snowmelt again triggered a leak detection alarm, which caused wells APW-1, APW-2, PW-1L, and PW-1U to temporary stop pumping during this time period. As a result, water levels exceeded setpoint in these wells on January 7 and January 8. These wells resumed pumping on January 9. The water level in APW-2 resumed to within setpoint range on January 9. The water levels in the remaining wells continued to exceed setpoint range on January 9 as the wells pumped down following the downtime and returned to within setpoint range on January 10.

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- Due to a power interruption on the programmable logic controller (PLC), all wells were offline from March 1 through March 5. As a result, water level elevation is not available for this time period. Power was restored to the PLC and the wells returned online on March 6. The water levels in all wells except for APW-2 returned to within setpoint range on March 7. The water level in APW-2 continued to exceed setpoint range through March 10 as the well pumped down following the downtime and returned to within setpoint range on March 11.
- Due to power interruptions resulting from high winds, the water levels in APW-1, APW-2, PW-1L, and PW-4U exceeded setpoint range on March 26 and returned to within setpoint range on March 27; the water levels in PW-1U, PW-2L, PW-2UR, and PW-6UR exceeded setpoint range from March 25 through March 27 and returned to within setpoint range on March 28; the water level in PW-2M exceeded setpoint range from March 26 through March 28 and returned to within setpoint range on March 29; and the water levels in PW-3L and PW-5UR exceeded setpoint range on March 25 and March 26 and returned to within setpoint range on March 27.
- The water level in APW-1 exceeded setpoint range from January 13 through January 15 and on January 24 due to communication errors and returned to within setpoint range on January 16 and January 25, respectively.
- The water level in APW-2 exceeded setpoint range on January 18, January 20, February 9 and February 10, and from March 17 through March 23 due to heavy rain and snowmelt. The water level in this well returned to within setpoint range on January 19, January 21, February 11, and March 24, respectively.
- The water level in PW-2M exceeded setpoint range from February 6 through February 9 due to a pump fault, which was repaired on February 7. The water level returned to within setpoint range on February 10. The water level in this well exceeded setpoint from March 7 through March 10 due to a communication issue and returned to within setpoint range on March 11.
- The water level in PW-3M exceeded setpoint range on March 29 due to a motor fault and returned to within setpoint range on March 30.
- The water level in PW-7U exceeded setpoint range from March 16 through March 20 due to a variable frequency drive VFD fault and returned to within setpoint range on March 21.
- The water level in PW-8U exceeded setpoint range from January 21 through 23 and from March 19 through March 21 due to heavy rain and snow melt and returned to within setpoint range on January 24 and March 22, respectively.
- The water level in PW-10U exceeded setpoint range on January 21 and January 22 due heavy rains/snow melt. The pump was reset on January 23 and the water level returned to within setpoint range on January 23.

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

May 1, 2023

Reference No. 11230216

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Very truly yours,

GLENN SPRINGS HOLDINGS, INC.

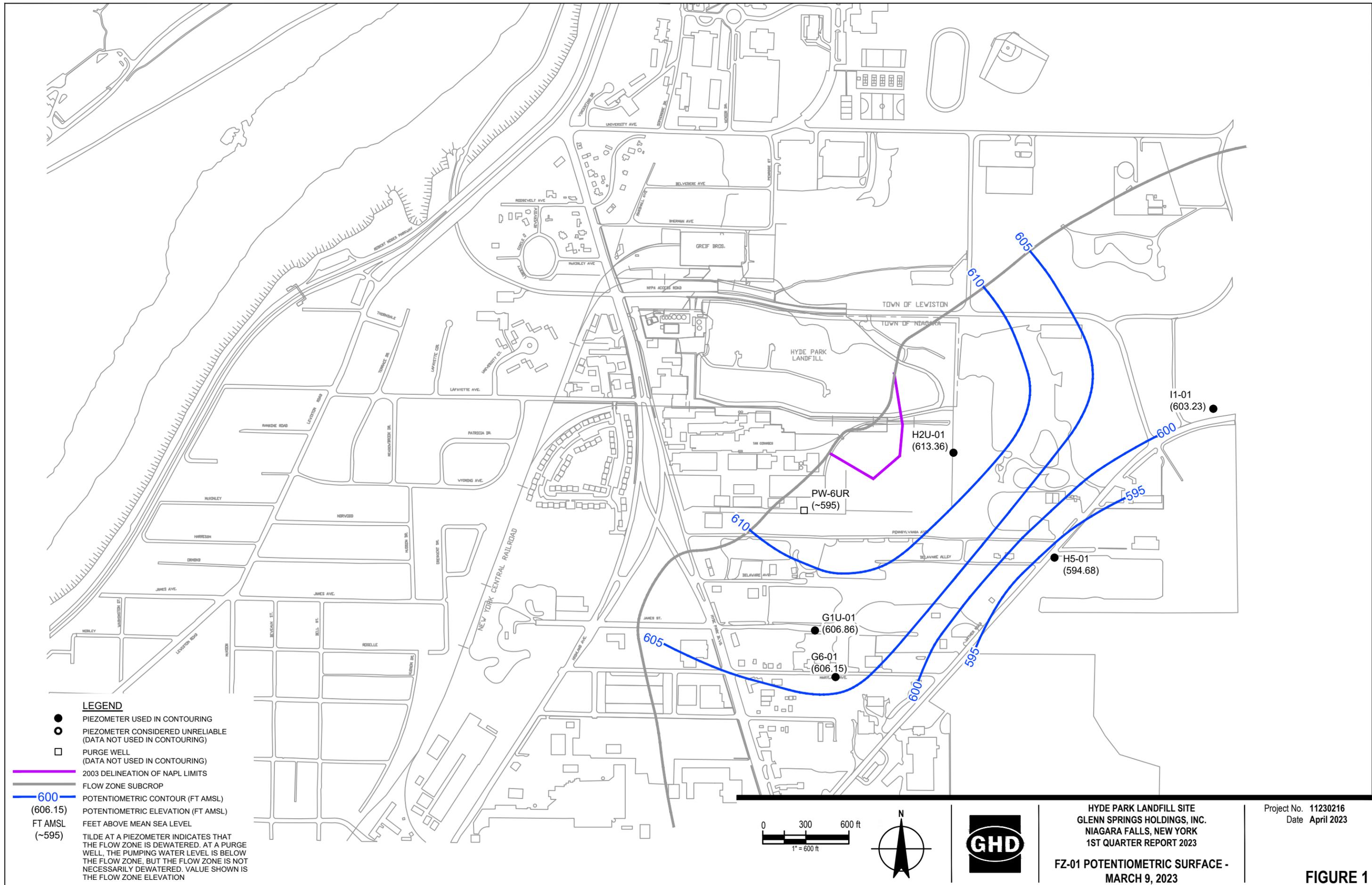
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Joe Branch
Project Manager
231-670-6809 Cell

JB/7
Encl.

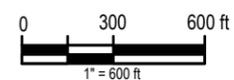
cc: B. McPherson NYSDEC
J. Robinson, NYSDOH

J. Pentilchuk, GHD
M. Popek, GHD



LEGEND

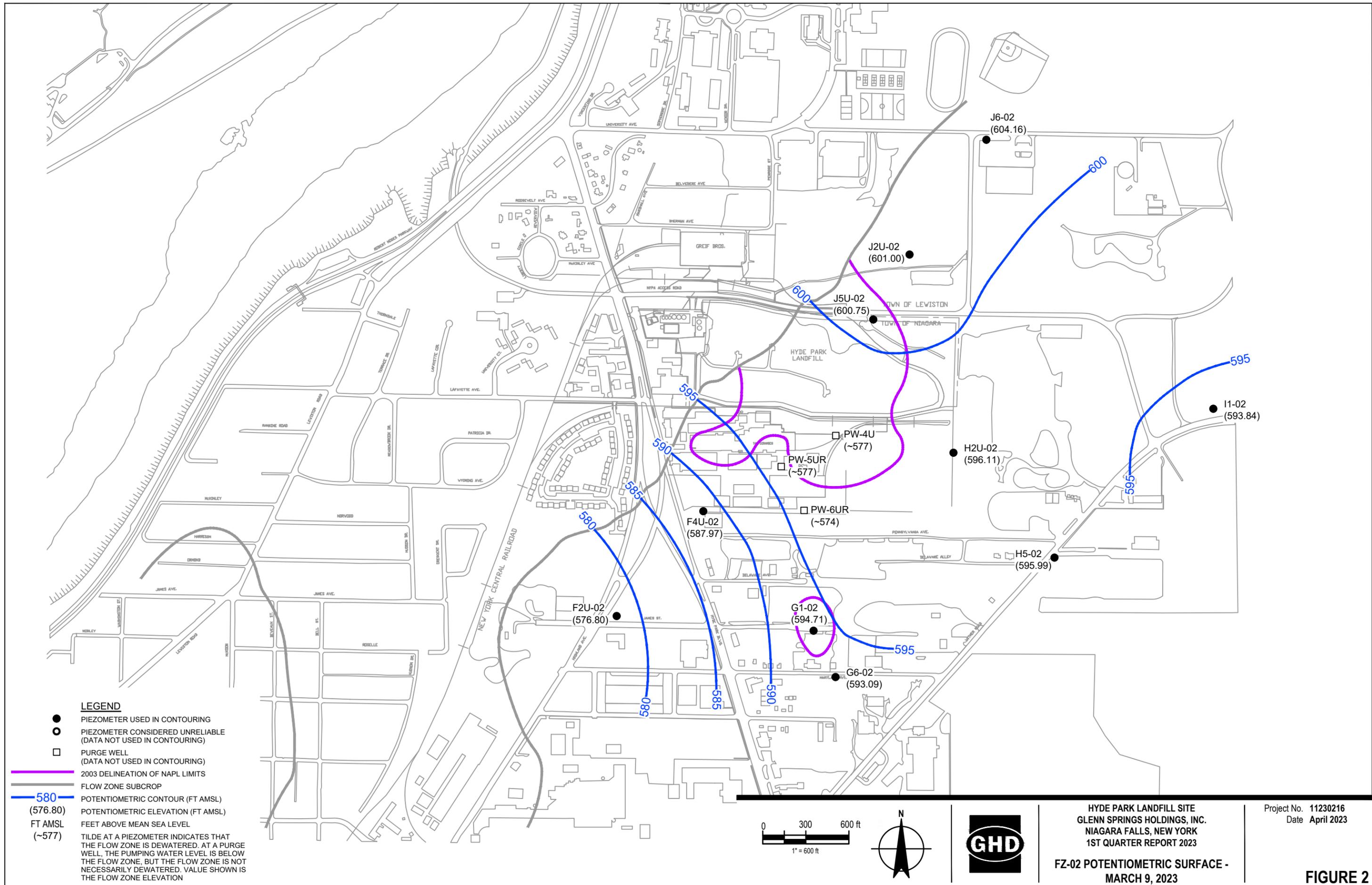
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 600 POTENTIOMETRIC CONTOUR (FT AMSL)
- 605 POTENTIOMETRIC ELEVATION (FT AMSL)
- 610 POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- ~595 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



HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 1ST QUARTER REPORT 2023
FZ-01 POTENTIOMETRIC SURFACE -
MARCH 9, 2023

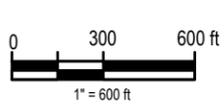
Project No. 11230216
 Date April 2023

FIGURE 1



LEGEND

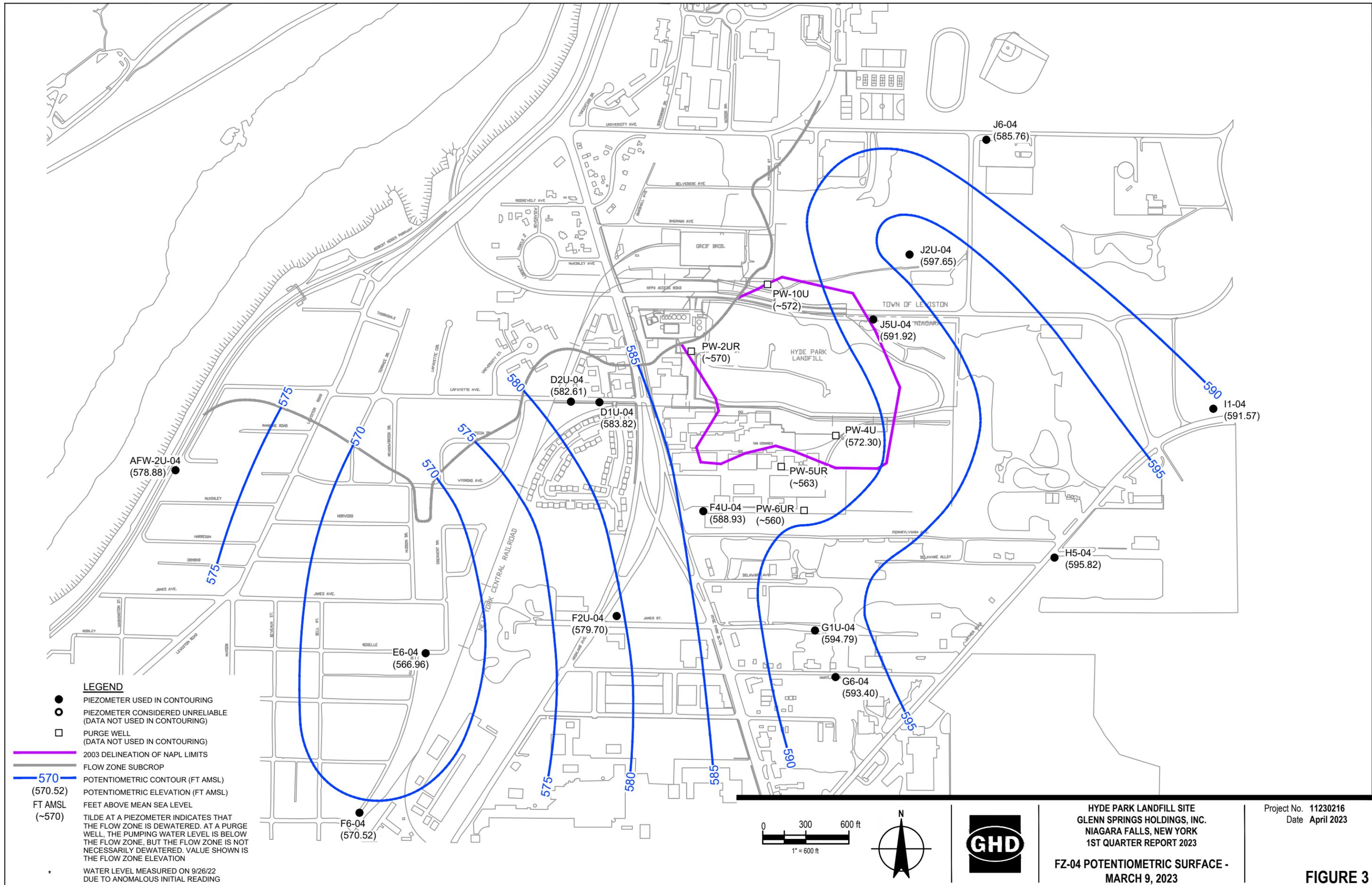
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 580 POTENTIOMETRIC CONTOUR (FT AMSL)
- 585 POTENTIOMETRIC ELEVATION (FT AMSL)
- 590 POTENTIOMETRIC ELEVATION (FT AMSL)
- 595 POTENTIOMETRIC ELEVATION (FT AMSL)
- 600 POTENTIOMETRIC ELEVATION (FT AMSL)
- FEET ABOVE MEAN SEA LEVEL
- ~ 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

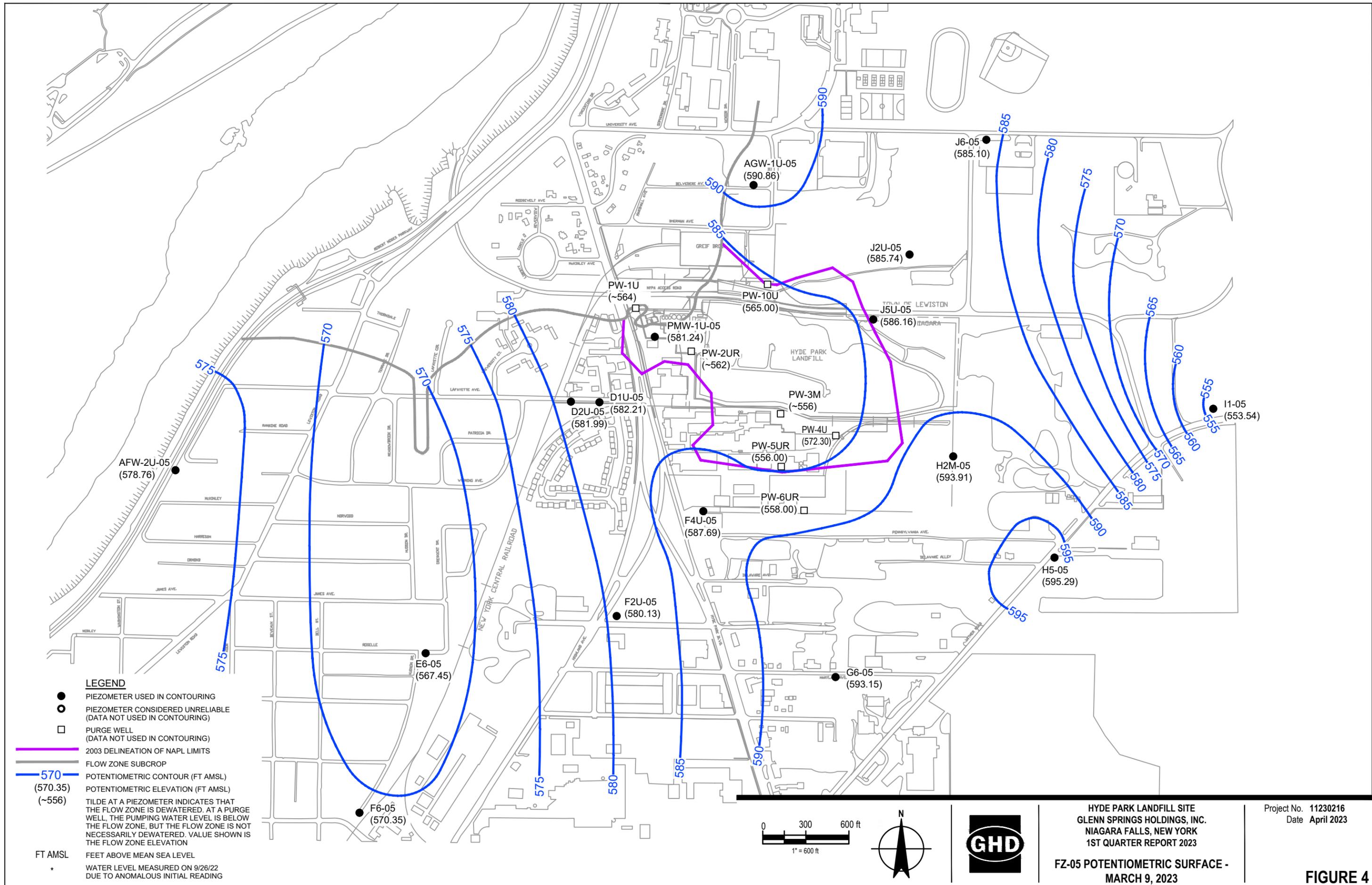


HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 1ST QUARTER REPORT 2023
FZ-02 POTENTIOMETRIC SURFACE -
MARCH 9, 2023

Project No. 11230216
 Date April 2023

FIGURE 2





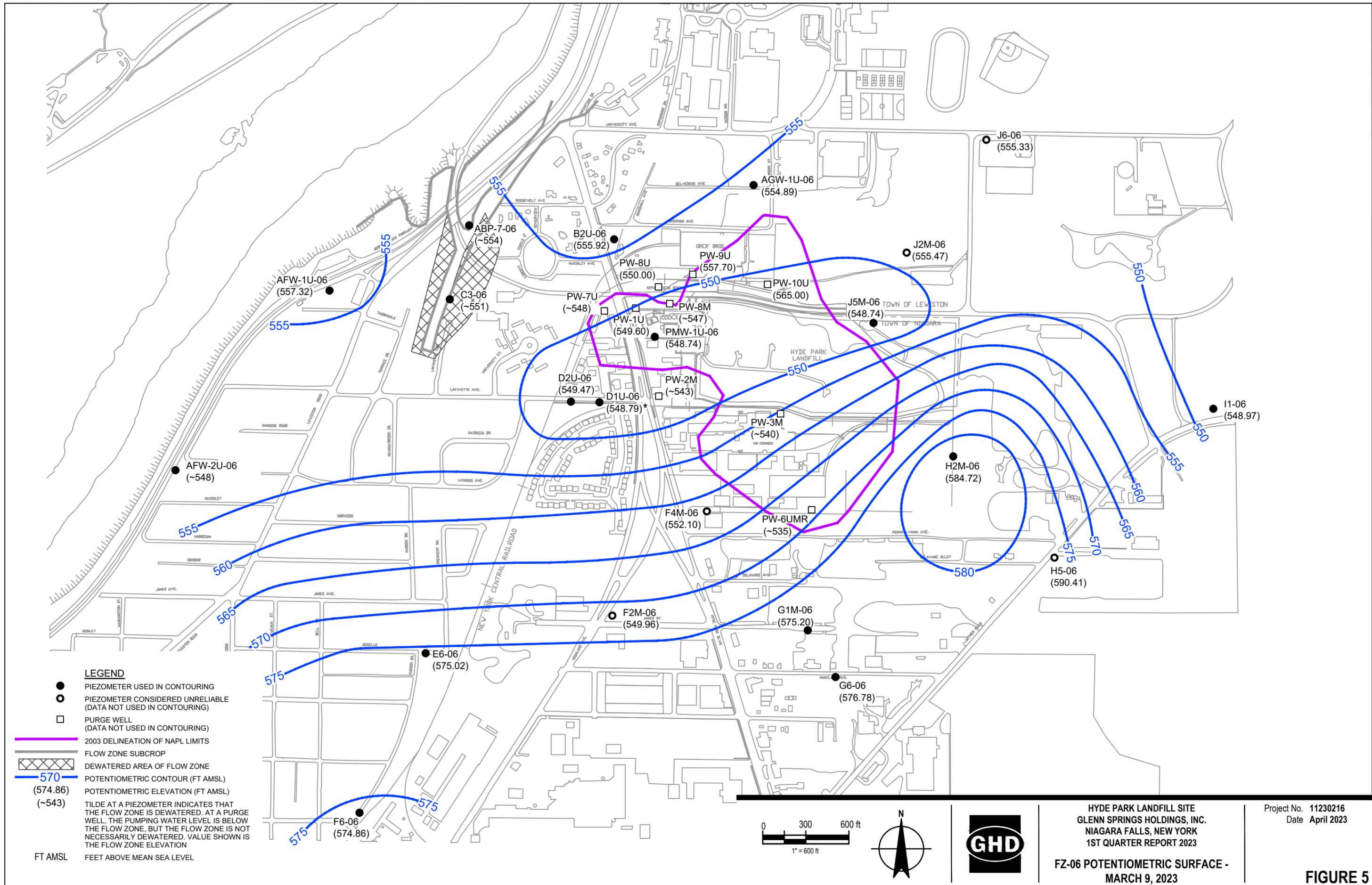
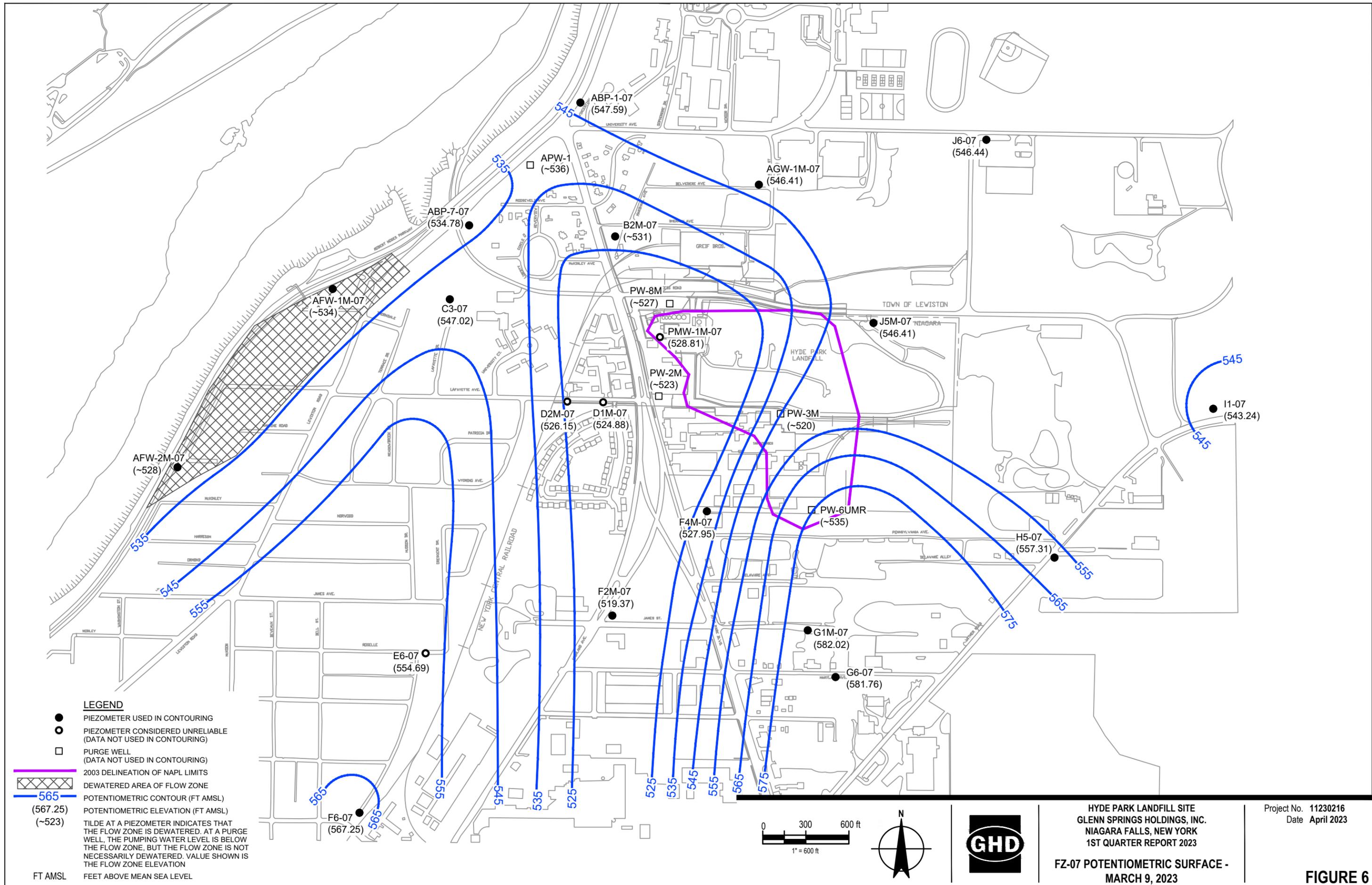


FIGURE 5



LEGEND

- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- ▨ 2003 DELINEATION OF NAPL LIMITS
- ▭ DEWATERED AREA OF FLOW ZONE
- 565 POTENTIOMETRIC CONTOUR (FT AMSL)
- (567.25) POTENTIOMETRIC ELEVATION (FT AMSL)
- (~523) 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
- FT AMSL FEET ABOVE MEAN SEA LEVEL

HYDE PARK LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
NIAGARA FALLS, NEW YORK
1ST QUARTER REPORT 2023
FZ-07 POTENTIOMETRIC SURFACE -
MARCH 9, 2023

Project No. 11230216
 Date April 2023

FIGURE 6

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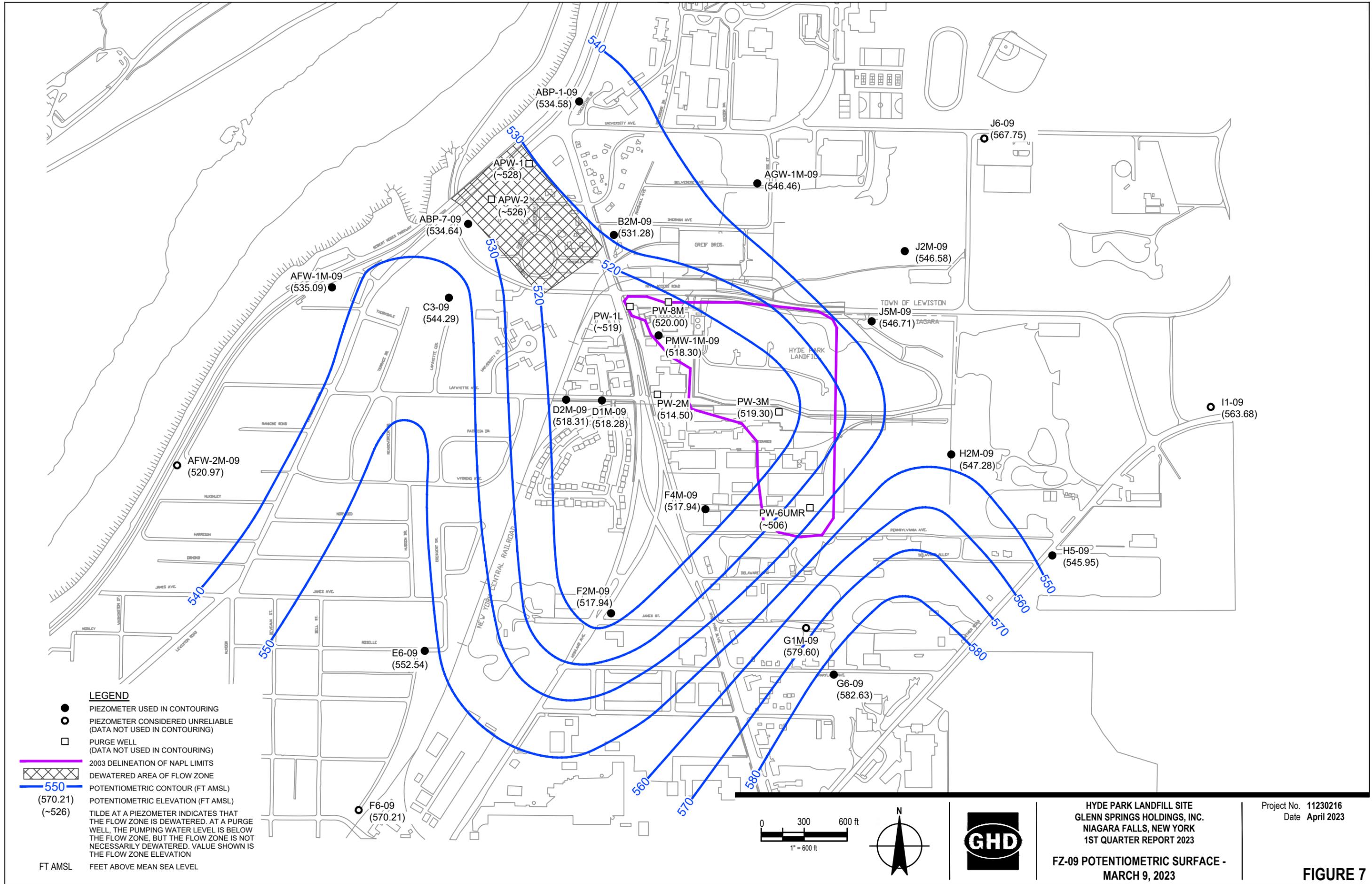


FIGURE 7

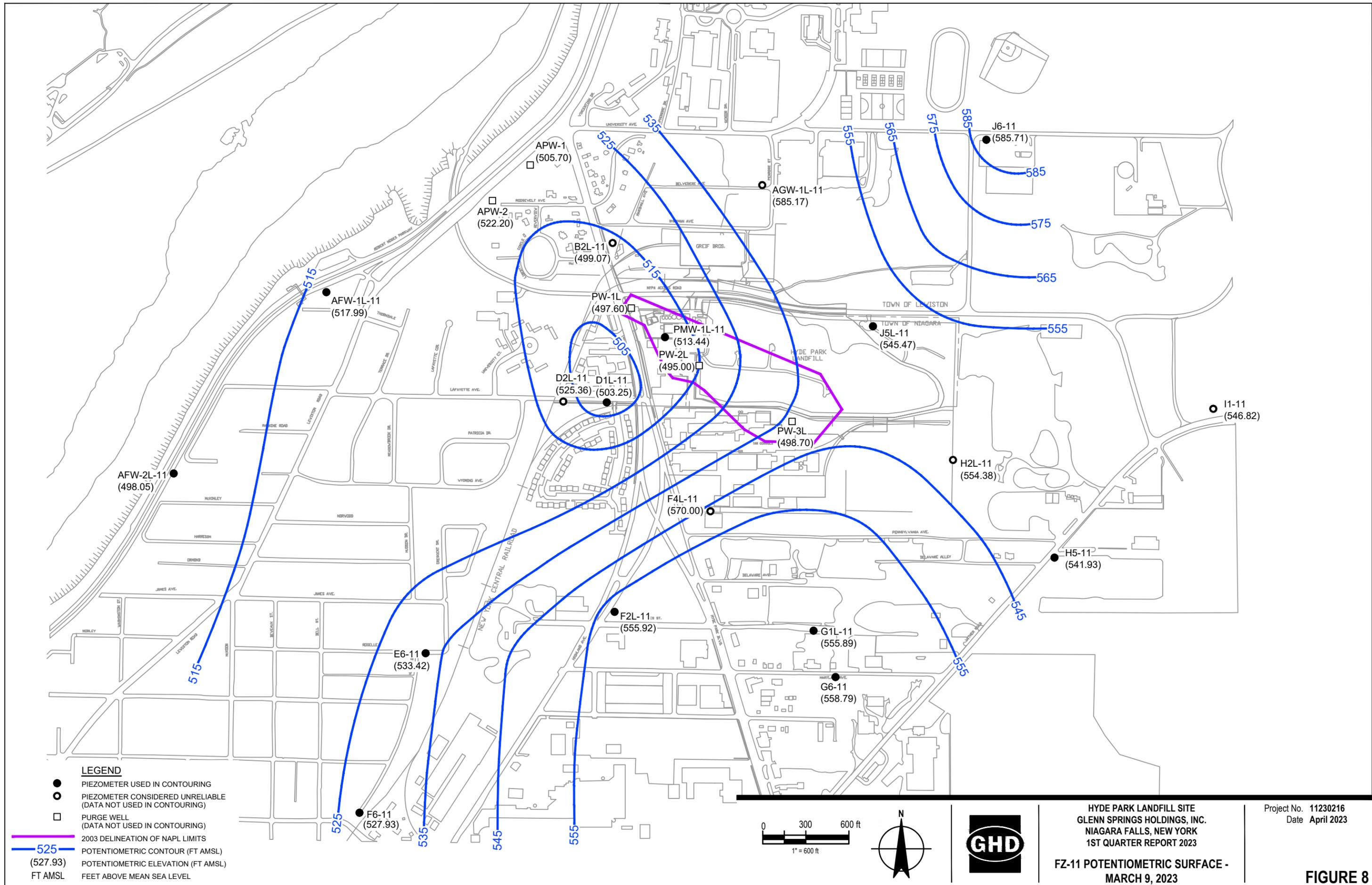


FIGURE 8

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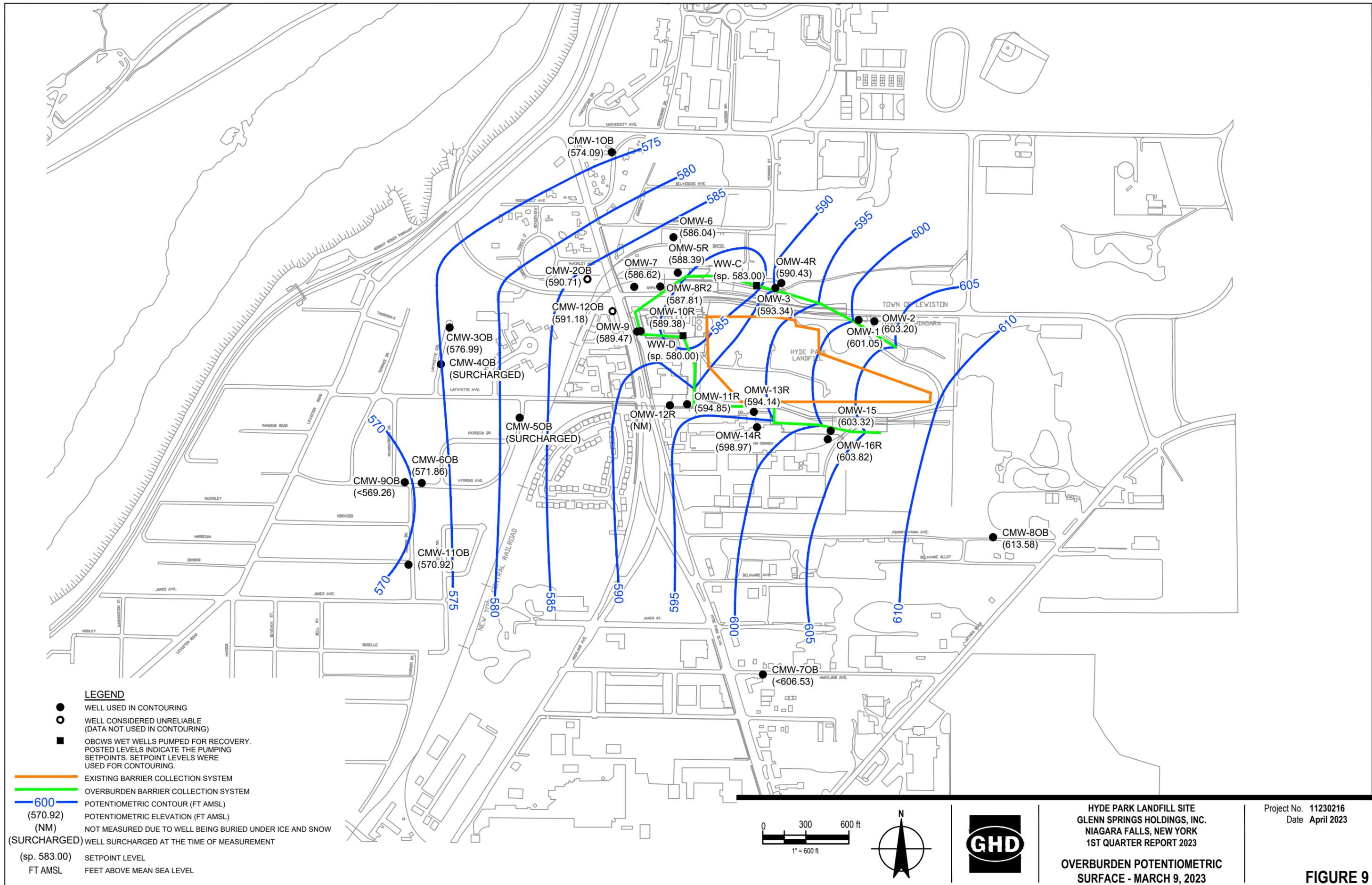


FIGURE 9

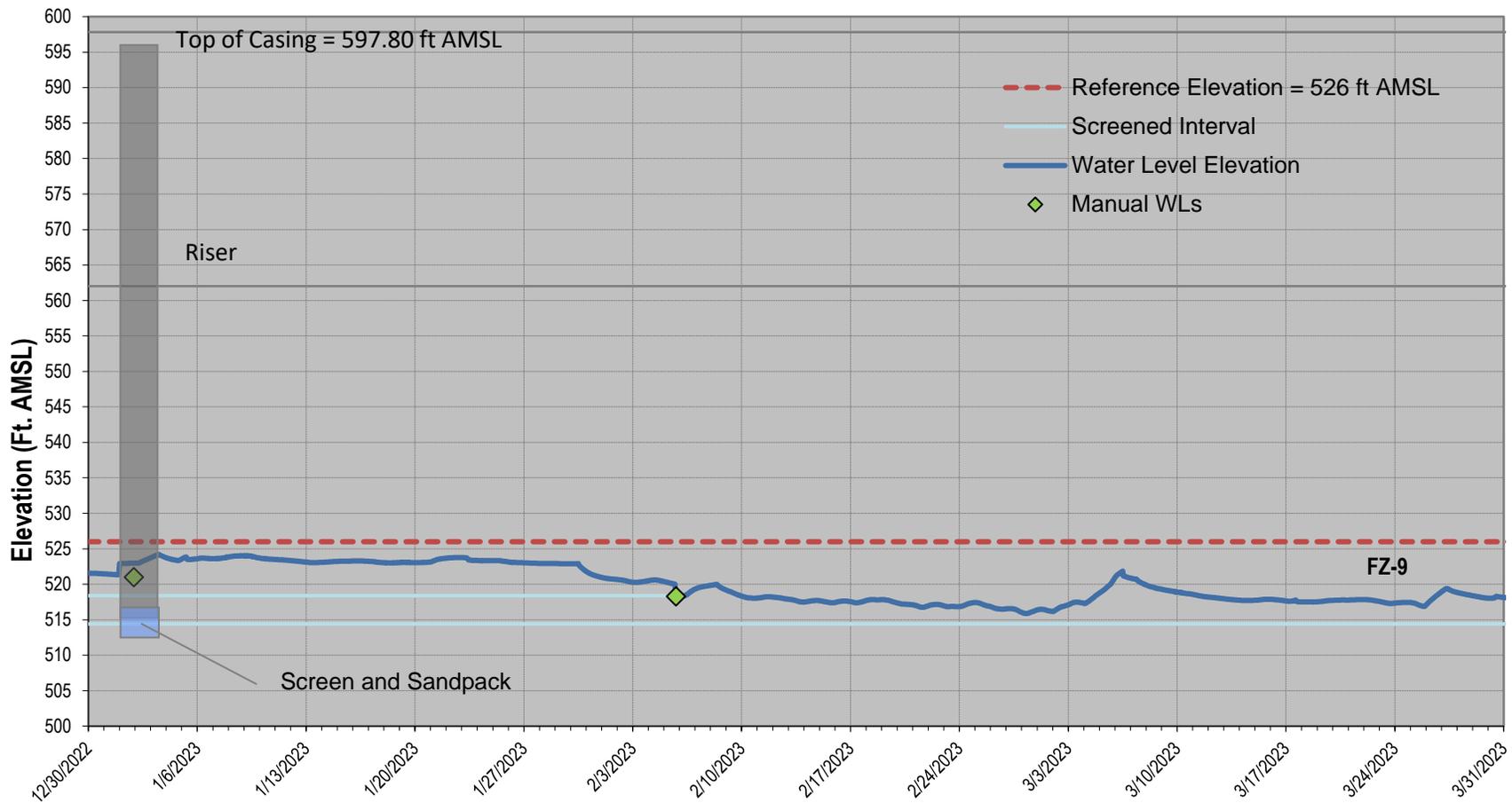


figure 10

PMW-1M-09 1st Quarter 2023 - Hourly Water Level Elevation
 1st Quarter Report
 Hyde Park Landfill Site
 Glenn Springs Holdings, Inc.

**Groundwater Elevation Summary
First Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Overburden			
CMW-2OB	590.79	0.08	590.71
CMW-3OB	582.13	5.14	576.99
CMW-4OB	574.28	Surcharged	-
CMW-5OB	583.43	Surcharged	583.59
CMW-6OB	571.89	0.03	571.86
CMW-7OB	611.00	Dry	-
CMW-8OB	616.11	2.53	613.58
CMW-9OB	571.76	Dry	-
CMW-10B	576.80	2.71	574.09
CMW-11OB	572.85	1.93	570.92
CMW-12OB	594.74	3.56	591.18
MH20	605.87	4.63	601.24
MH21	599.77	6.00	593.77
MH22	593.37	6.67	586.70
MH23	587.05	8.68	578.37
MH24	582.57	2.18	580.39
MH25	583.82	1.81	582.01
MH26	584.48	3.35	581.13
MH27	586.12	6.68	579.44
MH28	585.23	8.73	576.50
MH29	604.58	8.72	595.86
MH30	599.49	8.55	590.94
MH31	590.10	9.47	580.63
MH32	592.01	9.60	582.41
MH33	592.51	8.69	583.82
MH34	598.34	7.12	591.22
MH35	605.69	6.53	599.16
MH35A	605.69	7.15	598.54
OMW-1	605.28	4.23	601.05
OMW-2	605.99	2.79	603.20
OMW-3	598.63	5.29	593.34
OMW-4R	601.17	10.74	590.43
OMW-5R	591.31	2.92	588.39
OMW-6	587.62	1.58	586.04
OMW-7	592.74	6.12	586.62
OMW-8R2	594.67	6.86	587.81
OMW-9	595.27	5.80	589.47
OMW-10R	595.13	5.75	589.38
OMW-11R	597.52	2.67	594.85
OMW-12R	596.71	NM	-
OMW-13R	601.50	7.36	594.14
OMW-14R	599.64	0.67	598.97
OMW-15	607.48	4.16	603.32
OMW-16R	607.62	3.80	603.82
SC-2	625.61	22.58	603.03
SC-3	638.72	39.67	599.05
SC-4	639.35	39.41	599.94
SC-5	634.07	31.61	602.46
SC-6	631.15	18.84	612.31

**Groundwater Elevation Summary
First Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Shallow Bedrock			
CMW-1SH	576.11	11.49	564.62
CMW-2SH	590.51	18.22	572.29
CMW-3SH	581.91	26.32	555.59
CMW-4SH	574.16	6.12	568.04
CMW-5SH	583.36	3.96	579.40
CMW-6SH	572.05	9.52	562.53
CMW-7SH	610.58	8.88	601.70
CMW-8SH	615.95	2.84	613.11
CMW-9SH	571.96	11.40	560.56
CMW-11SH	573.21	7.85	565.36
CMW-12SH	597.02	24.75	572.27
Flow Zone 1			
G1U-01	617.08	10.22	606.86
G6-01	609.24	3.09	606.15
H2U-01	620.92	7.56	613.36
H5-01	617.61	22.93	594.68
I1-01	625.58	22.35	603.23
Flow Zone 2			
F2U-02	599.89	23.09	576.80
F4U-02	602.32	14.35	587.97
G1-02	616.86	22.15	594.71
G6-02	608.65	15.56	593.09
H2U-02	620.88	24.77	596.11
H5-02	617.47	21.48	595.99
I1-02	625.47	31.63	593.84
J2U-02	609.66	8.66	601.00
J5U-02	606.21	5.46	600.75
J6-02	609.23	5.07	604.16
Flow Zone 4			
AFW-2U-04	593.48	14.60	578.88
D1U-04	593.77	9.95	583.82
D2U-04	590.65	8.04	582.61
E6-04	578.23	11.27	566.96
F2U-04	599.76	20.06	579.70
F4U-04	602.19	13.26	588.93
F6-04	588.06	17.54	570.52
G1U-04	616.96	22.17	594.79
G6-04	609.15	15.75	593.40
H5-04	617.40	21.58	595.82
I1-04	625.30	33.73	591.57
J2U-04	609.42	11.77	597.65
J5U-04	606.05	14.13	591.92
J6-04	609.12	23.36	585.76

**Groundwater Elevation Summary
First Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 5			
AFW-2U-05	593.33	14.57	578.76
AGW-1U-05	591.80	0.94	590.86
D1U-05	593.51	11.30	582.21
D2U-05	590.56	8.57	581.99
E6-05	578.04	10.59	567.45
F2U-05	599.64	19.51	580.13
F4U-05	602.06	14.37	587.69
F6-05	587.85	17.50	570.35
G6-05	609.13	15.98	593.15
H2M-05	621.59	27.68	593.91
H5-05	617.31	22.02	595.29
I1-05	625.25	71.71	553.54
J2U-05	609.30	23.56	585.74
J5U-05	605.87	19.71	586.16
J6-05	609.02	23.92	585.10
PMW-1U-05	598.00	16.76	581.24
Flow Zone 6			
ABP-7-06	575.78	Dry	-
AFW-1U-06	571.83	14.51	557.32
AFW-2U-06	593.22	47.82	545.40
AGW-1U-06	591.66	36.77	554.89
B2U-06	589.29	33.37	555.92
C3-06	585.78	36.52	549.26
D1U-06	593.25	44.46	548.79
D2U-06	590.38	40.91	549.47
E6-06	577.99	2.97	575.02
F2M-06	599.06	49.10	549.96
F4M-06	602.05	49.95	552.10
F6-06	587.84	12.98	574.86
G1M-06	616.75	41.55	575.20
G6-06	609.09	32.31	576.78
H2M-06	621.42	36.70	584.72
H5-06	617.17	26.76	590.41
I1-06	625.15	76.18	548.97
J2M-06	608.94	53.47	555.47
J5M-06	606.22	57.48	548.74
J6-06	608.93	53.60	555.33
PMW-1U-06	597.92	49.18	548.74

**Groundwater Elevation Summary
First Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 7			
ABP-1-07	575.20	27.61	547.59
ABP-7-07	575.73	40.95	534.78
AFW-1M-07	571.41	Dry	-
AFW-2M-07	593.44	66.53	526.91
AGW-1M-07	592.91	46.50	546.41
B2M-07	589.52	Dry	-
C3-07	585.62	38.60	547.02
D1M-07	594.15	69.27	524.88
D2M-07	590.77	64.62	526.15
E6-07	577.91	23.22	554.69
F2M-07	598.91	79.54	519.37
F4M-07	601.91	73.96	527.95
F6-07	587.68	20.43	567.25
G1M-07	616.68	34.66	582.02
G6-07	609.06	27.30	581.76
H5-07	617.05	59.74	557.31
I1-07	625.14	81.90	543.24
J5M-07	606.07	59.66	546.41
J6-07	608.85	62.41	546.44
PMW-1M-07	598.50	69.69	528.81
Flow Zone 9			
ABP-1-09	575.19	40.61	534.58
ABP-7-09	575.67	41.03	534.64
AFW-1M-09	571.12	36.03	535.09
AFW-2M-09	593.32	72.35	520.97
AGW-1M-09	592.75	46.29	546.46
B2M-09	589.34	58.06	531.28
C3-09	585.00	40.71	544.29
D1M-09	594.02	75.74	518.28
D2M-09	590.66	72.35	518.31
E6-09	577.82	25.28	552.54
F2M-09	598.71	80.77	517.94
F4M-09	601.79	83.85	517.94
F6-09	587.53	17.32	570.21
G1M-09	616.58	36.98	579.60
G6-09	608.98	26.35	582.63
H2M-09	621.32	74.04	547.28
H5-09	616.93	70.98	545.95
I1-09	624.91	61.23	563.68
J2M-09	608.77	62.19	546.58
J5M-09	605.82	59.11	546.71
J6-09	608.76	41.01	567.75
PMW-1M-09	598.34	80.04	518.30

**Groundwater Elevation Summary
First Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 11			
AFW-1L-11	572.10	54.11	517.99
AFW-2L-11	593.43	95.38	498.05
AGW-1L-11	592.71	7.54	585.17
B2L-11	589.65	90.58	499.07
D1L-11	593.80	90.55	503.25
D2L-11	590.21	64.85	525.36
E6-11	577.72	44.30	533.42
F2L-11	598.94	43.02	555.92
F4L-11	602.22	32.22	570.00
F6-11	587.40	59.47	527.93
G1L-11	616.84	60.95	555.89
G6-11	608.89	50.10	558.79
H2L-11	620.73	66.35	554.38
H5-11	616.81	74.88	541.93
I1-11	624.75	77.93	546.82
J5L-11	607.20	61.73	545.47
J6-11	608.68	22.97	585.71
PMW-1L-11	598.84	85.40	513.44
Purge Wells			
APW-1	564.98	59.28	505.70
APW-2	569.89	47.69	522.20
PW-1L	593.16	95.56	497.60
PW-1U	593.50	43.90	549.60
PW-2L	597.29	102.29	495.00
PW-2M	596.61	82.11	514.50
PW-2UR	594.75	35.75	559.00
PW-3L	599.05	100.35	498.70
PW-3M	597.79	78.49	519.30
PW-4U	604.85	82.63	524.30
PW-5UR	601.31	32.55	572.30
PW-6UMR	609.31	45.31	556.00
PW-6UR	608.47	106.31	503.00
PW-7U	592.47	50.47	558.00
PW-8M	592.67	51.57	540.90
PW-8U	589.27	72.67	520.00
PW-9U	587.47	39.27	550.00
PW-10U	593.54	29.77	557.70
		28.54	565.00

Notes:

- - Not applicable
- ft AMSL - Feet above mean sea level
- NM - Not measured due to well being buried under ice and snow
- Surcharged - Well surcharged at the time of measurement
- Dry - No water present at the time of measurement

**Leachate Treatment System Daily Effluent Monitoring Data
First Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
01/01/23		
01/02/23	7.0	141,000
01/03/23	7.0	184,000
01/04/23	7.1	153,000
01/05/23	7.4	60,000
01/06/23	7.4	133,000
01/07/23	7.4	155,000
01/08/23	7.4	153,000
01/09/23	7.4	151,000
01/10/23	7.4	147,000
01/11/23	7.3	142,000
01/12/23	7.4	151,000
01/13/23	7.4	36,000
01/14/23		
01/15/23		
01/16/23	7.3	147,000
01/17/23	7.4	200,000
01/18/23	7.2	188,000
01/19/23	7.4	183,000
01/20/23	7.4	197,000
01/21/23		
01/22/23		
01/23/23	7.1	148,000
01/24/23	7.5	179,000
01/25/23	7.4	186,000
01/26/23	7.4	177,000
01/27/23		
01/28/23		
01/29/23		
01/30/23	7.8	40,000
01/31/23	7.1	170,000
02/01/23	7.1	175,000
02/02/23	7.4	172,000
02/03/23	7.4	166,000
02/04/23	7.4	157,000
02/05/23		
02/06/23	7.4	151,000

**Leachate Treatment System Daily Effluent Monitoring Data
First Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
02/07/23	7.3	187,000
02/08/23	7.4	176,000
02/09/23	7.3	173,000
02/10/23	7.4	178,000
02/11/23	7.4	18,000
02/12/23		
02/13/23	7.4	161,000
02/14/23	7.3	184,000
02/15/23	7.4	20,000
02/16/23		
02/17/23	7.4	147,000
02/18/23	7.4	175,000
02/19/23	7.4	171,000
02/20/23	7.3	173,000
02/21/23	7.3	176,000
02/22/23	7.3	143,000
02/23/23	7.4	25,000
02/24/23		
02/25/23		
02/26/23		
02/27/23	7.3	133,000
02/28/23	7.4	160,000
03/01/23	7.1	129,000
03/02/23	7.4	92,000
03/03/23	7.4	120,000
03/04/23		
03/05/23		
03/06/23	7.1	118,000
03/07/23	7.1	164,000
03/08/23	7.1	164,000
03/09/23	7.4	162,000
03/10/23	7.4	155,000
03/11/23	7.1	152,000
03/12/23	7.3	142,000
03/13/23	7.3	193,000
03/14/23	7.4	229,000
03/15/23	7.4	229,000

**Leachate Treatment System Daily Effluent Monitoring Data
First Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
03/16/23	7.4	223,000
03/17/23	7.4	229,000
03/18/23		
03/19/23		
03/20/23	7.4	181,000
03/21/23	7.4	203,000
03/22/23	7.4	195,000
03/23/23	7.4	192,000
03/24/23	7.3	190,000
03/25/23	7.3	136,000
03/26/23		
03/27/23	7.2	177,000
03/28/23	7.3	216,000
03/29/23	7.4	236,000
03/30/23	7.5	201,000
03/31/23	7.4	216,000
	Total	11,286,000

Notes:

su - Standard Unit
gal - Gallons

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
First Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	01/04/2023	01/11/2023	01/18/2023	01/25/2023	02/01/2023	02/08/2023
Volatiles								
	1,1,1-Trichloroethane	µg/L	1.0 U					
	1,1,2,2-Tetrachloroethane	µg/L	0.36 J	0.32 J	0.25 J	0.26 J	1.0 U	0.29 J
	1,1,2-Trichloroethane	µg/L	1.0 U					
	1,1-Dichloroethane	µg/L	1.9	2.3	1.8	1.9	2.0	2.0
	1,1-Dichloroethene	µg/L	1.0 U					
	1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	2.4	1.0 U
	1,2-Dichlorobenzene	µg/L	1.0 U					
	1,2-Dichloroethane	µg/L	4.3	4.8	3.9	4.4	4.6	4.6
	1,2-Dichloropropane	µg/L	0.33 J	1.0 U	0.35 J	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	0.23 J	1.0 U
	1,4-Dichlorobenzene	µg/L	1.0 U					
	2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U
	3-Chlorotoluene	µg/L	1.0 U					
	4-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.47 J	1.0 U
	Benzene	µg/L	8.9	11	10	11	10	12
	Bromodichloromethane	µg/L	1.0 U					
	Bromoform	µg/L	1.0 U					
	Bromomethane (Methyl bromide)	µg/L	1.0 U					
	Carbon disulfide	µg/L	5.8	4.0	5.2	5.3	5.7	5.2
	Carbon tetrachloride	µg/L	1.0 U					
	Chlorobenzene	µg/L	1.0 U					
	Chloroethane	µg/L	1.0 U					
	Chloroform (Trichloromethane)	µg/L	2.0	1.9	2.1	2.3	2.3	2.7
	Chloromethane (Methyl chloride)	µg/L	1.0 U					
	cis-1,2-Dichloroethene	µg/L	1.6	1.3	1.5	1.3	1.7	1.6
	cis-1,3-Dichloropropene	µg/L	1.0 U					
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U					
	Ethylbenzene	µg/L	1.0 U					
	m&p-Xylenes	µg/L	2.0 U					
	m-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Methylene chloride	µg/L	1.0 U					
	o-Monochlorobenzotrifluoride	µg/L	1.0 U					
	o-Xylene	µg/L	1.0 U					
	p-Monochlorobenzotrifluoride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	4.0	1.0 U
	Styrene	µg/L	1.0 U					
	Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.4	1.0 U
	Toluene	µg/L	1.0 U					
	trans-1,2-Dichloroethene	µg/L	1.0 U					
	trans-1,3-Dichloropropene	µg/L	1.0 U					
	Trichloroethene	µg/L	1.0 U					
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U					
	Vinyl acetate	µg/L	2.0 U					
	Vinyl chloride	µg/L	27	36	26	26	31	26
	Xylenes (total)	µg/L	3.0 U					
General Chemistry								
	Phenolics (total)	mg/L	0.0080	0.0121 U	0.0050	0.0050 U	0.0050 U	0.0081

Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

mg/L - Milligrams per liter

µg/L - Micrograms per liter

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
First Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	02/15/2023	02/22/2023	03/01/2023	03/08/2023	03/15/2023	03/22/2023	03/29/2023
Volatiles									
	1,1,1-Trichloroethane	µg/L	1.0 U	0.45 J	1.0 U	1.0 U	0.23 J	0.28 J	0.28 J
	1,1,2,2-Tetrachloroethane	µg/L	0.36 J	3.7	0.33 J	0.28 J	0.38 J	0.49 J	0.64 J
	1,1,2-Trichloroethane	µg/L	1.0 U	0.50 J	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J
	1,1-Dichloroethane	µg/L	2.2	1.9	1.9	1.6	1.7	1.9	1.8
	1,1-Dichloroethene	µg/L	1.0 U						
	1,2,4-Trichlorobenzene	µg/L	1.0 U						
	1,2-Dichlorobenzene	µg/L	1.0 U	0.64 J	1.0 U				
	1,2-Dichloroethane	µg/L	4.5	11	5.1	3.8	4.5	5.6	5.5
	1,2-Dichloropropane	µg/L	0.41 J	0.57 J	0.39 J	0.36 J	0.39 J	0.44 J	0.54 J
	1,3-Dichlorobenzene	µg/L	1.0 U						
	1,4-Dichlorobenzene	µg/L	1.0 U	0.51 J	1.0 U				
	2-Chlorotoluene	µg/L	1.0 U	11	1.0 U				
	3-Chlorotoluene	µg/L	1.0 U						
	4-Chlorotoluene	µg/L	1.0 U	3.6	1.0 U				
	Benzene	µg/L	14	50	13	11	17	17	20
	Bromodichloromethane	µg/L	1.0 U						
	Bromoform	µg/L	1.0 U						
	Bromomethane (Methyl bromide)	µg/L	1.0 U						
	Carbon disulfide	µg/L	8.1	7.2	5.2	1.8	1.5	4.7	1.9
	Carbon tetrachloride	µg/L	1.0 U						
	Chlorobenzene	µg/L	1.0 U	36	1.0 U				
	Chloroethane	µg/L	1.0 U						
	Chloroform (Trichloromethane)	µg/L	3.2	13	3.2	2.8	4.2	4.7	4.0
	Chloromethane (Methyl chloride)	µg/L	1.0 U						
	cis-1,2-Dichloroethene	µg/L	1.6	11	1.7	1.3	1.5	1.7	1.9
	cis-1,3-Dichloropropene	µg/L	1.0 U						
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U						
	Ethylbenzene	µg/L	1.0 U	6.7	1.0 U				
	m&p-Xylenes	µg/L	2.0 U	7.5	2.0 U				
	m-Monochlorobenzotrifluoride	µg/L	1.0 U	1.3	1.0 U				
	Methylene chloride	µg/L	1.0 U						
	o-Monochlorobenzotrifluoride	µg/L	1.0 U	4.5	1.0 U				
	o-Xylene	µg/L	1.0 U	10	1.0 U				
	p-Monochlorobenzotrifluoride	µg/L	1.0 U	4.0	1.0 U				
	Styrene	µg/L	1.0 U						
	Tetrachloroethene	µg/L	1.0 U	1.1	1.0 U				
	Toluene	µg/L	1.0 U	12	1.0 U				
	trans-1,2-Dichloroethene	µg/L	1.0 U	5.9	1.0 U				
	trans-1,3-Dichloropropene	µg/L	1.0 U						
	Trichloroethene	µg/L	1.0 U	8.0	1.0 U				
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U						
	Vinyl acetate	µg/L	2.0 U						
	Vinyl chloride	µg/L	25	35	24	20	18	19	18
	Xylenes (total)	µg/L	3.0 U	18	3.0 U				
General Chemistry									
	Phenolics (total)	mg/L	0.0049 J	0.0063	0.0069	0.0036 J	0.0061	0.0079	0.0046 J

Notes:

J - Estimated concentration

U - Not detected at the associated reporting limit

mg/L - Milligrams per liter

µg/L - Micrograms per liter

Table 4

**Analytical Results Summary
Quarterly Sampling - Leachate Treatment System
First Quarter - 2023
Hyde Park RRT Program**

Sample Location:	EFFLUENT	EFFLUENT
Sample ID:	HP 32223 EFF	HP 32223 EFF
Sample Date:	3/22/2023	3/22/2023

Parameters	Units		
Volatile Organic Compounds			
Vinyl chloride	µg/L	20.4	-
General Chemistry			
Phosphorus	mg/L	-	0.136

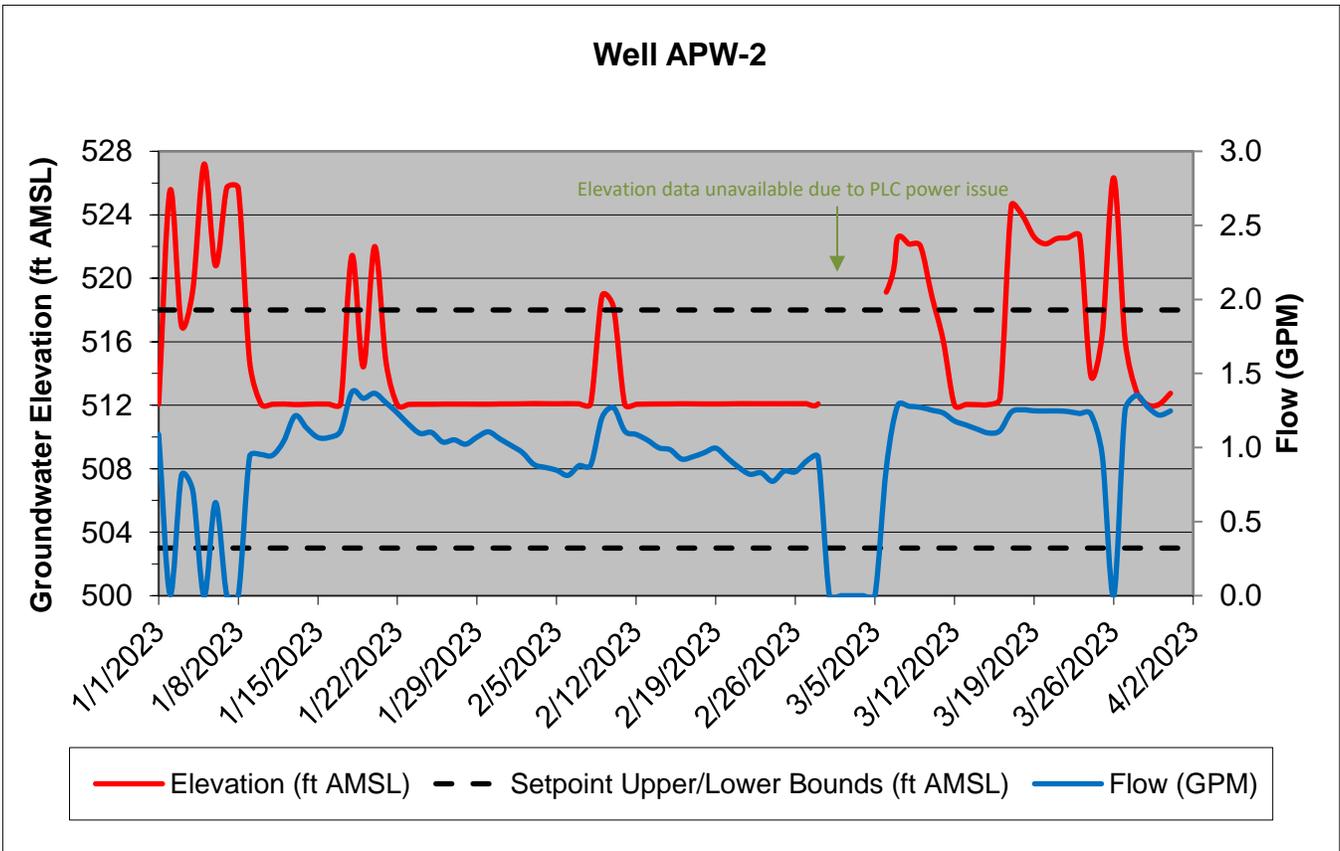
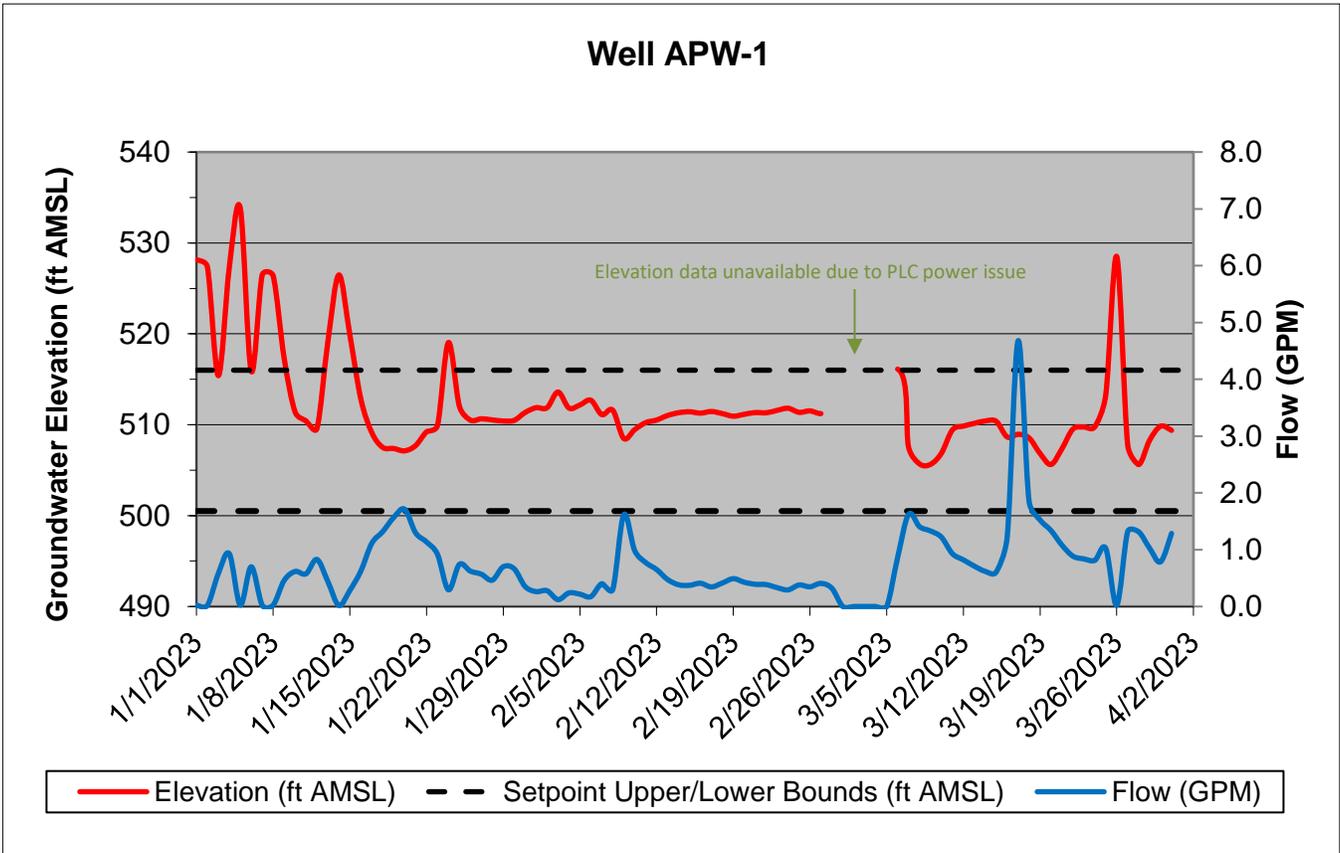
Notes:

"-" - Not applicable

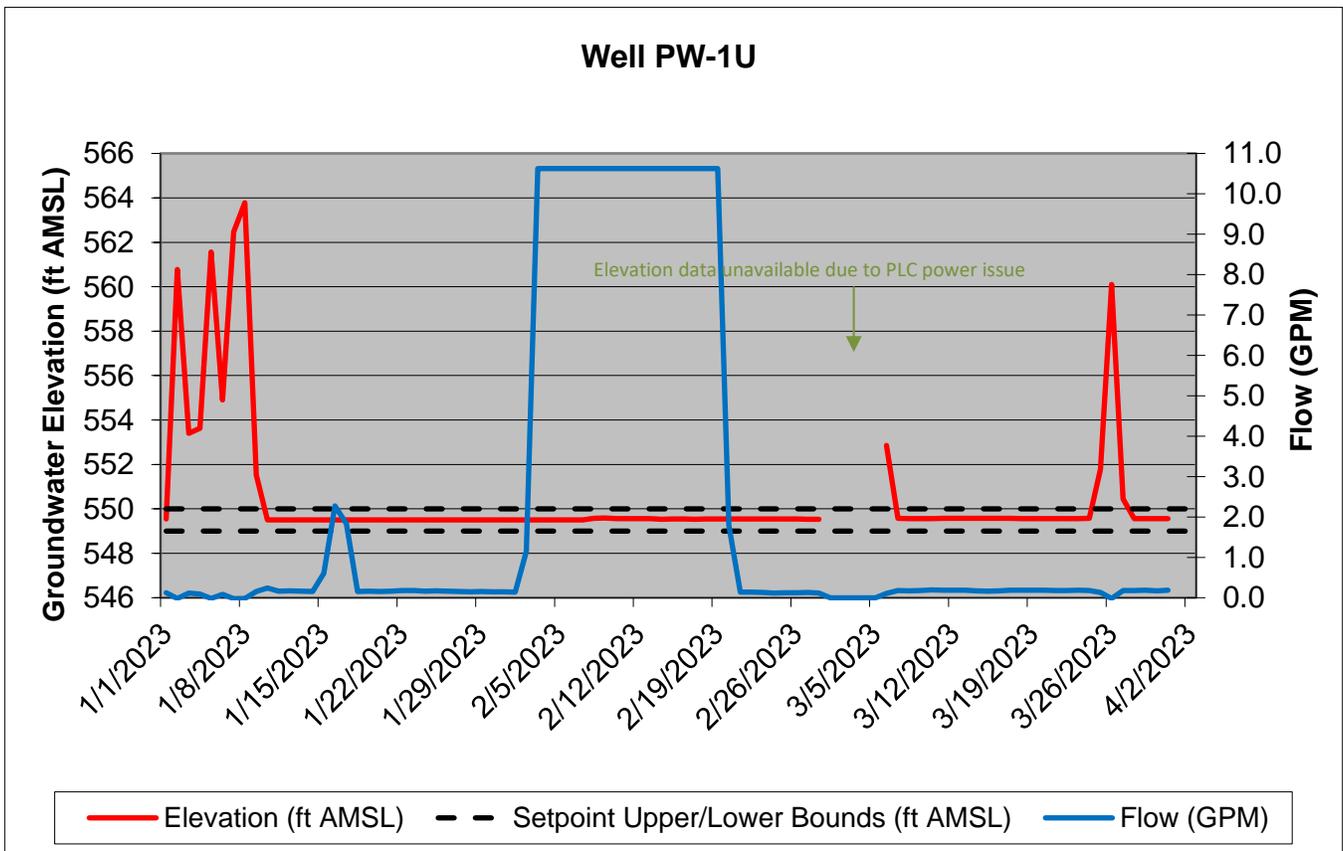
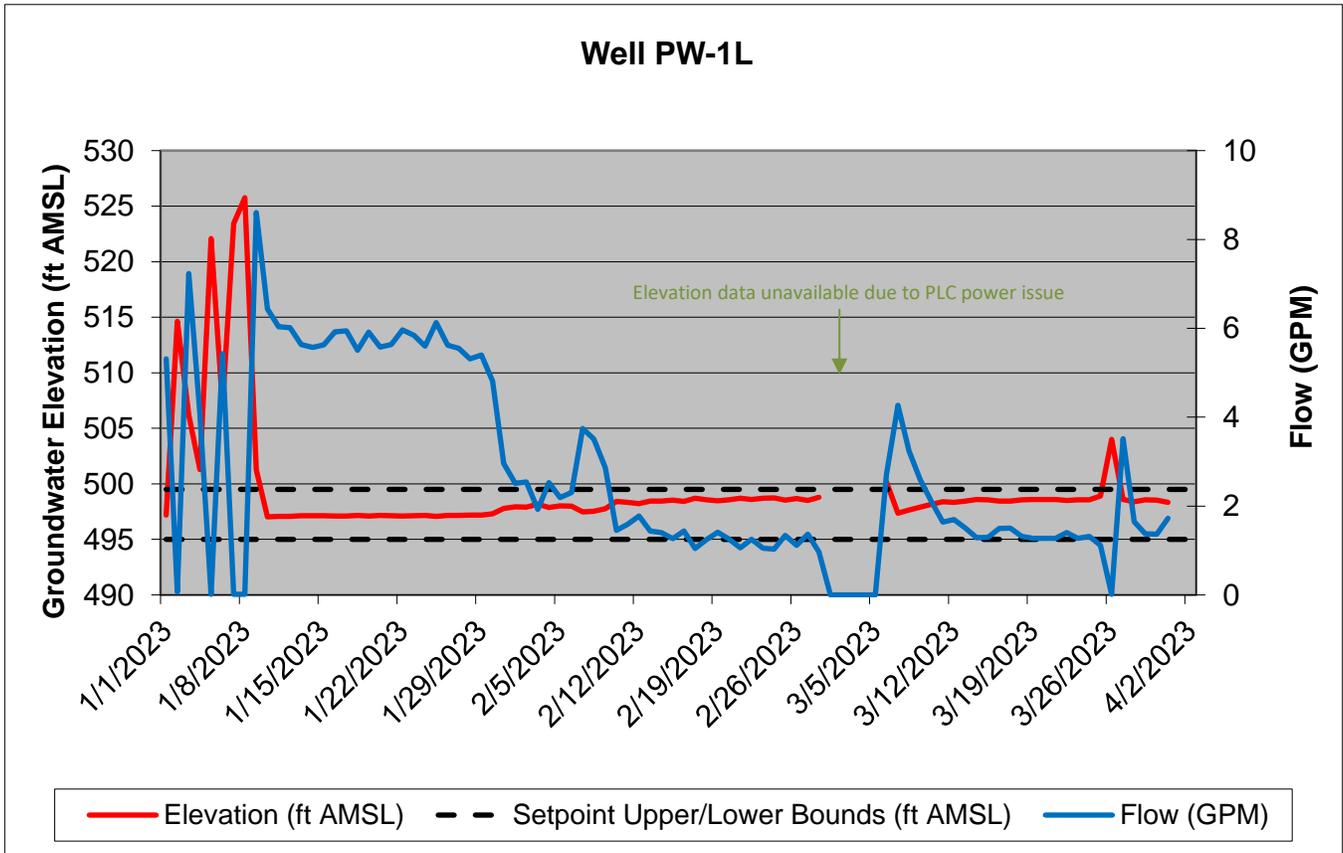
mg/L - Milligrams per liter

µg/L - Micrograms per liter

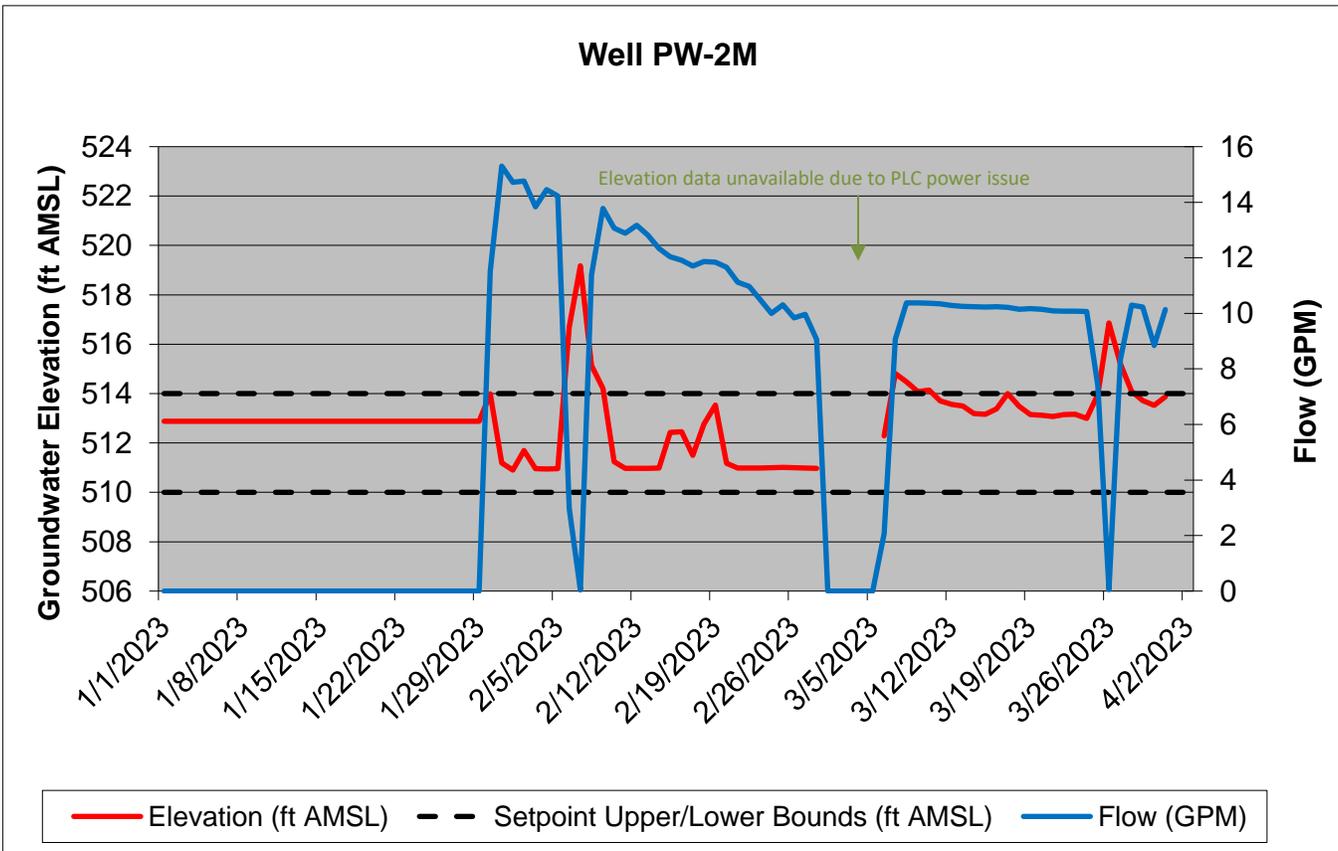
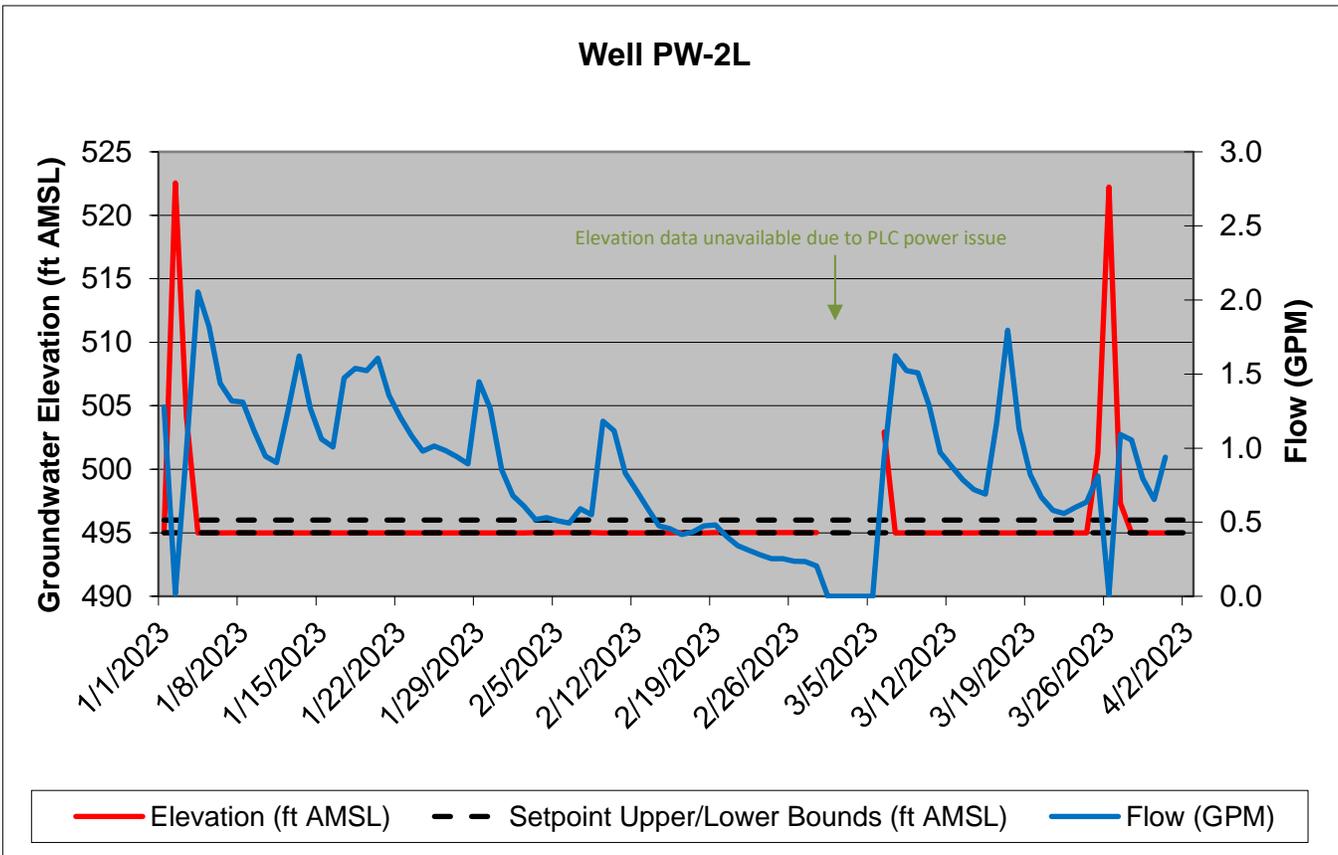
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



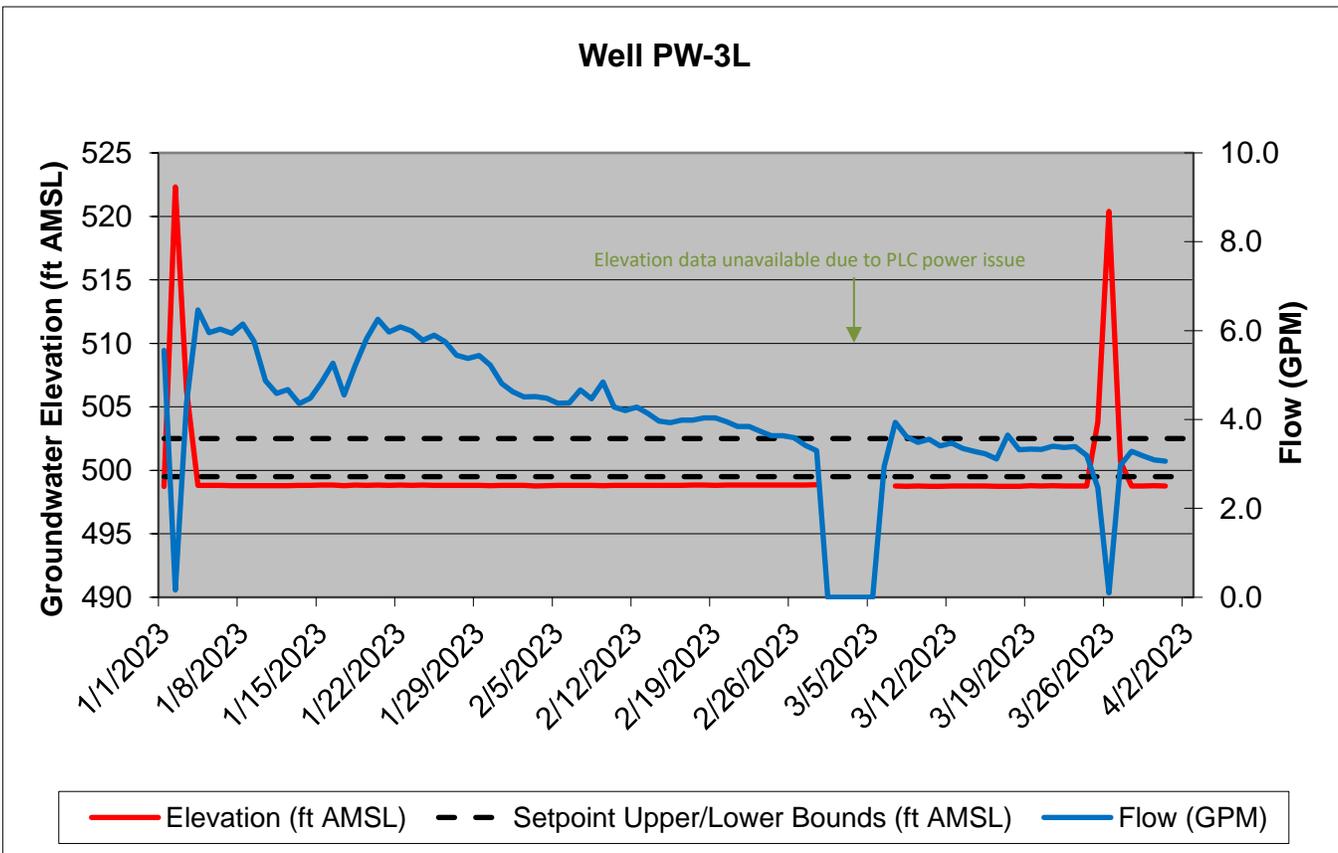
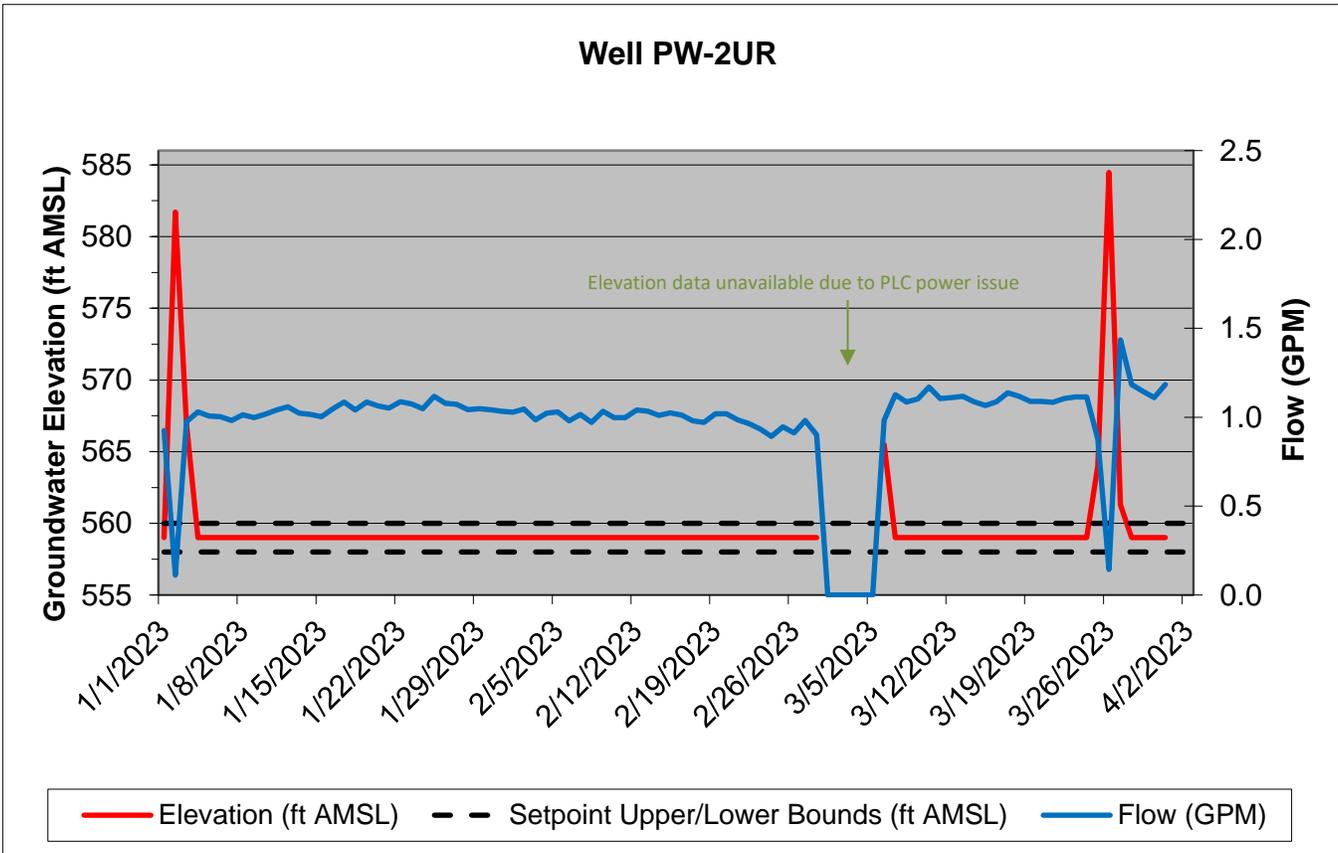
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



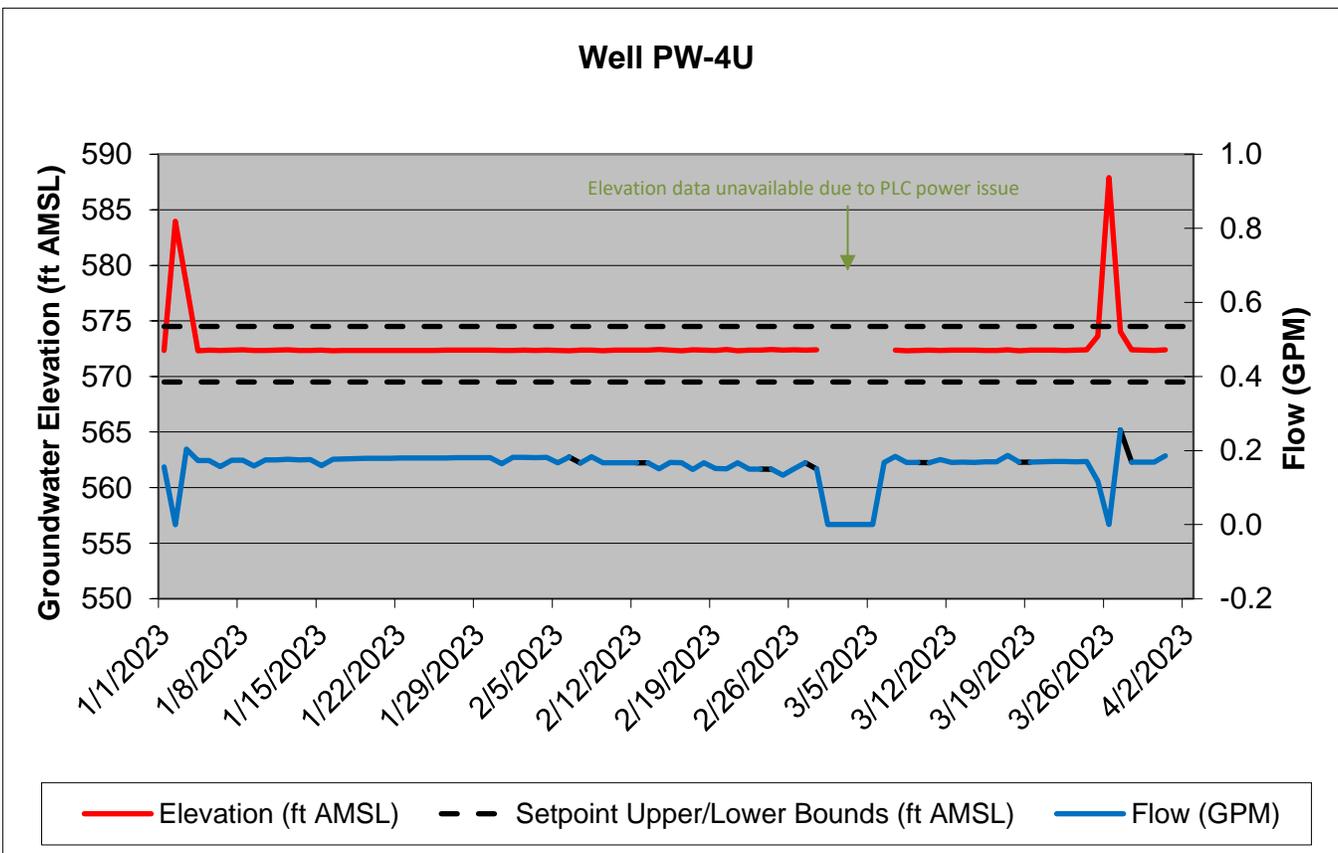
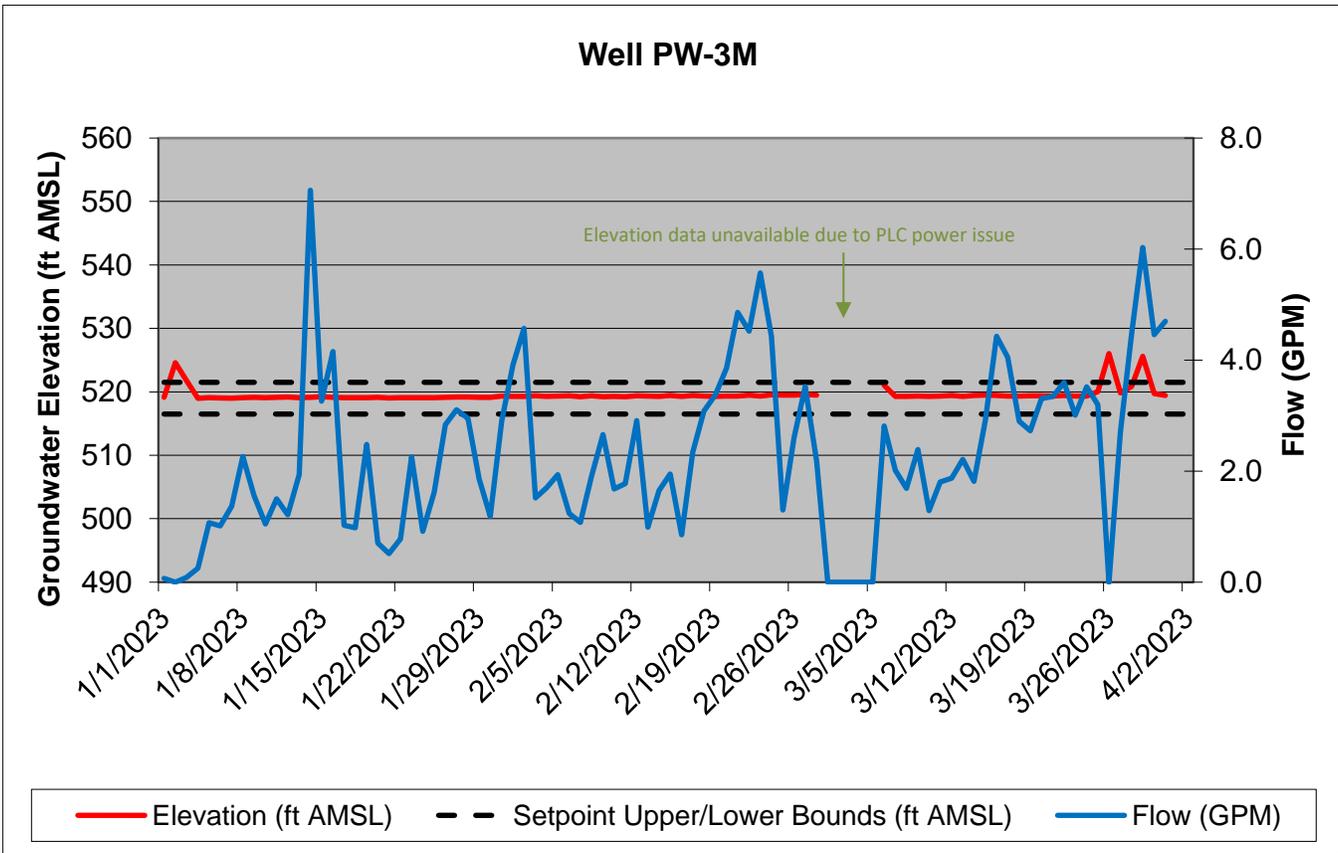
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



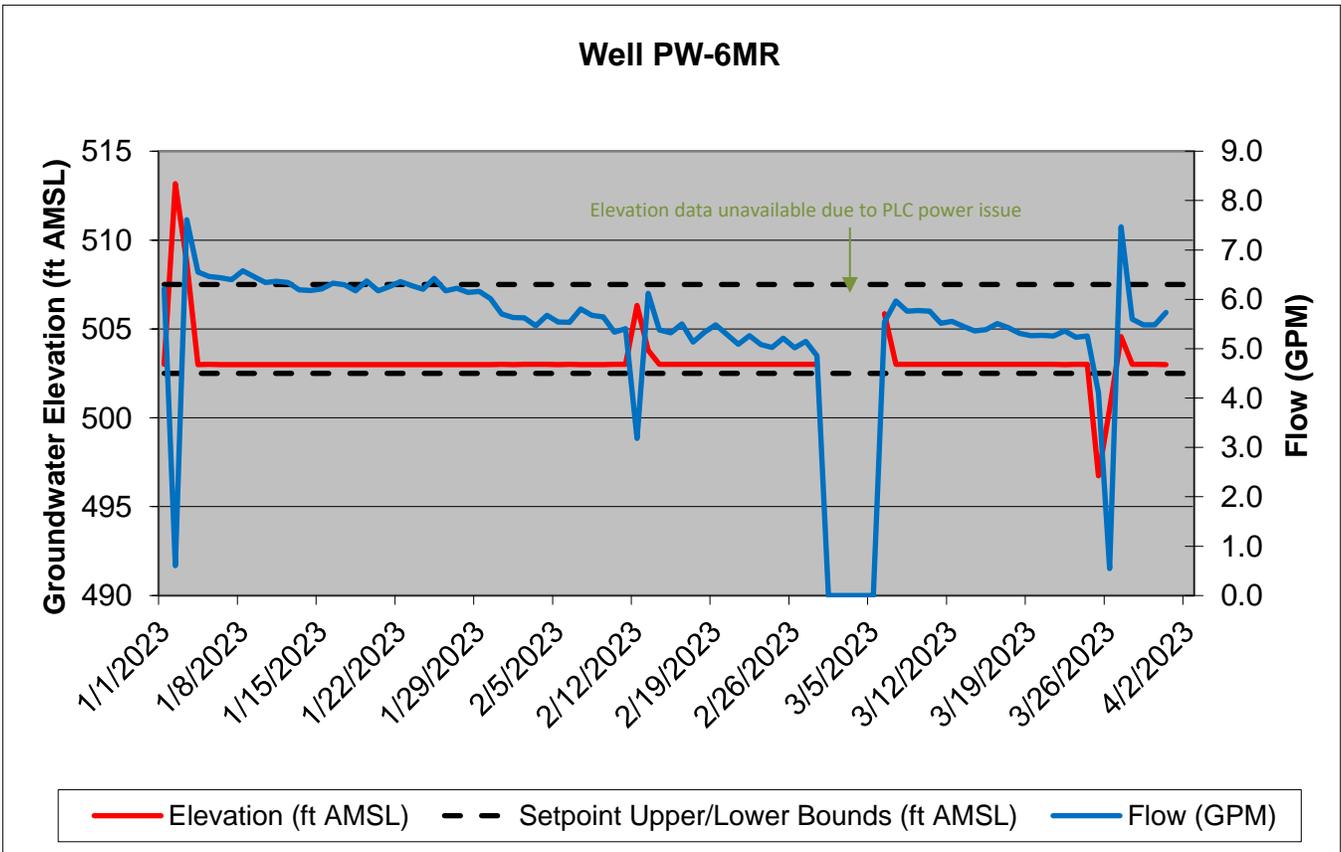
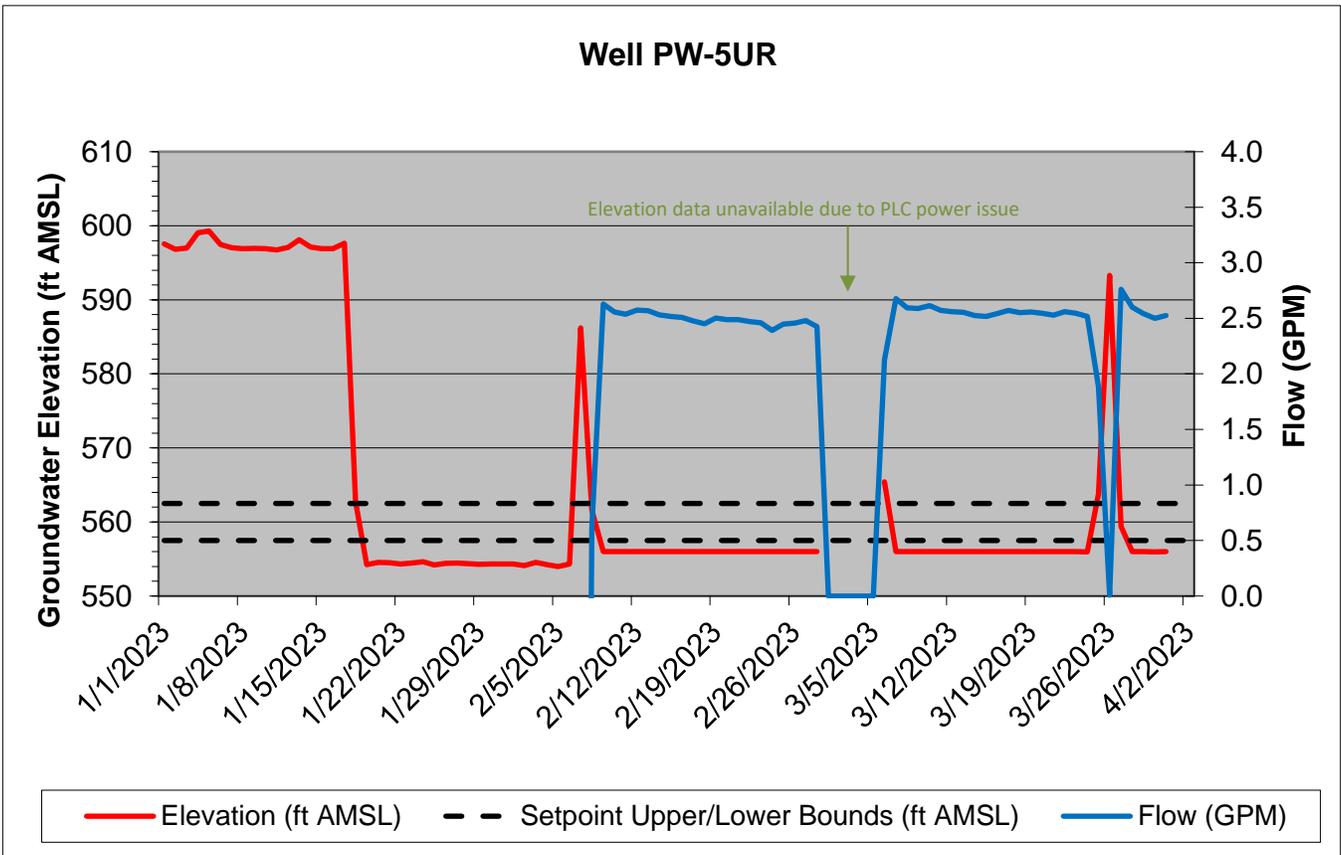
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



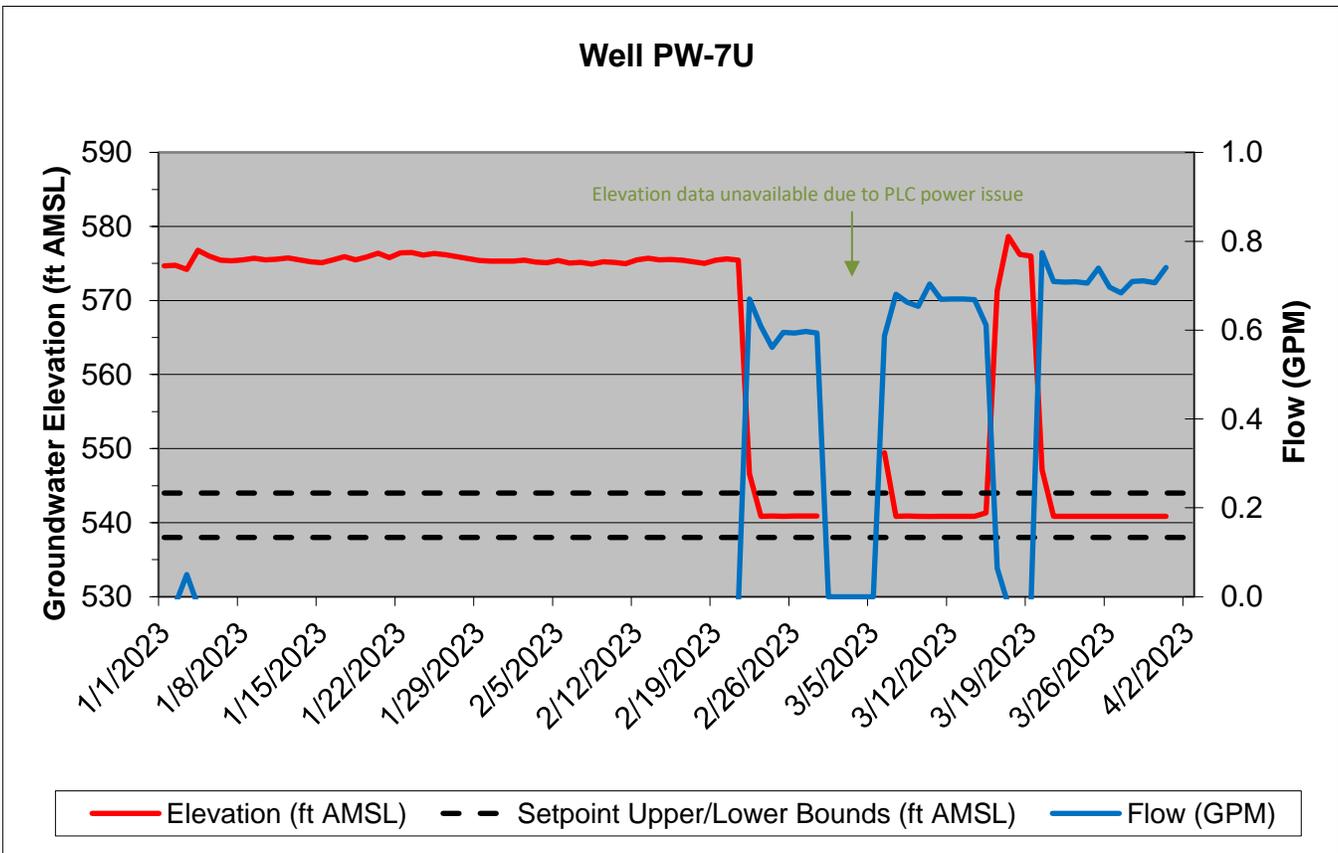
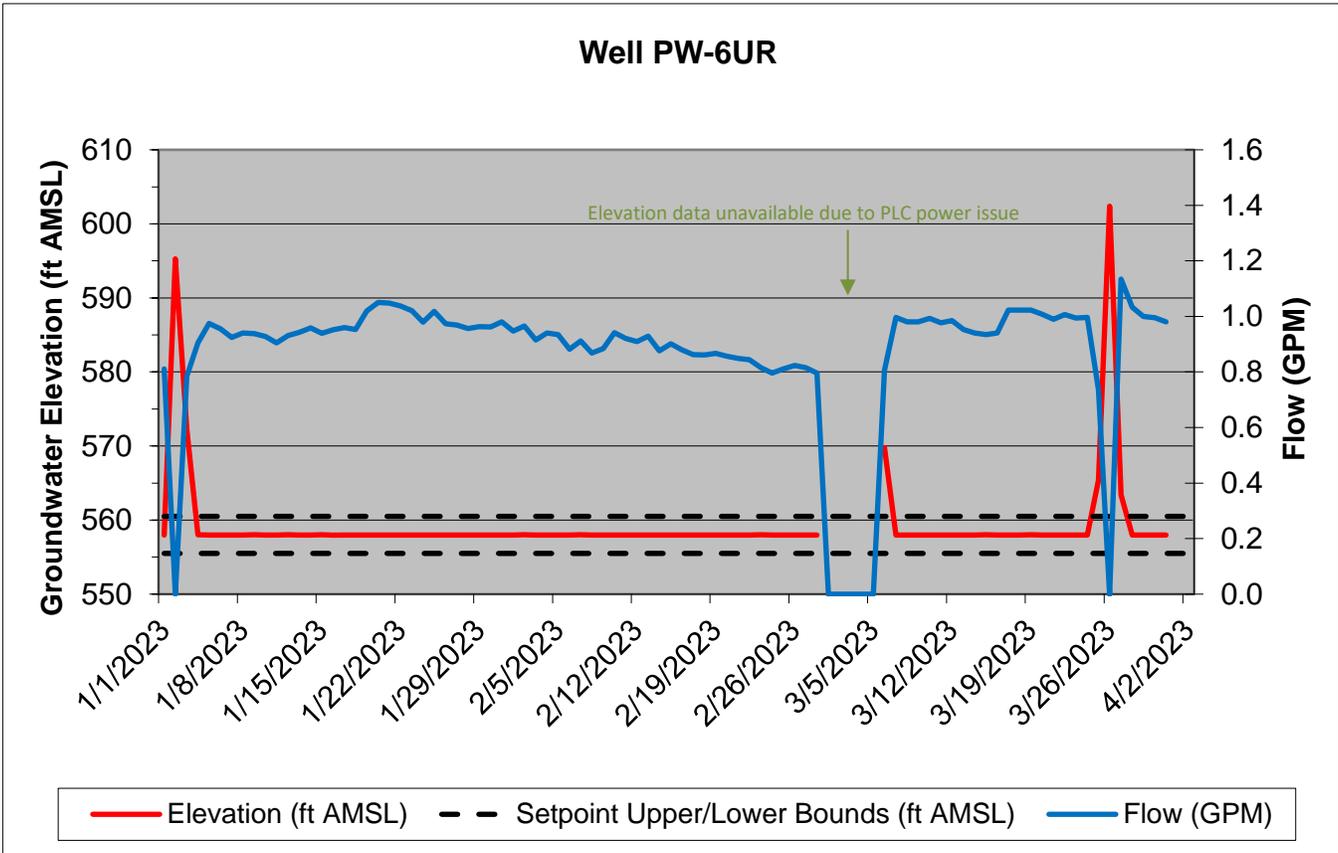
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



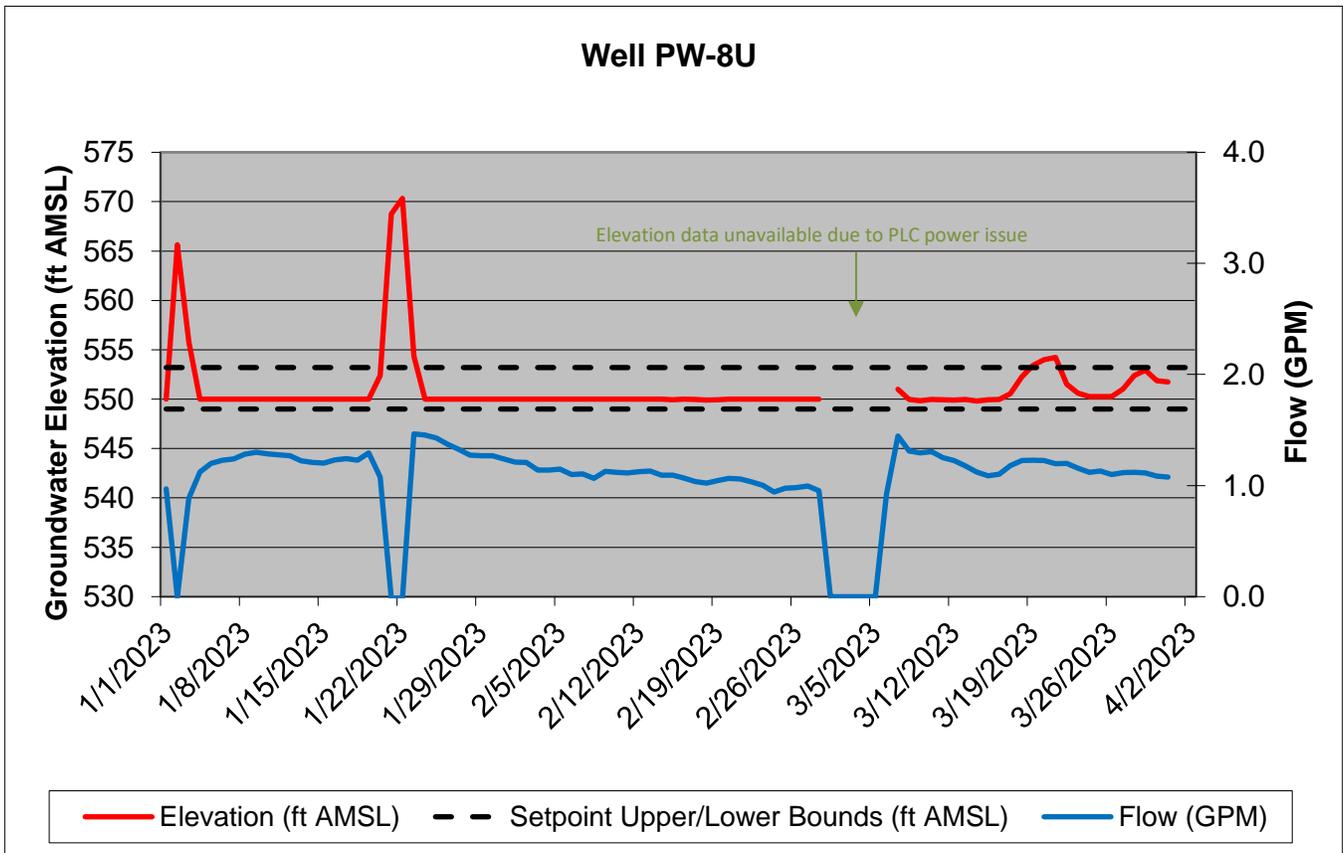
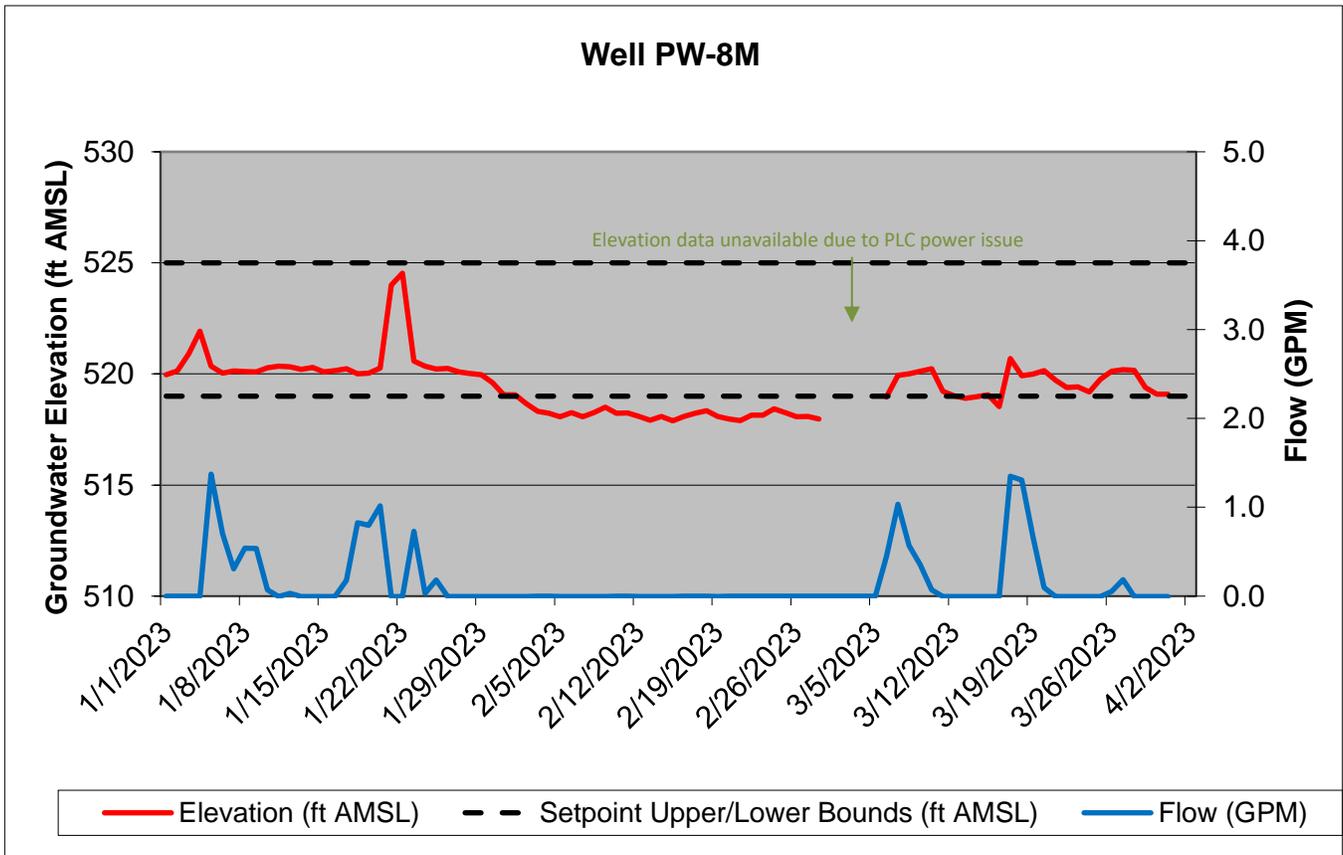
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



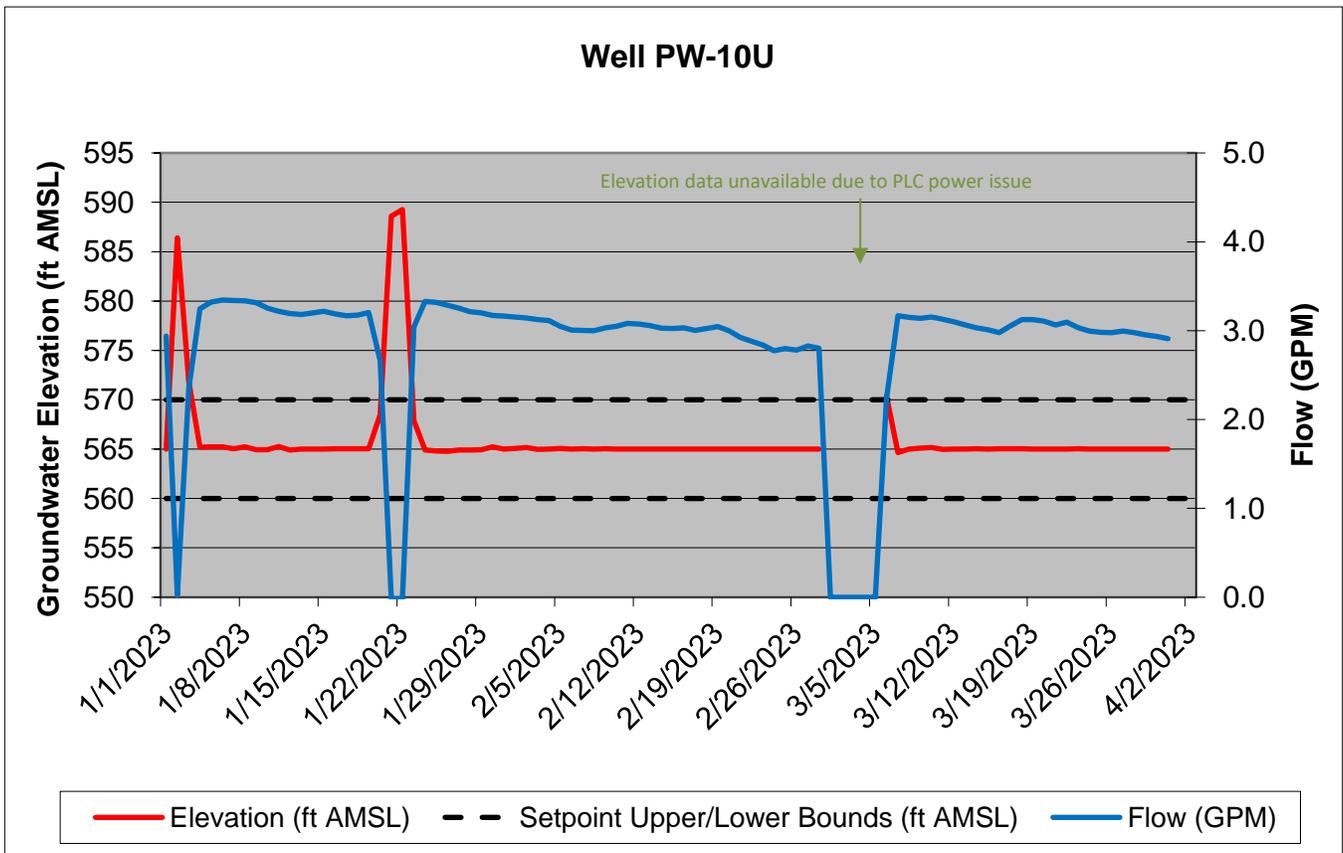
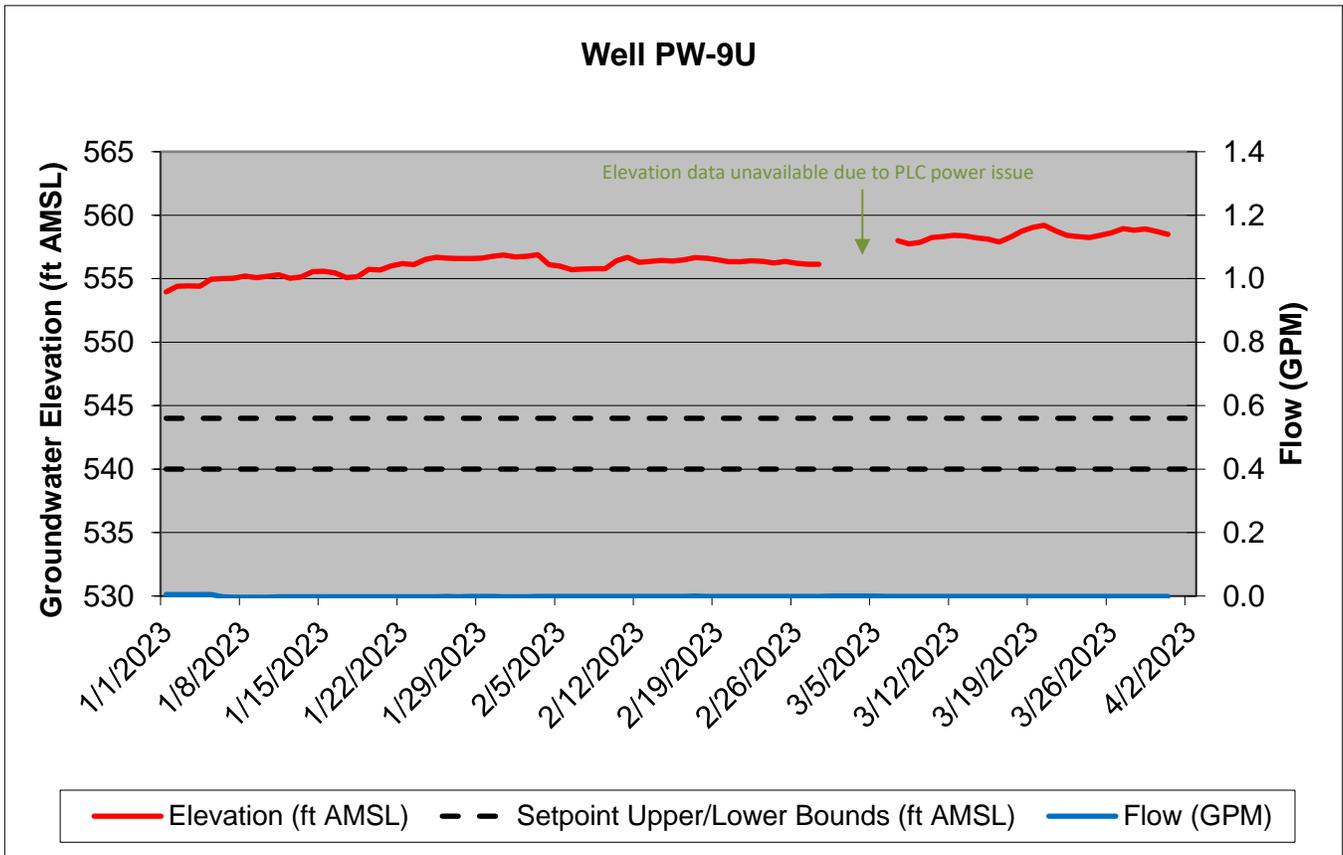
FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



FIRST QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK





Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

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

7601 Old Channel Trail
Montague, MI 49437

July 31, 2023

Reference No. 11230216

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

Mr. Andrew Zwack
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Kondrk and Mr. Zwack:

**Re: Quarterly Operations Report - Second Quarter 2023
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 April 1, 2023 through June 30, 2023. A total of 6.8 million gallons of APL were collected, treated, and discharged in compliance with the Site's City of Niagara Falls Publicly Owned Treatment Works (POTW) Significant Industrial User (SIU) Wastewater Discharge Permit #49. One drum (approximately 500 pounds) of 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: Groundwater elevation summary
- Tables 2 and 3: Daily and weekly treatment system effluent monitoring data
- Attachment A: Purge well performance graphs indicating daily level and flow information

The continuously recorded groundwater elevations for the flow zone 9 piezometer PMW-1M-09 for the second quarter 2023 are presented on Figure 10. These groundwater elevations were less than 526 feet above mean sea level (AMSL) through the entire quarter, indicating that the FZ-09 outcrop along the New York Power Authority (NYPA) access road was unsaturated throughout the entire quarter.

The pumping wells were operational and functioning as designed during the second quarter 2023, with the exception of the downtime periods discussed below. 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.

- 2 -

Delivery lead times for equipment (such as pumps, motors, drives, etc.) has recently increased from several weeks to several months (3 to 5 months). Although some spares have always been kept on hand, replacement of the spares is taking significantly longer than anticipated which is affecting repair of the wells as described below. To address this recent change, additional spares to the extent practicable have been ordered to address this issue moving forward.

All wells were down on April 9 and 10 due to a programmable logic controller power issue. As a result, the water level in PW-2M exceeded setpoint range from April 10 through April 12 and returned to within setpoint range on April 13. The water level in PW-8U exceeded setpoint range on April 10 and April 12 and returned to within setpoint range on April 11 and April 13, respectively. The water levels in PW-2L, PW-2UR, and PW-6UR exceeded setpoint range on April 10 and returned to within setpoint range on April 11.

PW-9U was offline from April 1 through June 9 awaiting a pump repair. The water level in this well exceeded setpoint range from April 1 through June 9. The pump was replaced and the well was returned online on June 10. The water level in this well returned to within setpoint range on June 10.

The following minor operational and setpoint issues were investigated and resolved during the first quarter of 2023:

- The water level in APW-2 exceeded setpoint range on April 1 and April 2 and from April 4 through April 7 due to heavy rain and returned to within setpoint range on April 3 and April 8, respectively.
- The water level in PW-1U exceeded setpoint range on June 20 and June 21 due to a pump fault. The pump was reset and the water level in this well returned to within setpoint range on June 22.
- The water level in PW-3M exceeded setpoint range from June 22 through June 25 due to a pump fault. Once troubleshooting was completed, the pump was reset and the water level in this well returned to within setpoint range on June 26.
- The water level in PW-5UR exceeded setpoint range on May 8 due to a motor fault. The motor was reset and the water level in this well returned to within setpoint range on May 9.
- The water level in PW-7U exceeded setpoint range from June 5 through June 19 due to variable frequency drive faults. The issue was resolved and the water level in this well returned to within setpoint range on June 20.
- The water level in PW-8U exceeded setpoint range on April 2 and April 3 due to heavy rain and returned to within setpoint range on April 4.

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.

July 31, 2023

Reference No. 11230216

- 3 -

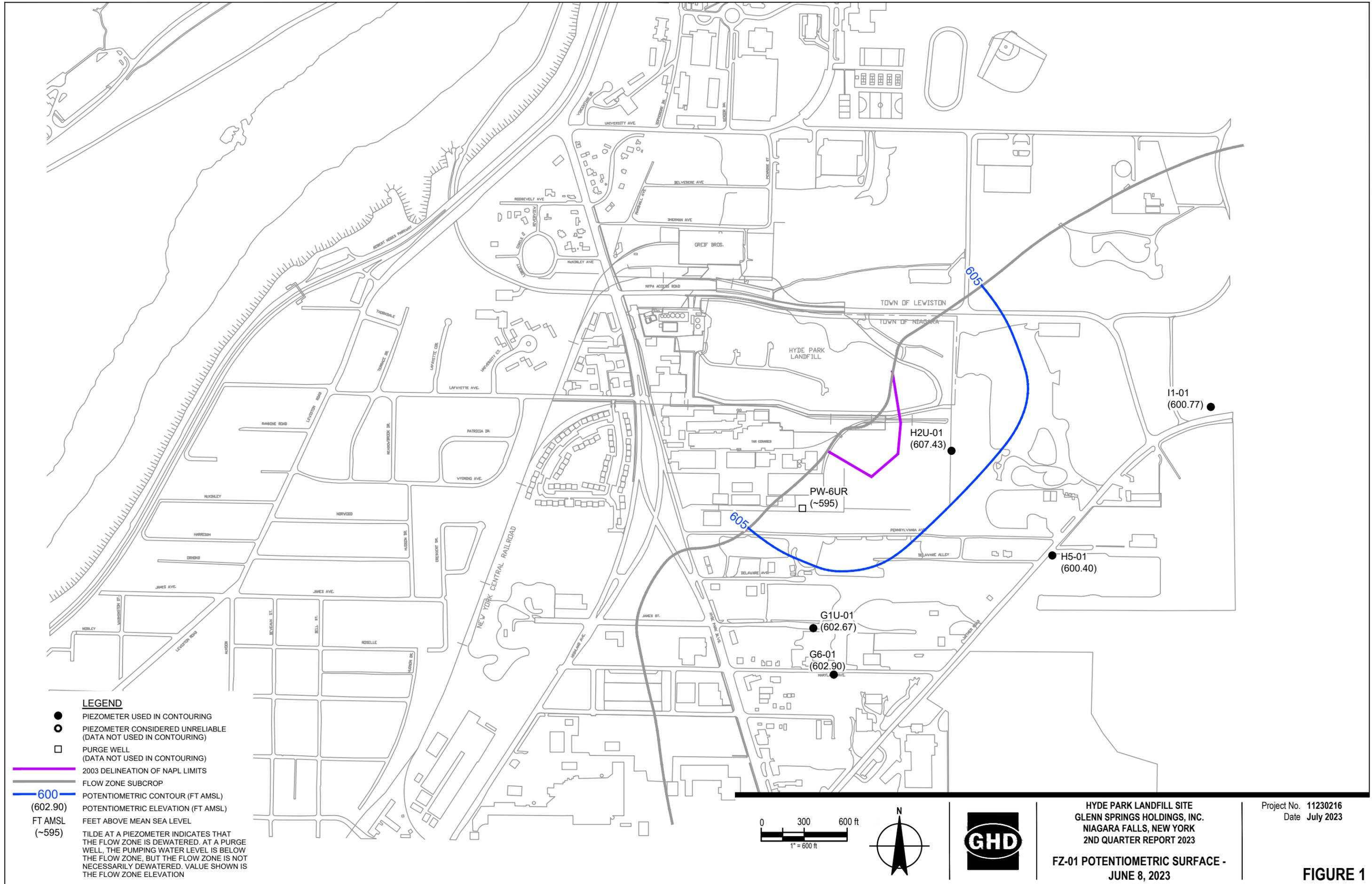
A handwritten signature in cursive script that reads "Joe Branch".

Joe Branch
Project Manager
231-670-6809 Cell

JB/8
Encl.

cc: B. McPherson NYSDEC
J. Robinson, NYSDOH

J. Pentilchuk, GHD
M. Popek, GHD



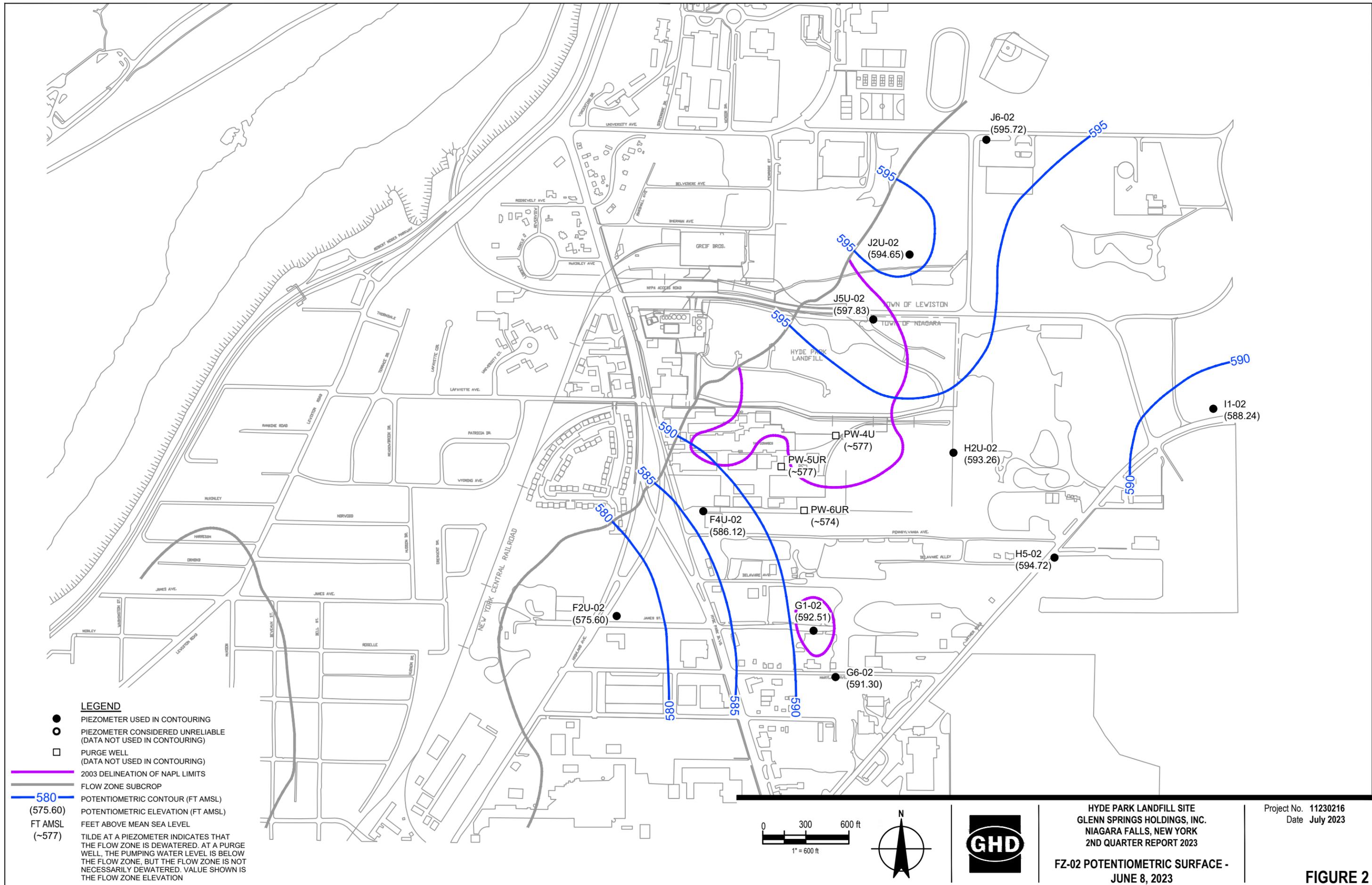
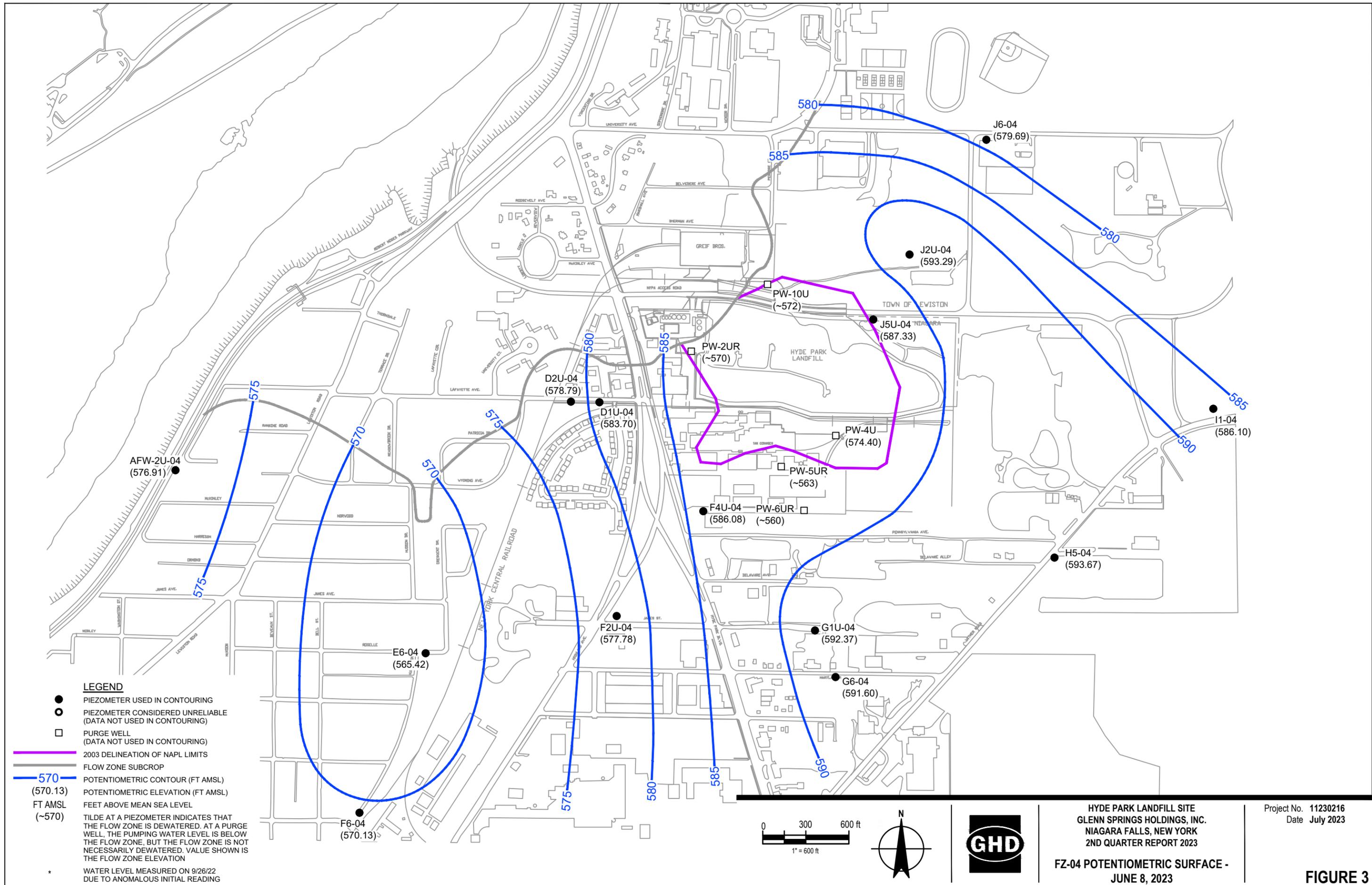
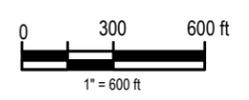


FIGURE 2



LEGEND

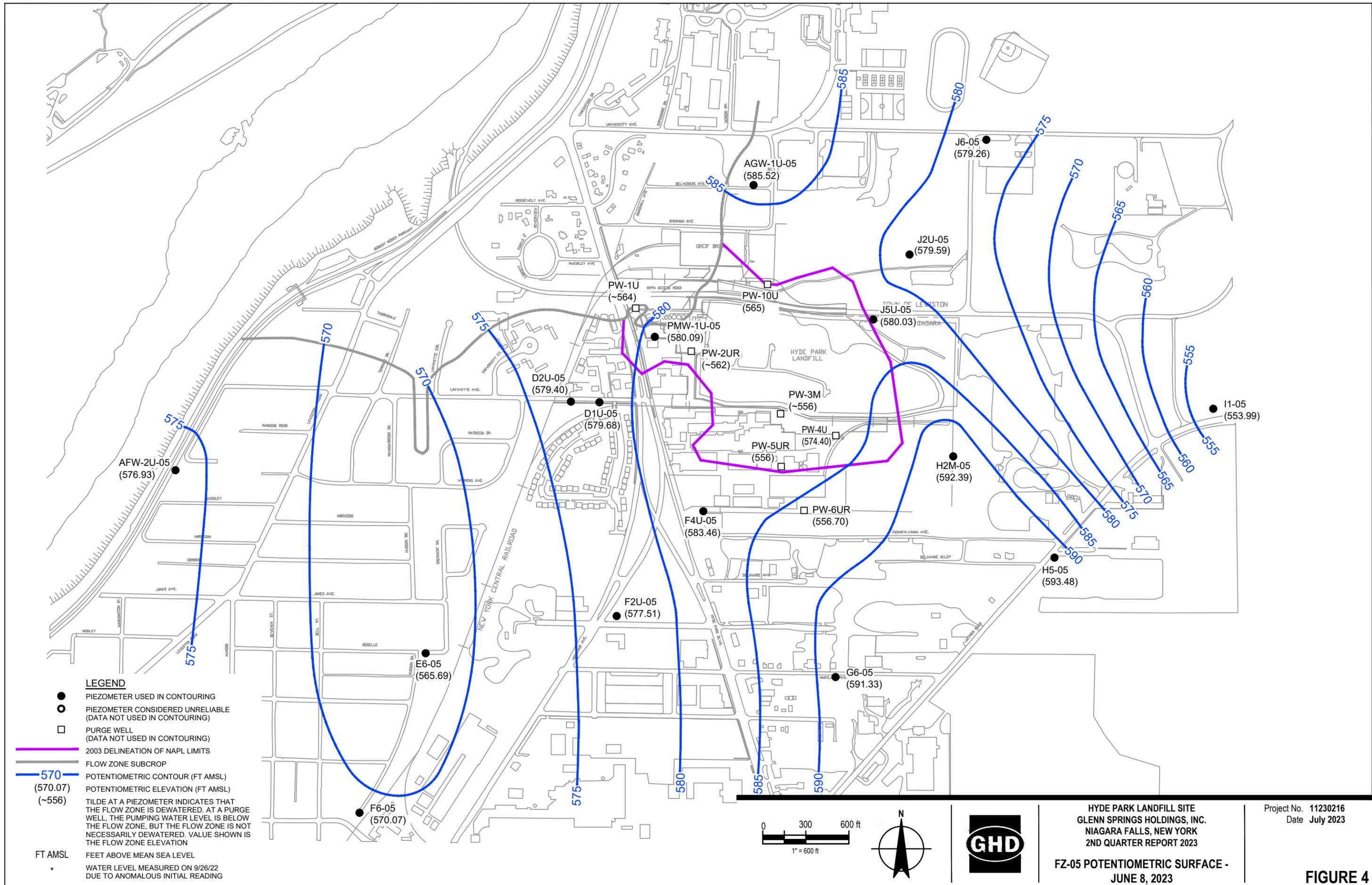
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 570 — POTENTIOMETRIC CONTOUR (FT AMSL)
- (570.13) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- (~570) 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
- * WATER LEVEL MEASURED ON 9/26/22 DUE TO ANOMALOUS INITIAL READING



HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 2ND QUARTER REPORT 2023
 FZ-04 POTENTIOMETRIC SURFACE -
 JUNE 8, 2023

Project No. 11230216
 Date July 2023

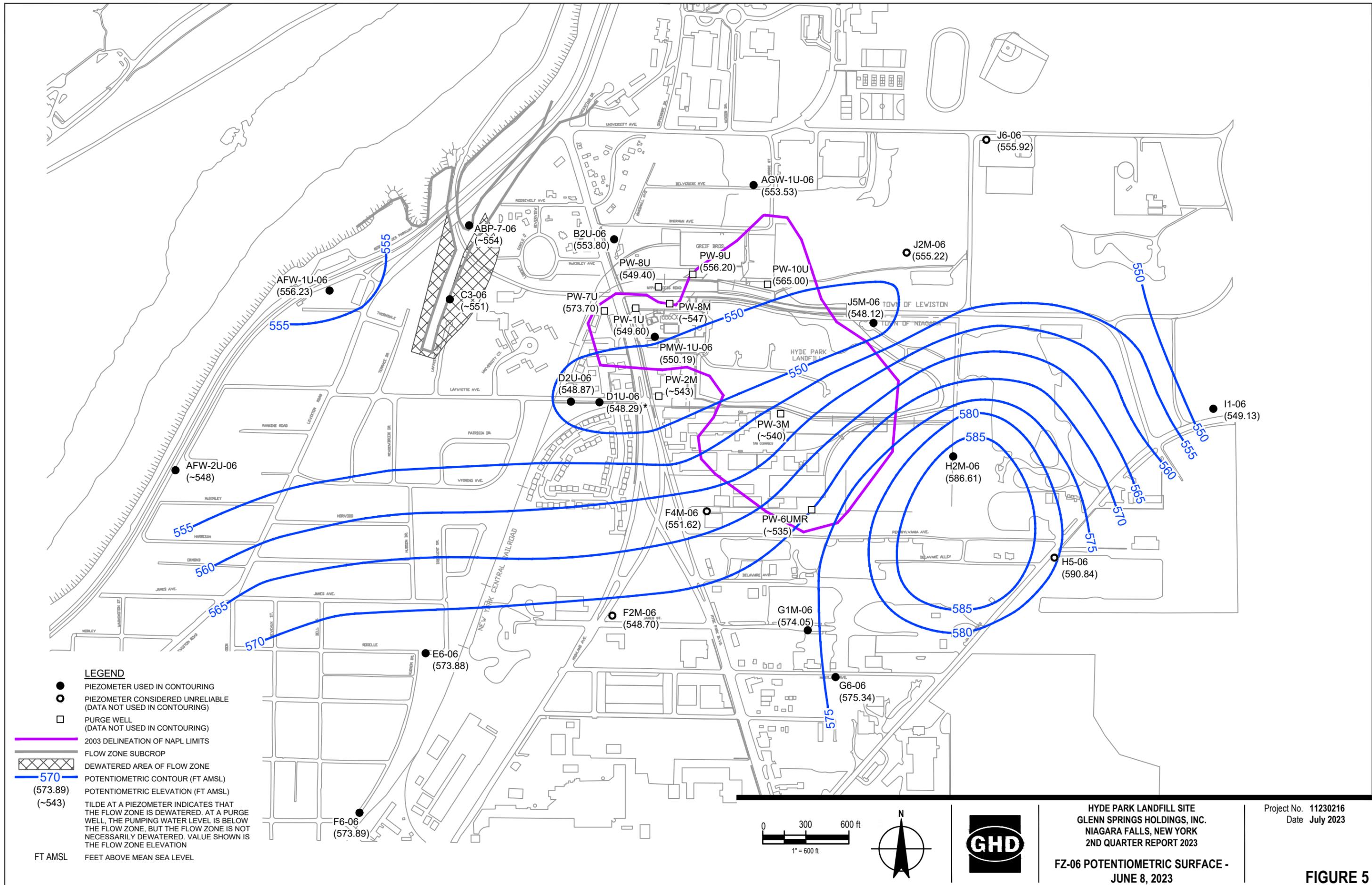
FIGURE 3

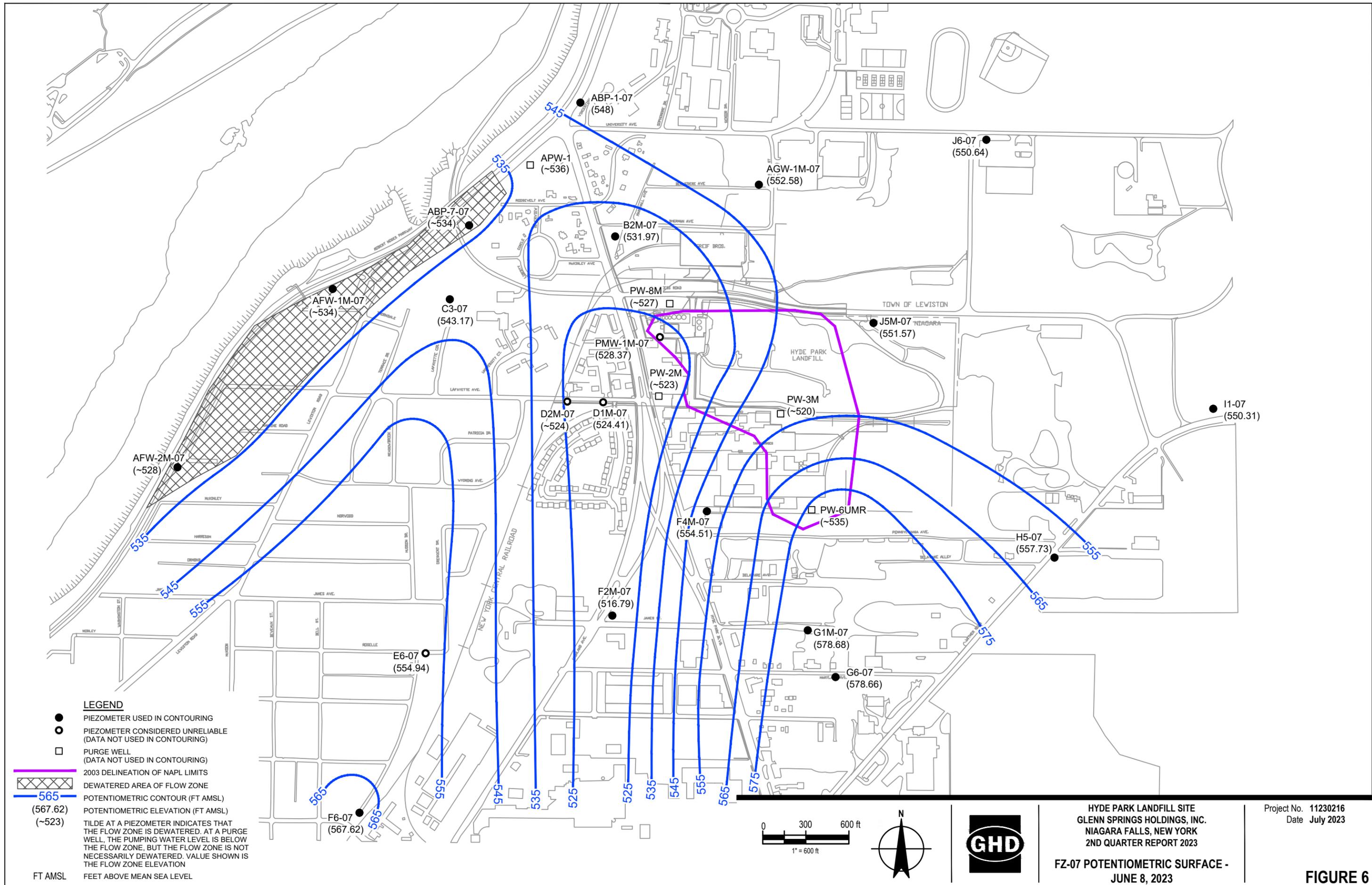


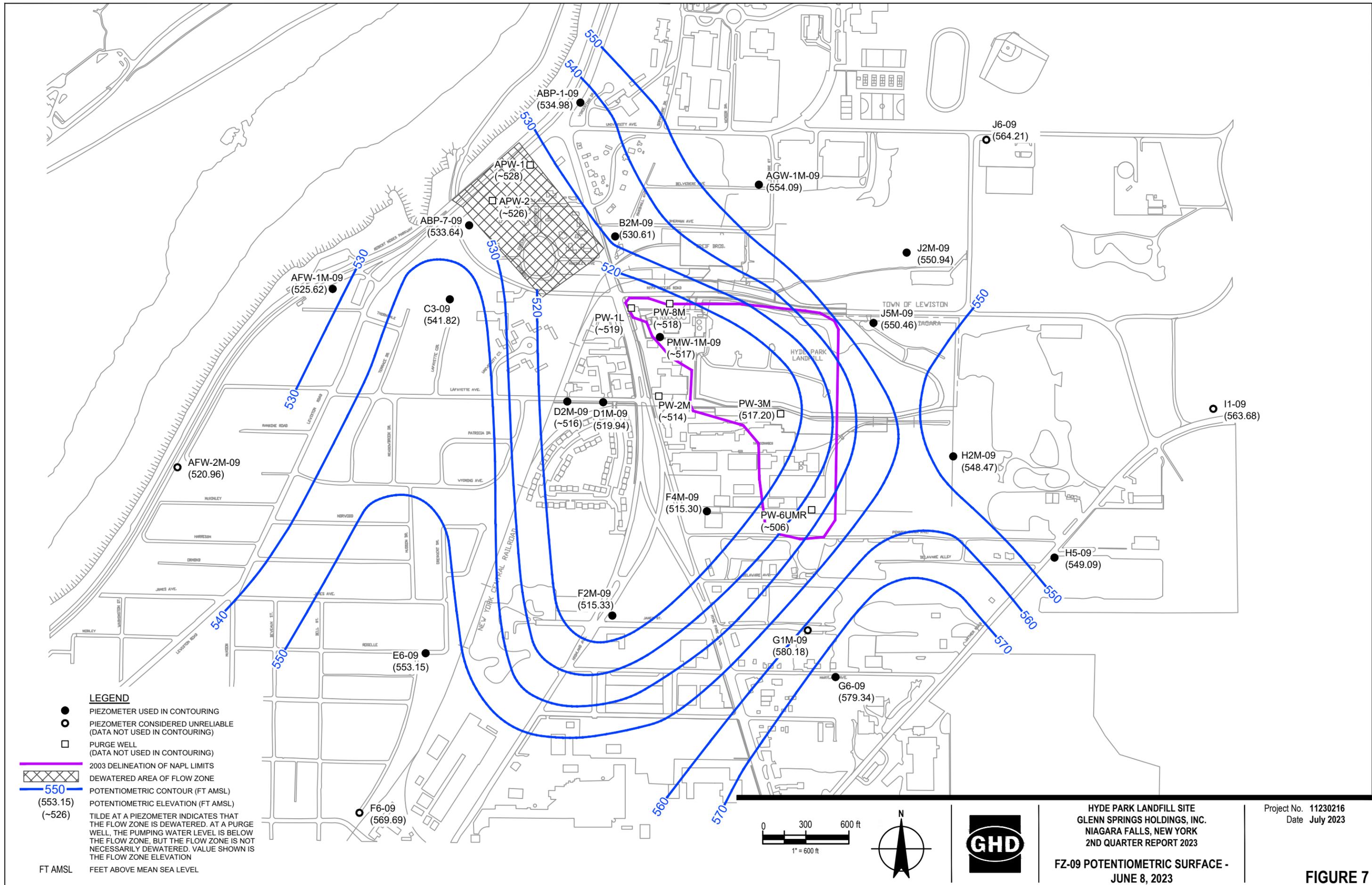
LEGEND

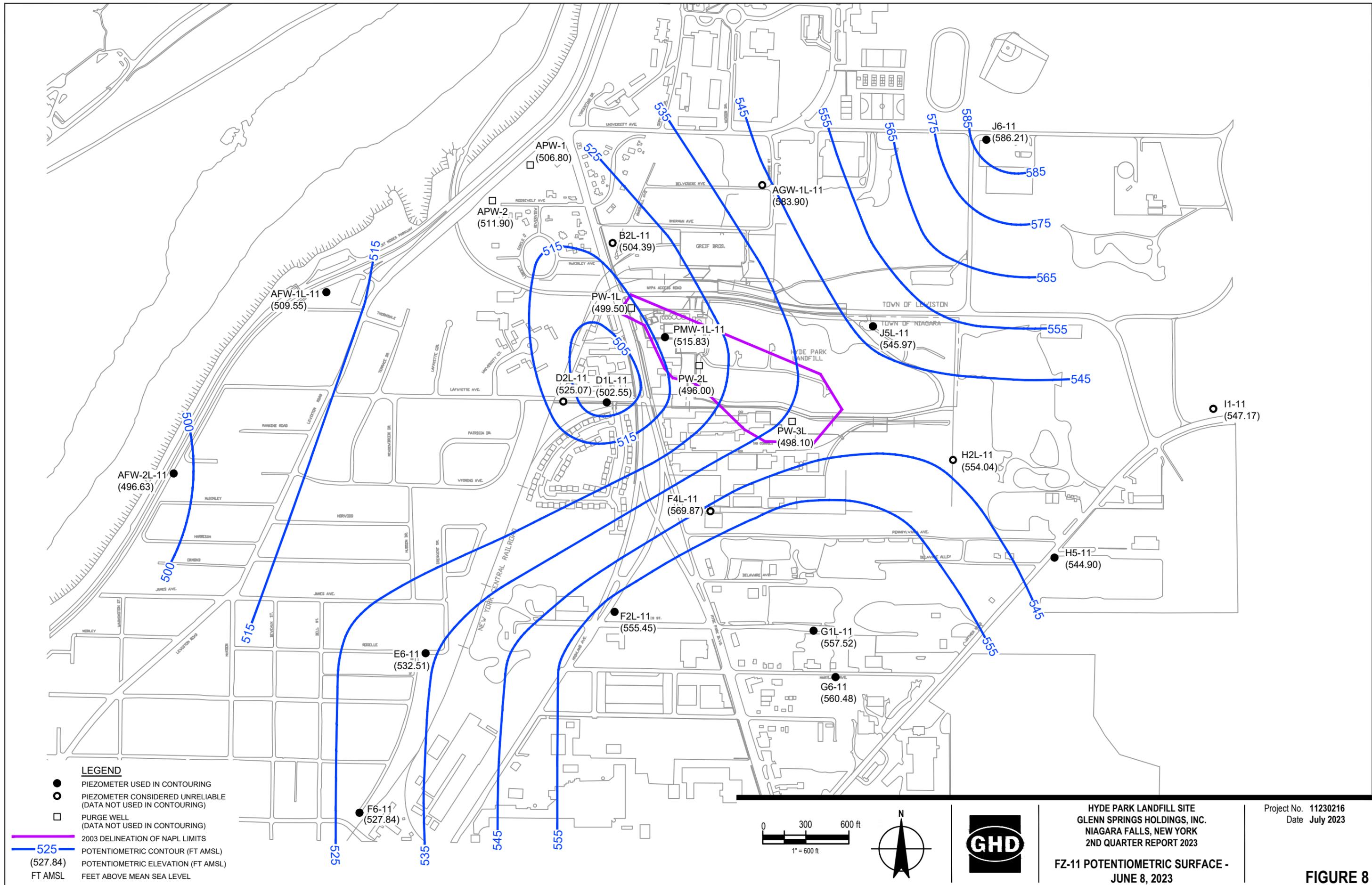
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 570 POTENTIOMETRIC CONTOUR (FT AMSL)
- (570.07) POTENTIOMETRIC ELEVATION (FT AMSL)
- (~556) TILDE AT A PIEZOMETER 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
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- * WATER LEVEL MEASURED ON 9/26/22 DUE TO ANOMALOUS INITIAL READING

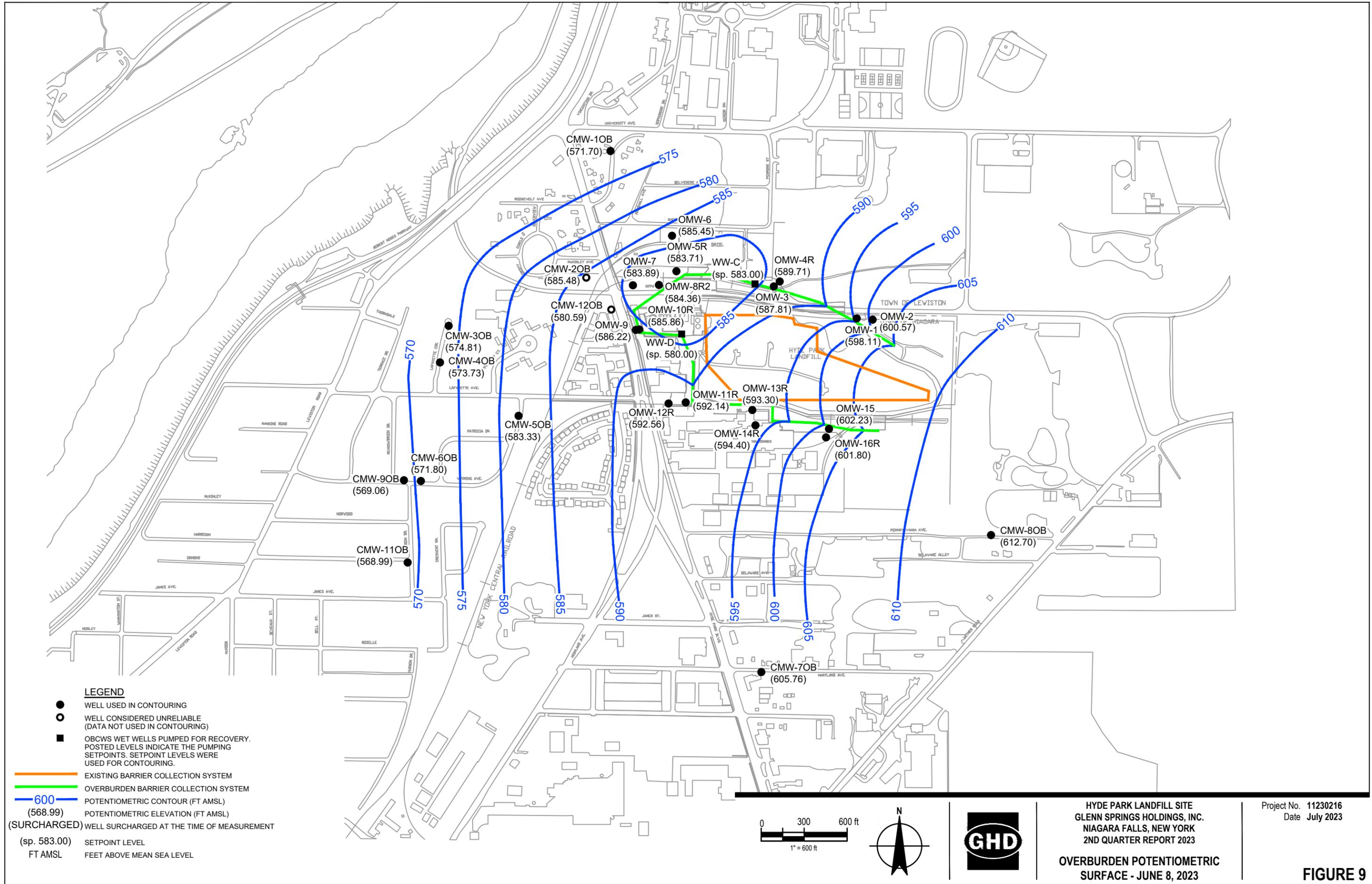
	<p>HYDE PARK LANDFILL SITE GLENN SPRINGS HOLDINGS, INC. NIAGARA FALLS, NEW YORK 2ND QUARTER REPORT 2023</p> <p>FZ-05 POTENTIOMETRIC SURFACE - JUNE 8, 2023</p>	<p>Project No. 11230216 Date July 2023</p>
<p>FIGURE 4</p>		











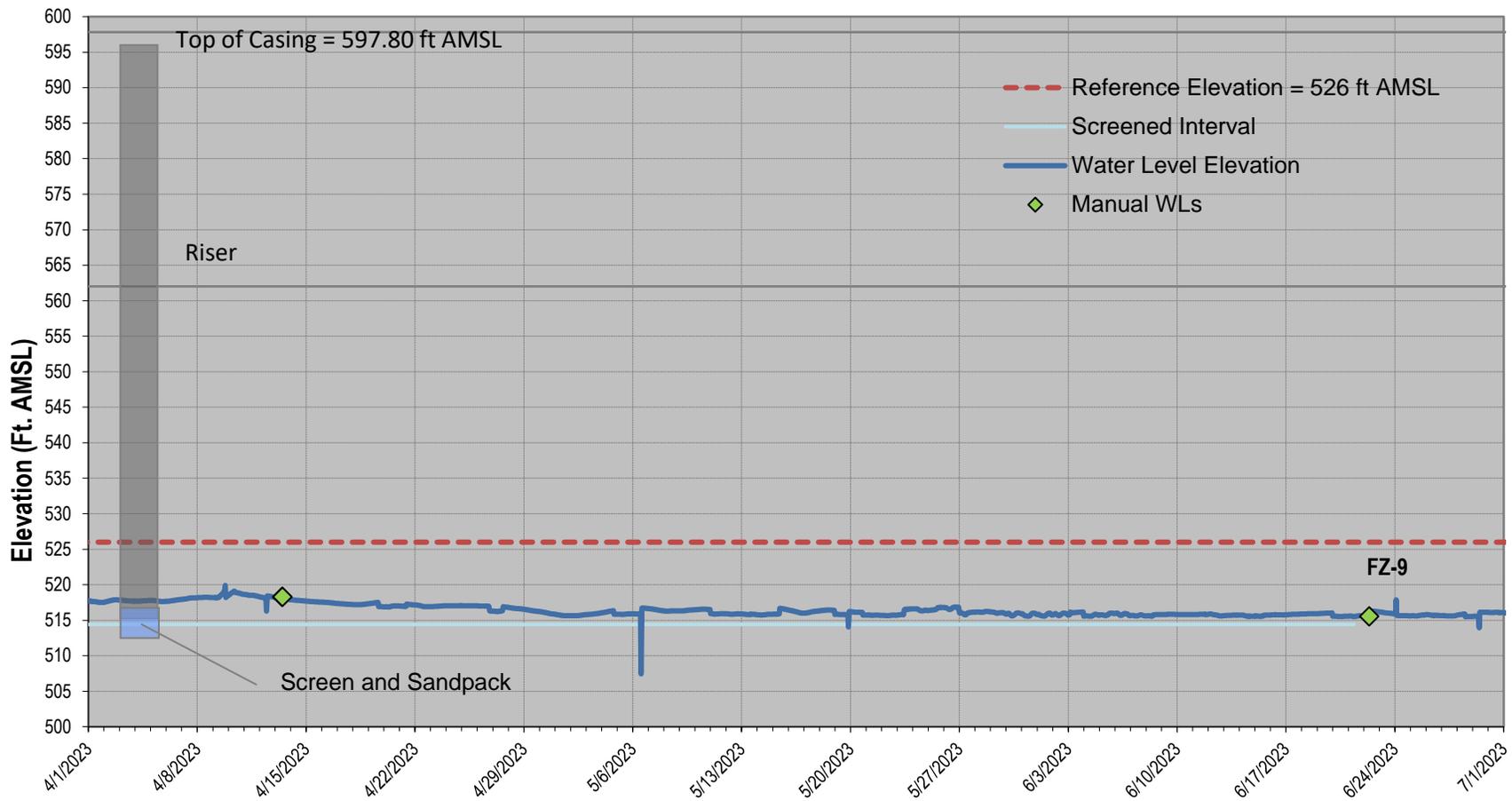


figure 10

PMW-1M-09 2nd Quarter 2023 - Hourly Water Level Elevation
 2nd Quarter Report
 Hyde Park Landfill Site
 Glenn Springs Holdings, Inc.

**Groundwater Elevation Summary
Second Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Overburden			
CMW-2OB	590.79	5.31	585.48
CMW-3OB	582.13	7.32	574.81
CMW-4OB	574.28	0.55	573.73
CMW-5OB	583.43	0.10	583.33
CMW-6OB	571.89	0.09	571.80
CMW-7OB	611.00	5.24	605.76
CMW-8OB	616.11	3.41	612.70
CMW-9OB	571.76	2.70	569.06
CMW-1OB	576.80	5.10	571.70
CMW-11OB	572.85	3.86	568.99
CMW-12OB	594.74	14.15	580.59
MH20	605.87	4.67	601.20
MH21	599.77	6.04	593.73
MH22	593.37	Dry	-
MH23	587.05	12.32	574.73
MH24	582.57	6.87	575.70
MH25	583.82	6.48	577.34
MH26	584.48	8.04	576.44
MH27	586.12	10.63	575.49
MH28	585.23	15.98	569.25
MH29	604.58	16.23	588.35
MH30	599.49	10.03	589.46
MH31	590.10	9.61	580.49
MH32	592.01	9.62	582.39
MH33	592.51	8.70	583.81
MH34	598.34	7.12	591.22
MH35	605.69	6.55	599.14
MH35A	605.69	7.15	598.54
OMW-1	605.28	7.17	598.11
OMW-2	605.99	5.42	600.57
OMW-3	598.63	10.82	587.81
OMW-4R	601.17	11.46	589.71
OMW-5R	591.31	7.60	583.71
OMW-6	587.62	2.17	585.45
OMW-7	592.74	8.85	583.89
OMW-8R2	594.67	10.31	584.36
OMW-9	595.27	9.05	586.22
OMW-10R	595.13	9.27	585.86
OMW-11R	597.52	5.38	592.14
OMW-12R	596.71	4.15	592.56
OMW-13R	601.50	8.20	593.30
OMW-14R	599.64	5.24	594.40
OMW-15	607.48	5.25	602.23
OMW-16R	607.62	5.82	601.80
SC-2	625.61	22.28	603.33
SC-3	638.72	39.30	599.42
SC-4	639.35	39.32	600.03
SC-5	634.07	31.64	602.43
SC-6	631.15	18.86	612.29

**Groundwater Elevation Summary
Second Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Shallow Bedrock			
CMW-1SH	576.11	12.86	563.25
CMW-2SH	590.51	19.98	570.53
CMW-3SH	581.91	27.84	554.07
CMW-4SH	574.16	7.65	566.51
CMW-5SH	583.36	8.03	575.33
CMW-6SH	572.05	10.17	561.88
CMW-7SH	610.58	12.32	598.26
CMW-8SH	615.95	8.22	607.73
CMW-9SH	571.96	12.23	559.73
CMW-11SH	573.21	8.42	564.79
CMW-12SH	597.02	24.20	572.82
Flow Zone 1			
G1U-01	617.08	14.41	602.67
G6-01	609.24	6.34	602.90
H2U-01	620.92	13.49	607.43
H5-01	617.61	17.21	600.40
I1-01	625.58	24.81	600.77
Flow Zone 2			
F2U-02	599.89	24.29	575.60
F4U-02	602.32	16.20	586.12
G1-02	616.86	24.35	592.51
G6-02	608.65	17.35	591.30
H2U-02	620.88	27.62	593.26
H5-02	617.47	22.75	594.72
I1-02	625.47	37.23	588.24
J2U-02	609.66	15.01	594.65
J5U-02	606.21	8.38	597.83
J6-02	609.23	13.51	595.72
Flow Zone 4			
AFW-2U-04	593.48	16.57	576.91
D1U-04	593.77	10.07	583.70
D2U-04	590.65	11.86	578.79
E6-04	578.23	12.81	565.42
F2U-04	599.76	21.98	577.78
F4U-04	602.19	16.11	586.08
F6-04	588.06	17.93	570.13
G1U-04	616.96	24.59	592.37
G6-04	609.15	17.55	591.60
H5-04	617.40	23.73	593.67
I1-04	625.30	39.20	586.10
J2U-04	609.42	16.13	593.29
J5U-04	606.05	18.72	587.33
J6-04	609.12	29.43	579.69

**Groundwater Elevation Summary
Second Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 5			
AFW-2U-05	593.33	16.40	576.93
AGW-1U-05	591.80	6.28	585.52
D1U-05	593.51	13.83	579.68
D2U-05	590.56	11.16	579.40
E6-05	578.04	12.35	565.69
F2U-05	599.64	22.13	577.51
F4U-05	602.06	18.60	583.46
F6-05	587.85	17.78	570.07
G6-05	609.13	17.80	591.33
H2M-05	621.59	29.20	592.39
H5-05	617.31	23.83	593.48
I1-05	625.25	71.26	553.99
J2U-05	609.30	29.71	579.59
J5U-05	605.87	25.84	580.03
J6-05	609.02	29.76	579.26
PMW-1U-05	598.00	17.91	580.09
Flow Zone 6			
ABP-7-06	575.78	Dry	-
AFW-1U-06	571.83	15.60	556.23
AFW-2U-06	593.22	48.09	545.13
AGW-1U-06	591.66	38.13	553.53
B2U-06	589.29	35.49	553.80
C3-06	585.78	Dry	-
D1U-06	593.25	44.96	548.29
D2U-06	590.38	41.51	548.87
E6-06	577.99	4.11	573.88
F2M-06	599.06	50.36	548.70
F4M-06	602.05	50.43	551.62
F6-06	587.84	13.95	573.89
G1M-06	616.75	42.70	574.05
G6-06	609.09	33.75	575.34
H2M-06	621.42	34.81	586.61
H5-06	617.17	26.33	590.84
I1-06	625.15	76.02	549.13
J2M-06	608.94	53.72	555.22
J5M-06	606.22	58.10	548.12
J6-06	608.93	53.01	555.92
PMW-1U-06	597.92	47.73	550.19

**Groundwater Elevation Summary
Second Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 7			
ABP-1-07	575.20	27.20	548.00
ABP-7-07	575.73	42.63	533.10
AFW-1M-07	571.41	Dry	-
AFW-2M-07	593.44	66.90	526.54
AGW-1M-07	592.91	40.33	552.58
B2M-07	589.52	57.55	531.97
C3-07	585.62	42.45	543.17
D1M-07	594.15	69.74	524.41
D2M-07	590.77	67.65	523.12
E6-07	577.91	22.97	554.94
F2M-07	598.91	82.12	516.79
F4M-07	601.91	47.40	554.51
F6-07	587.68	20.06	567.62
G1M-07	616.68	38.00	578.68
G6-07	609.06	30.40	578.66
H5-07	617.05	59.32	557.73
I1-07	625.14	74.83	550.31
J5M-07	606.07	54.50	551.57
J6-07	608.85	58.21	550.64
PMW-1M-07	598.50	70.13	528.37
Flow Zone 9			
ABP-1-09	575.19	40.21	534.98
ABP-7-09	575.67	42.03	533.64
AFW-1M-09	571.12	45.50	525.62
AFW-2M-09	593.32	72.36	520.96
AGW-1M-09	592.75	38.66	554.09
B2M-09	589.34	58.73	530.61
C3-09	585.00	43.18	541.82
D1M-09	594.02	74.08	519.94
D2M-09	590.66	75.15	515.51
E6-09	577.82	24.67	553.15
F2M-09	598.71	83.38	515.33
F4M-09	601.79	86.49	515.30
F6-09	587.53	17.84	569.69
G1M-09	616.58	36.40	580.18
G6-09	608.98	29.64	579.34
H2M-09	621.32	72.85	548.47
H5-09	616.93	67.84	549.09
I1-09	624.91	61.23	563.68
J2M-09	608.77	57.83	550.94
J5M-09	605.82	55.36	550.46
J6-09	608.76	44.55	564.21
PMW-1M-09	598.34	Dry	-

**Groundwater Elevation Summary
Second Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 11			
AFW-1L-11	572.10	62.55	509.55
AFW-2L-11	593.43	96.80	496.63
AGW-1L-11	592.71	8.81	583.90
B2L-11	589.65	85.26	504.39
D1L-11	593.80	91.25	502.55
D2L-11	590.21	65.14	525.07
E6-11	577.72	45.21	532.51
F2L-11	598.94	43.49	555.45
F4L-11	602.22	32.35	569.87
F6-11	587.40	59.56	527.84
G1L-11	616.84	59.32	557.52
G6-11	608.89	48.41	560.48
H2L-11	620.73	66.69	554.04
H5-11	616.81	71.91	544.90
I1-11	624.75	77.58	547.17
J5L-11	607.20	61.23	545.97
J6-11	608.68	22.47	586.21
PMW-1L-11	598.84	83.01	515.83
Purge Wells			
APW-1	564.98	58.18	506.80
APW-2	569.89	57.99	511.90
PW-1L	593.16	93.66	499.50
PW-1U	593.50	43.90	549.60
PW-2L	597.29	101.29	496.00
PW-2M	596.61	84.51	512.10
PW-2UR	594.75	36.35	558.40
PW-3L	599.05	100.95	498.10
PW-3M	597.79	80.59	517.20
PW-4U	604.85	82.63	524.30
PW-5UR	601.31	30.45	574.40
PW-6UMR	609.31	45.31	556.00
PW-6UR	608.47	107.10	502.21
PW-7U	592.47	51.77	556.70
PW-8M	592.67	18.77	573.70
PW-8U	589.27	74.57	518.10
PW-9U	587.47	39.87	549.40
PW-10U	593.54	31.27	556.20
		28.54	565.00

Notes:

- - Not applicable
- ft AMSL - Feet above mean sea level
- NM - Not measured due to well being buried under ice and snow
- Surcharged - Well surcharged at the time of measurement
- Dry - No water present at the time of measurement

**Leachate Treatment System Daily Effluent Monitoring Data
Second Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
04/01/23		
04/02/23		
04/03/23	7.4	172,000
04/04/23	7.4	193,000
04/05/23	7.4	197,000
04/06/23	7.4	208,000
04/07/23	7.4	211,000
04/08/23	7.4	192,000
04/09/23	7.3	35,000
04/10/23	7.1	182,000
04/11/23	7.3	191,000
04/12/23	7.4	204,000
04/13/23	7.4	212,000
04/14/23	7.4	225,000
04/15/23		
04/16/23		
04/17/23	7.1	162,000
04/18/23	7.4	205,000
04/19/23	7.4	68,000
04/20/23	7.4	177,000
04/21/23		
04/22/23		
04/23/23		
04/24/23	7.4	143,000
04/25/23	7.4	196,000
04/26/23	7.4	62,000
04/27/23	7.4	176,000
04/28/23		
04/29/23		
04/30/23		
05/01/23	7.4	156,000
05/02/23	7.4	63,000
05/03/23	7.2	164,000
05/04/23	7.2	196,000
05/05/23		
05/06/23		
05/07/23		

**Leachate Treatment System Daily Effluent Monitoring Data
Second Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
05/08/23	7.3	122,000
05/09/23	7.4	137,000
05/10/23	7.3	108,000
05/11/23		
05/12/23		
05/13/23		
05/14/23		
05/15/23	7.3	168,000
05/16/23	7.4	188,000
05/17/23	7.3	43,000
05/18/23		
05/19/23		
05/20/23		
05/21/23		
05/22/23		
05/23/23	7.3	169,000
05/24/23	7.4	188,000
05/25/23	7.4	47,000
05/26/23		
05/27/23		
05/28/23		
05/29/23		
05/30/23	7.3	131,000
05/31/23	7.4	193,000
06/01/23		
06/02/23		
06/03/23		
06/04/23		
06/05/23		
06/06/23	7.4	131,000
06/07/23	7.4	169,000
06/08/23		
06/09/23		
06/10/23		
06/11/23		
06/12/23		
06/13/23		

**Leachate Treatment System Daily Effluent Monitoring Data
Second Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
06/14/23	7.1	191,000
06/15/23	7.3	183,000
06/16/23	7.2	13,000
06/17/23		
06/18/23		
06/19/23		
06/20/23	7.2	111,000
06/21/23	7.4	267,000
06/22/23		
06/23/23		
06/24/23		
06/25/23		
06/26/23		
06/27/23	7.3	67,000
06/28/23	7.4	173,000
06/29/23		
06/30/23	7.4	48,000
	Total	6,837,000

Notes:

su - Standard Unit
gal - Gallons

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Second Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	04/05/2023	04/12/2023	04/18/2023	04/26/2023	05/03/2023	05/10/2023
Volatiles								
	1,1,1-Trichloroethane	µg/L	0.28 J	0.39 J	0.26 J	0.33 J	0.23 J	0.24 J
	1,1,2,2-Tetrachloroethane	µg/L	0.70 J	0.75 J	0.64 J	0.59 J	0.63 J	0.55 J
	1,1,2-Trichloroethane	µg/L	1.0 U					
	1,1-Dichloroethane	µg/L	2.2	2.2	2.1	2.2	2.7	2.5
	1,1-Dichloroethene	µg/L	1.0 U					
	1,2,4-Trichlorobenzene	µg/L	1.0 U					
	1,2-Dichlorobenzene	µg/L	1.0 U					
	1,2-Dichloroethane	µg/L	6.9	6.8	7.1	7.5	9.2	7.6
	1,2-Dichloropropane	µg/L	0.59 J	0.64 J	0.55 J	0.60 J	0.61 J	0.66 J
	1,3-Dichlorobenzene	µg/L	1.0 U					
	1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	0.73 J	1.0 U	1.0 U	1.0 U
	2-Chlorotoluene	µg/L	1.0 U					
	3-Chlorotoluene	µg/L	1.0 U					
	4-Chlorotoluene	µg/L	1.0 U					
	Benzene	µg/L	21	20	22	21	18	18
	Bromodichloromethane	µg/L	1.0 U					
	Bromoform	µg/L	1.0 U					
	Bromomethane (Methyl bromide)	µg/L	1.0 U					
	Carbon disulfide	µg/L	1.0 U	4.4	3.8	1.0 U	4.2	2.9
	Carbon tetrachloride	µg/L	1.0 U					
	Chlorobenzene	µg/L	1.0 U	1.0 U	0.31 J	1.0 U	1.0 U	1.0 U
	Chloroethane	µg/L	1.0 U					
	Chloroform (Trichloromethane)	µg/L	3.8	3.1	2.9	3.0	3.3	2.9
	Chloromethane (Methyl chloride)	µg/L	1.0 U					
	cis-1,2-Dichloroethene	µg/L	2.1	1.8	2.0	2.1	2.4	2.2
	cis-1,3-Dichloropropene	µg/L	1.0 U					
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U					
	Ethylbenzene	µg/L	1.0 U					
	m&p-Xylenes	µg/L	2.0 U					
	m-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Methylene chloride	µg/L	1.0 U					
	o-Monochlorobenzotrifluoride	µg/L	1.0 U					
	o-Xylene	µg/L	1.0 U					
	p-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Styrene	µg/L	1.0 U					
	Tetrachloroethene	µg/L	1.0 U					
	Toluene	µg/L	1.0 U					
	trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.21 J	1.0 U
	trans-1,3-Dichloropropene	µg/L	1.0 U					
	Trichloroethene	µg/L	0.51 J	1.0 U	1.0 U	1.0 U	0.27 J	1.0 U
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U					
	Vinyl acetate	µg/L	2.0 U					
	Vinyl chloride	µg/L	21	21	23	24	33	30
	Xylenes (total)	µg/L	3.0 U					
General Chemistry								
	Phenolics (total)	mg/L	0.0047 J	0.0045 J	0.0063	0.0124	0.0077	NA

Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

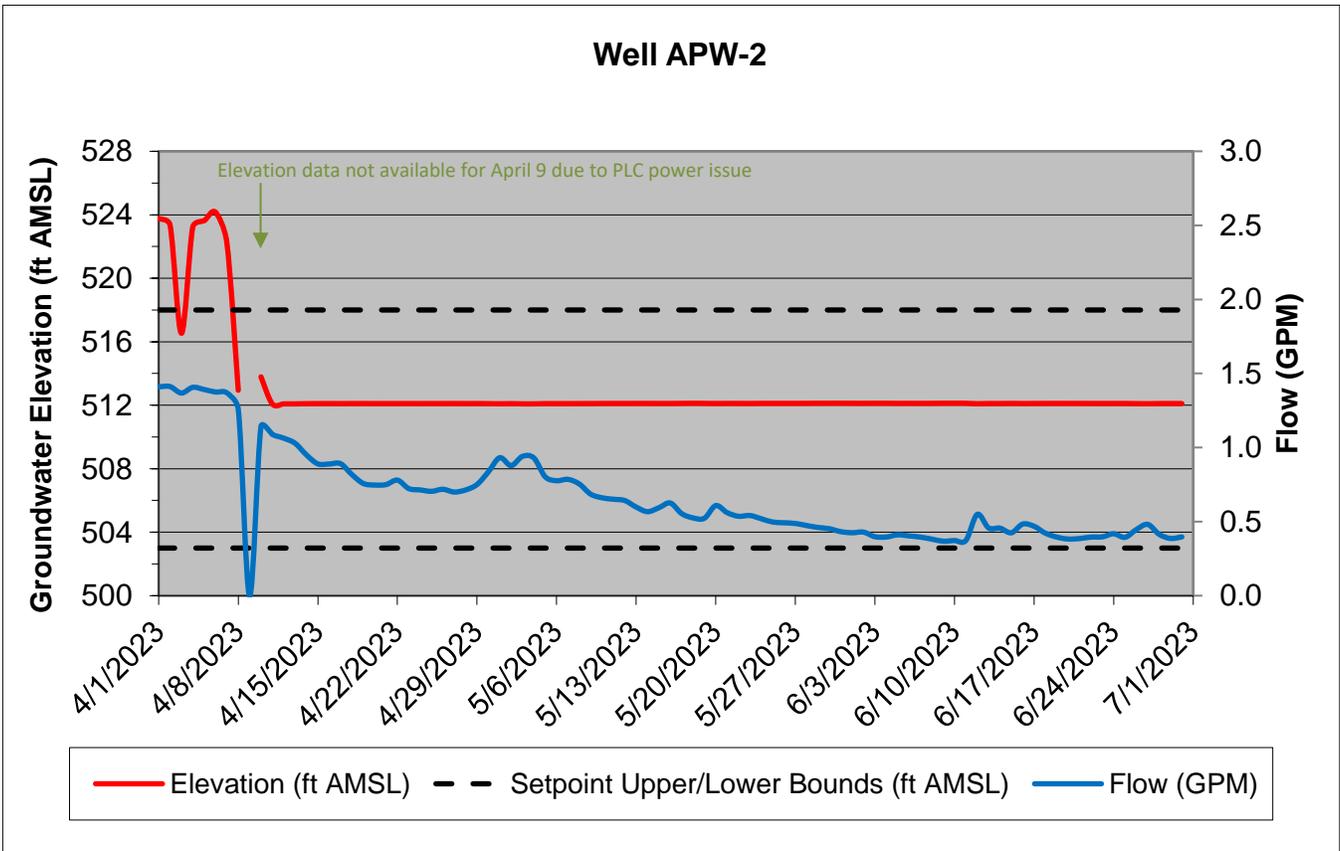
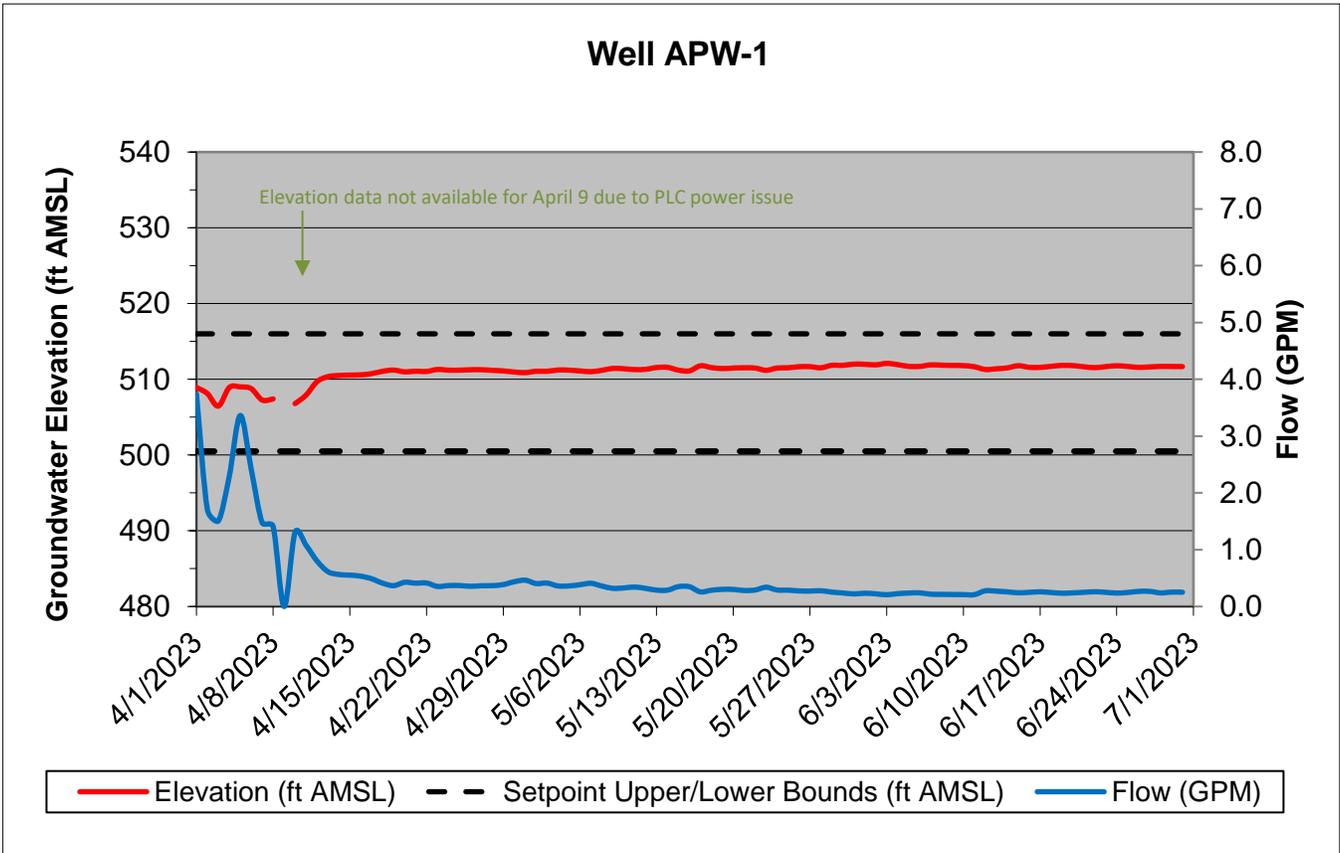
Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Second Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	05/17/2023	05/24/2023	05/31/2023	06/07/2023	06/14/2023	06/21/2023	06/28/2023
Volatiles									
	1,1,1-Trichloroethane	µg/L	0.22 J	0.23 J	0.22 J	0.20 J	0.21 J	1.0 U	1.0 U
	1,1,2,2-Tetrachloroethane	µg/L	1.0 U	0.71 J	0.59 J	0.54 J	0.79 J	0.58 J	0.59 J
	1,1,2-Trichloroethane	µg/L	1.0 U						
	1,1-Dichloroethane	µg/L	2.7	2.6	2.8	3.3	3.4	2.8	2.8
	1,1-Dichloroethene	µg/L	1.0 U						
	1,2,4-Trichlorobenzene	µg/L	1.0 U						
	1,2-Dichlorobenzene	µg/L	1.0 U						
	1,2-Dichloroethane	µg/L	8.0	9.1	9.4	9.5	11	8.6	8.9
	1,2-Dichloropropane	µg/L	0.59 J	0.61 J	0.73 J	0.76 J	0.70 J	0.60 J	0.62 J
	1,3-Dichlorobenzene	µg/L	1.0 U						
	1,4-Dichlorobenzene	µg/L	1.0 U						
	2-Chlorotoluene	µg/L	1.0 U						
	3-Chlorotoluene	µg/L	1.0 U						
	4-Chlorotoluene	µg/L	1.0 U						
	Benzene	µg/L	21	21	21	20	20	19	19
	Bromodichloromethane	µg/L	1.0 U						
	Bromoform	µg/L	1.0 U						
	Bromomethane (Methyl bromide)	µg/L	1.0 U						
	Carbon disulfide	µg/L	1.6	2.4	1.0 U	2.8	2.5	3.2	4.0
	Carbon tetrachloride	µg/L	1.0 U						
	Chlorobenzene	µg/L	1.0 U						
	Chloroethane	µg/L	1.0 U						
	Chloroform (Trichloromethane)	µg/L	2.8	3.1	3.0	3.3	3.4	2.9	3.1
	Chloromethane (Methyl chloride)	µg/L	1.0 U						
	cis-1,2-Dichloroethene	µg/L	2.4	2.5	2.5	2.7	3.0	2.5	2.5
	cis-1,3-Dichloropropene	µg/L	1.0 U						
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U						
	Ethylbenzene	µg/L	1.0 U						
	m&p-Xylenes	µg/L	2.0 U						
	m-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Methylene chloride	µg/L	1.0 U						
	o-Monochlorobenzotrifluoride	µg/L	1.0 U						
	o-Xylene	µg/L	1.0 U						
	p-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Styrene	µg/L	1.0 U						
	Tetrachloroethene	µg/L	1.0 U	0.36 J	1.0 U				
	Toluene	µg/L	1.0 U						
	trans-1,2-Dichloroethene	µg/L	1.0 U	0.20 J	0.31 J	1.0 U	0.26 J	1.0 U	1.0 U
	trans-1,3-Dichloropropene	µg/L	1.0 U						
	Trichloroethene	µg/L	0.25 J	1.0 U					
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U						
	Vinyl acetate	µg/L	2.0 U						
	Vinyl chloride	µg/L	28	38	38	37	42	34	38
	Xylenes (total)	µg/L	3.0 U						
General Chemistry									
	Phenolics (total)	mg/L	0.0036 J	0.0085	0.0073	0.0078	0.0082	0.0084	0.0066

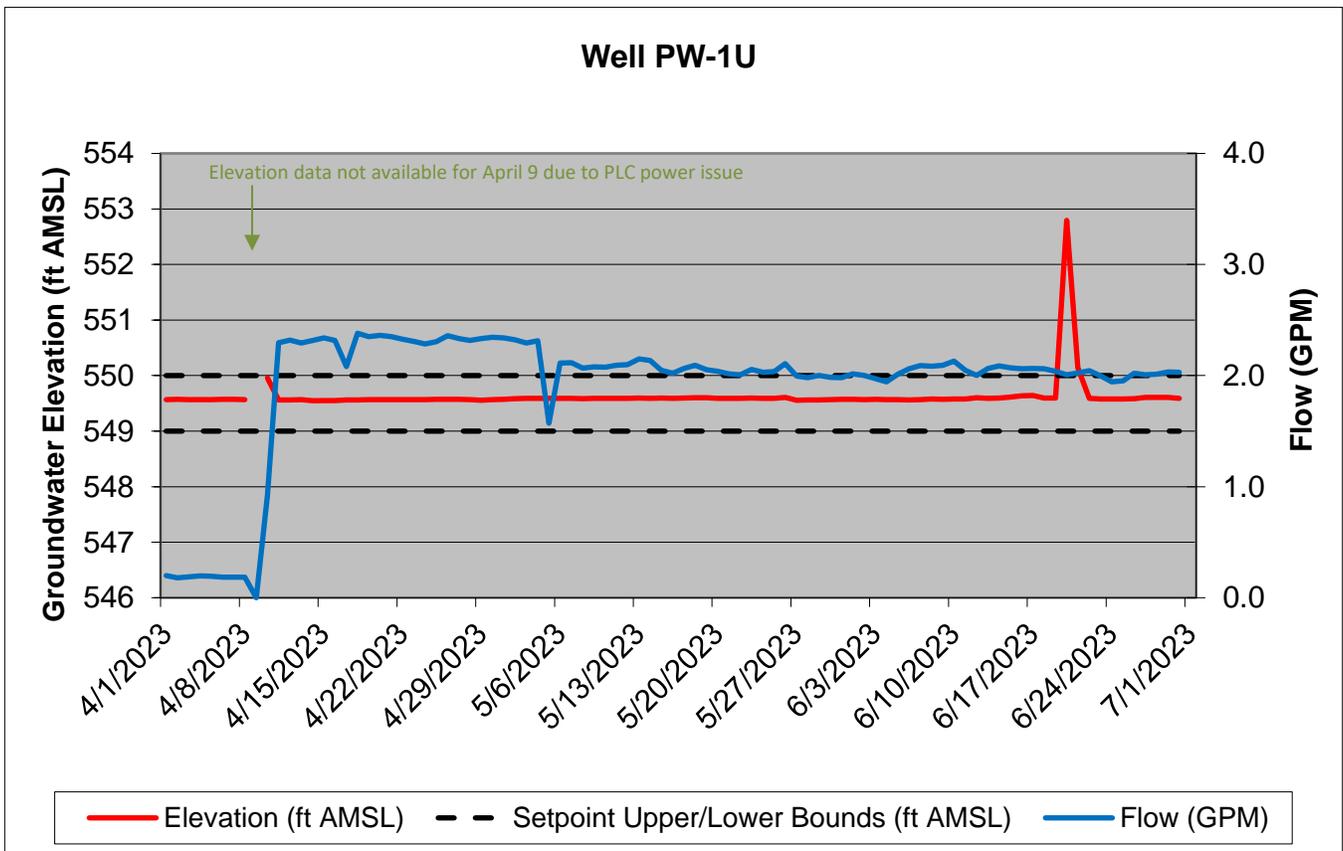
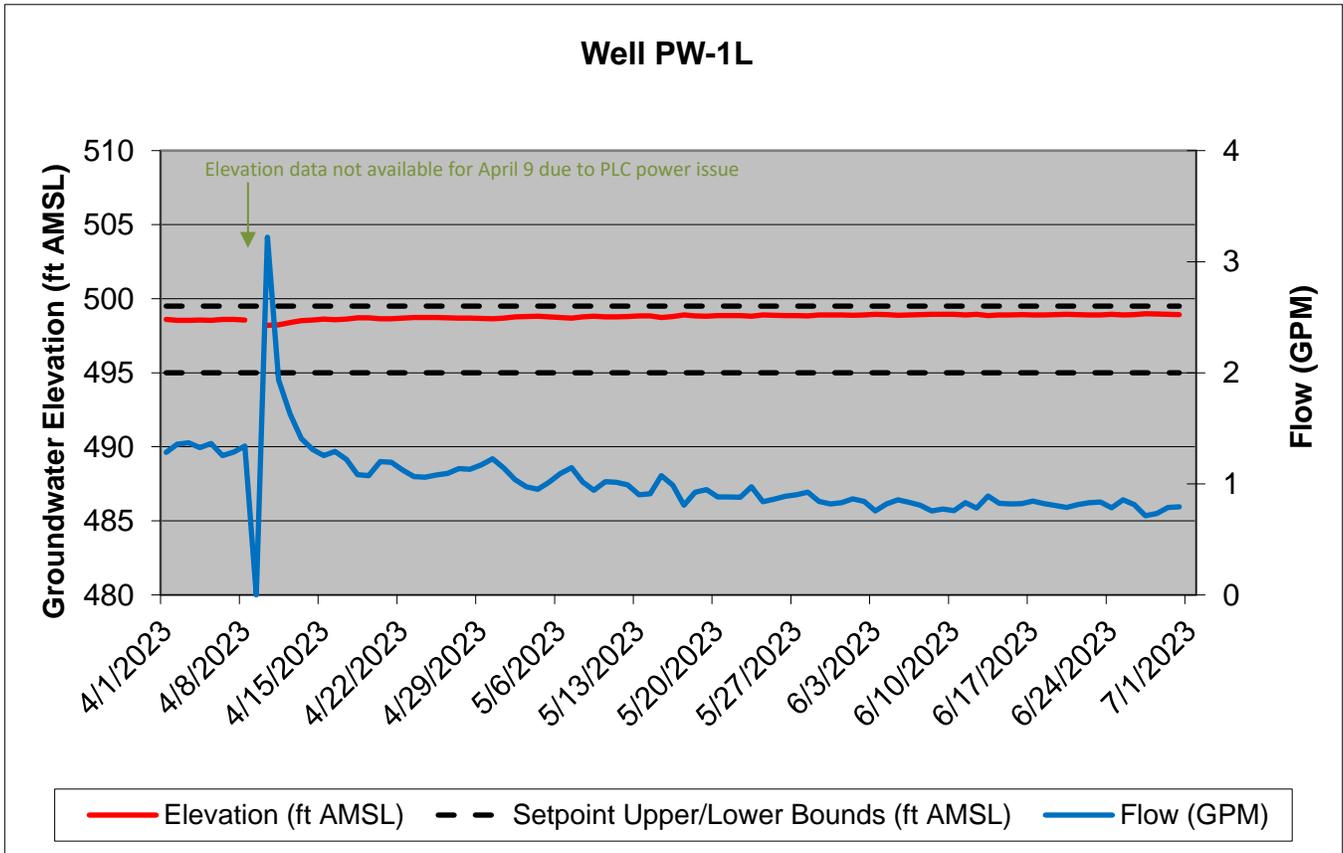
Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

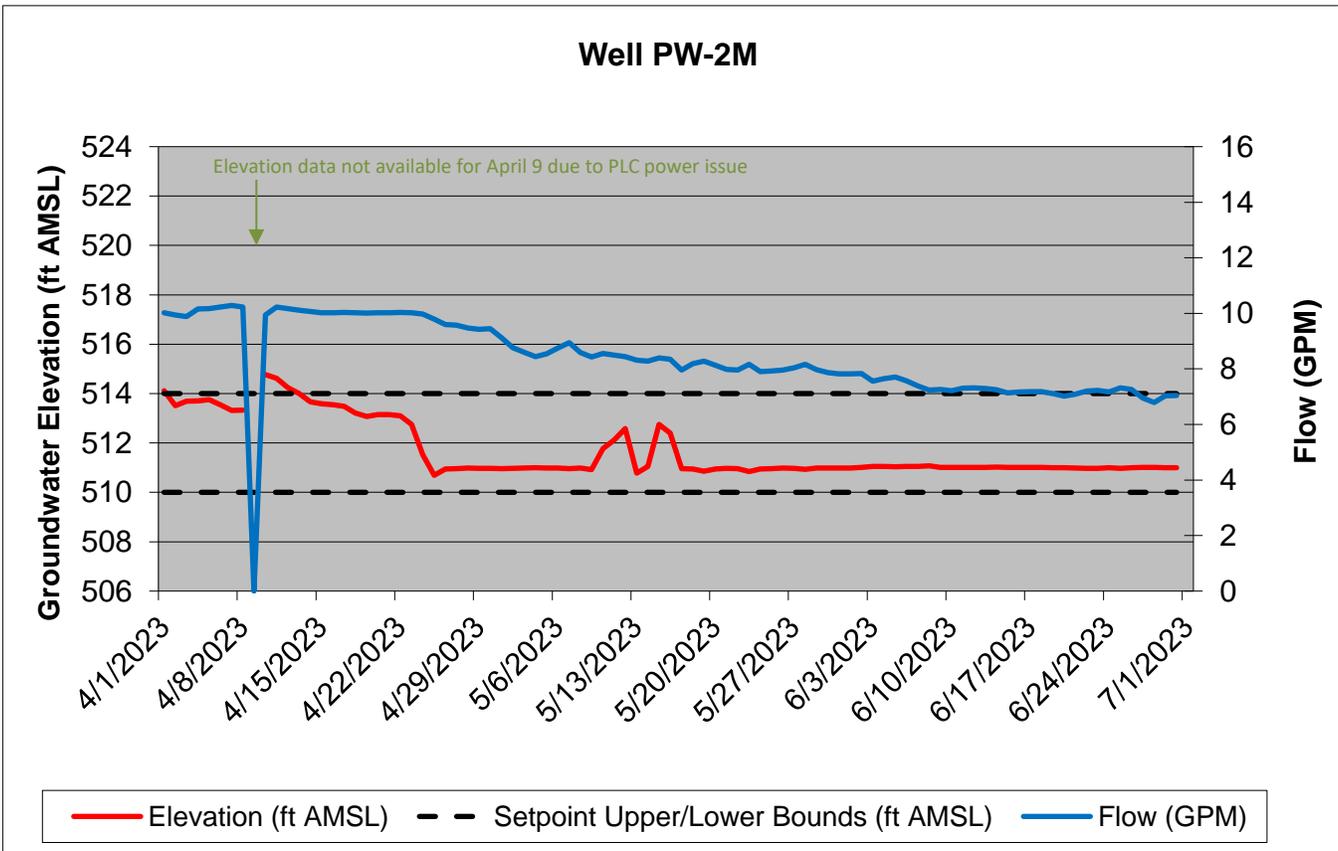
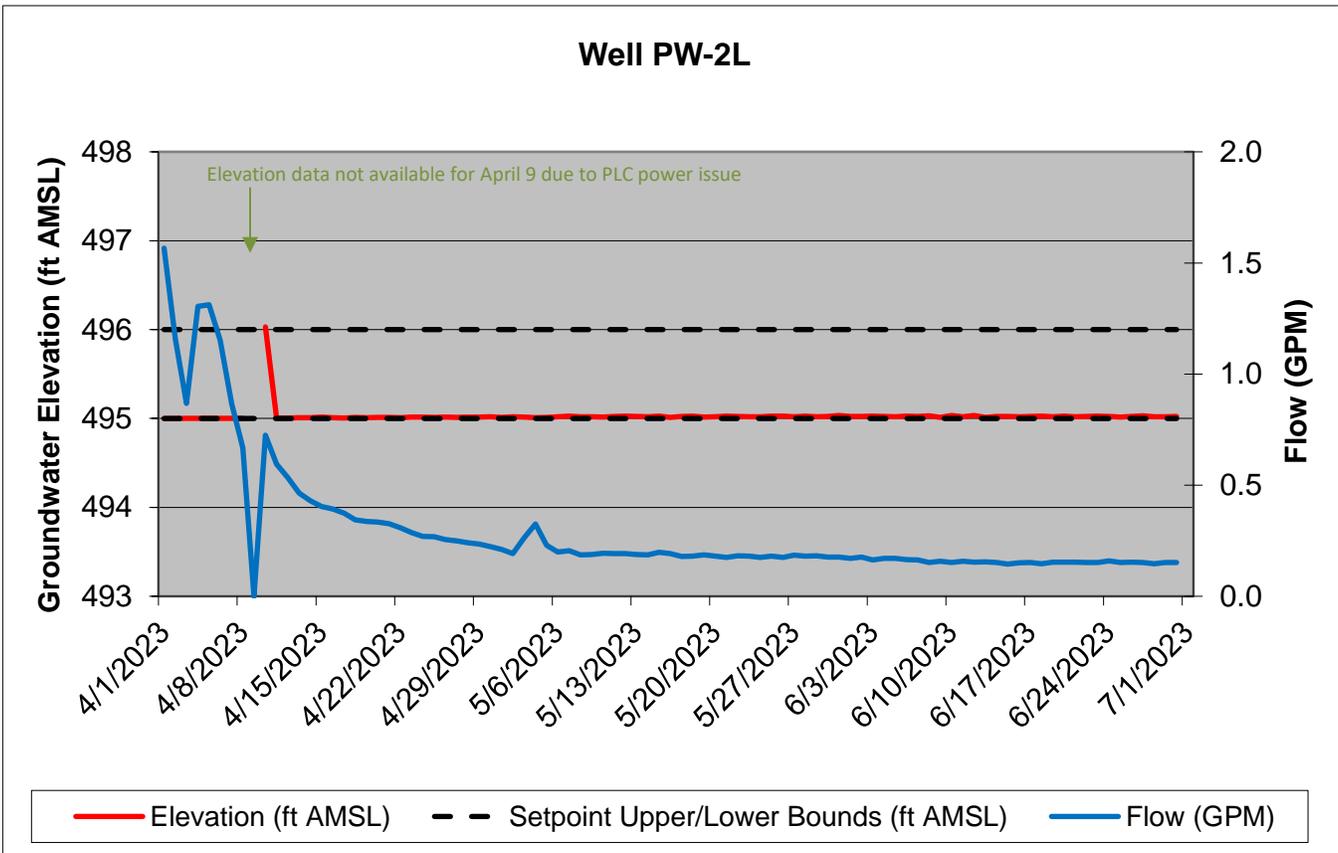
SECOND QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



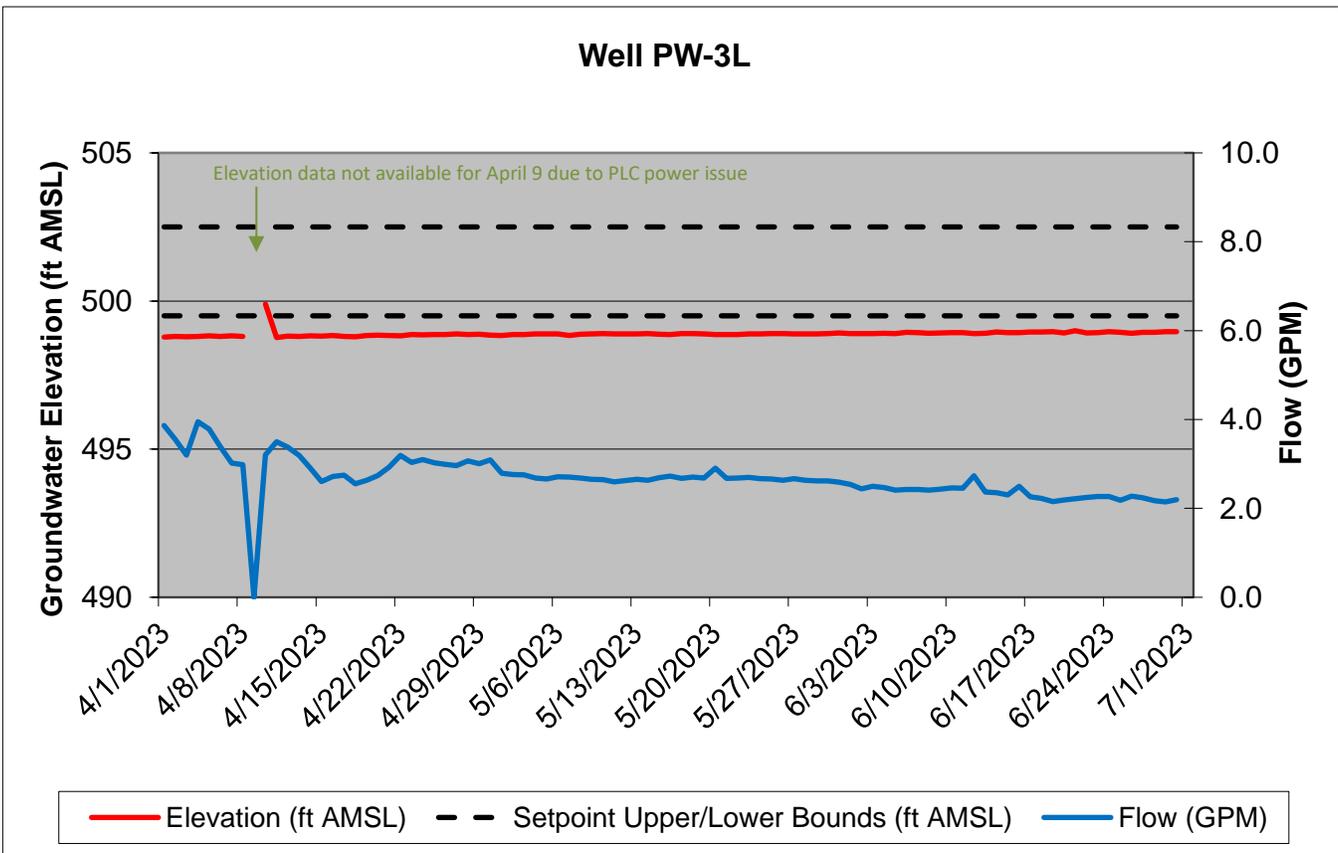
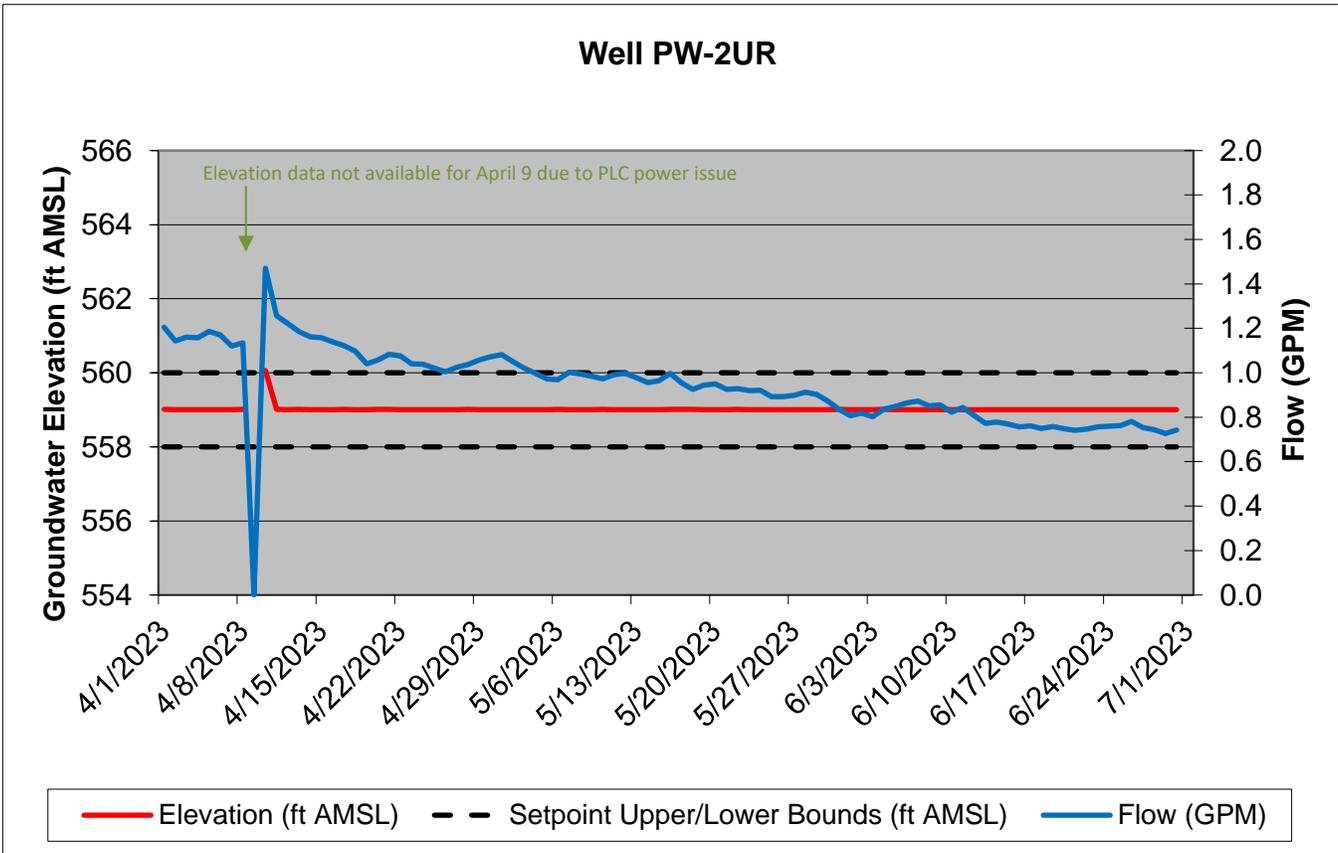
SECOND QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



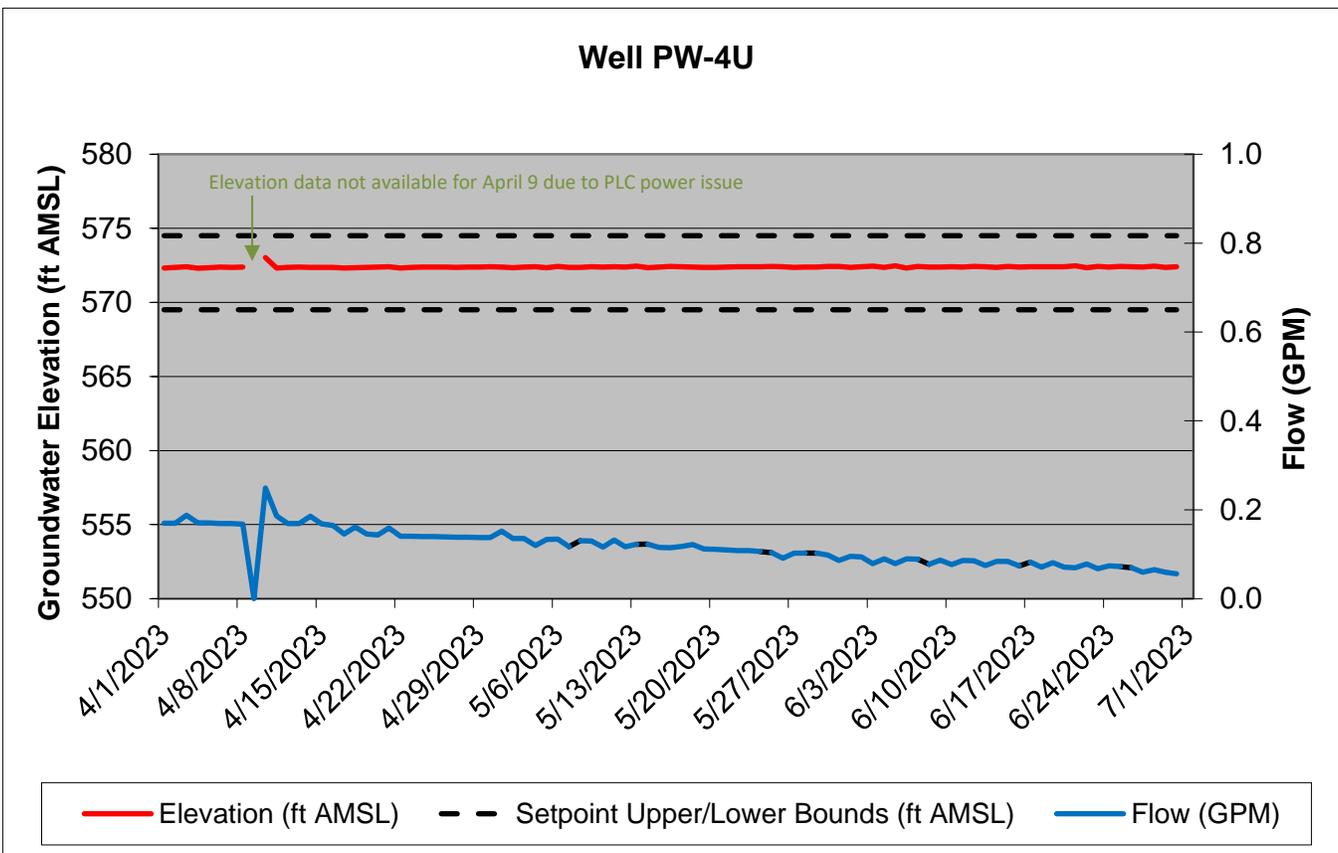
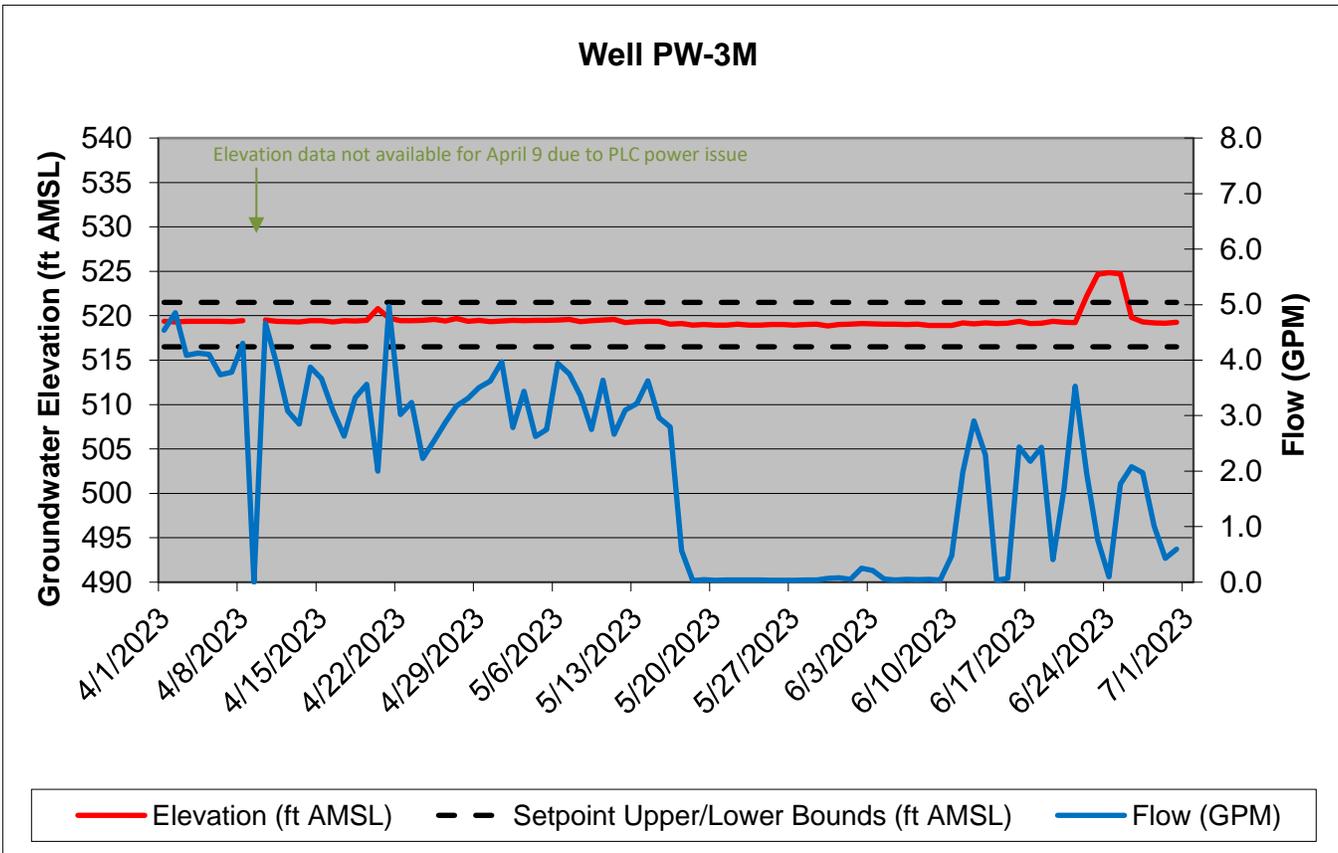
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HYDE PARK



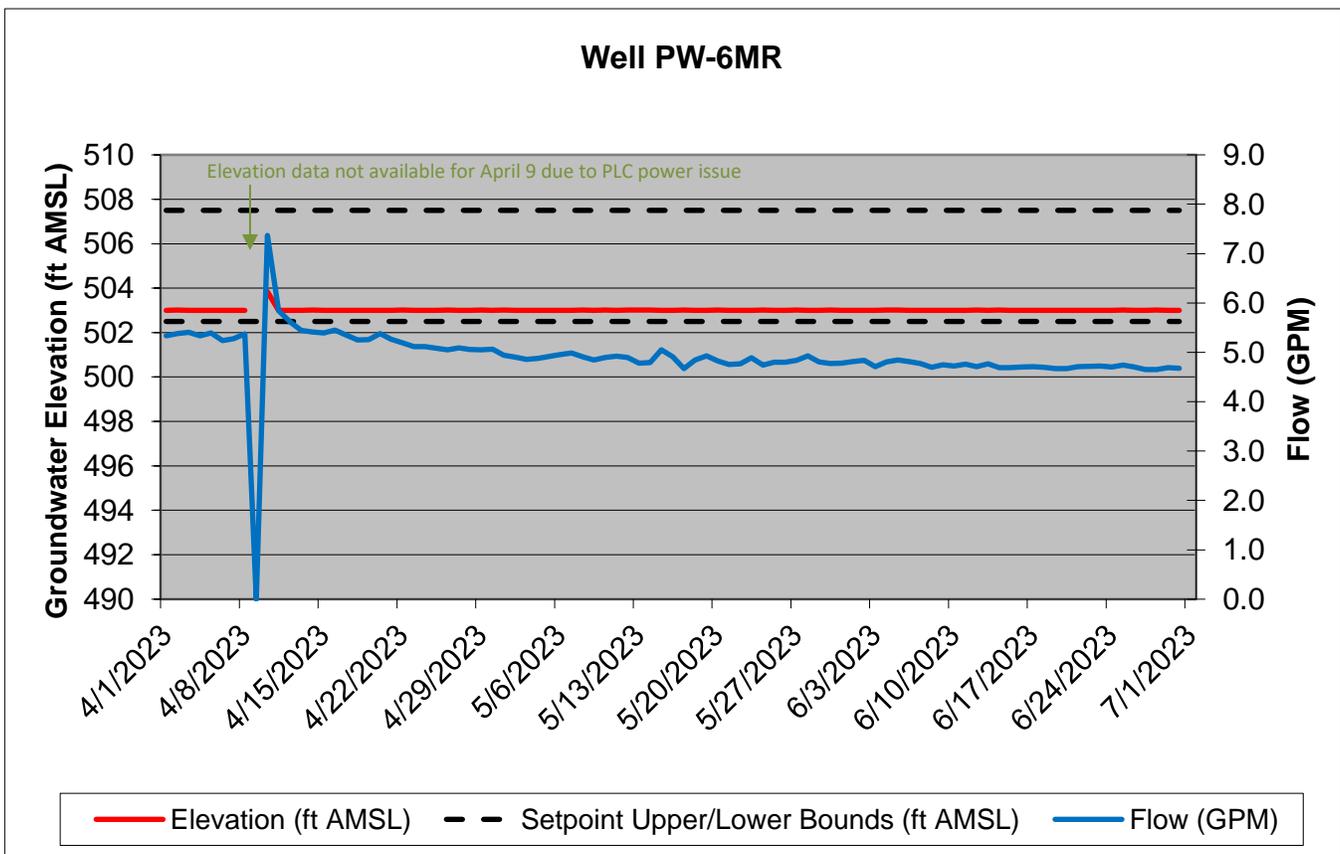
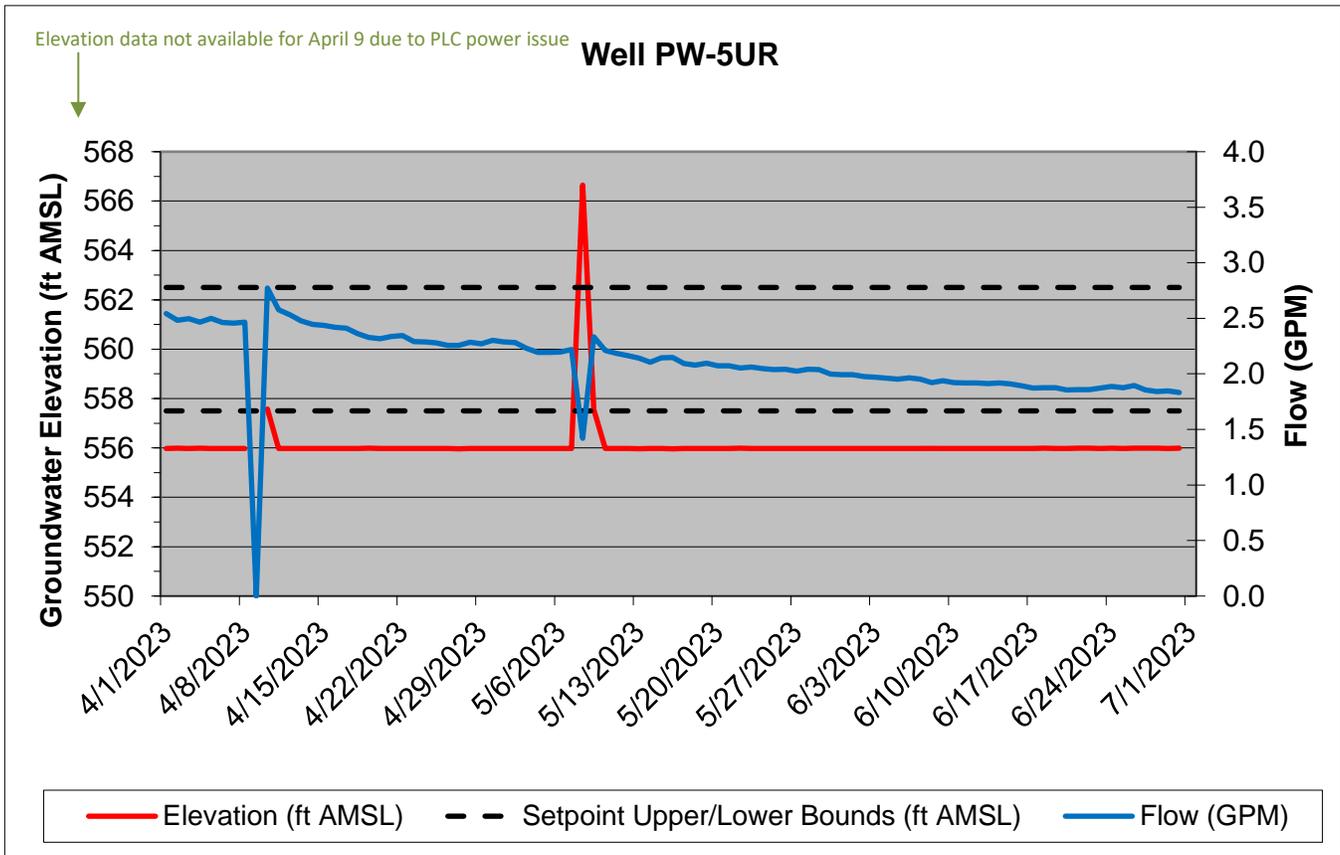
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HYDE PARK



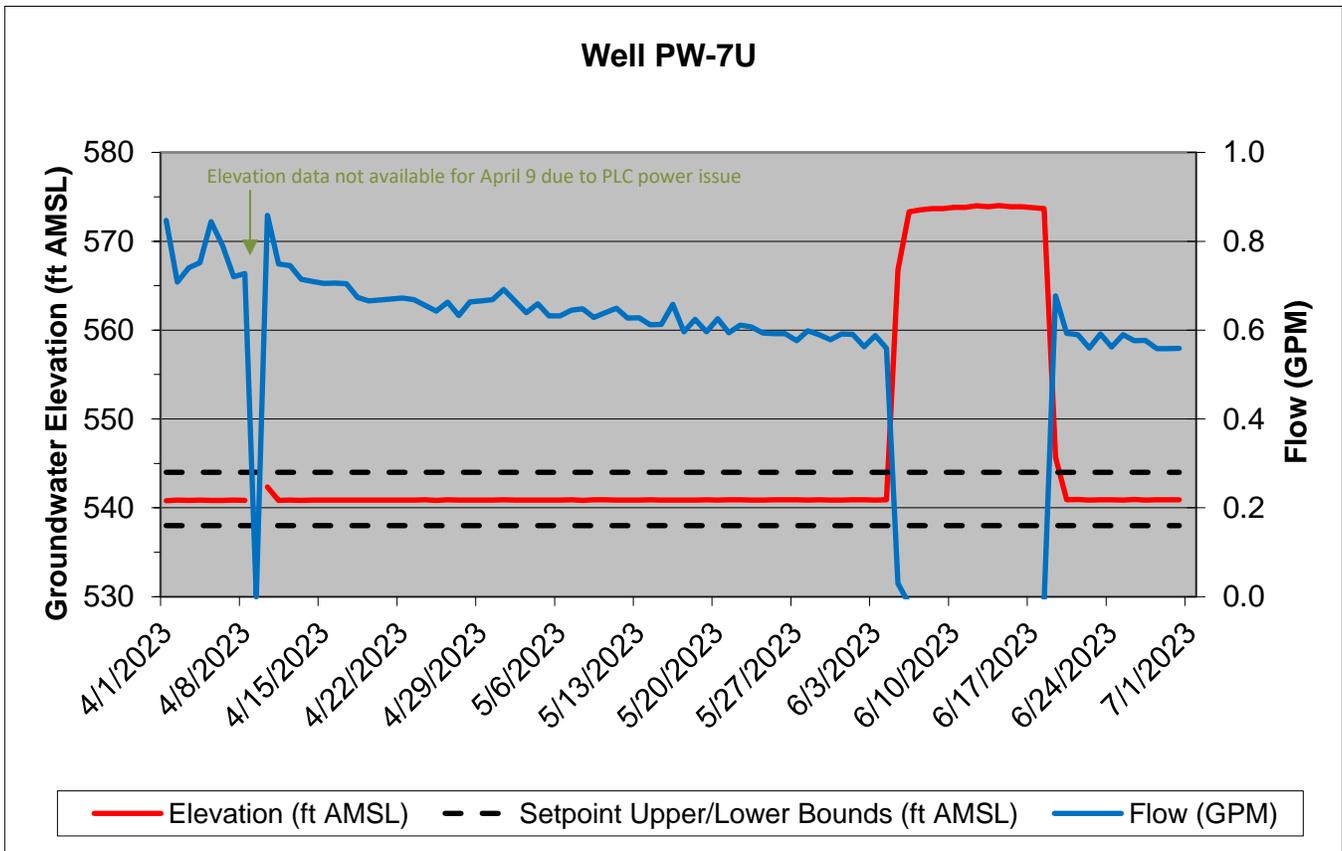
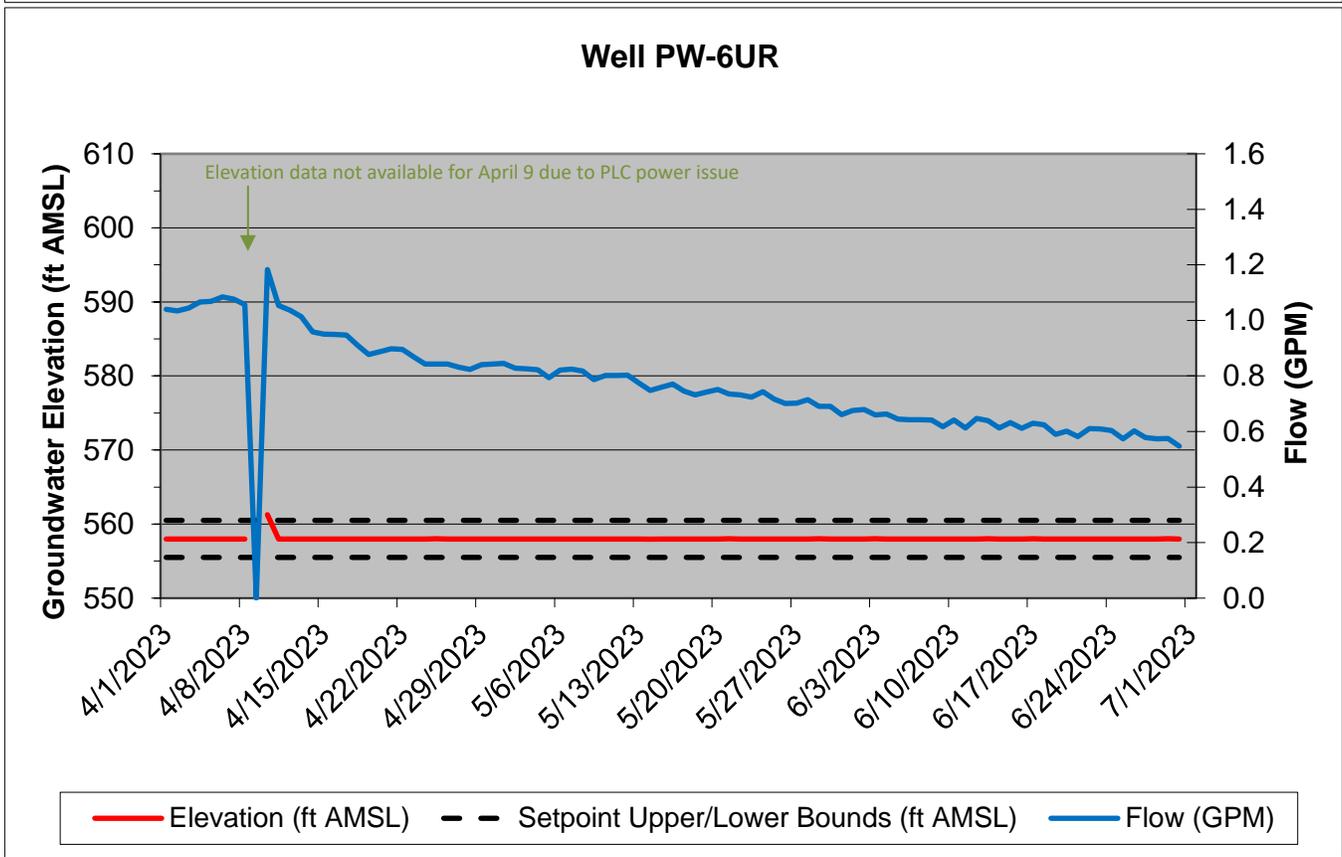
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HYDE PARK



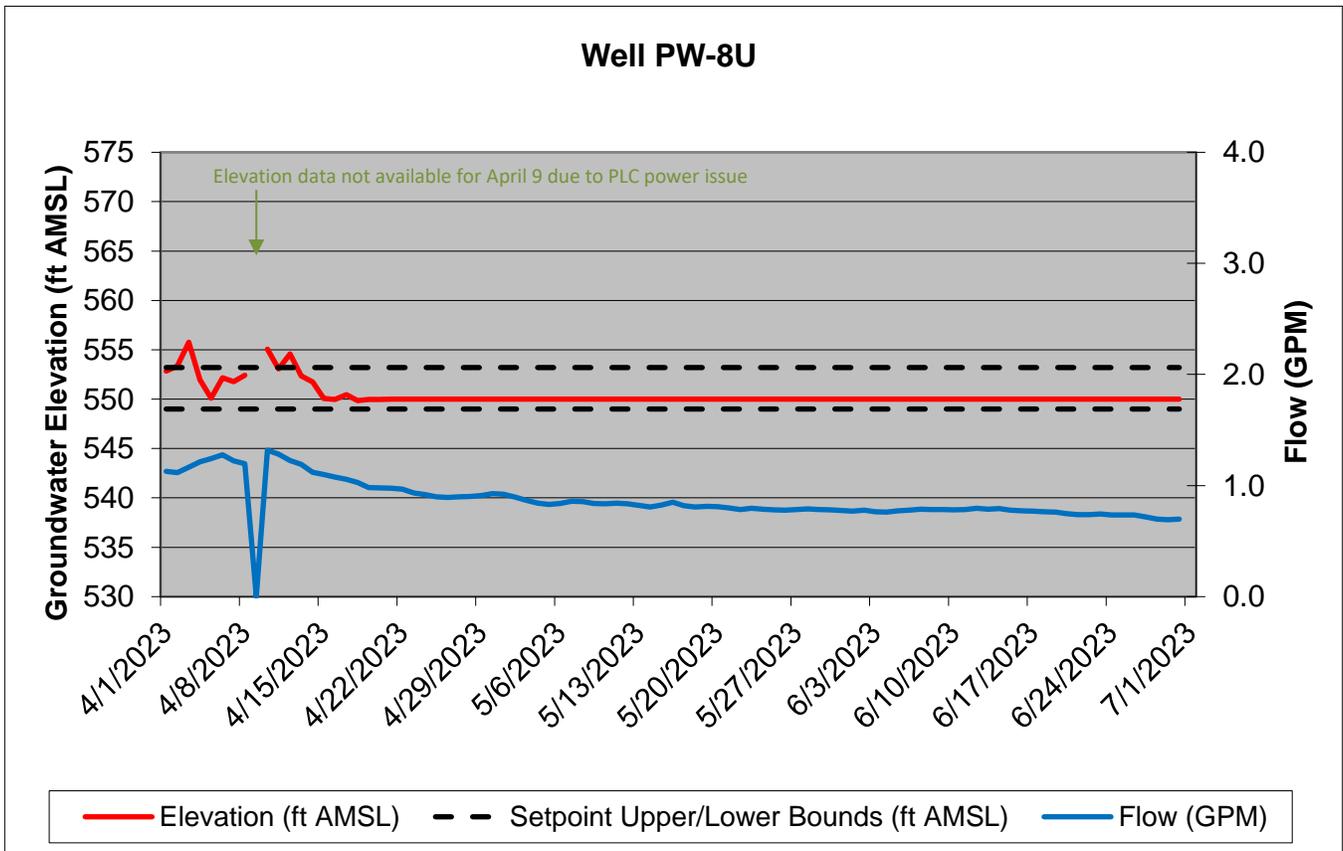
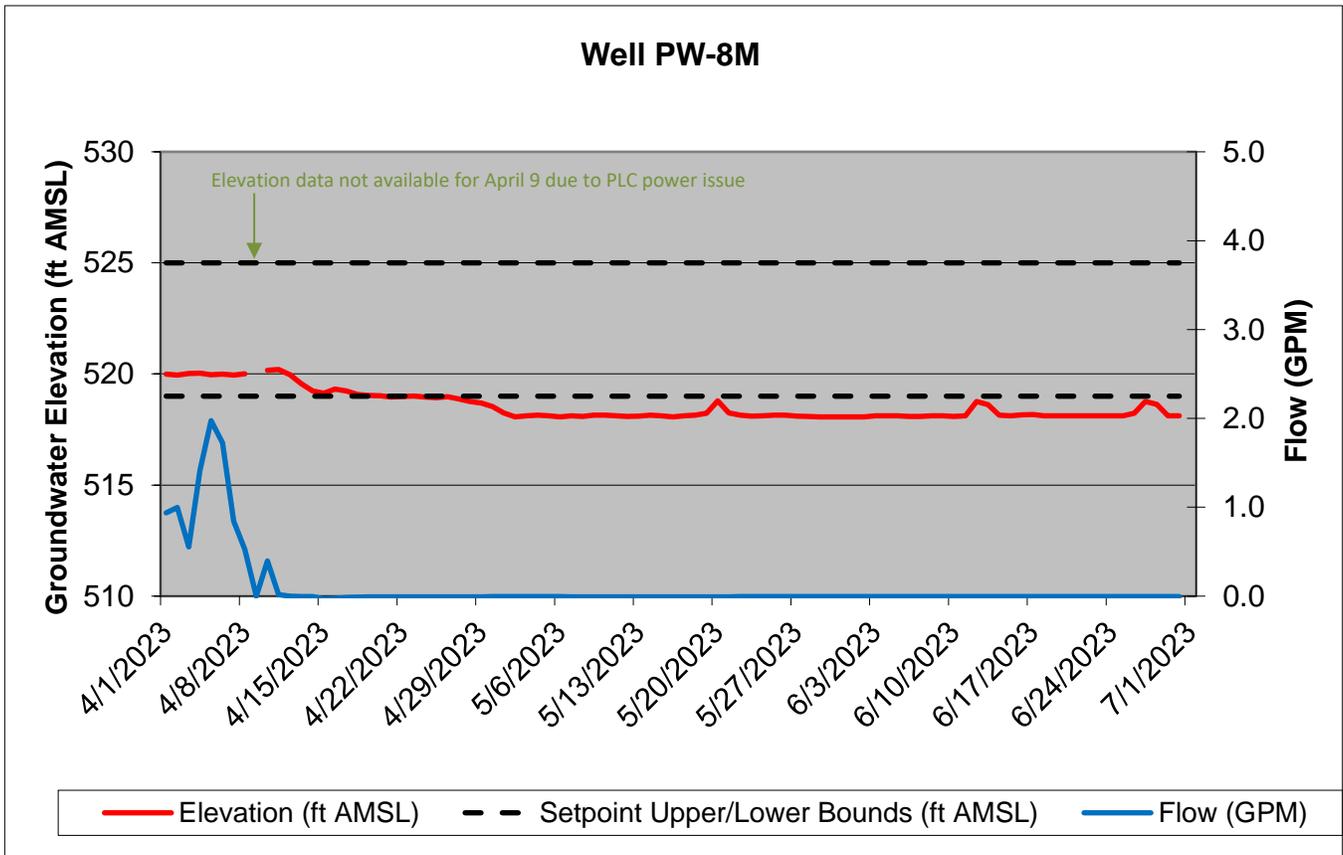
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HYDE PARK



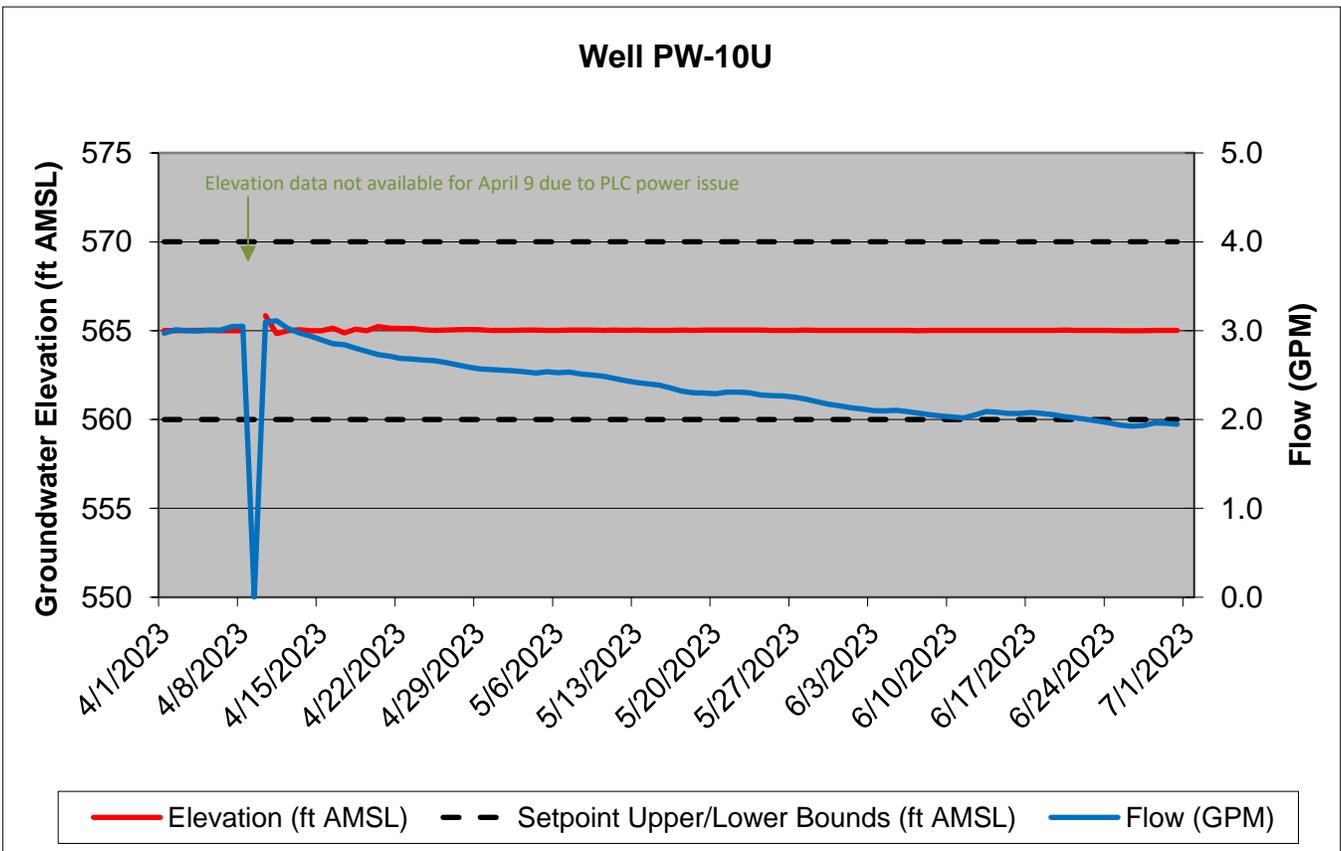
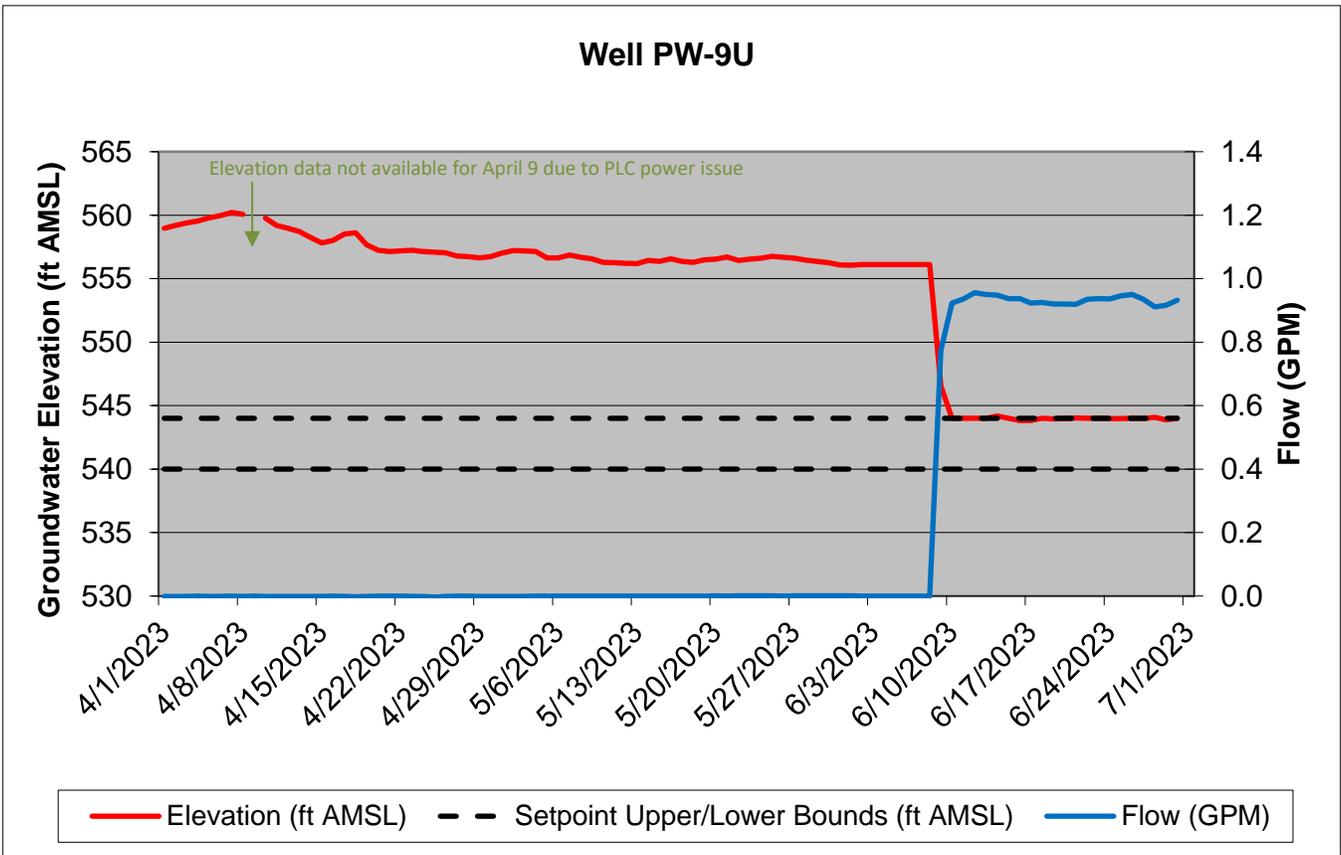
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HYDE PARK



SECOND QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



SECOND QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK





Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

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

7601 Old Channel Trail
Montague, MI 49437

October 31, 2023

Reference No. 11230216

Ms. Maeve Wurtz
USEPA Region II
290 Broadway, 20th Floor
New York, NY 10007-1866

Mr. Andrew Zwack
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Wurtz and Mr. Zwack:

**Re: Quarterly Operations Report - Third Quarter 2023
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 July 1, 2023 through September 30, 2023. A total of 4.7 million gallons of APL were collected, treated, and discharged in compliance with the Site's City of Niagara Falls Publicly Owned Treatment Works (POTW) Significant Industrial User (SIU) Wastewater Discharge Permit #49. No waste 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: Groundwater 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 continuously recorded groundwater elevations for the flow zone 9 piezometer PMW-1M-09 for the third quarter 2023 are presented on Figure 10. Due to a malfunction in the barometric pressure transducer, only uncompensated groundwater elevations are available for the period from July 25 through September 27. A manual water level was collected during this period on September 8, and the associated groundwater elevation was less than 526 feet above mean sea level (AMSL). Both the compensated and uncompensated groundwater elevations were less than 526 feet AMSL through the entire quarter, indicating that the FZ-09 outcrop along the New York Power Authority (NYPA) access road was unsaturated throughout the entire quarter.

The pumping wells were operational and functioning as designed during the third quarter 2023, with the exception of the downtime periods discussed below. 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.

All wells were down from September 28 through September 30 due to a programmable logic controller power issue. As a result, the water levels in PW-1U, PW-2L, PW-2UR, PW-3L, PW-5UR, PW-6UR, PW-7U, PW-8U, PW-9U, and PW-10U exceeded setpoint range from September 28 through September 30 and the water levels in APW-1, APW-2, PW-1L, PW-2M, PW-3M, PW-4U, and PW-6MR exceeded setpoint range on September 29 and September 30.

Wells PW-8U, PW-9U, and PW-10U were down from September 22 through September 24 due to a false leak detection alarm at PW-10U. As a result, the water levels in PW-8U and PW-10U exceeded setpoint range from September 22 through September 24 and returned to within setpoint range on September 25. The water level in PW-9U exceeded setpoint range from September 22 through September 25 and returned to within setpoint range on September 26.

The following minor operational and setpoint issues were investigated and resolved during the third quarter of 2023:

- The water level in APW-2 exceeded setpoint range several times between July 27 and August 25 due to heavy rain. The water level returned to within setpoint range on August 26.
- The water level in APW-2 exceeded setpoint range on September 7 due to heavy rain and returned to within setpoint range on September 8.
- The water level in PW-1U exceeded setpoint range from September 7 through September 20 due to a pump fault. The pump was repaired and the water level returned to within setpoint range on September 21.

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.

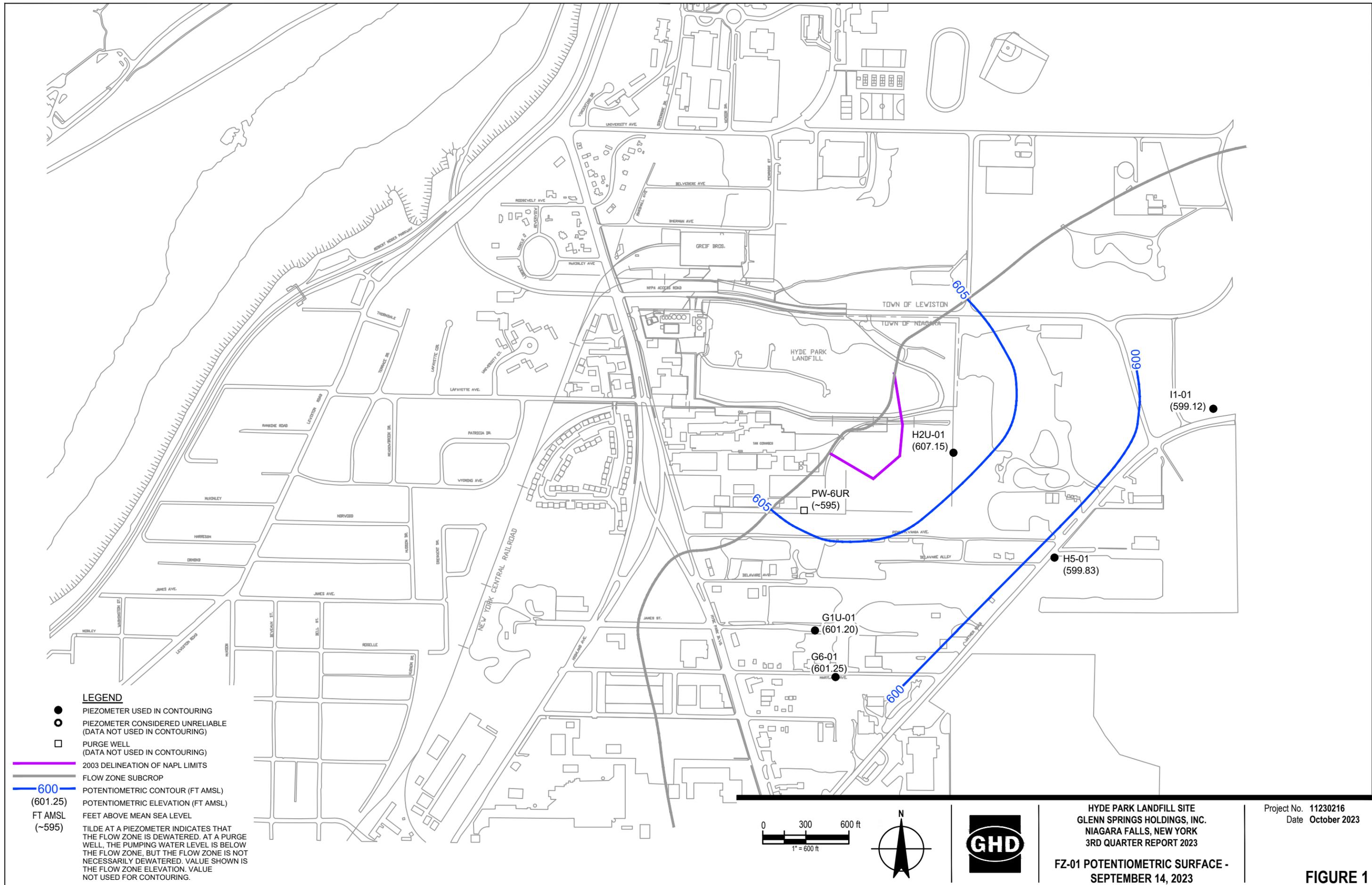


Joe Branch
Project Manager
231-670-6809 Cell

JB/9
Encl.

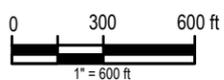
cc: B. McPherson NYSDEC
J. Robinson, NYSDOH

J. Pentilchuk, GHD
M. Popek, GHD



LEGEND

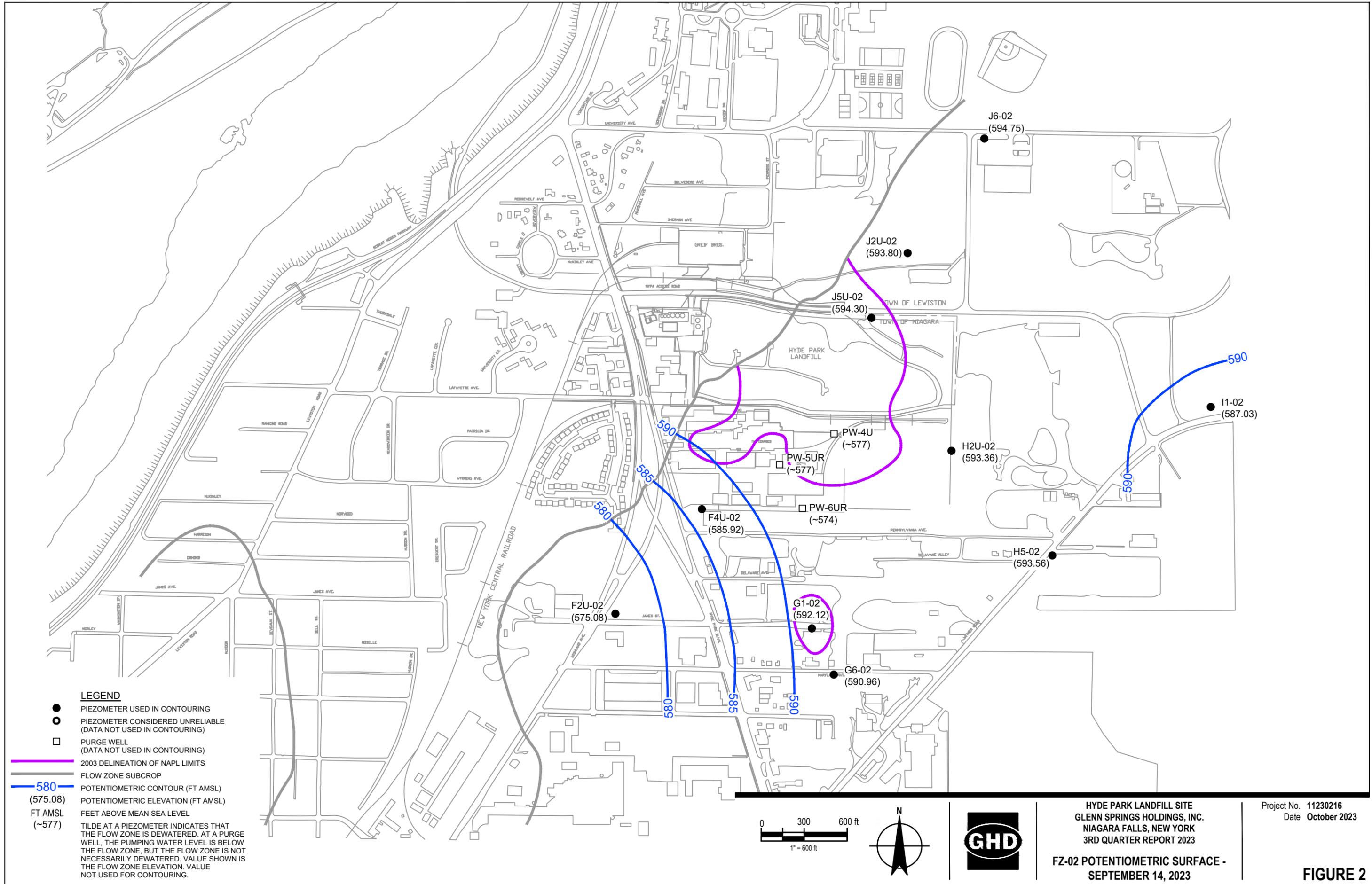
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- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 600 POTENTIOMETRIC CONTOUR (FT AMSL)
- (601.25) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- ~595 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. VALUE NOT USED FOR CONTOURING.



HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 3RD QUARTER REPORT 2023
 FZ-01 POTENTIOMETRIC SURFACE -
 SEPTEMBER 14, 2023

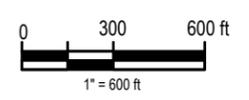
Project No. 11230216
 Date October 2023

FIGURE 1



LEGEND

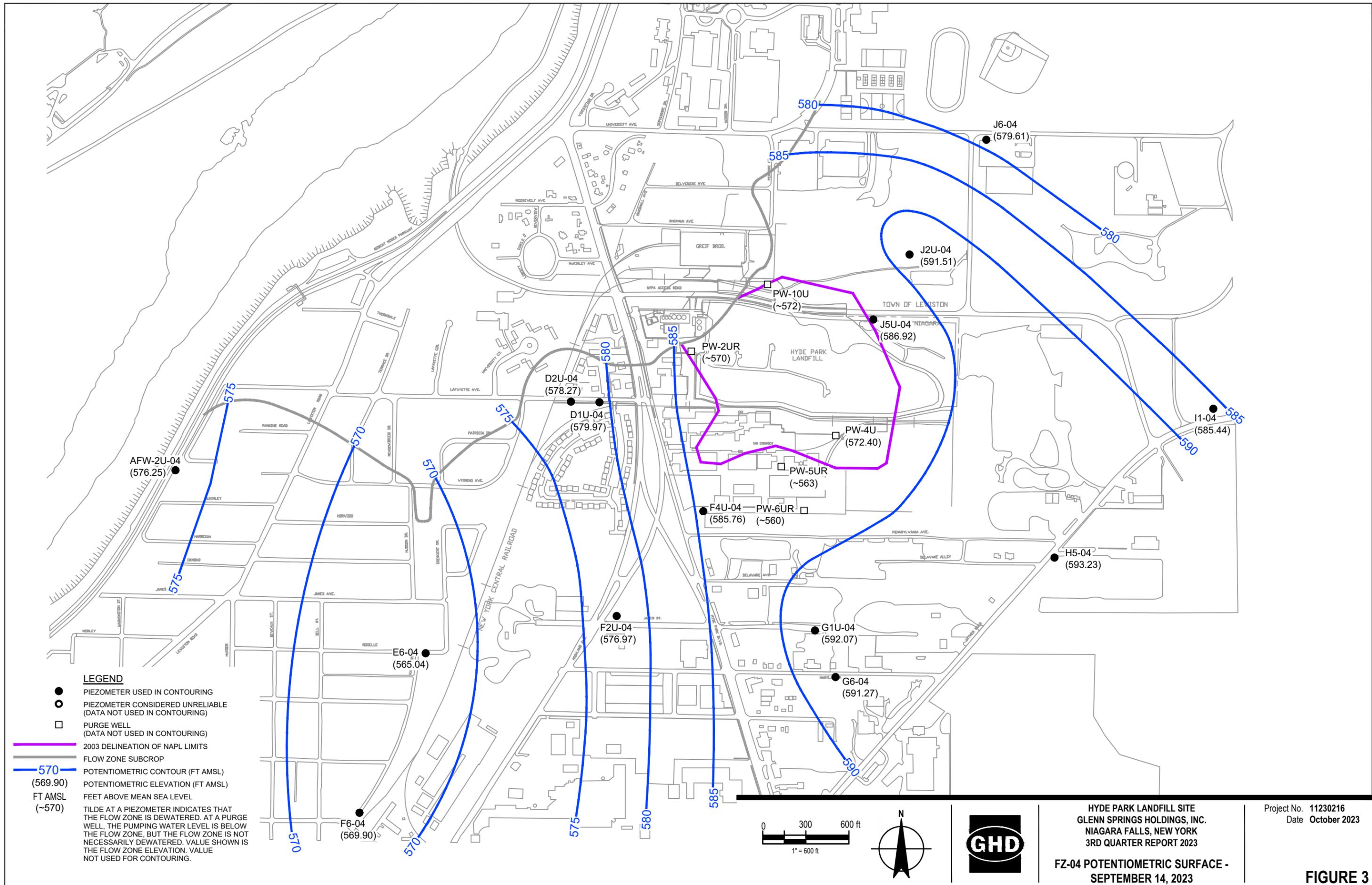
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 580 POTENTIOMETRIC CONTOUR (FT AMSL)
- 585 POTENTIOMETRIC ELEVATION (FT AMSL)
- 590 POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- ~ 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. VALUE NOT USED FOR CONTOURING.

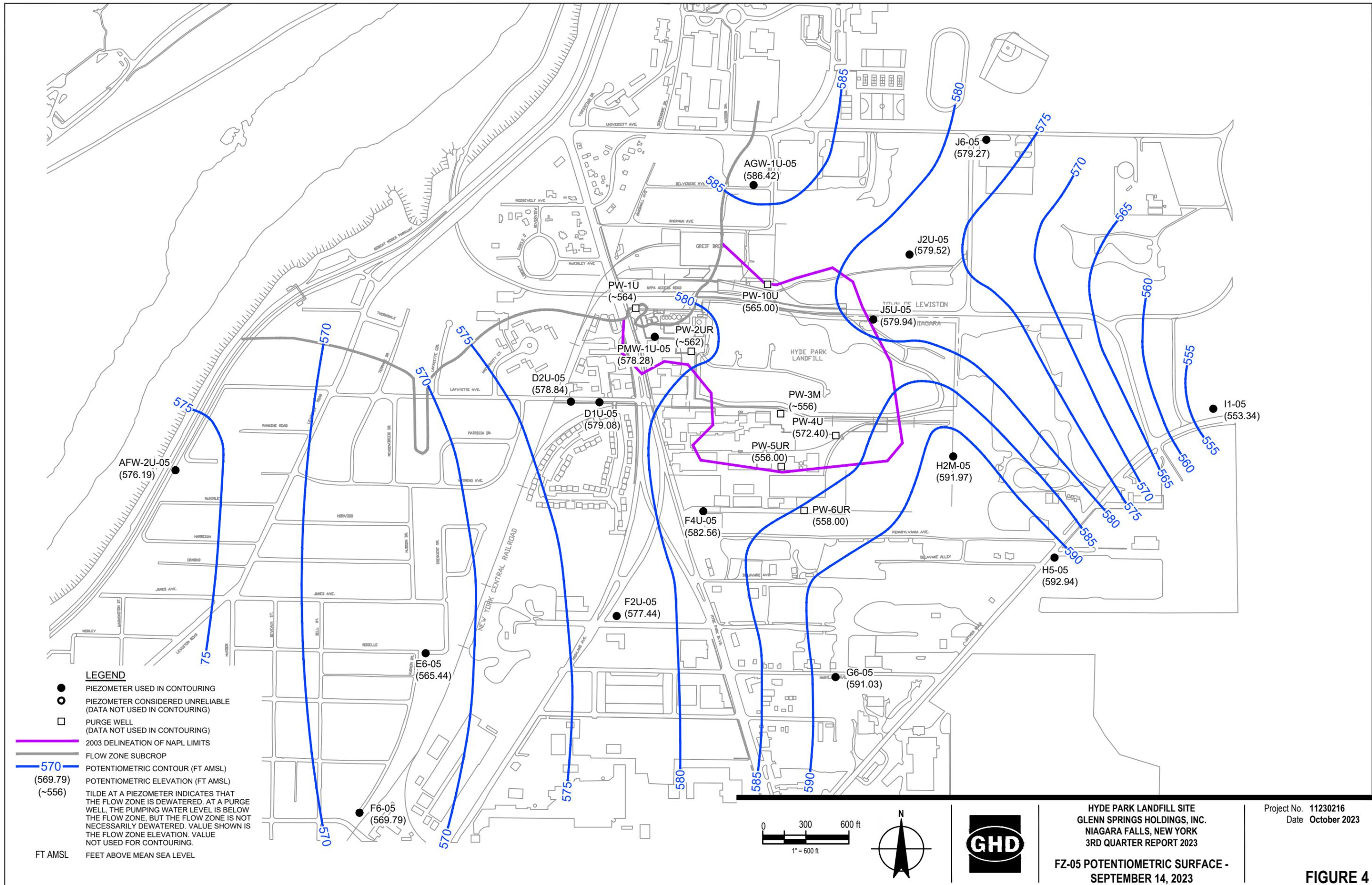


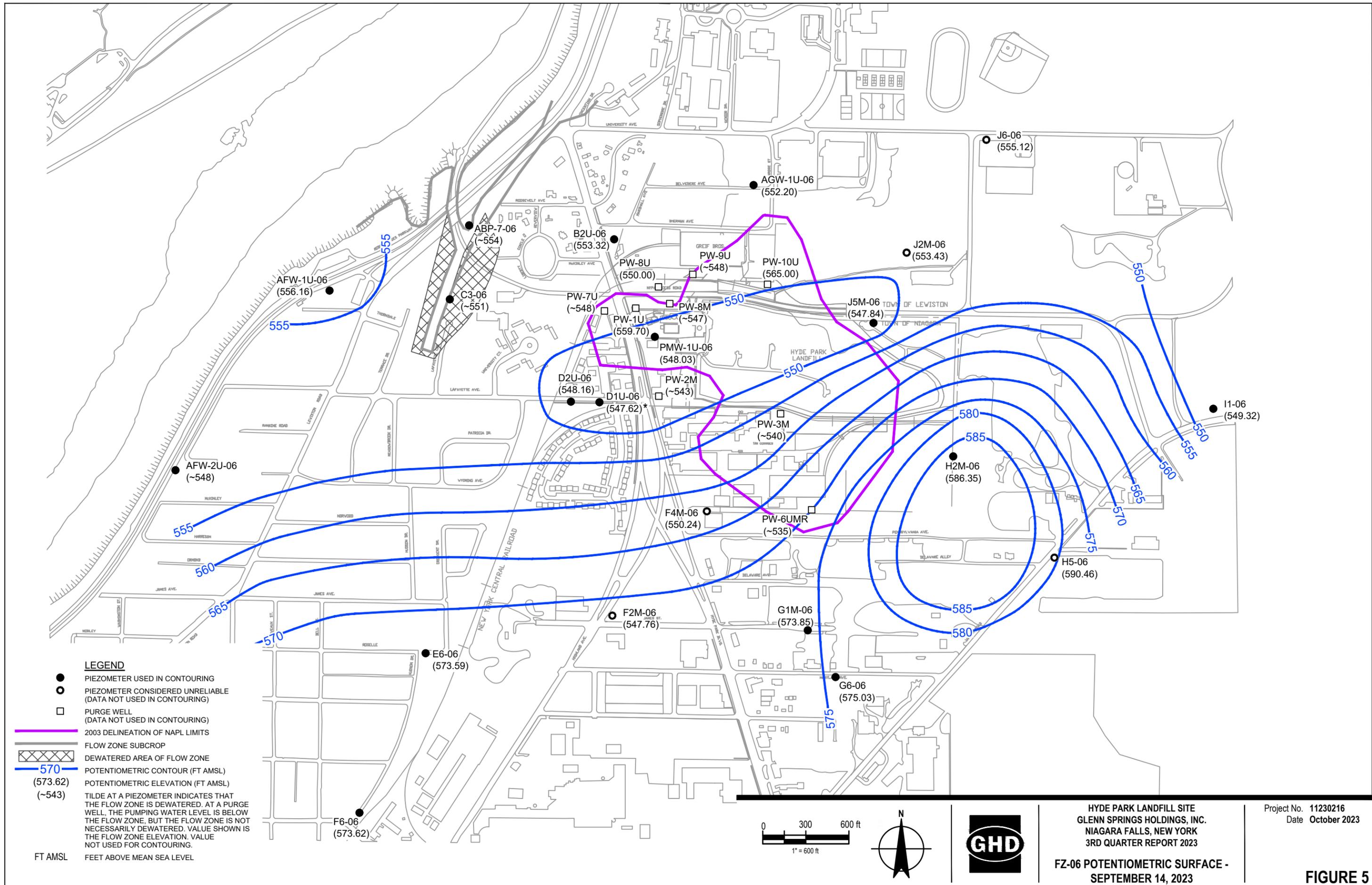
HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 3RD QUARTER REPORT 2023
**FZ-02 POTENTIOMETRIC SURFACE -
 SEPTEMBER 14, 2023**

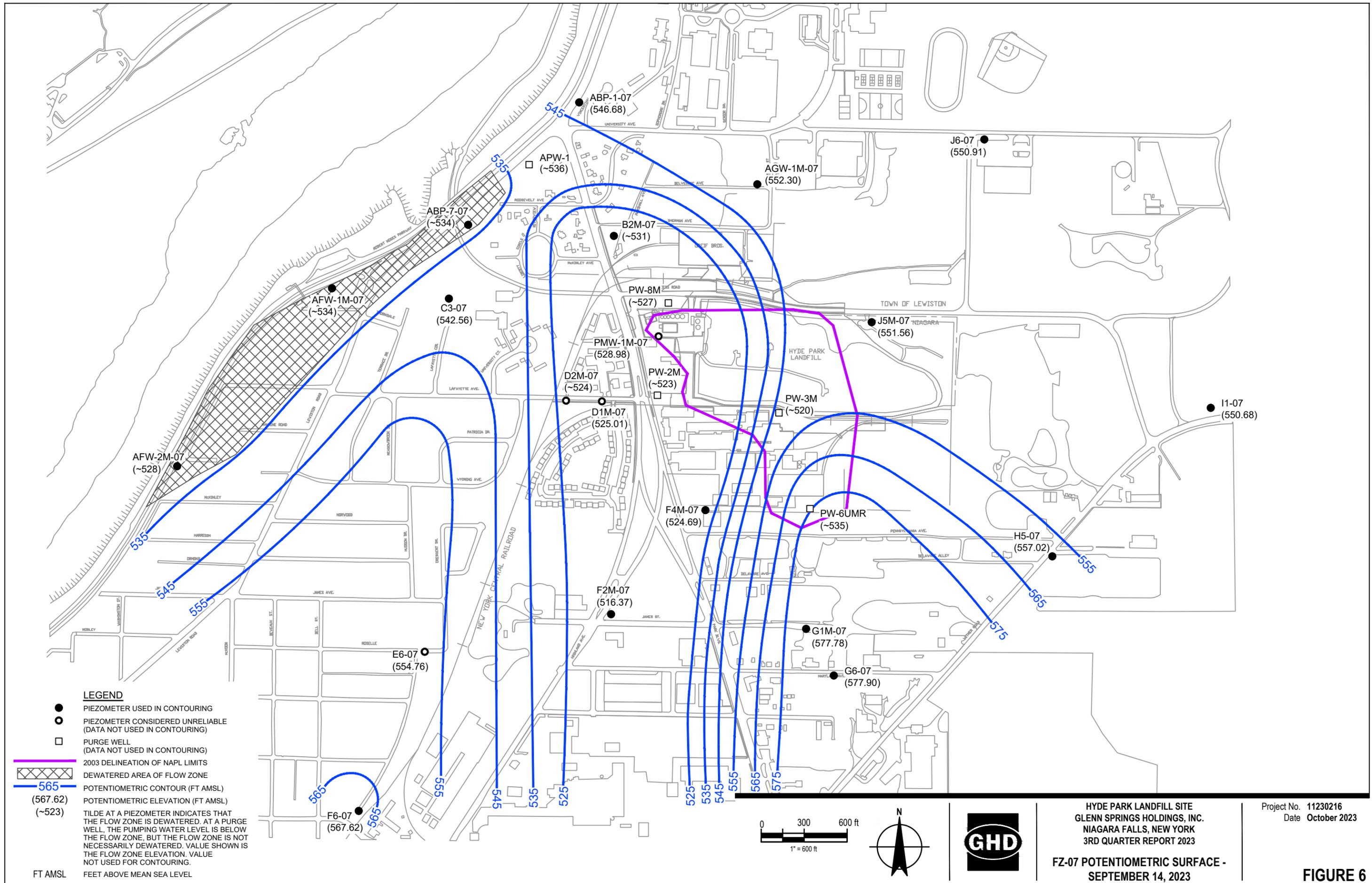
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 Date October 2023

FIGURE 2





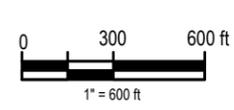




LEGEND

- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- ▭ 2003 DELINEATION OF NAPL LIMITS
- ▨ DEWATERED AREA OF FLOW ZONE
- 565 POTENTIOMETRIC CONTOUR (FT AMSL)
- (567.62) POTENTIOMETRIC ELEVATION (FT AMSL)
- (~523) 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. VALUE NOT USED FOR CONTOURING.

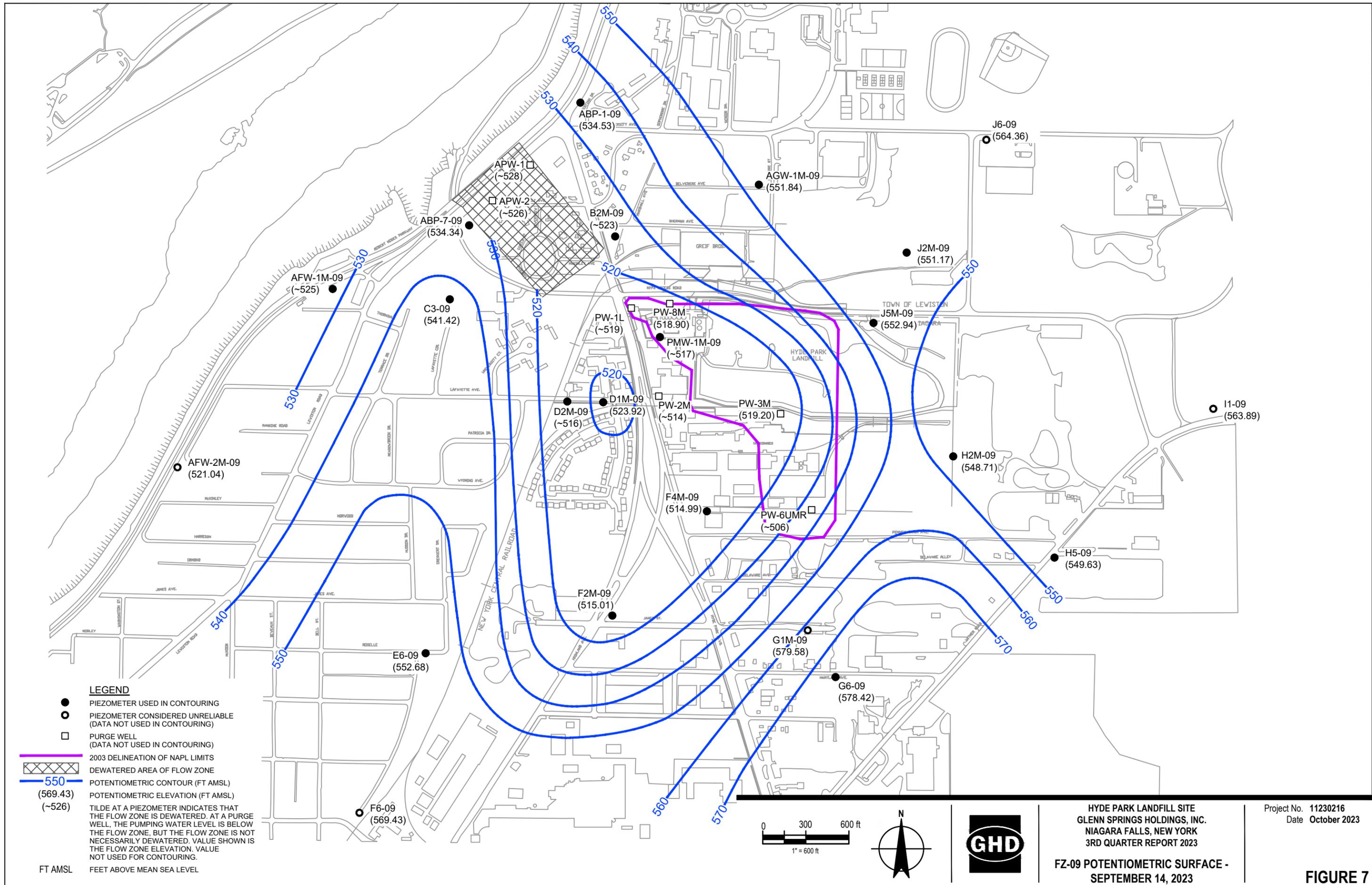
FT AMSL FEET ABOVE MEAN SEA LEVEL

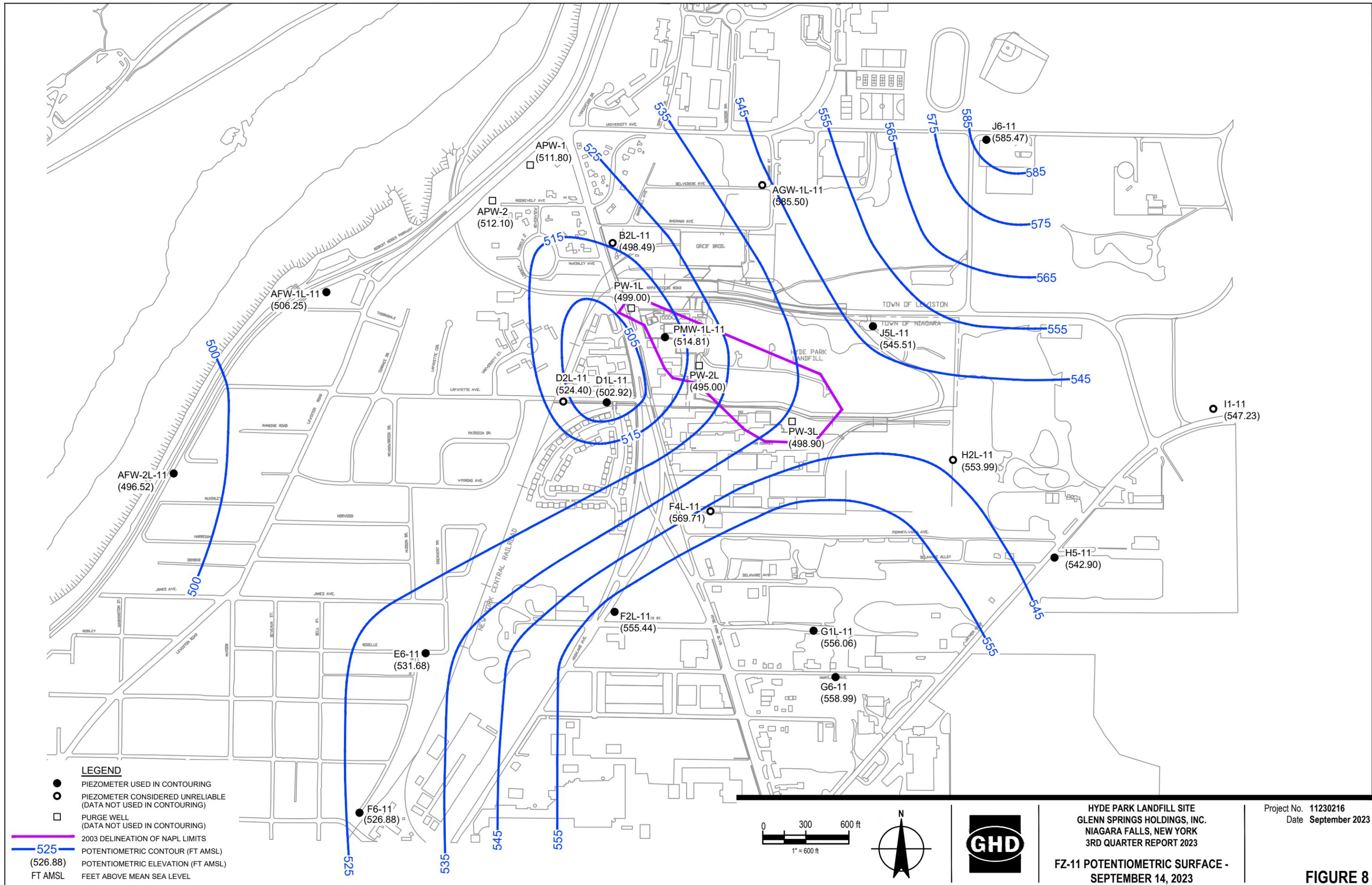


HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 3RD QUARTER REPORT 2023
**FZ-07 POTENTIOMETRIC SURFACE -
 SEPTEMBER 14, 2023**

Project No. 11230216
 Date October 2023

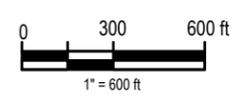
FIGURE 6





LEGEND

- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- 525 POTENTIOMETRIC CONTOUR (FT AMSL)
- (526.88) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL

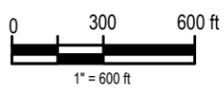
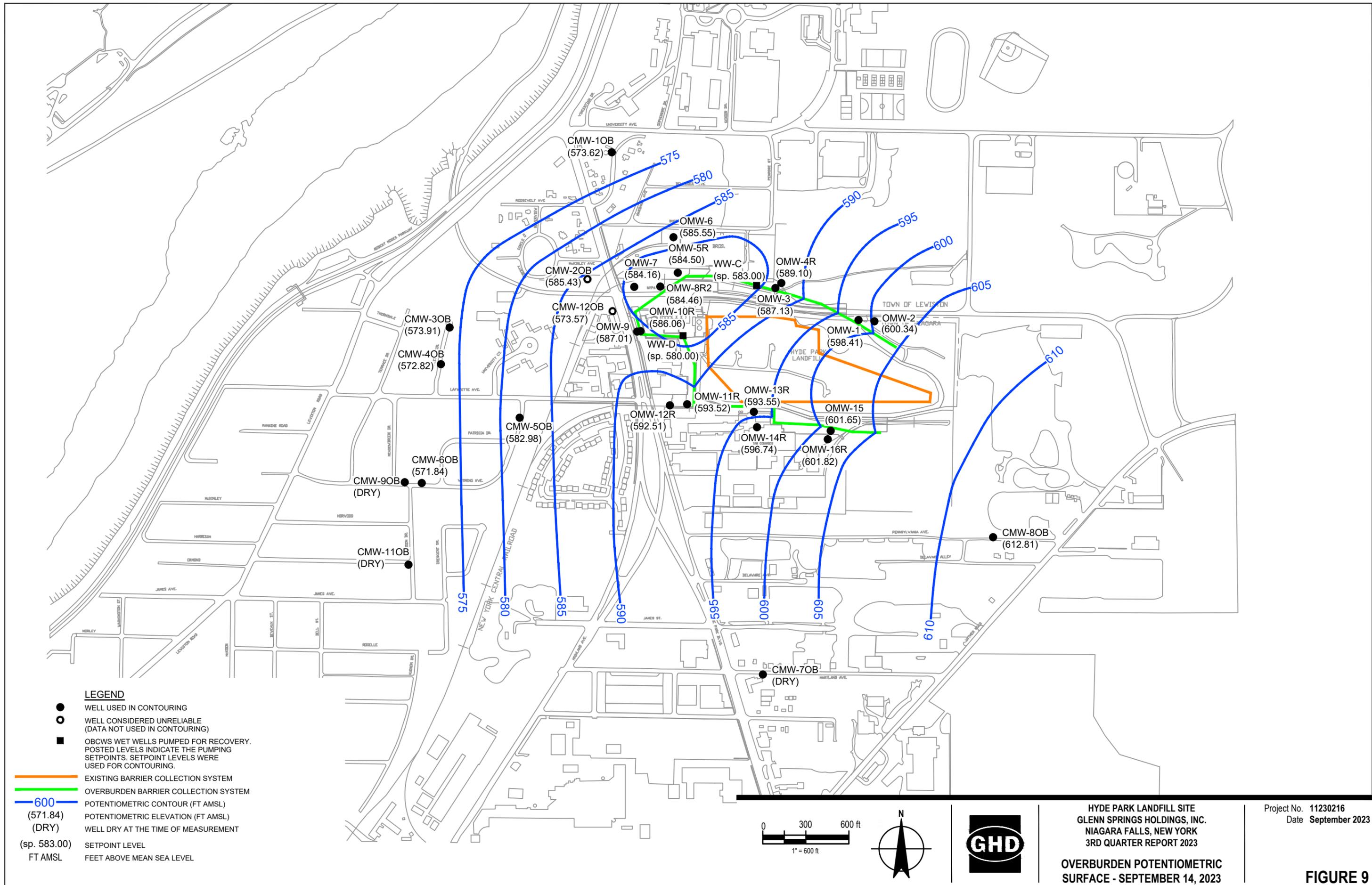


HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 3RD QUARTER REPORT 2023
**FZ-11 POTENTIOMETRIC SURFACE -
 SEPTEMBER 14, 2023**

Project No. 11230216
 Date September 2023

FIGURE 8

Filename: \\ghdnet\ghd\US\Niagara Falls\Projects\56411230216\Digital_Design\ACAD\Figures\LTR-Wurtz-Zwack00111230216-GHD-00-00-LTR-EN-D108_WA-Wurtz-Zwack001.dwg
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HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 3RD QUARTER REPORT 2023

OVERBURDEN POTENTIOMETRIC SURFACE - SEPTEMBER 14, 2023

Project No. 11230216
 Date September 2023

FIGURE 9

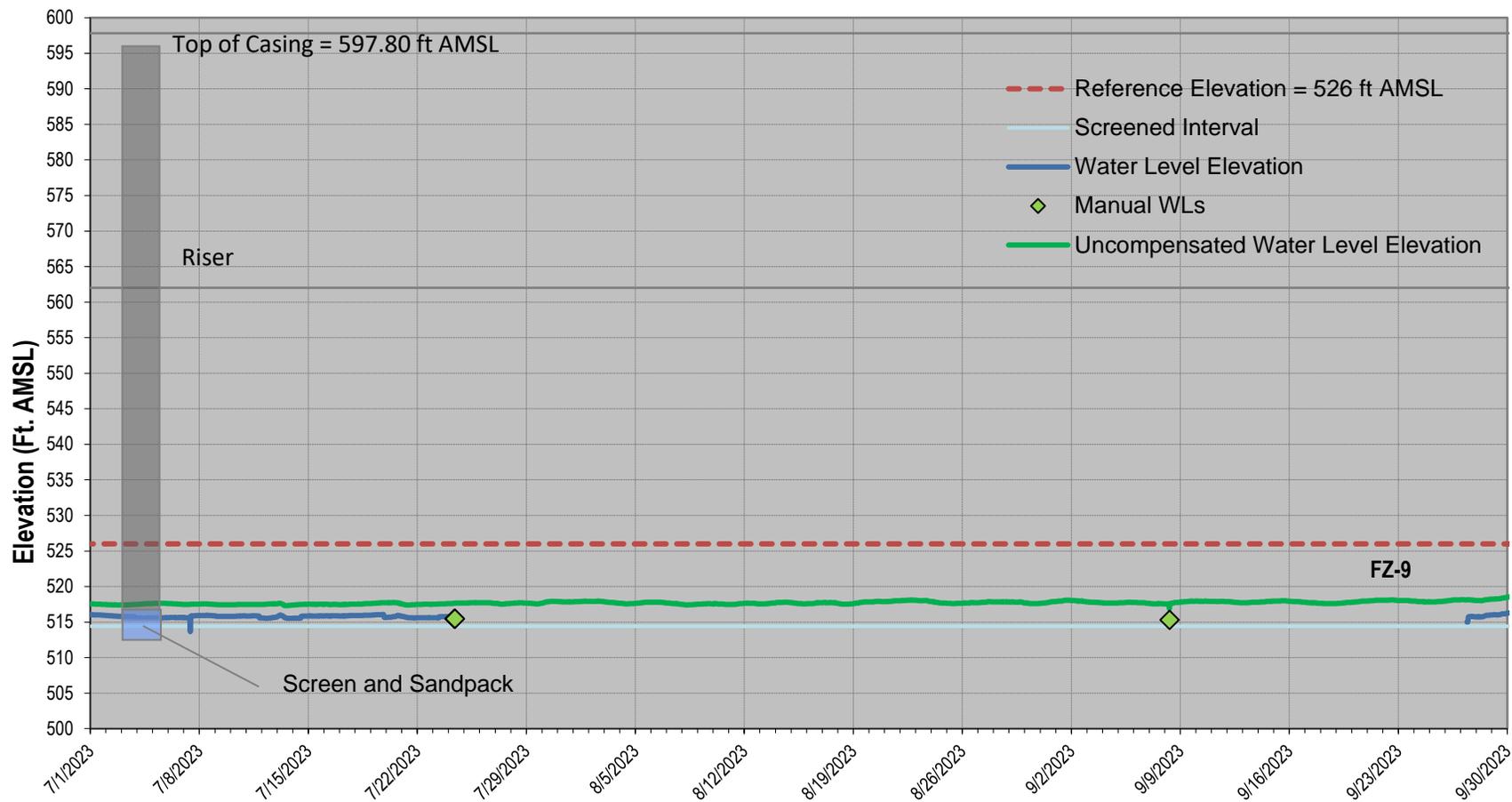


figure 10

PMW-1M-09 3rd Quarter 2023 - Hourly Water Level Elevation
 3rd Quarter Report
 Hyde Park Landfill Site
 Glenn Springs Holdings, Inc.

**Groundwater Elevation Summary
Third Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Overburden			
CMW-2OB	590.79	5.36	585.43
CMW-3OB	582.13	8.22	573.91
CMW-4OB	574.28	1.46	572.82
CMW-5OB	583.43	0.45	582.98
CMW-6OB	571.89	0.05	571.84
CMW-7OB	611.00	Dry	-
CMW-8OB	616.11	3.30	612.81
CMW-9OB	571.76	Dry	-
CMW-1OB	576.80	3.18	573.62
CMW-11OB	572.85	Dry	-
CMW-12OB	594.74	21.17	573.57
MH20	605.87	4.64	601.23
MH21	599.77	6.08	593.69
MH22	593.37	Dry	-
MH23	587.05	Dry	-
MH24	582.57	8.57	574.00
MH25	583.82	8.21	575.61
MH26	584.48	8.97	575.51
MH27	586.12	10.70	575.42
MH28	585.23	16.48	568.75
MH29	604.58	15.07	589.51
MH30	599.49	10.04	589.45
MH31	590.10	9.56	580.54
MH32	592.01	9.65	582.36
MH33	592.51	8.75	583.76
MH34	598.34	7.07	591.27
MH35	605.69	6.55	599.14
MH35A	605.69	7.62	598.07
OMW-1	605.28	6.87	598.41
OMW-2	605.99	5.65	600.34
OMW-3	598.63	11.50	587.13
OMW-4R	601.17	12.07	589.10
OMW-5R	591.31	6.81	584.50
OMW-6	587.62	2.07	585.55
OMW-7	592.74	8.58	584.16
OMW-8R2	594.67	10.21	584.46
OMW-9	595.27	8.26	587.01
OMW-10R	595.13	9.07	586.06
OMW-11R	597.52	4.00	593.52
OMW-12R	596.71	4.20	592.51
OMW-13R	601.50	7.95	593.55
OMW-14R	599.64	2.90	596.74
OMW-15	607.48	5.83	601.65
OMW-16R	607.62	5.80	601.82
SC-2	625.61	22.52	603.09
SC-3	638.72	39.58	599.14
SC-4	639.35	39.35	600.00
SC-5	634.07	31.69	602.38
SC-6	631.15	19.22	611.93

**Groundwater Elevation Summary
Third Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Shallow Bedrock			
CMW-1SH	576.11	13.21	562.90
CMW-2SH	590.51	20.28	570.23
CMW-3SH	581.91	27.89	554.02
CMW-4SH	574.16	7.61	566.55
CMW-5SH	583.36	6.47	576.89
CMW-6SH	572.05	10.27	561.78
CMW-7SH	610.58	12.65	597.93
CMW-8SH	615.95	9.63	606.32
CMW-9SH	571.96	12.58	559.38
CMW-11SH	573.21	8.45	564.76
CMW-12SH	597.02	27.03	569.99
Flow Zone 1			
G1U-01	617.08	15.88	601.20
G6-01	609.24	7.99	601.25
H2U-01	620.92	13.77	607.15
H5-01	617.61	17.78	599.83
I1-01	625.58	26.46	599.12
Flow Zone 2			
F2U-02	599.89	24.81	575.08
F4U-02	602.32	16.40	585.92
G1-02	616.86	24.74	592.12
G6-02	608.65	17.69	590.96
H2U-02	620.88	27.52	593.36
H5-02	617.47	23.91	593.56
I1-02	625.47	38.44	587.03
J2U-02	609.66	15.86	593.80
J5U-02	606.21	11.91	594.30
J6-02	609.23	14.48	594.75
Flow Zone 4			
AFW-2U-04	593.48	17.23	576.25
D1U-04	593.77	13.80	579.97
D2U-04	590.65	12.38	578.27
E6-04	578.23	13.19	565.04
F2U-04	599.76	22.79	576.97
F4U-04	602.19	16.43	585.76
F6-04	588.06	18.16	569.90
G1U-04	616.96	24.89	592.07
G6-04	609.15	17.88	591.27
H5-04	617.40	24.17	593.23
I1-04	625.30	39.86	585.44
J2U-04	609.42	17.91	591.51
J5U-04	606.05	19.13	586.92
J6-04	609.12	29.51	579.61

**Groundwater Elevation Summary
Third Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 5			
AFW-2U-05	593.33	17.14	576.19
AGW-1U-05	591.80	5.38	586.42
D1U-05	593.51	14.43	579.08
D2U-05	590.56	11.72	578.84
E6-05	578.04	12.60	565.44
F2U-05	599.64	22.20	577.44
F4U-05	602.06	19.50	582.56
F6-05	587.85	18.06	569.79
G6-05	609.13	18.10	591.03
H2M-05	621.59	29.62	591.97
H5-05	617.31	24.37	592.94
I1-05	625.25	71.91	553.34
J2U-05	609.30	29.78	579.52
J5U-05	605.87	25.93	579.94
J6-05	609.02	29.75	579.27
PMW-1U-05	598.00	19.72	578.28
Flow Zone 6			
ABP-7-06	575.78	Dry	-
AFW-1U-06	571.83	15.67	556.16
AFW-2U-06	593.22	Dry	-
AGW-1U-06	591.66	39.46	552.20
B2U-06	589.29	35.97	553.32
C3-06	585.78	Dry	-
D1U-06	593.25	45.63	547.62
D2U-06	590.38	42.22	548.16
E6-06	577.99	4.40	573.59
F2M-06	599.06	51.30	547.76
F4M-06	602.05	51.81	550.24
F6-06	587.84	14.22	573.62
G1M-06	616.75	42.90	573.85
G6-06	609.09	34.06	575.03
H2M-06	621.42	35.07	586.35
H5-06	617.17	26.71	590.46
I1-06	625.15	75.83	549.32
J2M-06	608.94	55.51	553.43
J5M-06	606.22	58.38	547.84
J6-06	608.93	53.81	555.12
PMW-1U-06	597.92	49.89	548.03

**Groundwater Elevation Summary
Third Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 7			
ABP-1-07	575.20	28.52	546.68
ABP-7-07	575.73	42.48	533.25
AFW-1M-07	571.41	Dry	-
AFW-2M-07	593.44	66.95	526.49
AGW-1M-07	592.91	40.61	552.30
B2M-07	589.52	Dry	-
C3-07	585.62	43.06	542.56
D1M-07	594.15	69.14	525.01
D2M-07	590.77	Dry	-
E6-07	577.91	23.15	554.76
F2M-07	598.91	82.54	516.37
F4M-07	601.91	77.22	524.69
F6-07	587.68	20.06	567.62
G1M-07	616.68	38.90	577.78
G6-07	609.06	31.16	577.90
H5-07	617.05	60.03	557.02
I1-07	625.14	74.46	550.68
J5M-07	606.07	54.51	551.56
J6-07	608.85	57.94	550.91
PMW-1M-07	598.50	69.52	528.98
Flow Zone 9			
ABP-1-09	575.19	40.66	534.53
ABP-7-09	575.67	41.33	534.34
AFW-1M-09	571.12	46.57	524.55
AFW-2M-09	593.32	72.28	521.04
AGW-1M-09	592.75	40.91	551.84
B2M-09	589.34	Dry	-
C3-09	585.00	43.58	541.42
D1M-09	594.02	70.10	523.92
D2M-09	590.66	75.45	515.21
E6-09	577.82	25.14	552.68
F2M-09	598.71	83.70	515.01
F4M-09	601.79	86.80	514.99
F6-09	587.53	18.10	569.43
G1M-09	616.58	37.00	579.58
G6-09	608.98	30.56	578.42
H2M-09	621.32	72.61	548.71
H5-09	616.93	67.30	549.63
I1-09	624.91	61.02	563.89
J2M-09	608.77	57.60	551.17
J5M-09	605.82	52.88	552.94
J6-09	608.76	44.40	564.36
PMW-1M-09	598.34	Dry	-

**Groundwater Elevation Summary
Third Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 11			
AFW-1L-11	572.10	65.85	506.25
AFW-2L-11	593.43	96.91	496.52
AGW-1L-11	592.71	7.21	585.50
B2L-11	589.65	91.16	498.49
D1L-11	593.80	90.88	502.92
D2L-11	590.21	65.81	524.40
E6-11	577.72	46.04	531.68
F2L-11	598.94	43.50	555.44
F4L-11	602.22	32.51	569.71
F6-11	587.40	60.52	526.88
G1L-11	616.84	60.78	556.06
G6-11	608.89	49.90	558.99
H2L-11	620.73	66.74	553.99
H5-11	616.81	73.91	542.90
I1-11	624.75	77.52	547.23
J5L-11	607.20	61.69	545.51
J6-11	608.68	23.21	585.47
PMW-1L-11	598.84	84.03	514.81
Purge Wells			
APW-1	564.98	53.18	511.80
APW-2	569.89	57.79	512.10
PW-1L	593.16	94.16	499.00
PW-1U	593.50	33.80	559.70
PW-2L	597.29	102.29	495.00
PW-2M	596.61	85.61	511.00
PW-2UR	594.75	35.75	559.00
PW-3L	599.05	100.15	498.90
PW-3M	597.79	78.59	519.20
PW-4U	604.85	32.45	572.40
PW-5UR	601.31	45.31	556.00
PW-6UMR	609.31	106.31	503.00
PW-6UR	608.47	50.47	558.00
PW-7U	592.47	51.57	540.90
PW-8M	592.67	73.77	518.90
PW-8U	589.27	39.27	550.00
PW-9U	587.47	43.47	544.00
PW-10U	593.54	28.54	565.00

Notes:

- - Not applicable
- ft AMSL - Feet above mean sea level
- Dry - No water present at the time of measurement

**Leachate Treatment System Daily Effluent Monitoring Data
Third Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
07/01/23		
07/02/23		
07/03/23	7.3	48,000
07/04/23		
07/05/23	7.3	159,000
07/06/23	7.3	50,000
07/07/23	7.4	44,000
07/08/23		
07/09/23		
07/10/23		
07/11/23		
07/12/23	7.4	147,000
07/13/23	7.4	170,000
07/14/23		
07/15/23		
07/16/23		
07/17/23		
07/18/23	7.1	155,000
07/19/23	7.3	161,000
07/20/23		
07/21/23		
07/22/23		
07/23/23		
07/24/23		
07/25/23	7.8	144,000
07/26/23	7.4	151,000
07/27/23	7.3	96,000
07/28/23	7.3	171,000
07/29/23		
07/30/23		
07/31/23	7.2	164,000
08/01/23	7.3	184,000
08/02/23	7.3	169,000
08/03/23	7.3	57,000
08/04/23	7.3	35,000
08/05/23		
08/06/23		

**Leachate Treatment System Daily Effluent Monitoring Data
Third Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
08/07/23	7.4	114,000
08/08/23	7.5	168,000
08/09/23	7.4	55,000
08/10/23	7.3	34,000
08/11/23		
08/12/23		
08/13/23		
08/14/23	7.3	133,000
08/15/23	7.3	165,000
08/16/23	7.3	54,000
08/17/23	7.3	35,000
08/18/23		
08/19/23		
08/20/23		
08/21/23	7.4	246,000
08/22/23	7.4	164,000
08/23/23	7.4	56,000
08/24/23	7.5	33,000
08/25/23		
08/26/23		
08/27/23		
08/28/23		
08/29/23	7.4	46,000
08/30/23	7.4	159,000
08/31/23	7.4	155,000
09/01/23		
09/02/23		
09/03/23		
09/04/23		
09/05/23		
09/06/23	7.4	143,000
09/07/23	7.2	55,000
09/08/23		
09/09/23		
09/10/23		
09/11/23		
09/12/23		

**Leachate Treatment System Daily Effluent Monitoring Data
Third Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
09/13/23		
09/14/23	7.4	173,000
09/15/23	7.3	43,000
09/16/23		
09/17/23		
09/18/23		
09/19/23	7.2	165,000
09/20/23	7.5	152,000
09/21/23	7.3	35,000
09/22/23		
09/23/23		
09/24/23		
09/25/23		
09/26/23	7.4	112,000
09/27/23	7.4	53,000
09/28/23		
09/29/23		
09/30/23		
	Total	4,653,000

Notes:

su - Standard Unit
gal - Gallons

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Third Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	07/05/2023	07/12/2023	07/19/2023	07/26/2023	08/02/2023	08/09/2023
Volatiles								
	1,1,1-Trichloroethane	µg/L	1.0 U					
	1,1,2,2-Tetrachloroethane	µg/L	0.71 J	1.1	0.65 J	0.59 J	0.61 J	0.70 J
	1,1,2-Trichloroethane	µg/L	1.0 U					
	1,1-Dichloroethane	µg/L	3.9	4.8	3.4	3.3	3.2	4.0
	1,1-Dichloroethene	µg/L	1.0 U					
	1,2,4-Trichlorobenzene	µg/L	1.0 U					
	1,2-Dichlorobenzene	µg/L	1.0 U					
	1,2-Dichloroethane	µg/L	11	13	9.8	9.8	9.3	11
	1,2-Dichloropropane	µg/L	0.71 J	0.78 J	0.71 J	0.63 J	0.74 J	1.0
	1,3-Dichlorobenzene	µg/L	1.0 U					
	1,4-Dichlorobenzene	µg/L	1.0 U					
	2-Chlorotoluene	µg/L	1.0 U					
	3-Chlorotoluene	µg/L	1.0 U					
	4-Chlorotoluene	µg/L	1.0 U					
	Benzene	µg/L	20	21	20	21	21	24
	Bromodichloromethane	µg/L	1.0 U					
	Bromoform	µg/L	1.0 U					
	Bromomethane (Methyl bromide)	µg/L	1.0 U					
	Carbon disulfide	µg/L	6.0	9.6	2.2	10	2.5	7.3
	Carbon tetrachloride	µg/L	1.0 U					
	Chlorobenzene	µg/L	1.0 U					
	Chloroethane	µg/L	1.0 U					
	Chloroform (Trichloromethane)	µg/L	3.8	4.7	3.7	3.5	4.7	4.8
	Chloromethane (Methyl chloride)	µg/L	1.0 U					
	cis-1,2-Dichloroethene	µg/L	3.3	3.8	2.8	2.7	2.7	3.0
	cis-1,3-Dichloropropene	µg/L	1.0 U					
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U					
	Ethylbenzene	µg/L	1.0 U					
	m&p-Xylenes	µg/L	2.0 U					
	m-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Methylene chloride	µg/L	1.0 U					
	o-Monochlorobenzotrifluoride	µg/L	1.0 U					
	o-Xylene	µg/L	1.0 U					
	p-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Styrene	µg/L	1.0 U					
	Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U
	Toluene	µg/L	1.0 U					
	trans-1,2-Dichloroethene	µg/L	0.30 J	0.28 J	0.20 J	1.0 U	1.0 U	0.30 J
	trans-1,3-Dichloropropene	µg/L	1.0 U					
	Trichloroethene	µg/L	1.0 U	0.24 J				
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U					
	Vinyl acetate	µg/L	2.0 U					
	Vinyl chloride	µg/L	48	61	48	41	33	40
	Xylenes (total)	µg/L	3.0 U					
General Chemistry								
	Phenolics (total)	mg/L	0.0078	0.0062	0.0077	0.0073 U	0.0068	0.0104

Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Third Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	08/16/2023	08/23/2023	08/30/2023	09/06/2023	09/14/2023	09/20/2023	09/27/2023
Volatiles									
	1,1,1-Trichloroethane	µg/L	1.0 U						
	1,1,2,2-Tetrachloroethane	µg/L	0.58 J	0.53 J	0.66 J	0.71 J	0.68 J	0.55 J	0.59 J
	1,1,2-Trichloroethane	µg/L	1.0 U						
	1,1-Dichloroethane	µg/L	3.2	2.9	3.7	3.6	3.6	3.1	3.1
	1,1-Dichloroethene	µg/L	1.0 U						
	1,2,4-Trichlorobenzene	µg/L	1.0 U						
	1,2-Dichlorobenzene	µg/L	1.0 U						
	1,2-Dichloroethane	µg/L	8.8	9.0	9.6	11	10	9.2	9.9
	1,2-Dichloropropane	µg/L	0.79 J	0.70 J	0.77 J	0.85 J	0.72 J	0.71 J	0.74 J
	1,3-Dichlorobenzene	µg/L	1.0 U						
	1,4-Dichlorobenzene	µg/L	0.21 J	1.0 U					
	2-Chlorotoluene	µg/L	1.0 U						
	3-Chlorotoluene	µg/L	1.0 U						
	4-Chlorotoluene	µg/L	1.0 U						
	Benzene	µg/L	21	21	22	20	18	19	19
	Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
	Bromoform	µg/L	1.0 U						
	Bromomethane (Methyl bromide)	µg/L	1.0 U						
	Carbon disulfide	µg/L	1.1	1.2	1.4	0.88 J	1.6	1.1	1.2
	Carbon tetrachloride	µg/L	1.0 U						
	Chlorobenzene	µg/L	1.0 U						
	Chloroethane	µg/L	1.0 U						
	Chloroform (Trichloromethane)	µg/L	4.5	4.2	5.1	4.5	4.4	4.6	4.9
	Chloromethane (Methyl chloride)	µg/L	1.0 U						
	cis-1,2-Dichloroethene	µg/L	2.6	2.4	3.0	2.8	2.6	2.4	2.4
	cis-1,3-Dichloropropene	µg/L	1.0 U						
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U						
	Ethylbenzene	µg/L	1.0 U						
	m&p-Xylenes	µg/L	2.0 U						
	m-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Methylene chloride	µg/L	1.0 U						
	o-Monochlorobenzotrifluoride	µg/L	1.0 U						
	o-Xylene	µg/L	1.0 U						
	p-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Styrene	µg/L	1.0 U						
	Tetrachloroethene	µg/L	1.0 U						
	Toluene	µg/L	1.0 U						
	trans-1,2-Dichloroethene	µg/L	0.21 J	1.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U
	trans-1,3-Dichloropropene	µg/L	1.0 U						
	Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	0.66 J	1.0 U	1.0 U
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U						
	Vinyl acetate	µg/L	2.0 U						
	Vinyl chloride	µg/L	29	28	39	37	36	30	32
	Xylenes (total)	µg/L	3.0 U						
General Chemistry									
	Phenolics (total)	mg/L	0.0196	0.0143	0.0128	0.0121	0.0125	0.0084	0.0079

Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

Table 4

**Analytical Results Summary
Quarterly Sampling - Leachate Treatment System
Third Quarter - 2023
Hyde Park RRT Program**

Sample Location:	EFFLUENT	EFFLUENT
Sample ID:	HP 62723 EFF	HP 71923 EFF
Sample Date:	6/27/2023	7/19/2023

Parameters	Units		
Volatile Organic Compounds			
Vinyl chloride	µg/L	28.4	-
General Chemistry			
Phosphorus	mg/L	-	0.277

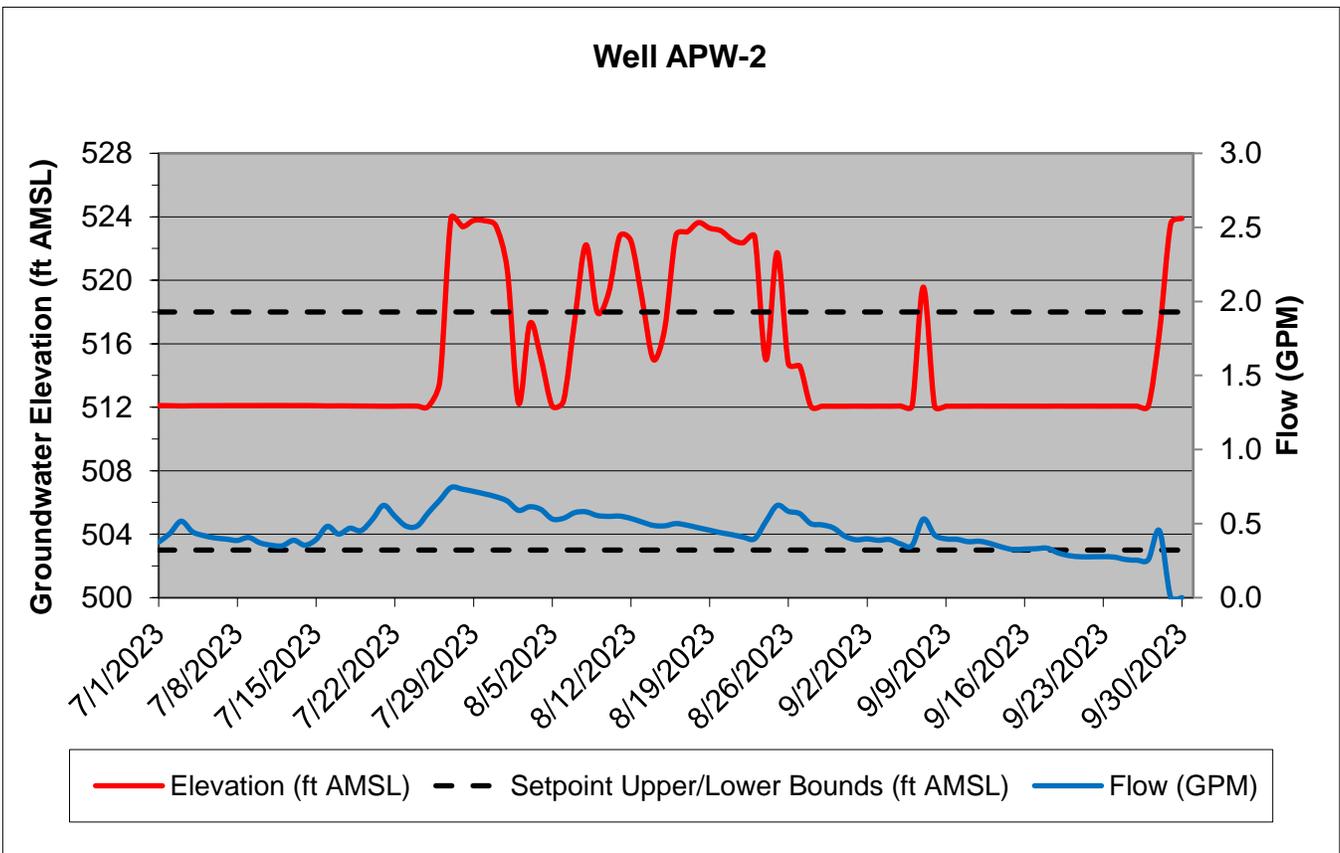
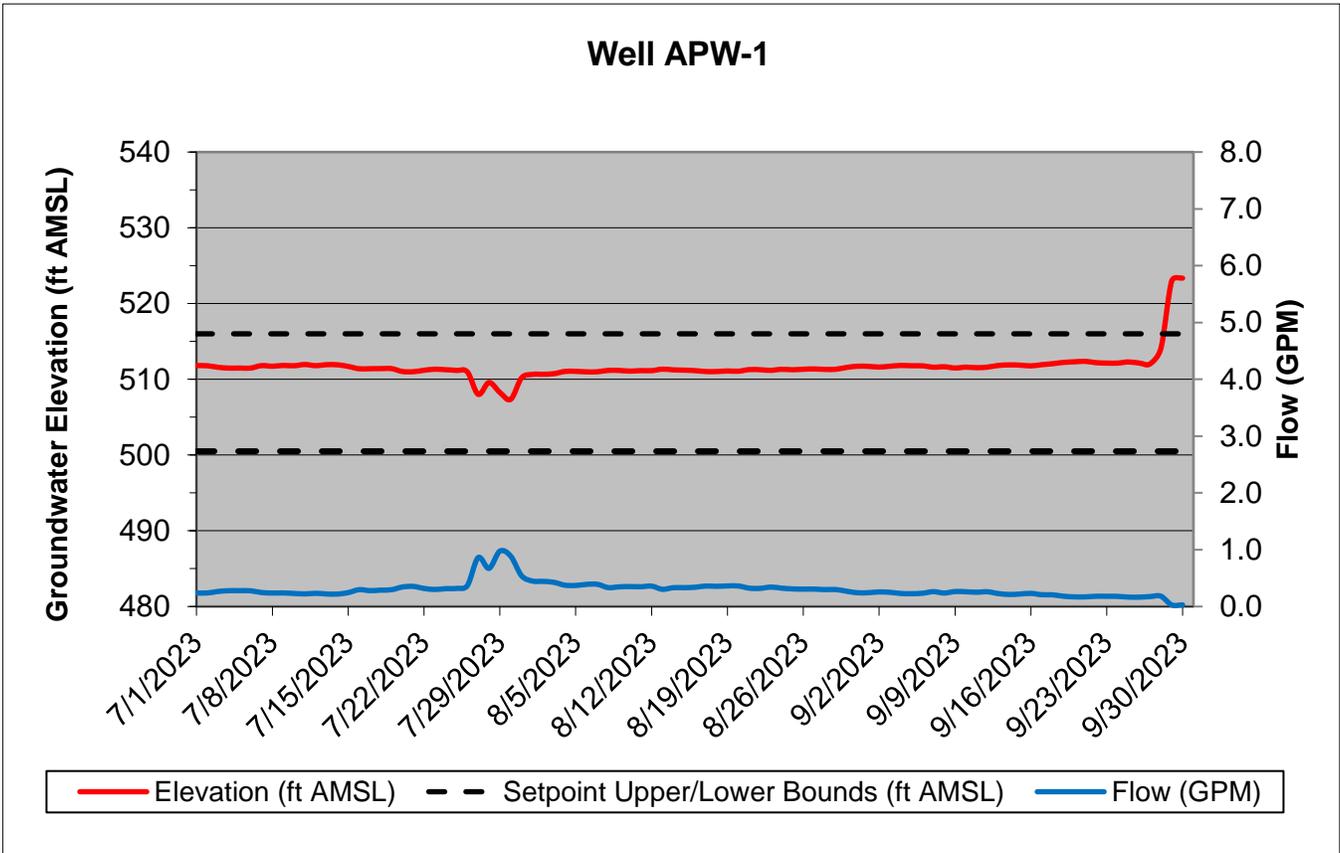
Notes:

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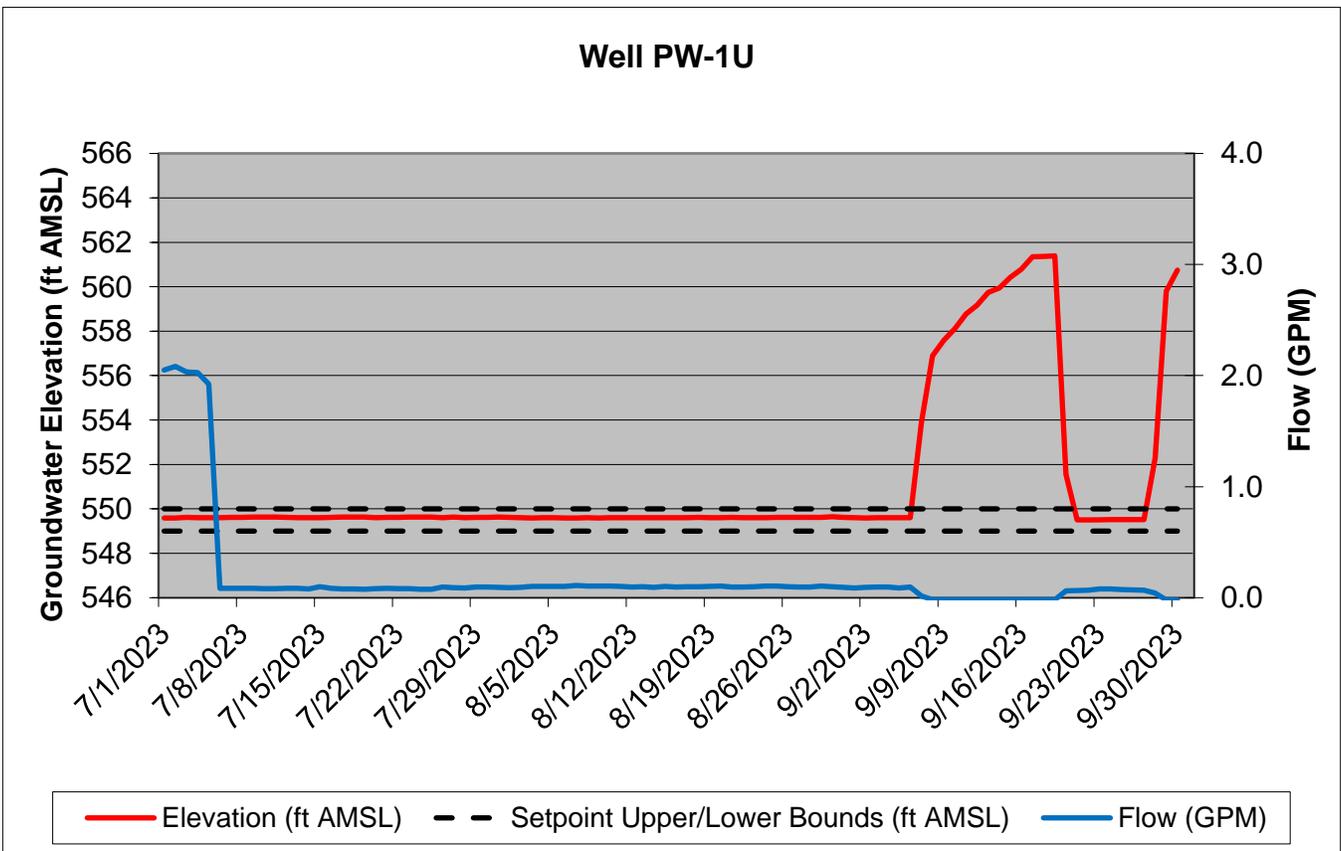
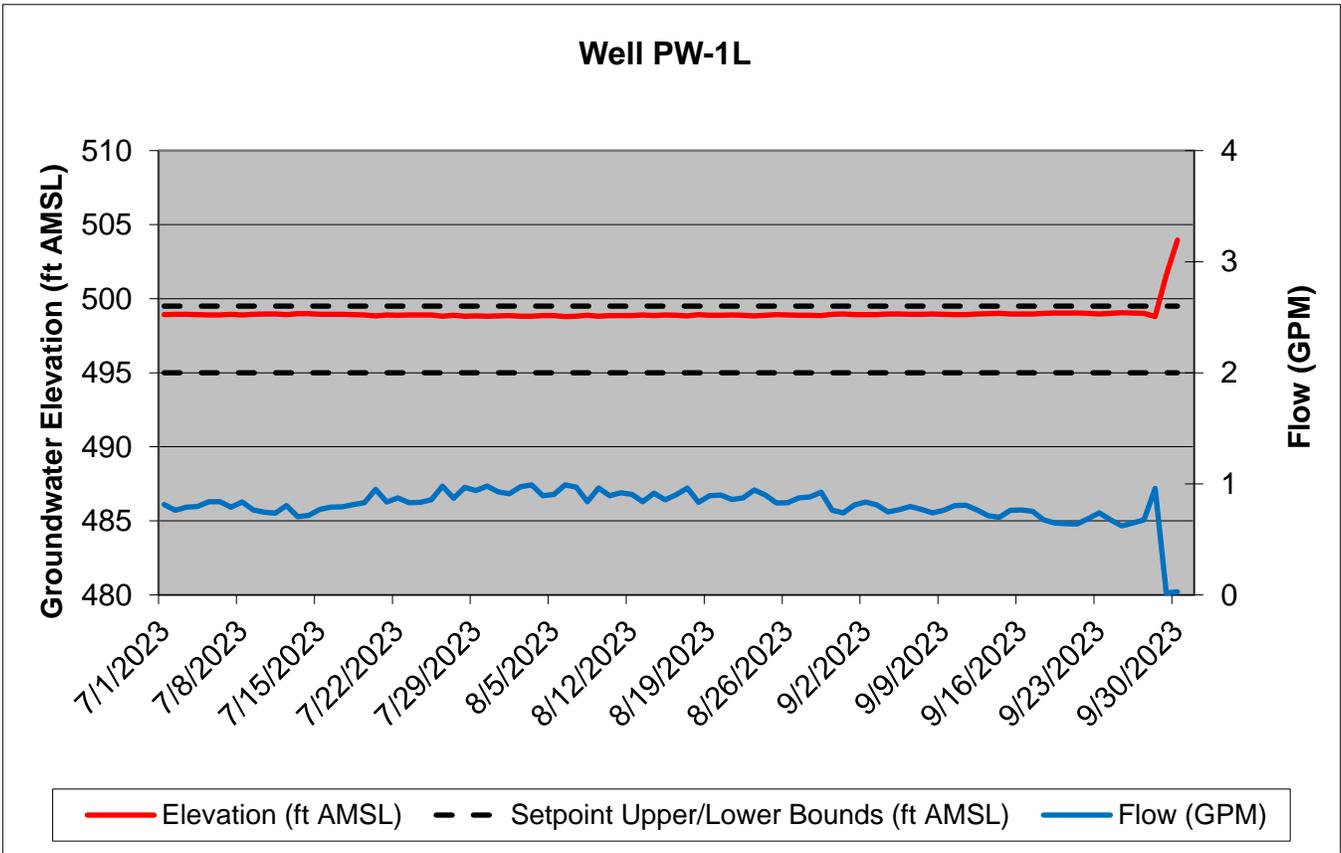
mg/L - Milligrams per liter

µg/L - Micrograms per liter

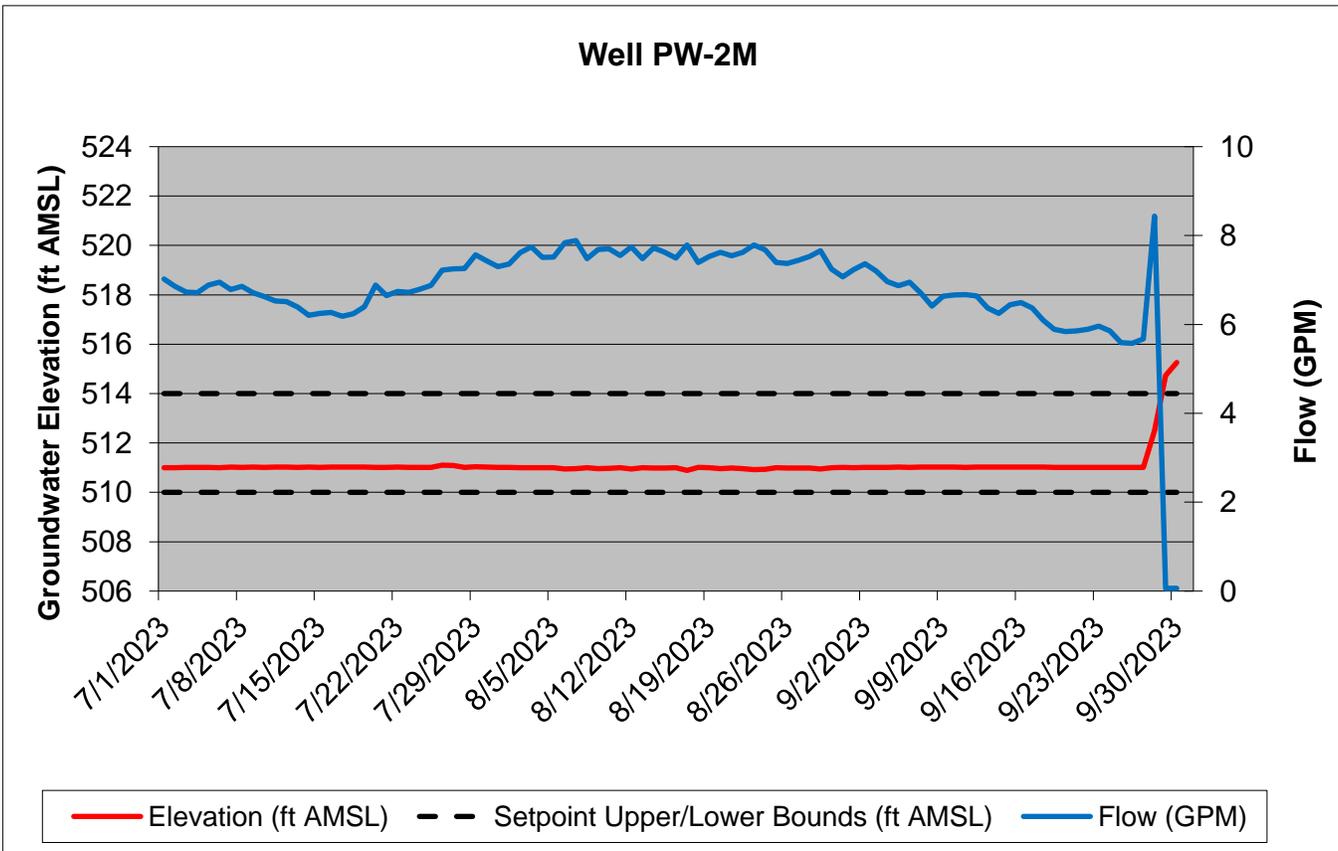
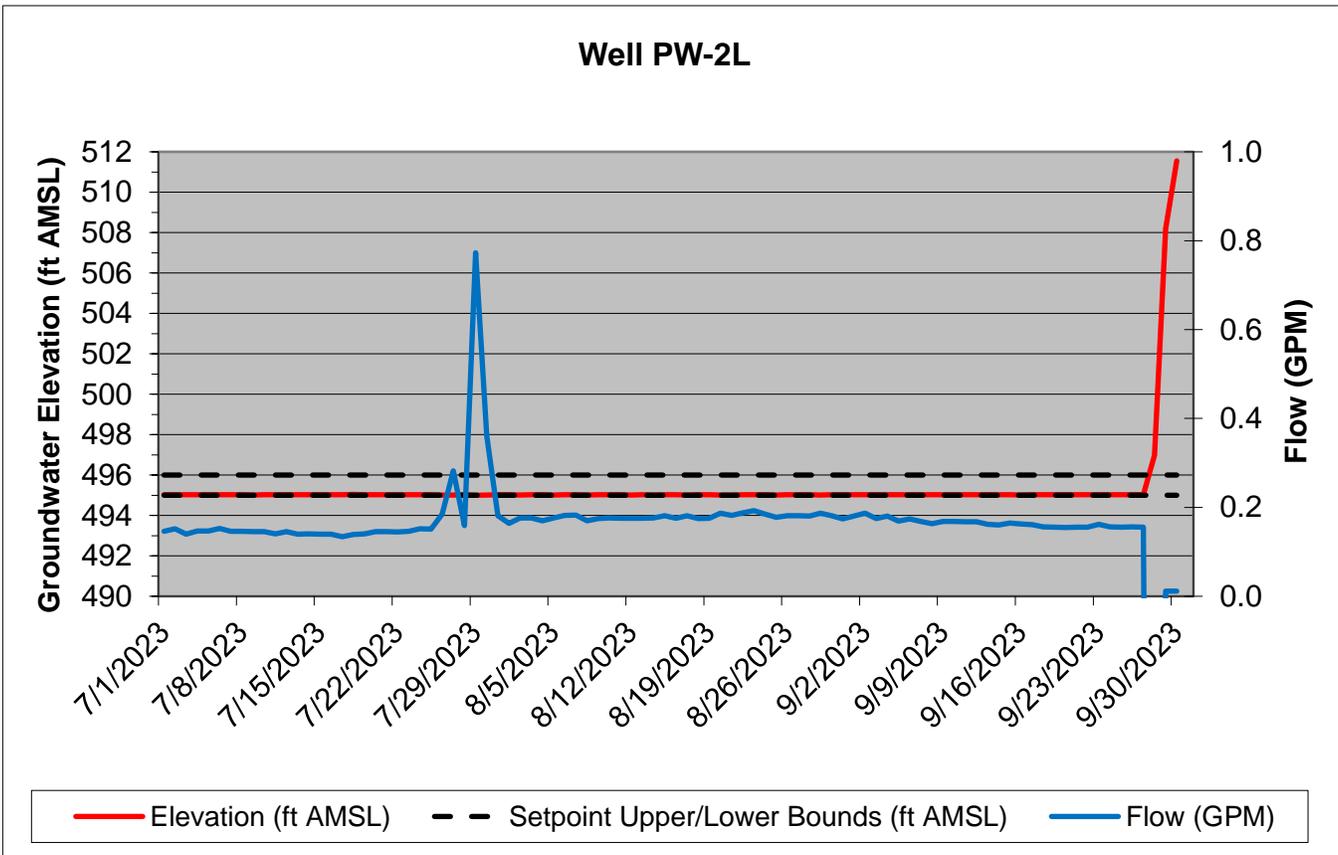
THIRD QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



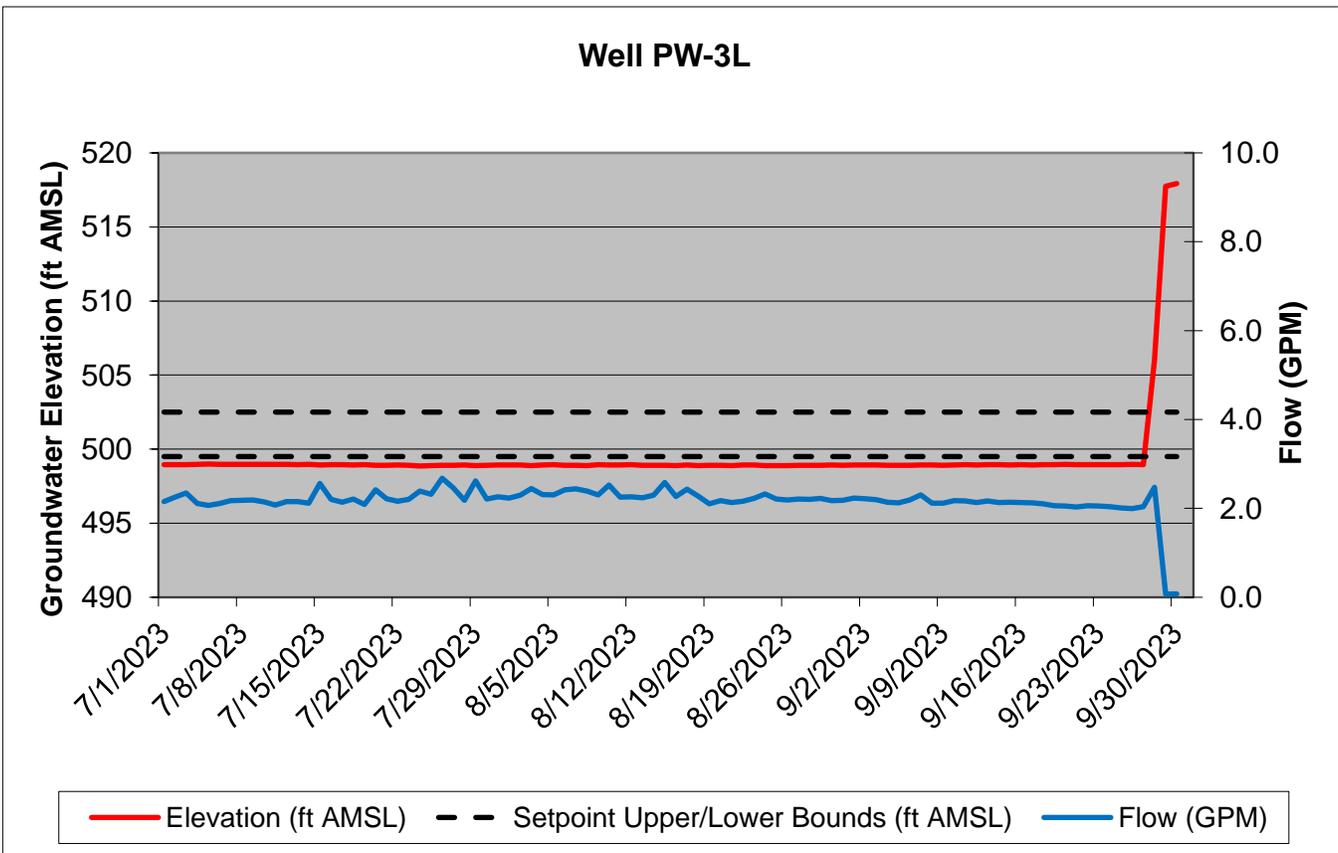
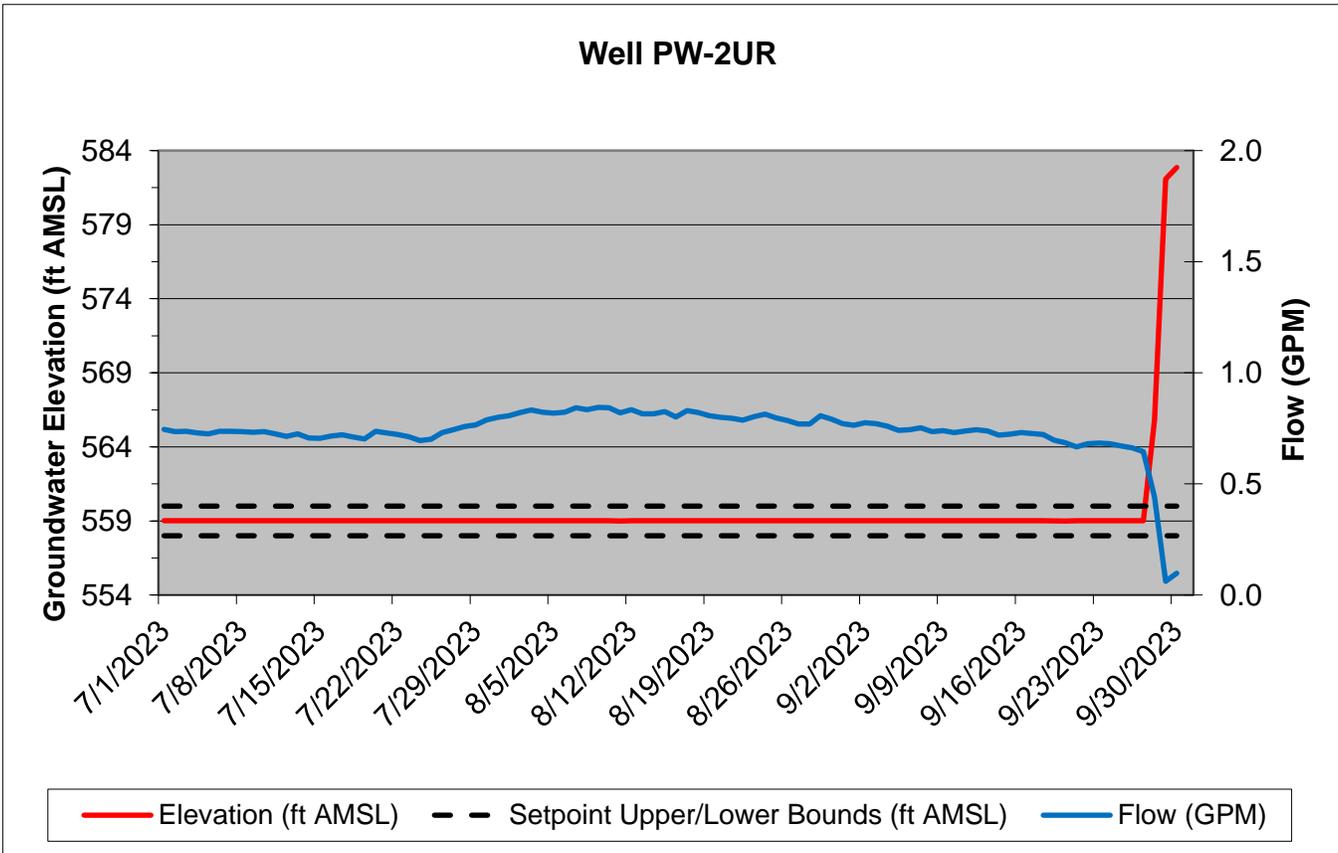
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HYDE PARK



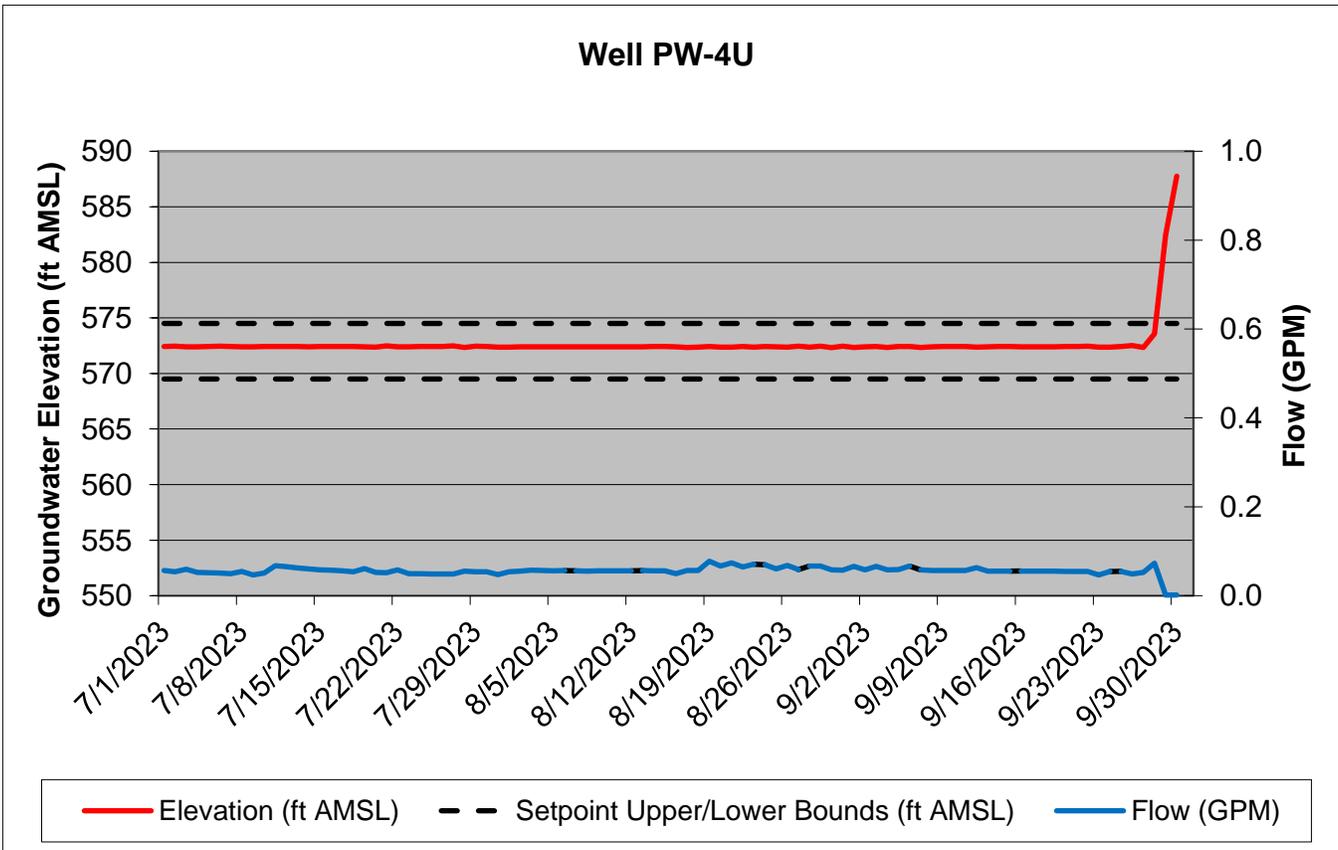
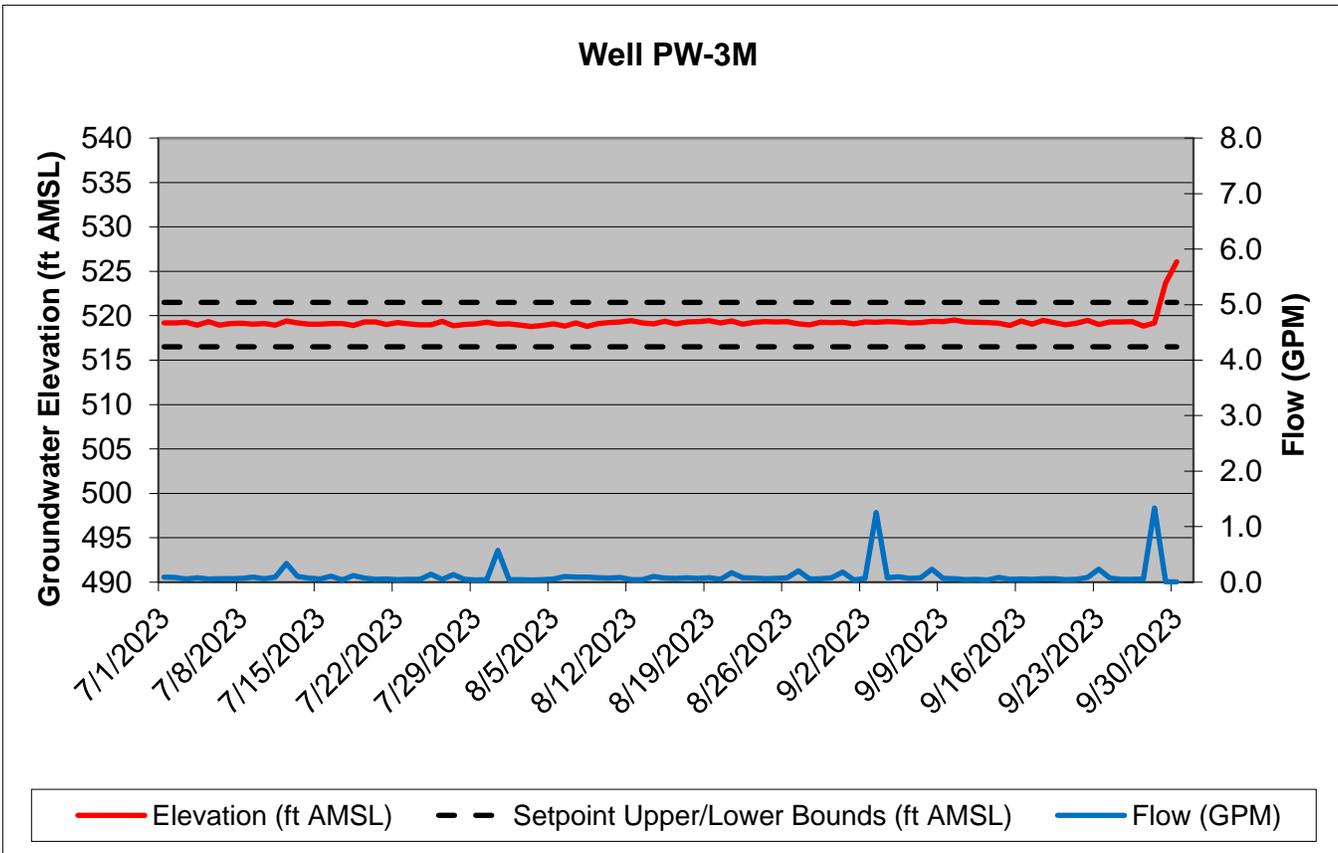
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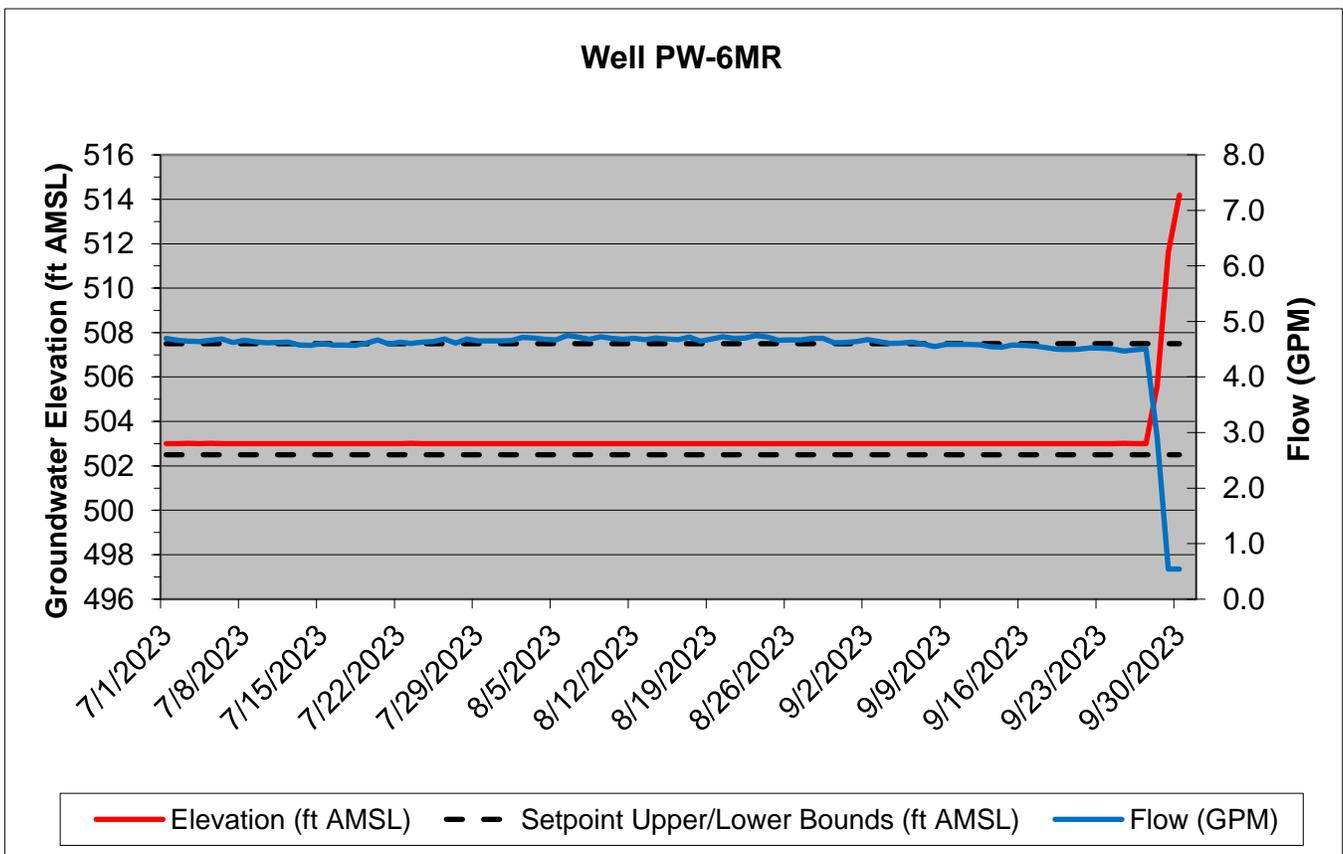
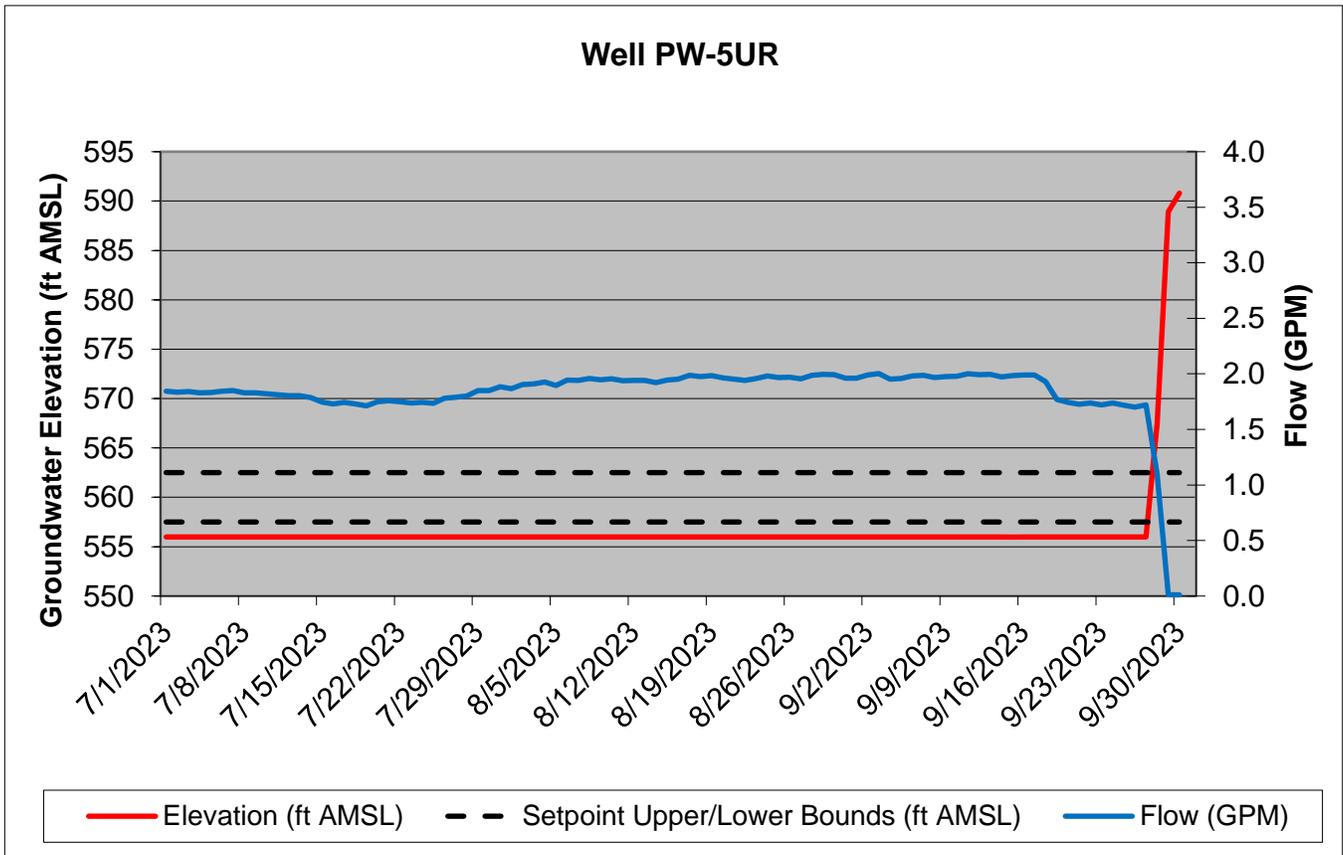
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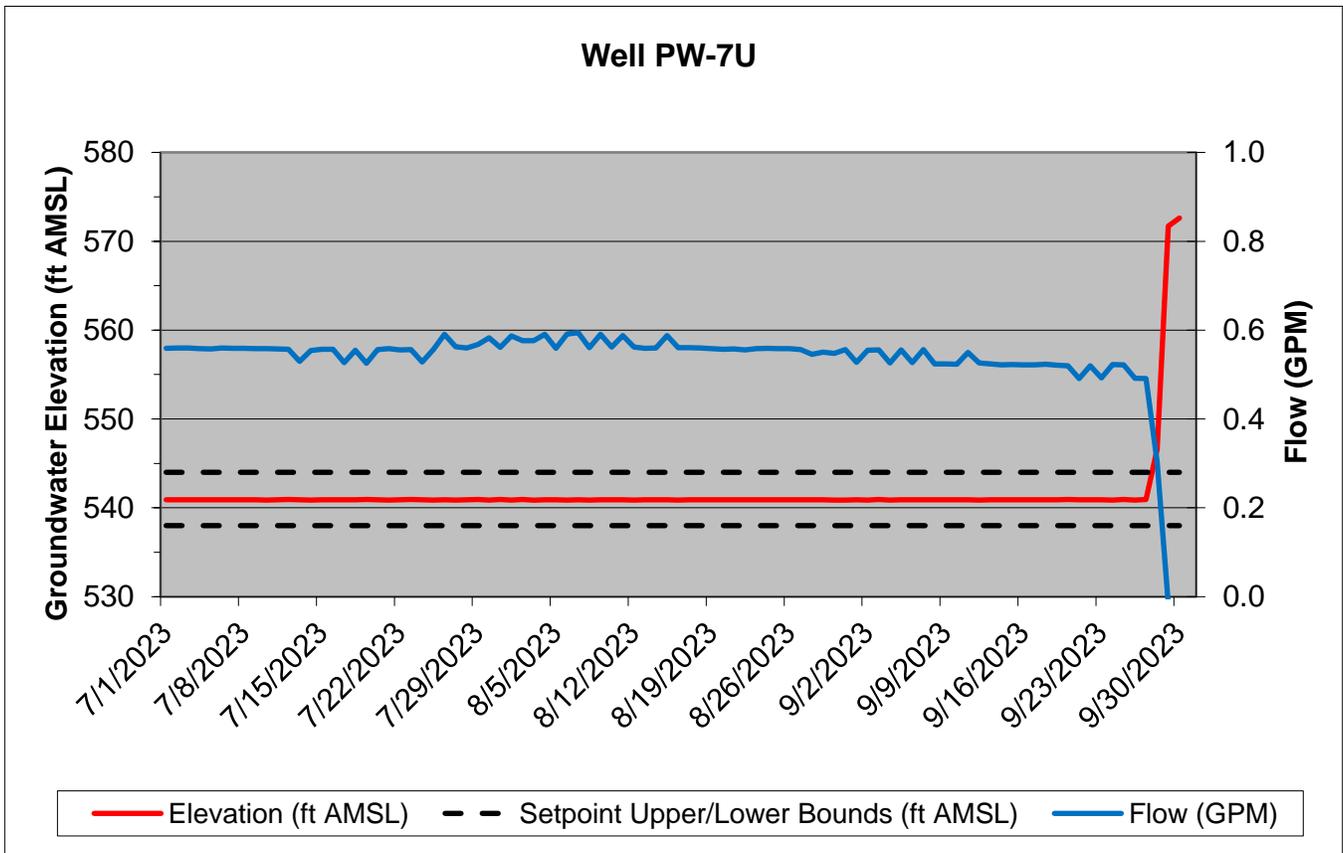
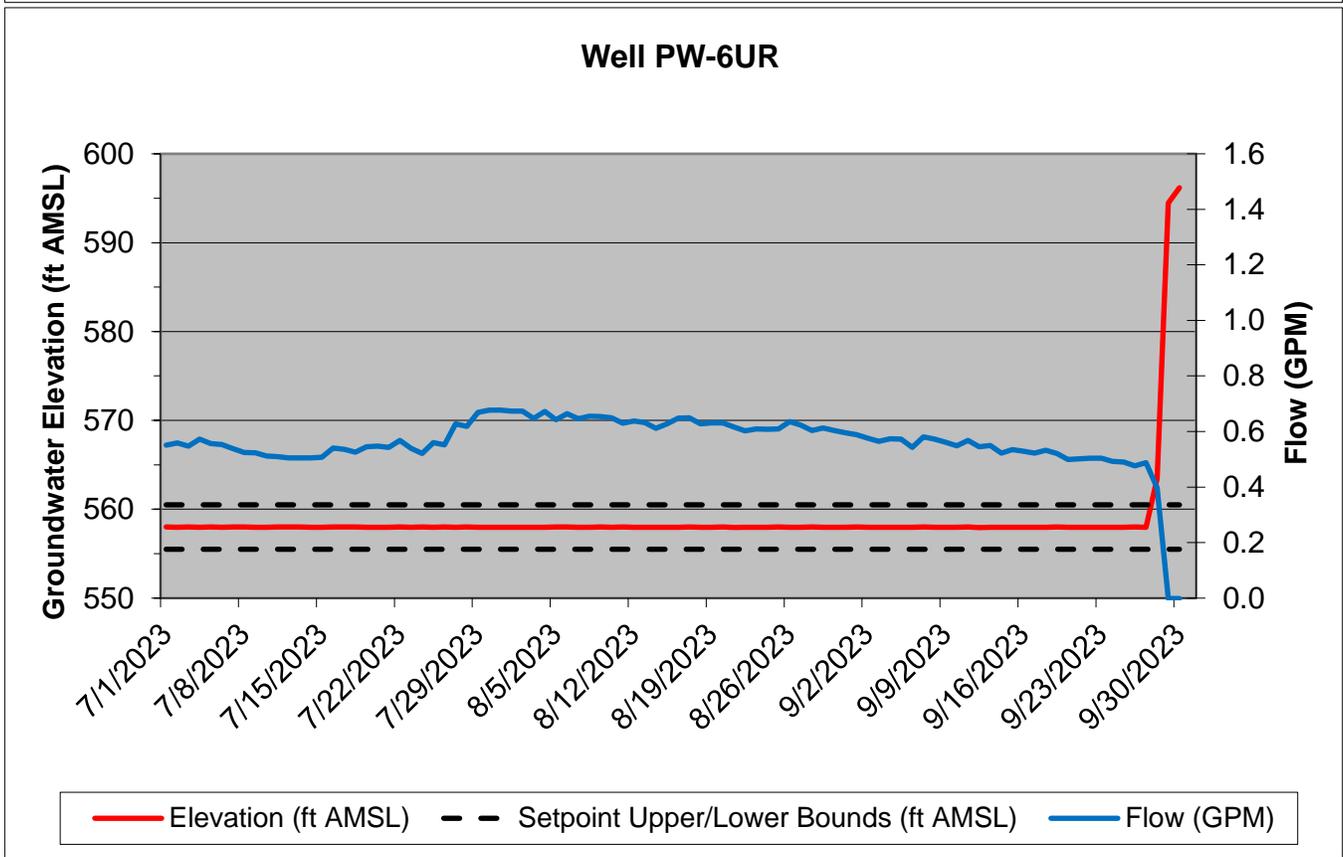
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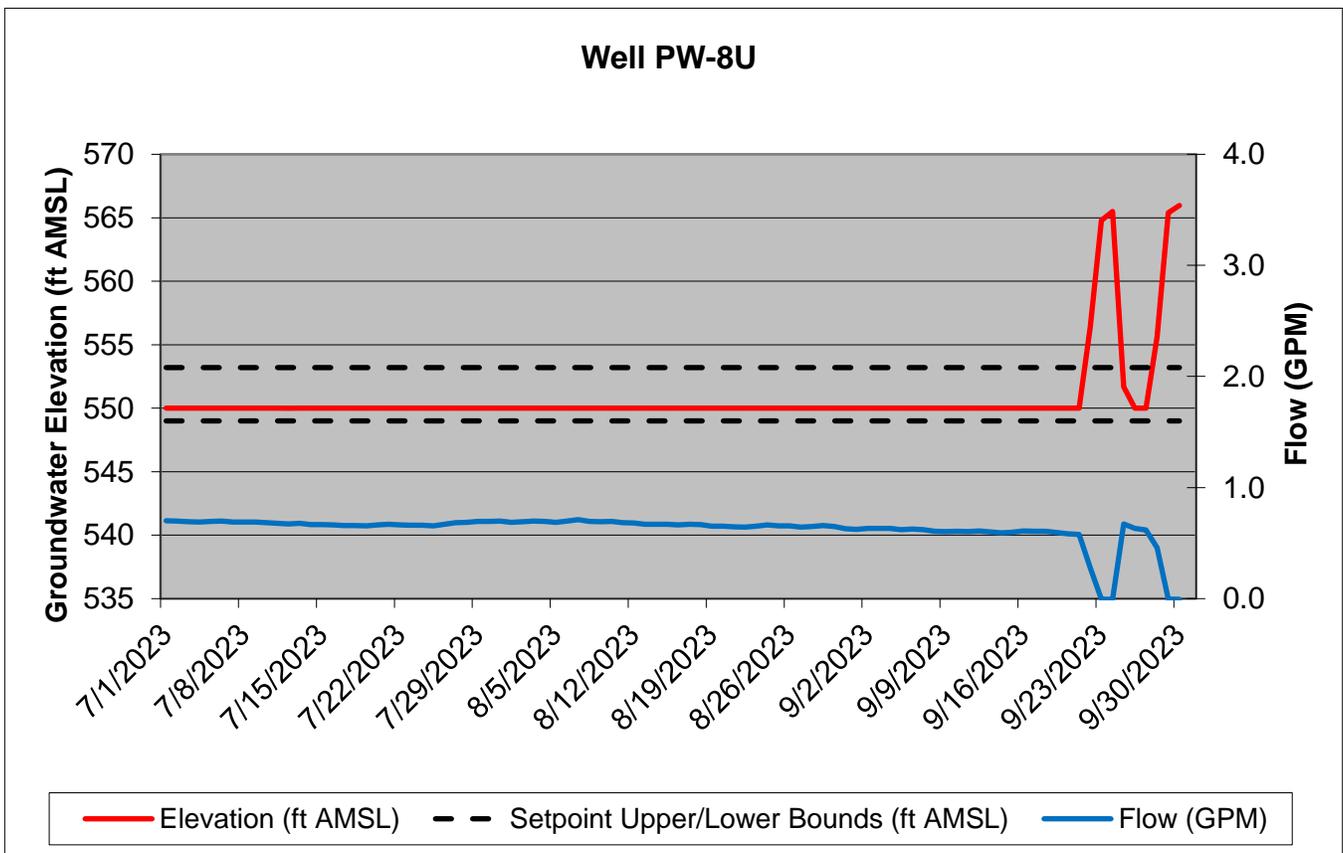
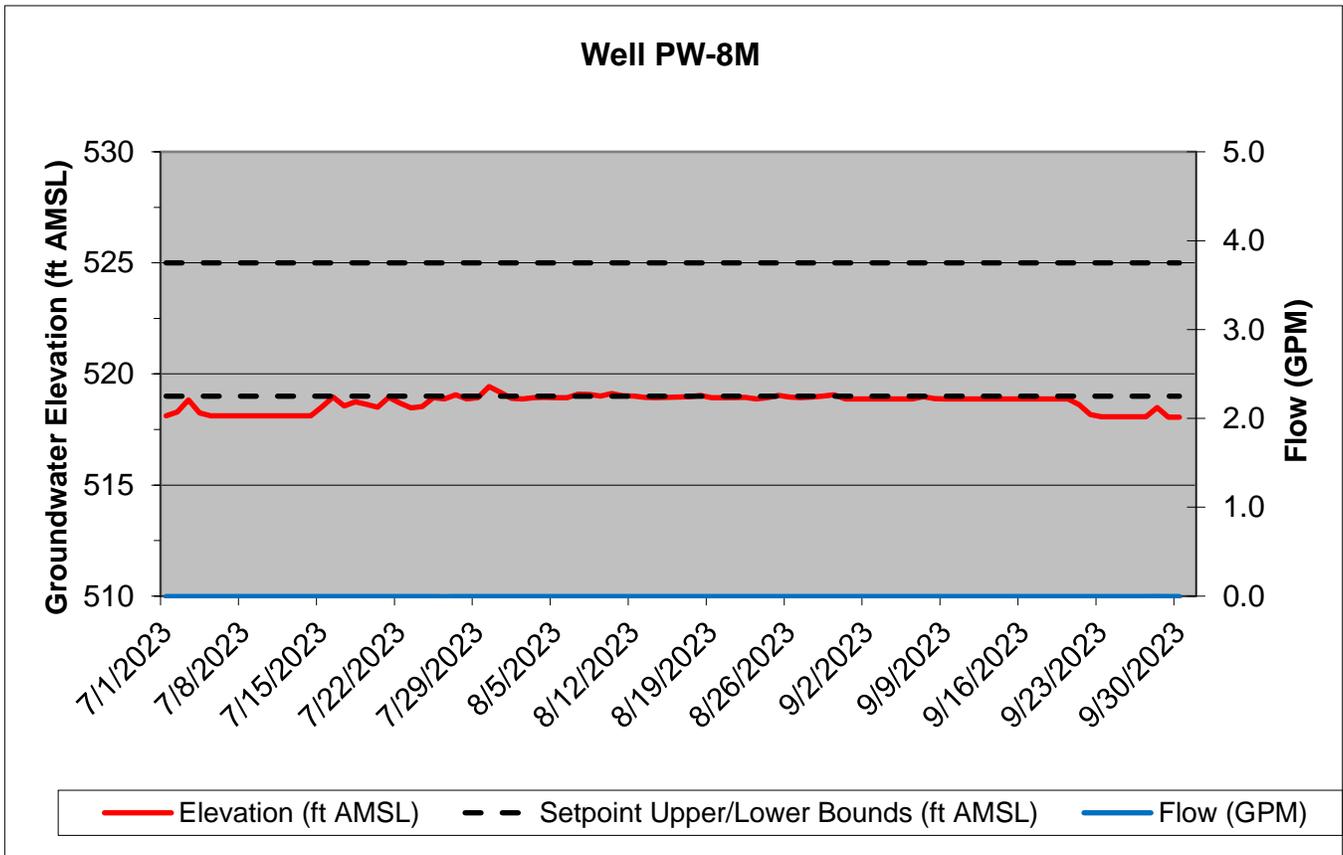
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HYDE PARK



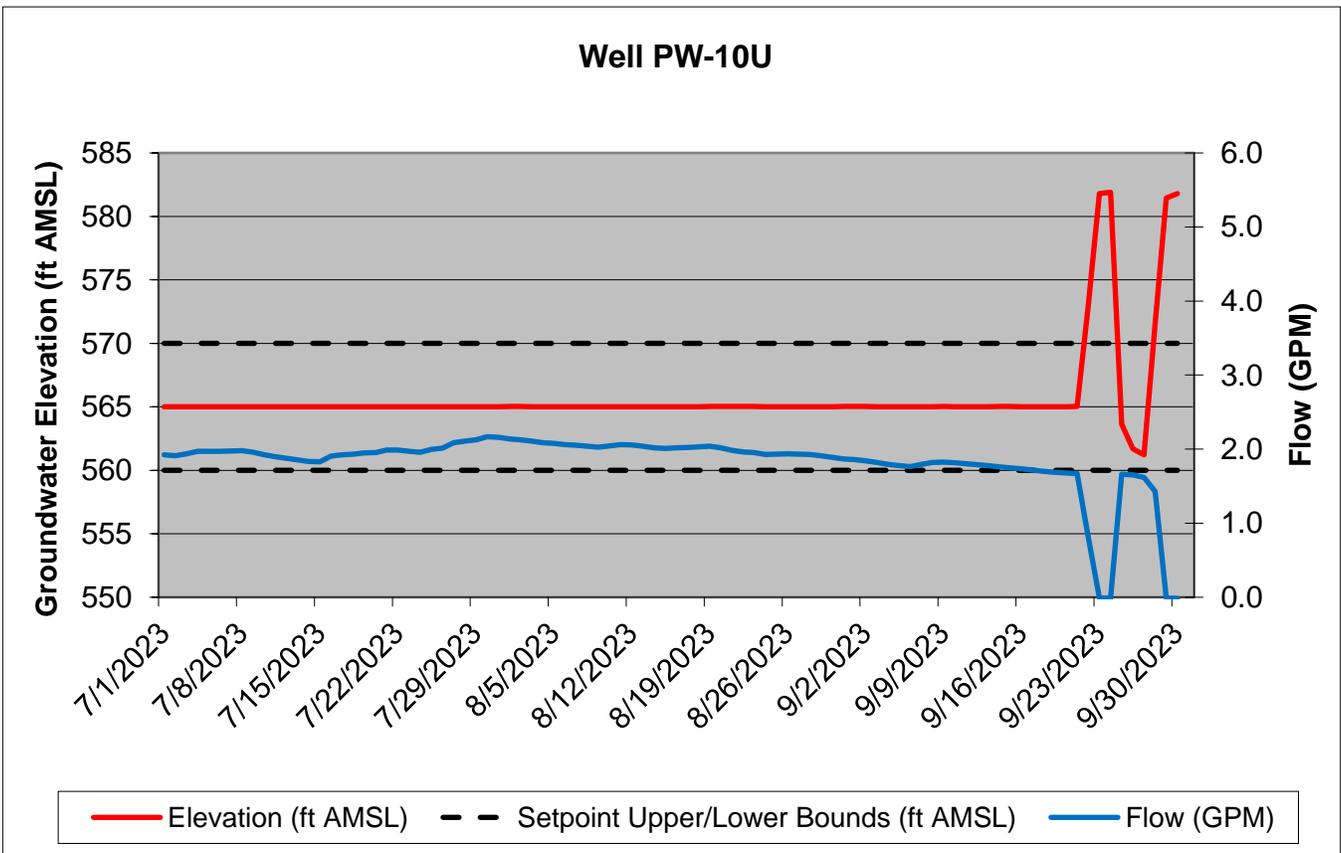
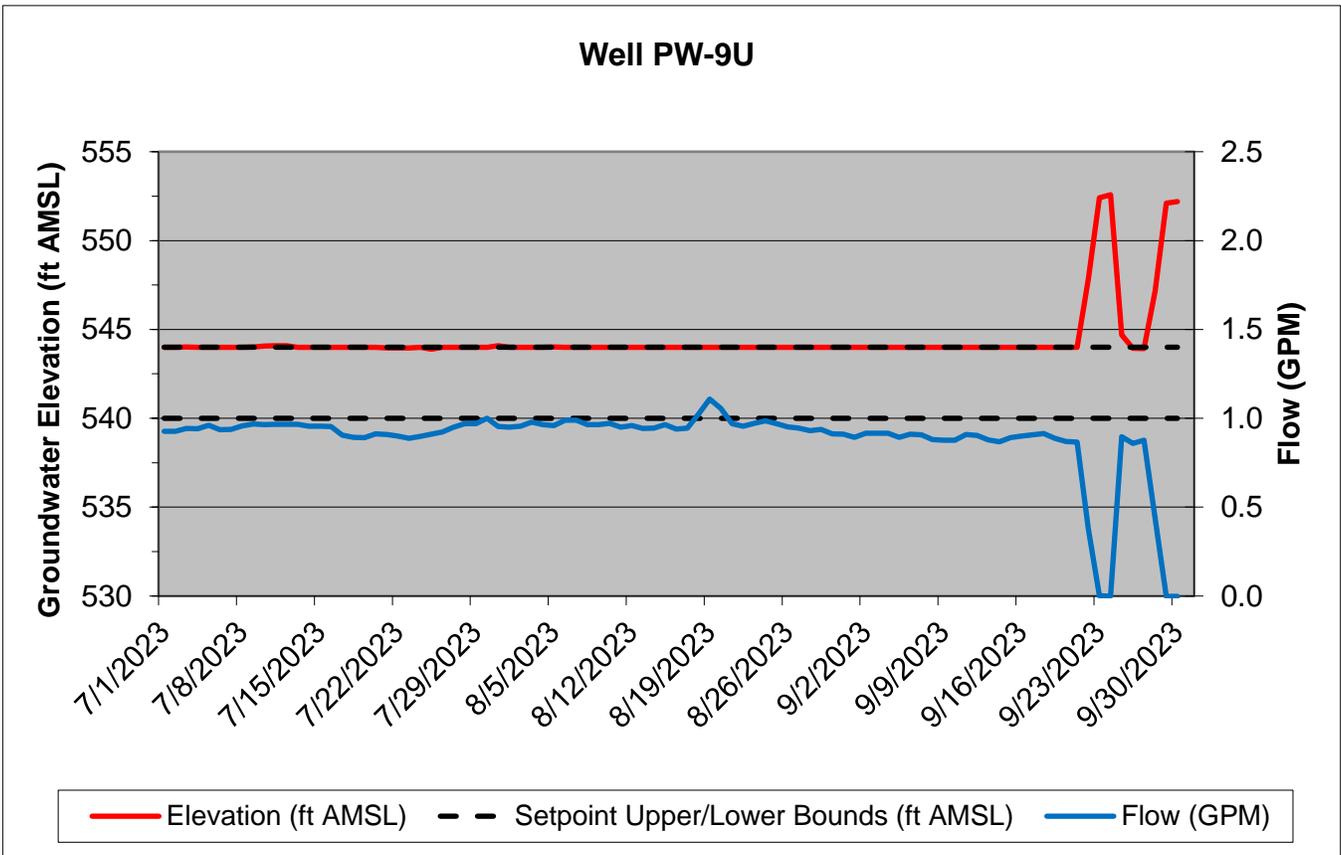
THIRD QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



THIRD QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



THIRD QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK





Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

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

7601 Old Channel Trail
Montague, MI 49437

January 30, 2024

Reference No. 11230216

Ms. Maeve Wurtz
USEPA Region II
290 Broadway, 20th Floor
New York, NY 10007-1866

Mr. Andrew Zwack
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Wurtz and Mr. Zwack:

**Re: Quarterly Operations Report - Fourth Quarter 2023
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, 2023 through December 31, 2023. A total of 4.3 million gallons of APL were collected, treated, and discharged in compliance with the Site's City of Niagara Falls Publicly Owned Treatment Works (POTW) Significant Industrial User (SIU) Wastewater Discharge Permit #49. One drum (approximately 500 pounds) of 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: Groundwater 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 continuously recorded groundwater elevations for the flow zone 9 piezometer PMW-1M-09 for the fourth quarter 2023 are presented on Figure 10. These groundwater elevations were less than 526 feet above mean sea level (AMSL) through the entire quarter, indicating that the FZ-09 outcrop along the New York Power Authority (NYPA) access road was unsaturated throughout the entire quarter.

The pumping wells were operational and functioning as designed during the fourth quarter 2023, with the exception of the downtime periods discussed below. 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.

With the exception of PW-8M, the water levels in all of the pumping wells exceeded setpoint range on October 1 and October 2 as a result of a programmable logic controller (PLC) power issue. The PLC was restarted, and the water levels in all wells returned to within setpoint range on October 3.

The water level in APW-2 exceeded setpoint range on October 21 and October 27 due to communication errors. The errors were resolved and the water level returned to within setpoint range on October 22 and October 28, respectively. The water level in APW-2 exceeded setpoint range from October 30 through the end of the quarter as the pump is awaiting replacement. APW-2 is currently inaccessible for performing the pump replacement due to unsuitable winter ground conditions for mobilizing the crane needed for the work.

The following minor operational and setpoint issues were investigated and resolved during the fourth quarter of 2023:

- The water level in PW-5UR exceeded setpoint range from October 4 through October 6 and on October 8 and October 9 due to level control issues. The issues were resolved and the water level returned to within setpoint range on October 7 and October 10, respectively.
- The water level in PW-2UR exceeded setpoint range on October 24 due to a false leak detection alarm. The water level returned to within setpoint range on October 25.
- The water level in APW-1 exceeded setpoint range on October 25 and October 26 due to a variable frequency drive fault. The fault was repaired and the water level returned to within setpoint range on October 27.
- The water level in PW-3M exceeded setpoint range from November 10 through November 15 and from November 18 through November 20 due to a pump fault. The pump was reset and the water level returned to within setpoint range on November 16 and November 21, respectively.
- The water level in PW-2M exceeded setpoint range on December 1 due to a pump issue and from December 3 through December 5 while the pump was awaiting repairs. The pump was repaired and the water level returned to within setpoint range on December 2 and December 6, respectively.
- The water level in APW-1 exceeded setpoint range from December 16 through December 18 due to a pump issue. The pump was reset and the water level returned to within setpoint range on December 19.
- The water level in PW-8U exceeded setpoint range on December 23 and December 24 due to heavy rains and returned to within setpoint range on December 25.
- The water level in PW-8U exceeded setpoint range from December 28 through the end of the quarter due to heavy rains.

January 30, 2024

Reference No. 11230216

- 3 -

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.

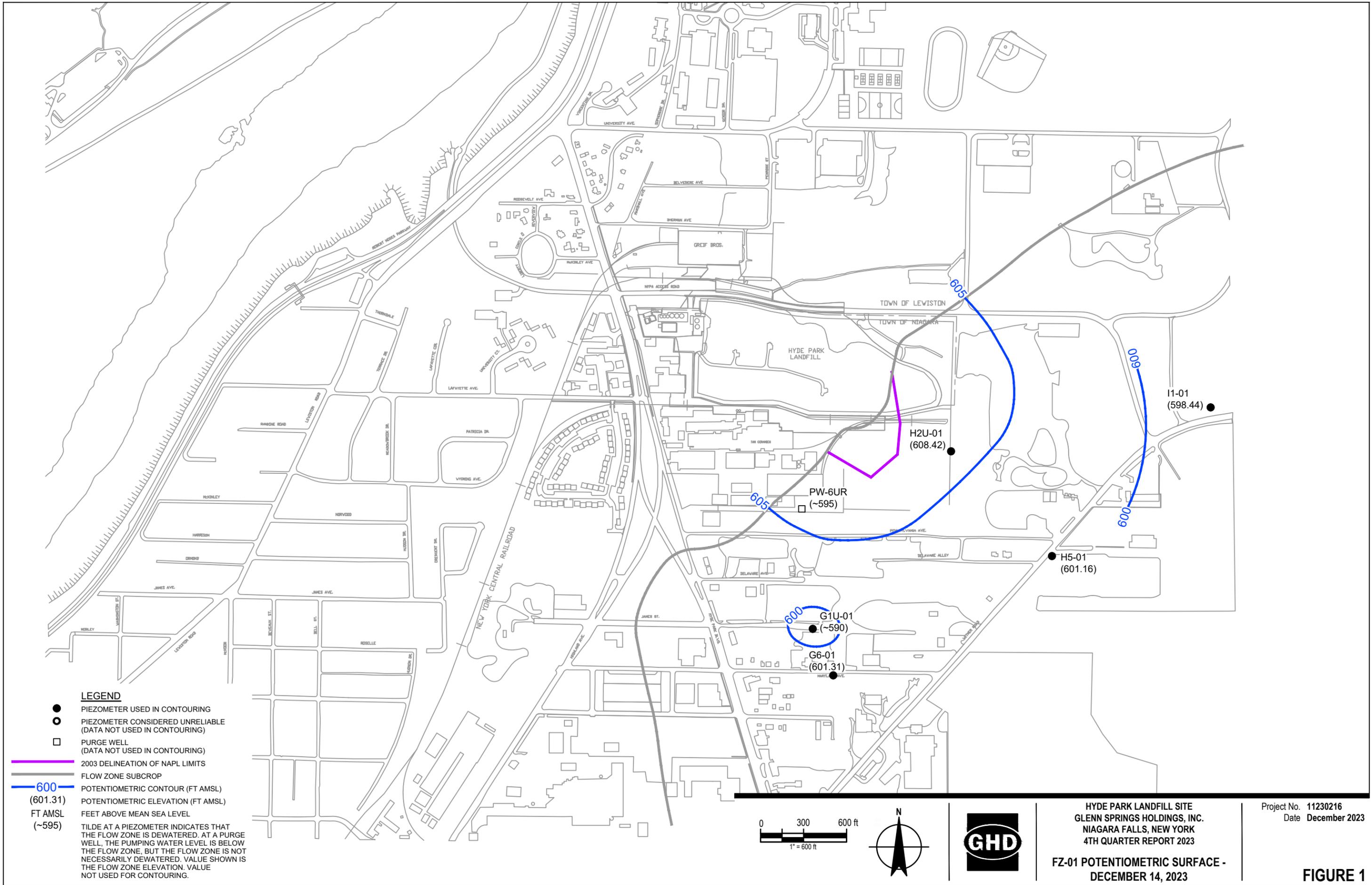
A handwritten signature in cursive script that reads "J. Branch".

Joe Branch
Project Manager
231-670-6809 Cell

JB/10
Encl.

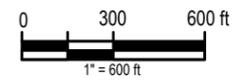
cc: B. McPherson NYSDEC
J. Robinson, NYSDOH

J. Pentilchuk, GHD
M. Popek, GHD



LEGEND

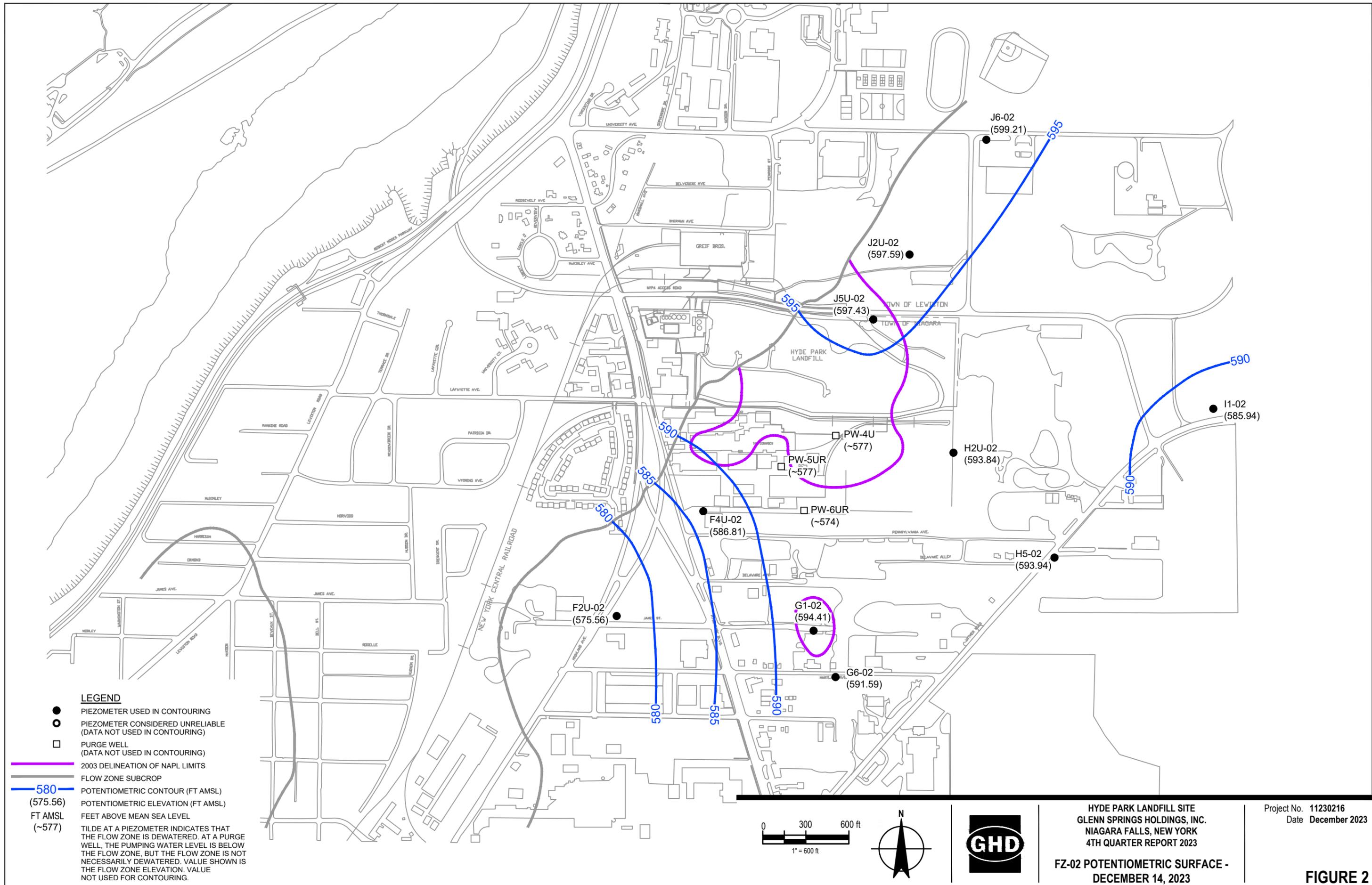
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- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 600 POTENTIOMETRIC CONTOUR (FT AMSL)
- (601.31) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- ~595 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. VALUE NOT USED FOR CONTOURING.



HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 4TH QUARTER REPORT 2023
 FZ-01 POTENTIOMETRIC SURFACE -
 DECEMBER 14, 2023

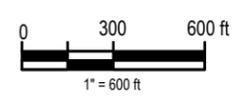
Project No. 11230216
 Date December 2023

FIGURE 1



LEGEND

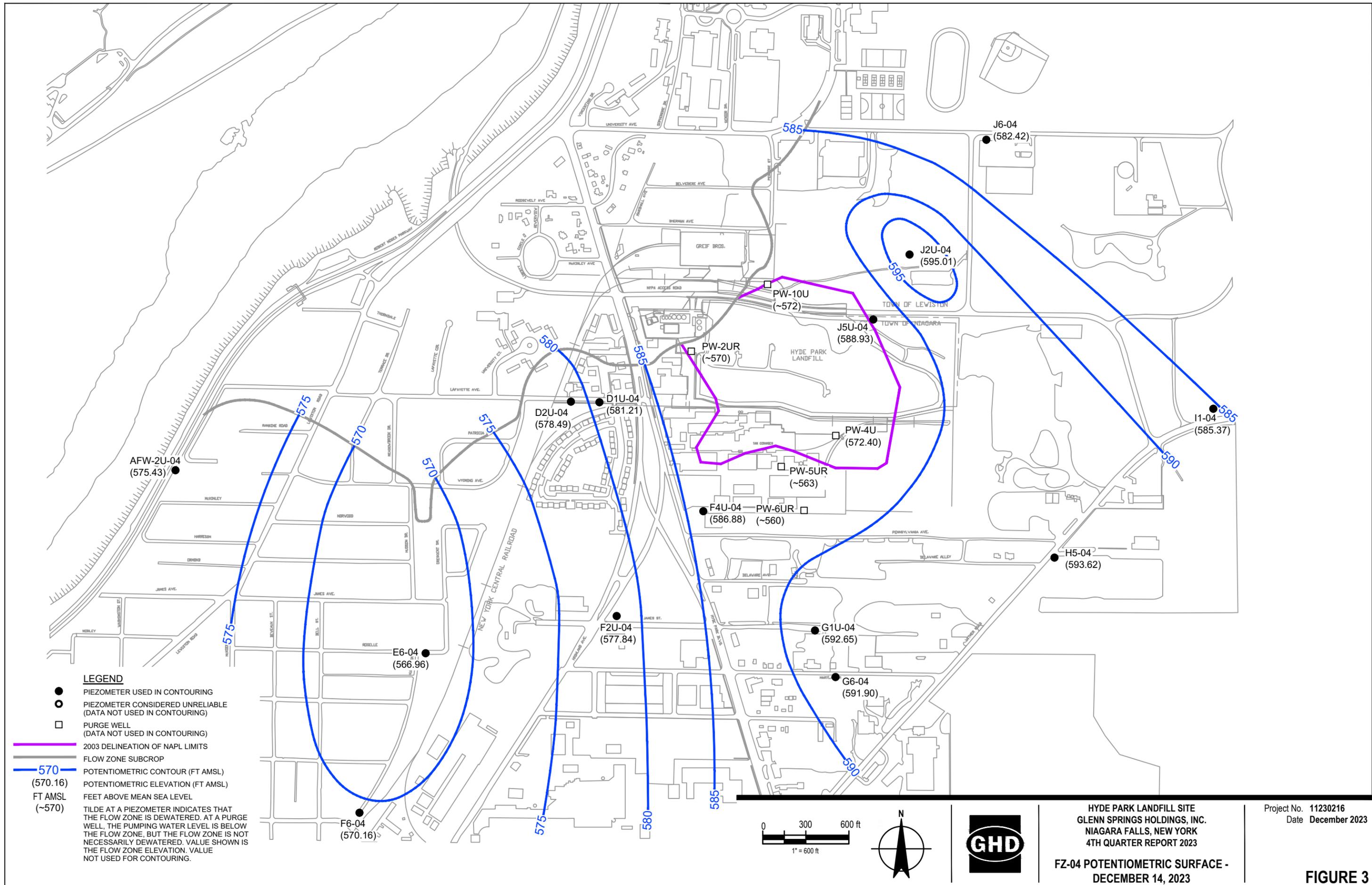
- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- FLOW ZONE SUBCROP
- 580 POTENTIOMETRIC CONTOUR (FT AMSL)
- (575.56) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL
- ~ 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. VALUE NOT USED FOR CONTOURING.

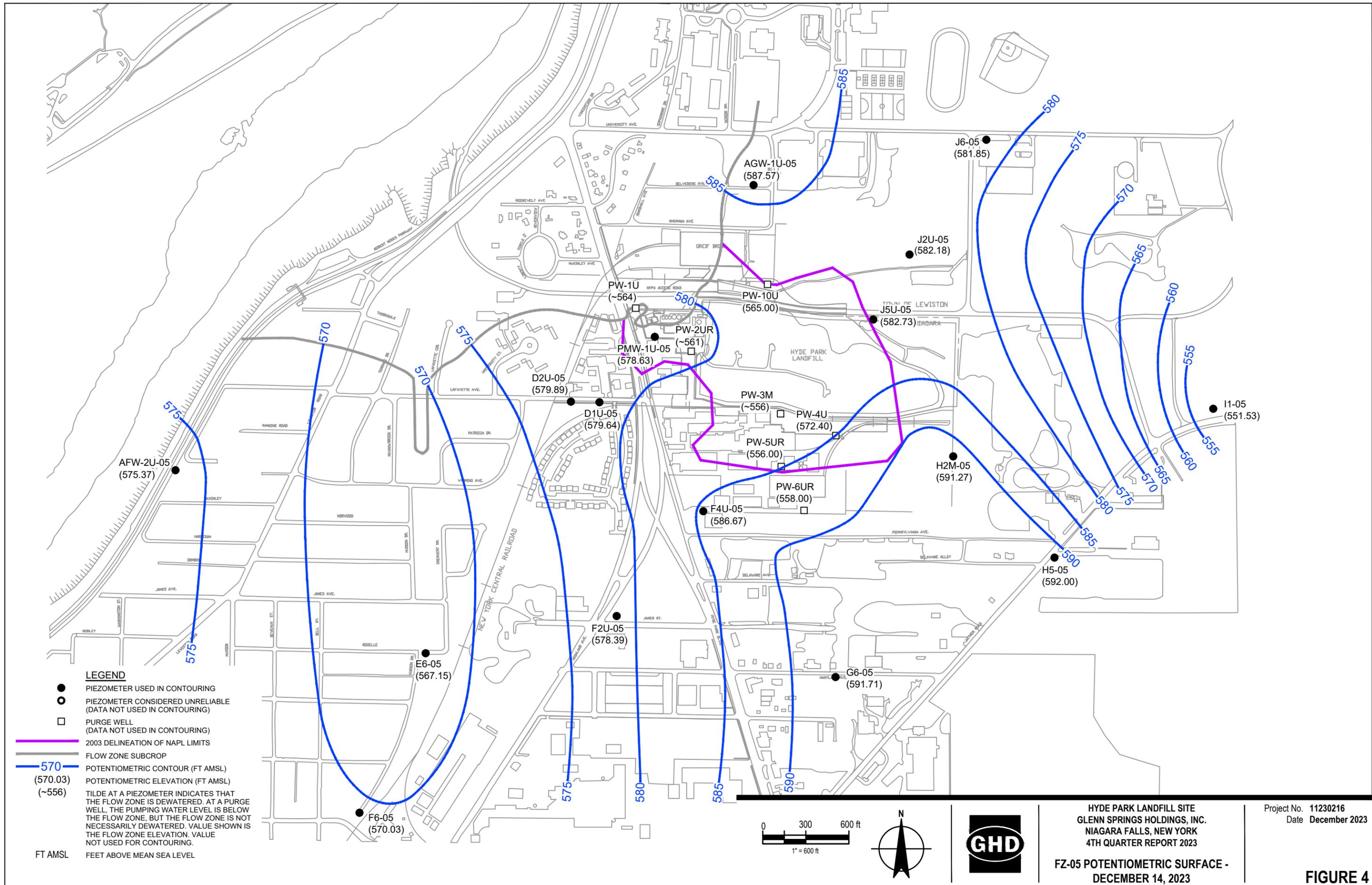


HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 4TH QUARTER REPORT 2023
 FZ-02 POTENTIOMETRIC SURFACE -
 DECEMBER 14, 2023

Project No. 11230216
 Date December 2023

FIGURE 2





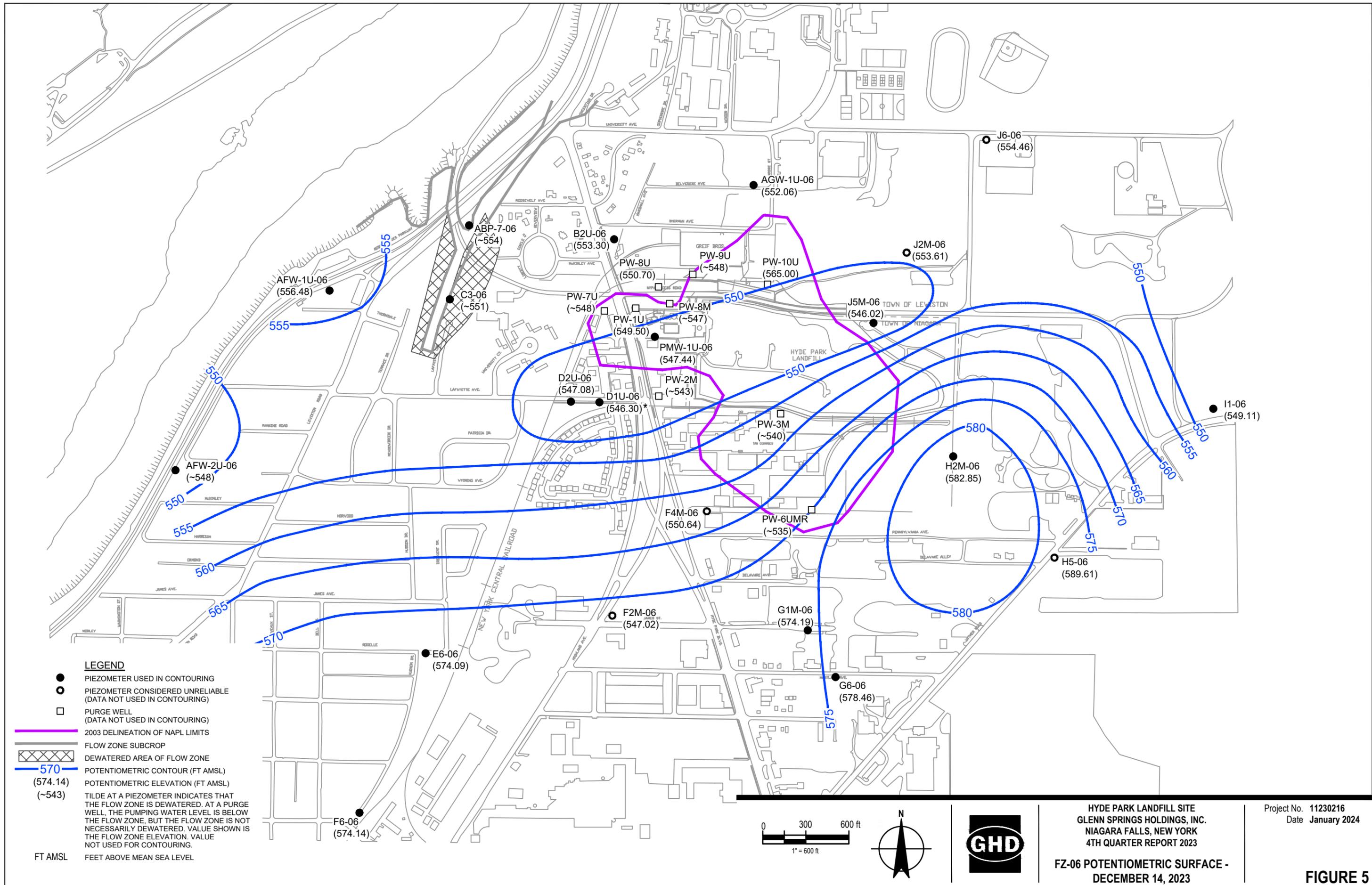
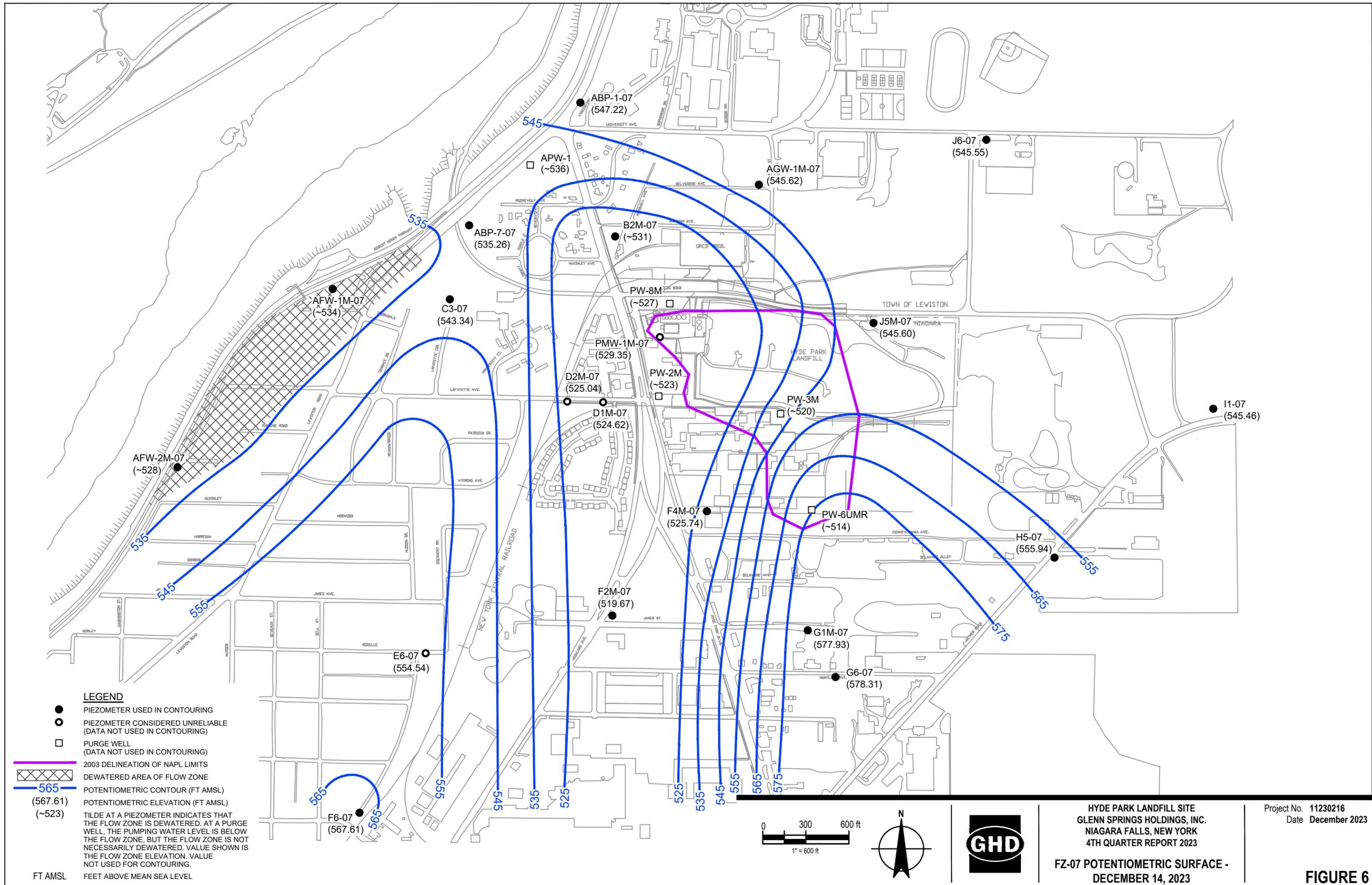
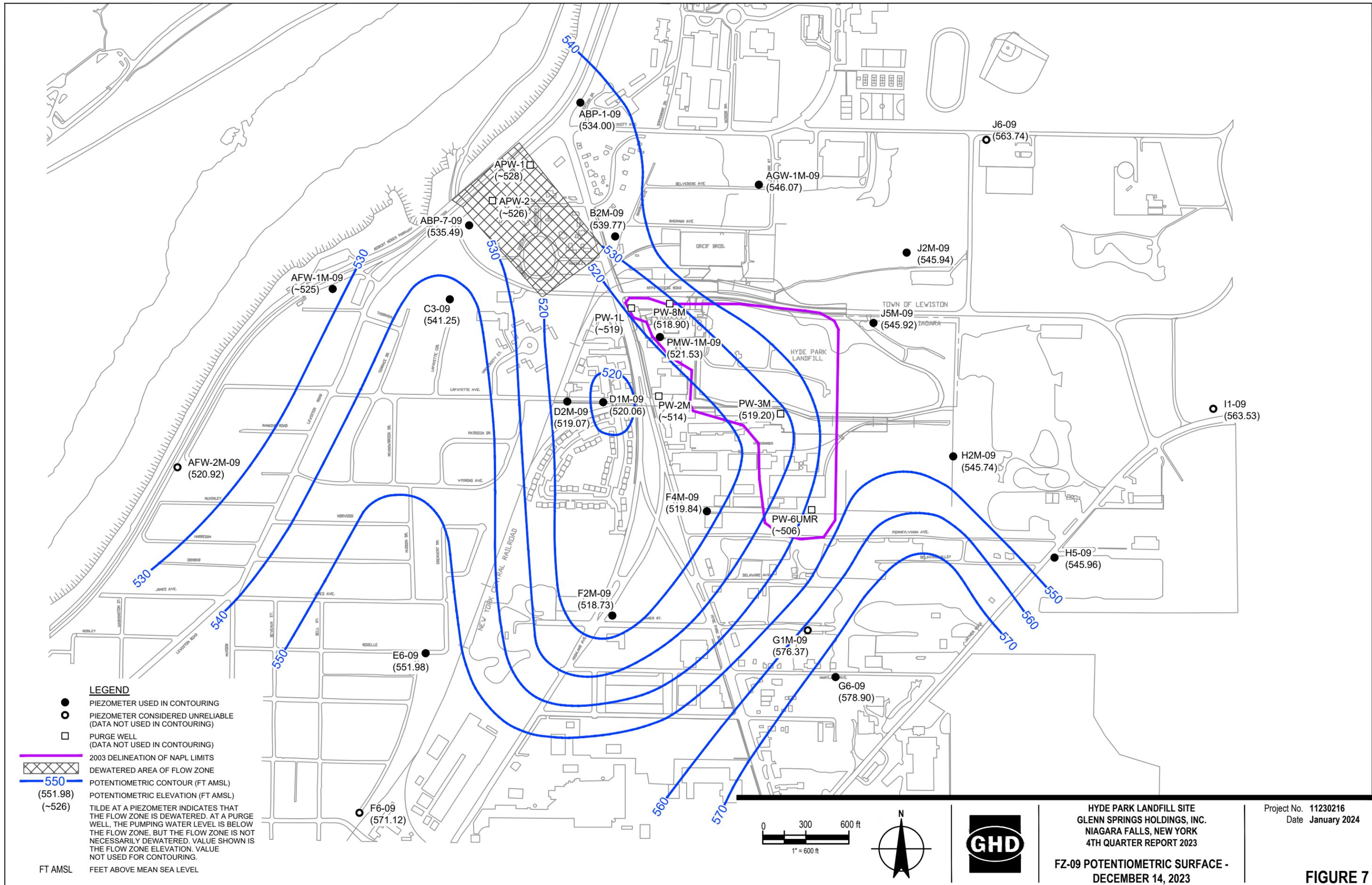


FIGURE 5





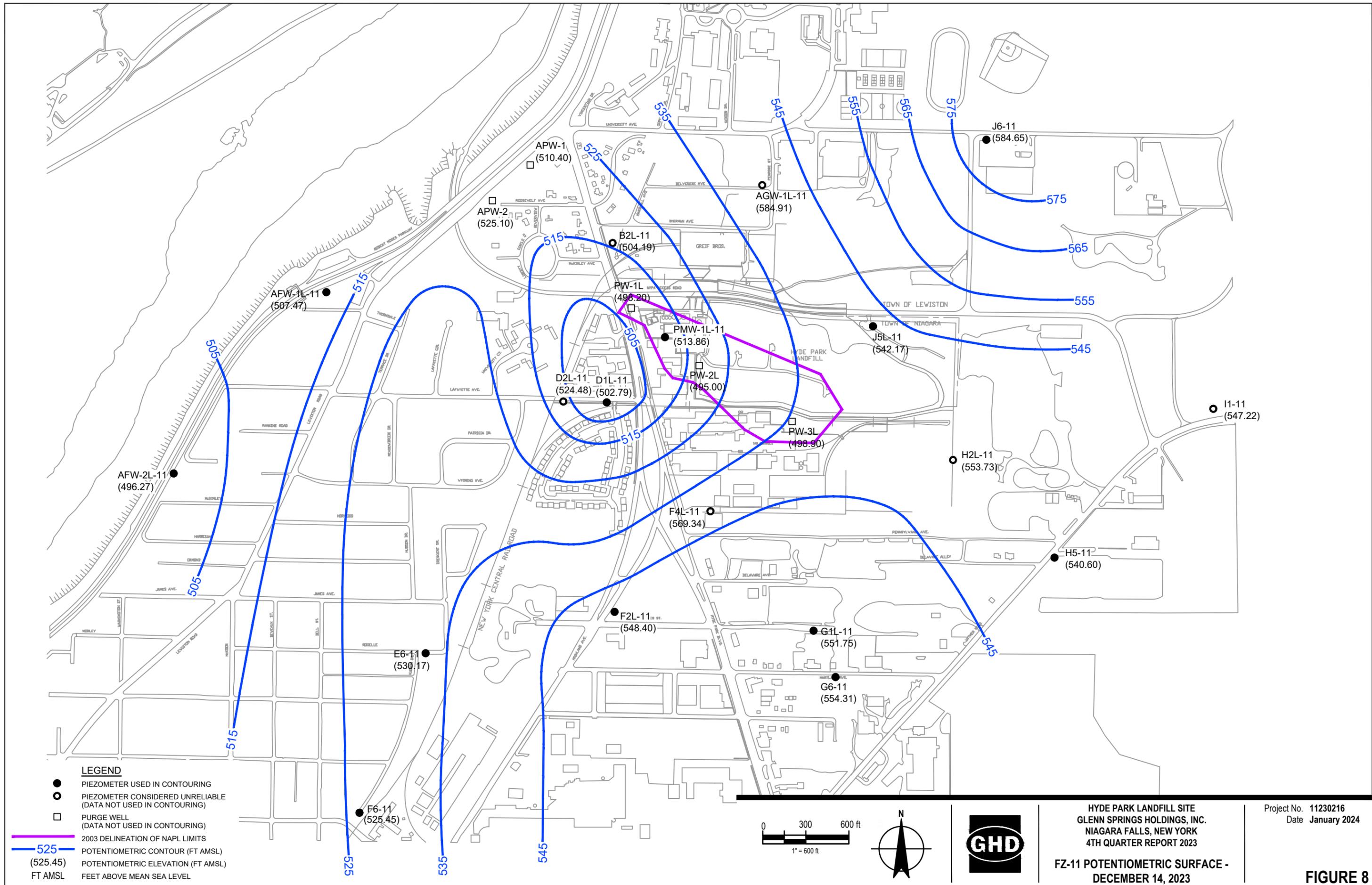
LEGEND

- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- ▨ 2003 DELINEATION OF NAPL LIMITS
- ▭ DEWATERED AREA OF FLOW ZONE
- 550— POTENTIOMETRIC CONTOUR (FT AMSL)
- (551.98) POTENTIOMETRIC ELEVATION (FT AMSL)
- (~526) 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. VALUE NOT USED FOR CONTOURING.
- FT AMSL FEET ABOVE MEAN SEA LEVEL

HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 4TH QUARTER REPORT 2023
FZ-09 POTENTIOMETRIC SURFACE -
DECEMBER 14, 2023

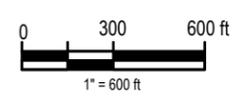
Project No. 11230216
 Date January 2024

FIGURE 7



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- PIEZOMETER USED IN CONTOURING
- PIEZOMETER CONSIDERED UNRELIABLE (DATA NOT USED IN CONTOURING)
- PURGE WELL (DATA NOT USED IN CONTOURING)
- 2003 DELINEATION OF NAPL LIMITS
- 525 POTENTIOMETRIC CONTOUR (FT AMSL)
- (525.45) POTENTIOMETRIC ELEVATION (FT AMSL)
- FT AMSL FEET ABOVE MEAN SEA LEVEL

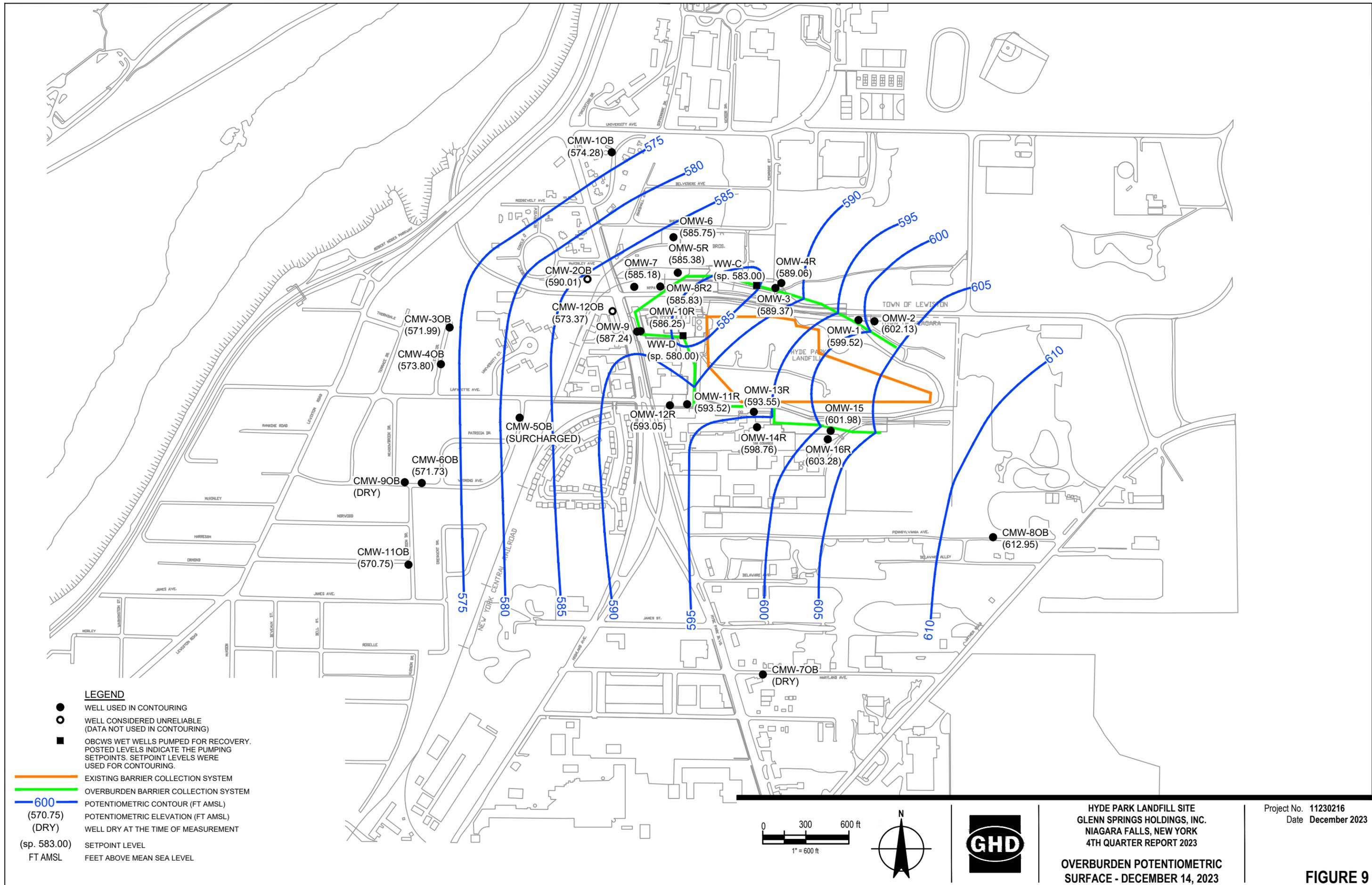


HYDE PARK LANDFILL SITE
 GLENN SPRINGS HOLDINGS, INC.
 NIAGARA FALLS, NEW YORK
 4TH QUARTER REPORT 2023
 FZ-11 POTENTIOMETRIC SURFACE -
 DECEMBER 14, 2023

Project No. 11230216
 Date January 2024

FIGURE 8

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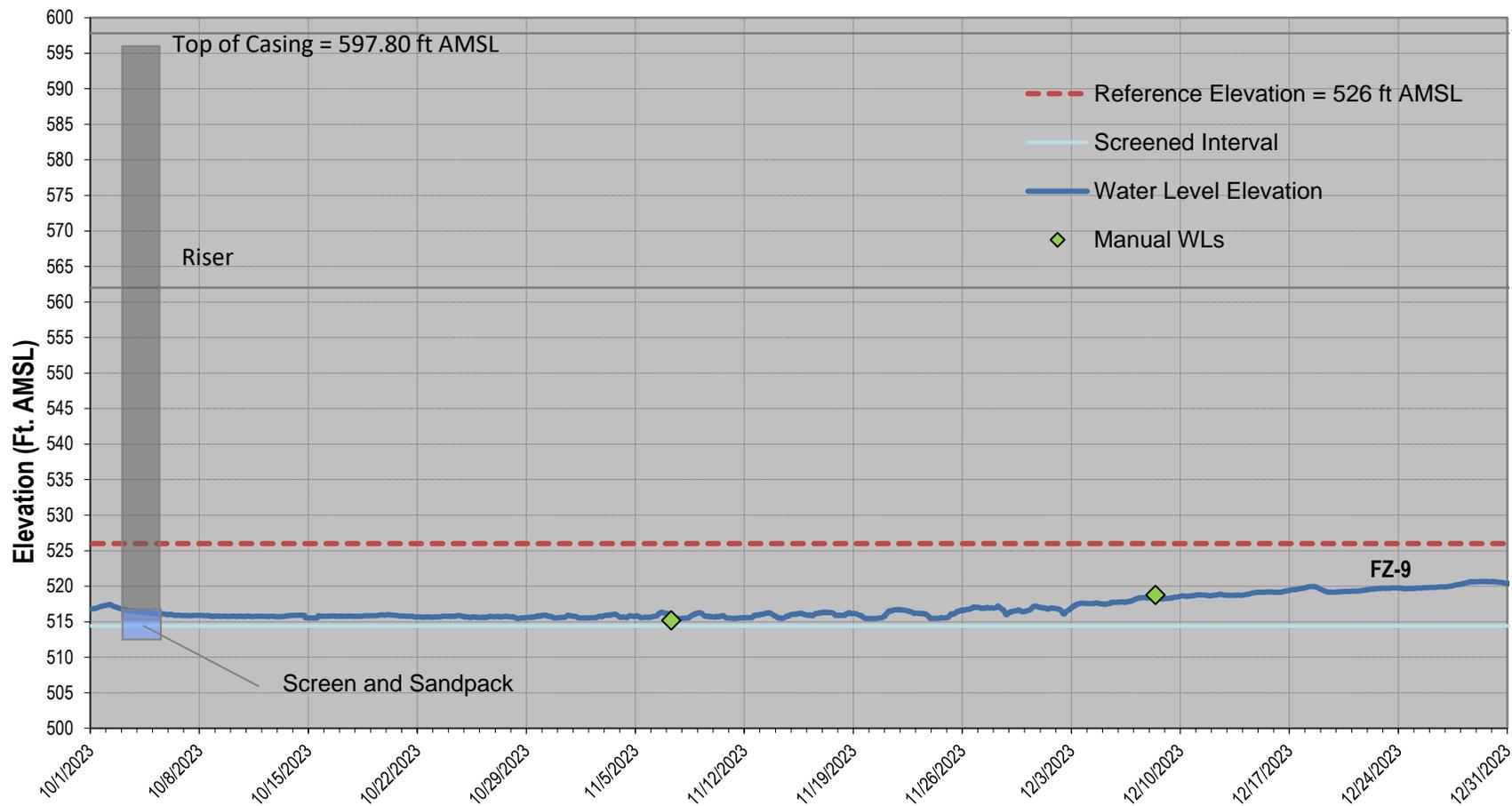


figure 10

PMW-1M-09 4th Quarter 2023 - Hourly Water Level Elevation
 4th Quarter Report
 Hyde Park Landfill Site
 Glenn Springs Holdings, Inc.

**Groundwater Elevation Summary
Fourth Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Overburden			
CMW-2OB	590.79	0.78	590.01
CMW-3OB	582.13	10.14	571.99
CMW-4OB	574.28	0.48	573.80
CMW-5OB	583.43	Surcharged	-
CMW-6OB	571.89	0.16	571.73
CMW-7OB	611.00	Dry	-
CMW-8OB	616.11	3.16	612.95
CMW-9OB	571.76	Dry	-
CMW-1OB	576.80	2.52	574.28
CMW-11OB	572.85	2.10	570.75
CMW-12OB	594.74	21.37	573.37
MH20	605.87	4.67	601.20
MH21	599.77	6.07	593.70
MH22	593.37	Dry	-
MH23	587.05	12.15	574.90
MH24	582.57	8.56	574.01
MH25	583.82	8.18	575.64
MH26	584.48	8.96	575.52
MH27	586.12	10.63	575.49
MH28	585.23	16.10	569.13
MH29	604.58	14.98	589.60
MH30	599.49	20.31	579.18
MH31	590.10	9.65	580.45
MH32	592.01	9.62	582.39
MH33	592.51	8.69	583.82
MH34	598.34	7.16	591.18
MH35	605.69	6.57	599.12
MH35A	605.69	7.20	598.49
OMW-1	605.28	5.76	599.52
OMW-2	605.99	3.86	602.13
OMW-3	598.63	9.26	589.37
OMW-4R	601.17	12.11	589.06
OMW-5R	591.31	5.93	585.38
OMW-6	587.62	1.87	585.75
OMW-7	592.74	7.56	585.18
OMW-8R2	594.67	8.84	585.83
OMW-9	595.27	8.03	587.24
OMW-10R	595.13	8.88	586.25
OMW-11R	597.52	4.00	593.52
OMW-12R	596.71	3.66	593.05
OMW-13R	601.50	7.95	593.55
OMW-14R	599.64	0.88	598.76
OMW-15	607.48	5.50	601.98
OMW-16R	607.62	4.34	603.28
SC-2	625.61	22.72	602.89
SC-3	638.72	39.84	598.88
SC-4	639.35	39.43	599.92
SC-5	634.07	31.65	602.42
SC-6	631.15	20.93	610.22

**Groundwater Elevation Summary
Fourth Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Shallow Bedrock			
CMW-1SH	576.11	13.13	562.98
CMW-2SH	590.51	20.30	570.21
CMW-3SH	581.91	27.71	554.20
CMW-4SH	574.16	7.16	567.00
CMW-5SH	583.36	4.37	578.99
CMW-6SH	572.05	10.10	561.95
CMW-7SH	610.58	12.61	597.97
CMW-8SH	615.95	8.85	607.10
CMW-9SH	571.96	11.96	560.00
CMW-11SH	573.21	8.03	565.18
CMW-12SH	597.02	26.97	570.05
Flow Zone 1			
G1U-01	617.08	50.05	567.03
G6-01	609.24	7.93	601.31
H2U-01	620.92	12.50	608.42
H5-01	617.61	16.45	601.16
I1-01	625.58	27.14	598.44
Flow Zone 2			
F2U-02	599.89	24.33	575.56
F4U-02	602.32	15.51	586.81
G1-02	616.86	22.45	594.41
G6-02	608.65	17.06	591.59
H2U-02	620.88	27.04	593.84
H5-02	617.47	23.53	593.94
I1-02	625.47	39.53	585.94
J2U-02	609.66	12.07	597.59
J5U-02	606.21	8.78	597.43
J6-02	609.23	10.02	599.21
Flow Zone 4			
AFW-2U-04	593.48	18.05	575.43
D1U-04	593.77	12.56	581.21
D2U-04	590.65	12.16	578.49
E6-04	578.23	11.27	566.96
F2U-04	599.76	21.92	577.84
F4U-04	602.19	15.31	586.88
F6-04	588.06	17.90	570.16
G1U-04	616.96	24.31	592.65
G6-04	609.15	17.25	591.90
H5-04	617.40	23.78	593.62
I1-04	625.30	39.93	585.37
J2U-04	609.42	14.41	595.01
J5U-04	606.05	17.12	588.93
J6-04	609.12	26.70	582.42

**Groundwater Elevation Summary
Fourth Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 5			
AFW-2U-05	593.33	17.96	575.37
AGW-1U-05	591.80	4.23	587.57
D1U-05	593.51	13.87	579.64
D2U-05	590.56	10.67	579.89
E6-05	578.04	10.89	567.15
F2U-05	599.64	21.25	578.39
F4U-05	602.06	15.39	586.67
F6-05	587.85	17.82	570.03
G6-05	609.13	17.42	591.71
H2M-05	621.59	30.32	591.27
H5-05	617.31	25.31	592.00
I1-05	625.25	73.72	551.53
J2U-05	609.30	27.12	582.18
J5U-05	605.87	23.14	582.73
J6-05	609.02	27.17	581.85
PMW-1U-05	598.00	19.37	578.63
Flow Zone 6			
ABP-7-06	575.78	Dry	-
AFW-1U-06	571.83	15.35	556.48
AFW-2U-06	593.22	Dry	-
AGW-1U-06	591.66	39.60	552.06
B2U-06	589.29	35.99	553.30
C3-06	585.78	Dry	-
D1U-06	593.25	46.95	546.30
D2U-06	590.38	43.30	547.08
E6-06	577.99	3.90	574.09
F2M-06	599.06	52.04	547.02
F4M-06	602.05	51.41	550.64
F6-06	587.84	13.70	574.14
G1M-06	616.75	42.56	574.19
G6-06	609.09	30.63	578.46
H2M-06	621.42	38.57	582.85
H5-06	617.17	27.56	589.61
I1-06	625.15	76.04	549.11
J2M-06	608.94	55.33	553.61
J5M-06	606.22	60.20	546.02
J6-06	608.93	54.47	554.46
PMW-1U-06	597.92	50.48	547.44

**Groundwater Elevation Summary
Fourth Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 7			
ABP-1-07	575.20	27.98	547.22
ABP-7-07	575.73	40.47	535.26
AFW-1M-07	571.41	Dry	-
AFW-2M-07	593.44	67.12	526.32
AGW-1M-07	592.91	47.29	545.62
B2M-07	589.52	59.09	530.43
C3-07	585.62	42.28	543.34
D1M-07	594.15	69.53	524.62
D2M-07	590.77	65.73	525.04
E6-07	577.91	23.37	554.54
F2M-07	598.91	79.24	519.67
F4M-07	601.91	76.17	525.74
F6-07	587.68	20.07	567.61
G1M-07	616.68	38.75	577.93
G6-07	609.06	30.75	578.31
H5-07	617.05	61.11	555.94
I1-07	625.14	79.68	545.46
J5M-07	606.07	60.47	545.60
J6-07	608.85	63.30	545.55
PMW-1M-07	598.50	69.15	529.35
Flow Zone 9			
ABP-1-09	575.19	41.19	534.00
ABP-7-09	575.67	40.18	535.49
AFW-1M-09	571.12	46.60	524.52
AFW-2M-09	593.32	72.40	520.92
AGW-1M-09	592.75	46.68	546.07
B2M-09	589.34	49.57	539.77
C3-09	585.00	43.75	541.25
D1M-09	594.02	73.96	520.06
D2M-09	590.66	71.59	519.07
E6-09	577.82	25.84	551.98
F2M-09	598.71	79.98	518.73
F4M-09	601.79	81.95	519.84
F6-09	587.53	16.41	571.12
G1M-09	616.58	40.21	576.37
G6-09	608.98	30.08	578.90
H2M-09	621.32	75.58	545.74
H5-09	616.93	70.97	545.96
I1-09	624.91	61.38	563.53
J2M-09	608.77	62.83	545.94
J5M-09	605.82	59.90	545.92
J6-09	608.76	45.02	563.74
PMW-1M-09	598.34	76.81	521.53

**Groundwater Elevation Summary
Fourth Quarter - 2023
Hyde Park RRT Program**

Well	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
Flow Zone 11			
AFW-1L-11	572.10	64.63	507.47
AFW-2L-11	593.43	97.16	496.27
AGW-1L-11	592.71	7.80	584.91
B2L-11	589.65	85.46	504.19
D1L-11	593.80	91.01	502.79
D2L-11	590.21	65.73	524.48
E6-11	577.72	47.55	530.17
F2L-11	598.94	50.54	548.40
F4L-11	602.22	32.88	569.34
F6-11	587.40	61.95	525.45
G1L-11	616.84	65.09	551.75
G6-11	608.89	54.58	554.31
H2L-11	620.73	67.00	553.73
H5-11	616.81	76.21	540.60
I1-11	624.75	77.53	547.22
J5L-11	607.20	65.03	542.17
J6-11	608.68	24.03	584.65
PMW-1L-11	598.84	84.98	513.86
Purge Wells			
APW-1	564.98	54.58	510.40
APW-2	569.89	44.79	525.10
PW-1L	593.16	94.96	498.20
PW-1U	593.50	44.00	549.50
PW-2L	597.29	102.29	495.00
PW-2M	596.61	82.71	513.90
PW-2UR	594.75	35.75	559.00
PW-3L	599.05	100.15	498.90
PW-3M	597.79	78.59	519.20
PW-4M	606.93	82.63	524.30
PW-4U	604.85	32.45	572.40
PW-5UR	601.31	45.31	556.00
PW-6UMR	609.31	106.31	503.00
PW-6UR	608.47	50.47	558.00
PW-7U	592.47	51.57	540.90
PW-8M	592.67	73.77	518.90
PW-8U	589.27	38.57	550.70
PW-9U	587.47	43.57	543.90
PW-10U	593.54	28.54	565.00

Notes:

- - Not applicable
- ft AMSL - Feet above mean sea level
- Surcharged - Well surcharged at the time of measurement
- Dry - No water present at the time of measurement

**Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
10/01/23		
10/02/23		
10/03/23		
10/04/23	7.4	172,000
10/05/23		
10/06/23		
10/07/23		
10/08/23		
10/09/23		
10/10/23	7.2	139,000
10/11/23	7.3	164,000
10/12/23		
10/13/23		
10/14/23		
10/15/23		
10/16/23		
10/17/23		
10/18/23	7.3	169,000
10/19/23		
10/20/23		
10/21/23		
10/22/23		
10/23/23	7.4	34,000
10/24/23	7.3	125,000
10/25/23	7.4	44,000
10/26/23	7.4	47,000
10/27/23	7.4	46,000
10/28/23		
10/29/23		
10/30/23		
10/31/23		
11/01/23	7.4	151,000
11/02/23	7.4	148,000
11/03/23		
11/04/23		
11/05/23		
11/06/23	7.4	148,000

**Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
11/07/23		
11/08/23		
11/09/23		
11/10/23	7.3	145,000
11/11/23		
11/12/23		
11/13/23		
11/14/23		
11/15/23	7.2	144,000
11/16/23		
11/17/23		
11/18/23		
11/19/23		
11/20/23	7.3	14,000
11/21/23	7.3	123,000
11/22/23	7.4	23,000
11/23/23		
11/24/23		
11/25/23		
11/26/23		
11/27/23	7.4	143,000
11/28/23	7.7	146,000
11/29/23	7.7	31,000
11/30/23	7.3	29,000
12/01/23		
12/02/23		
12/03/23		
12/04/23		
12/05/23	7.8	170,000
12/06/23	7.6	174,000
12/07/23		
12/08/23		
12/09/23		
12/10/23		
12/11/23	7.6	158,000
12/12/23	7.7	157,000
12/13/23	7.6	147,000

**Leachate Treatment System Daily Effluent Monitoring Data
Fourth Quarter - 2023
Hyde Park RRT Program**

Date	Effluent	
	pH (su)	Flow (gal)
12/14/23		
12/15/23		
12/16/23		
12/17/23		
12/18/23		
12/19/23	7.5	150,000
12/20/23	7.8	144,000
12/21/23	7.8	153,000
12/22/23	7.6	125,000
12/23/23		
12/24/23		
12/25/23		
12/26/23		
12/27/23	7.1	177,000
12/28/23	7.5	199,000
12/29/23	7.5	164,000
12/30/23	7.5	184,000
12/31/23		
	Total	4,287,000

Notes:

su - Standard Unit
gal - Gallons

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Fourth Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	10/04/2023	10/11/2023	10/18/2023	10/25/2023	11/01/2023	11/08/2023
Volatiles								
	1,1,1-Trichloroethane	µg/L	1.0 U					
	1,1,2,2-Tetrachloroethane	µg/L	0.75 J	0.68 J	0.59 J	0.39 J	0.32 J	0.62 J
	1,1,2-Trichloroethane	µg/L	1.0 U					
	1,1-Dichloroethane	µg/L	3.5	3.2	2.5	3.2	2.9	2.8
	1,1-Dichloroethene	µg/L	1.0 U					
	1,2,4-Trichlorobenzene	µg/L	1.0 U					
	1,2-Dichlorobenzene	µg/L	1.0 U					
	1,2-Dichloroethane	µg/L	11	7.8	7.9	8.6	8.0	7.2
	1,2-Dichloropropane	µg/L	0.78 J	0.69 J	0.59 J	0.69 J	0.58 J	0.64 J
	1,3-Dichlorobenzene	µg/L	1.0 U					
	1,4-Dichlorobenzene	µg/L	1.0 U					
	2-Chlorotoluene	µg/L	1.0 U					
	3-Chlorotoluene	µg/L	1.0 U					
	4-Chlorotoluene	µg/L	1.0 U					
	Benzene	µg/L	17	18	14	17	13	13
	Bromodichloromethane	µg/L	1.0 U					
	Bromoform	µg/L	1.0 U					
	Bromomethane (Methyl bromide)	µg/L	1.0 U					
	Carbon disulfide	µg/L	1.0 U	1.9	1.9	1.5	1.5	1.2
	Carbon tetrachloride	µg/L	1.0 U					
	Chlorobenzene	µg/L	1.0 U					
	Chloroethane	µg/L	1.0 U					
	Chloroform (Trichloromethane)	µg/L	4.5	5.0	4.2	4.9	4.0	4.7
	Chloromethane (Methyl chloride)	µg/L	1.0 U					
	cis-1,2-Dichloroethene	µg/L	2.5	2.6	2.2	2.5	2.1	2.0
	cis-1,3-Dichloropropene	µg/L	1.0 U					
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 UJ				
	Ethylbenzene	µg/L	1.0 U					
	m&p-Xylenes	µg/L	2.0 U					
	m-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Methylene chloride	µg/L	1.0 U					
	o-Monochlorobenzotrifluoride	µg/L	1.0 U					
	o-Xylene	µg/L	1.0 U					
	p-Monochlorobenzotrifluoride	µg/L	1.0 U					
	Styrene	µg/L	1.0 U					
	Tetrachloroethene	µg/L	1.0 U					
	Toluene	µg/L	1.0 U					
	trans-1,2-Dichloroethene	µg/L	1.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U
	trans-1,3-Dichloropropene	µg/L	1.0 U					
	Trichloroethene	µg/L	1.0 U					
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U					
	Vinyl acetate	µg/L	2.0 U					
	Vinyl chloride	µg/L	37	34	28	36	35	25
	Xylenes (total)	µg/L	3.0 U					
General Chemistry								
	Phenolics (total)	mg/L	0.0062	0.0095	0.0096	0.0073	0.0073	0.010 U

Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

Analytical Results Summary
Weekly Sampling - Leachate Treatment System
Fourth Quarter - 2023
Hyde Park RRT Program

Effluent	Parameter	Units	11/15/2023	11/22/2023	11/29/2023	12/06/2023	12/13/2023	12/20/2023	12/27/2023
Volatiles									
	1,1,1-Trichloroethane	µg/L	1.0 U						
	1,1,2,2-Tetrachloroethane	µg/L	0.57 J	1.0 U	1.0 U	0.49 J	1.0 U	0.48 J	0.56 J
	1,1,2-Trichloroethane	µg/L	1.0 U						
	1,1-Dichloroethane	µg/L	2.7	2.5	2.5	3.0	2.7	3.1	2.9
	1,1-Dichloroethene	µg/L	1.0 U						
	1,2,4-Trichlorobenzene	µg/L	1.0 U						
	1,2-Dichlorobenzene	µg/L	1.0 U						
	1,2-Dichloroethane	µg/L	7.2	7.5	7.1	7.3	6.9	6.7	7.1
	1,2-Dichloropropane	µg/L	0.54 J	0.56 J	0.63 J	0.57 J	0.63 J	0.65 J	0.58 J
	1,3-Dichlorobenzene	µg/L	1.0 U						
	1,4-Dichlorobenzene	µg/L	1.0 U						
	2-Chlorotoluene	µg/L	1.0 U						
	3-Chlorotoluene	µg/L	1.0 U						
	4-Chlorotoluene	µg/L	1.0 U						
	Benzene	µg/L	13	14	16	16	17	16	14
	Bromodichloromethane	µg/L	1.0 U						
	Bromoform	µg/L	1.0 U						
	Bromomethane (Methyl bromide)	µg/L	1.0 U						
	Carbon disulfide	µg/L	1.0 U	1.3	1.0 U	3.2	1.4	5.1	4.3
	Carbon tetrachloride	µg/L	1.0 U						
	Chlorobenzene	µg/L	1.0 U						
	Chloroethane	µg/L	1.0 U						
	Chloroform (Trichloromethane)	µg/L	4.5	4.7	6.0	7.0	5.8	6.9	6.4
	Chloromethane (Methyl chloride)	µg/L	1.0 U						
	cis-1,2-Dichloroethene	µg/L	2.1	2.0	1.8	2.0	1.6	1.9	1.7
	cis-1,3-Dichloropropene	µg/L	1.0 U						
	Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U						
	Ethylbenzene	µg/L	1.0 U						
	m&p-Xylenes	µg/L	2.0 U						
	m-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Methylene chloride	µg/L	1.0 U						
	o-Monochlorobenzotrifluoride	µg/L	1.0 U						
	o-Xylene	µg/L	1.0 U						
	p-Monochlorobenzotrifluoride	µg/L	1.0 U						
	Styrene	µg/L	1.0 U						
	Tetrachloroethene	µg/L	1.0 U						
	Toluene	µg/L	1.0 U						
	trans-1,2-Dichloroethene	µg/L	1.0 U						
	trans-1,3-Dichloropropene	µg/L	1.0 U						
	Trichloroethene	µg/L	1.0 U						
	Trichlorofluoromethane (CFC-11)	µg/L	1.0 U						
	Vinyl acetate	µg/L	2.0 U						
	Vinyl chloride	µg/L	30	29	26	26	23	25	31
	Xylenes (total)	µg/L	3.0 U						
General Chemistry									
	Phenolics (total)	mg/L	0.0039 J	0.0030 J	0.0048 J	0.0056	0.0087	0.0230	0.0143

Notes:

NA - Data not available due to laboratory error
J - Estimated concentration
U - Not detected at the associated reporting limit
mg/L - Milligrams per liter
µg/L - Micrograms per liter

Table 4

**Analytical Results Summary
Quarterly Sampling - Leachate Treatment System
Fourth Quarter - 2023
Hyde Park RRT Program**

Sample Location:	EFFLUENT
Sample ID:	HP 121323 EFF
Sample Date:	12/1/2023

Parameters	Units	
Volatile Organic Compounds		
Vinyl chloride	µg/L	21.2
General Chemistry		
Phosphorus	mg/L	0.181

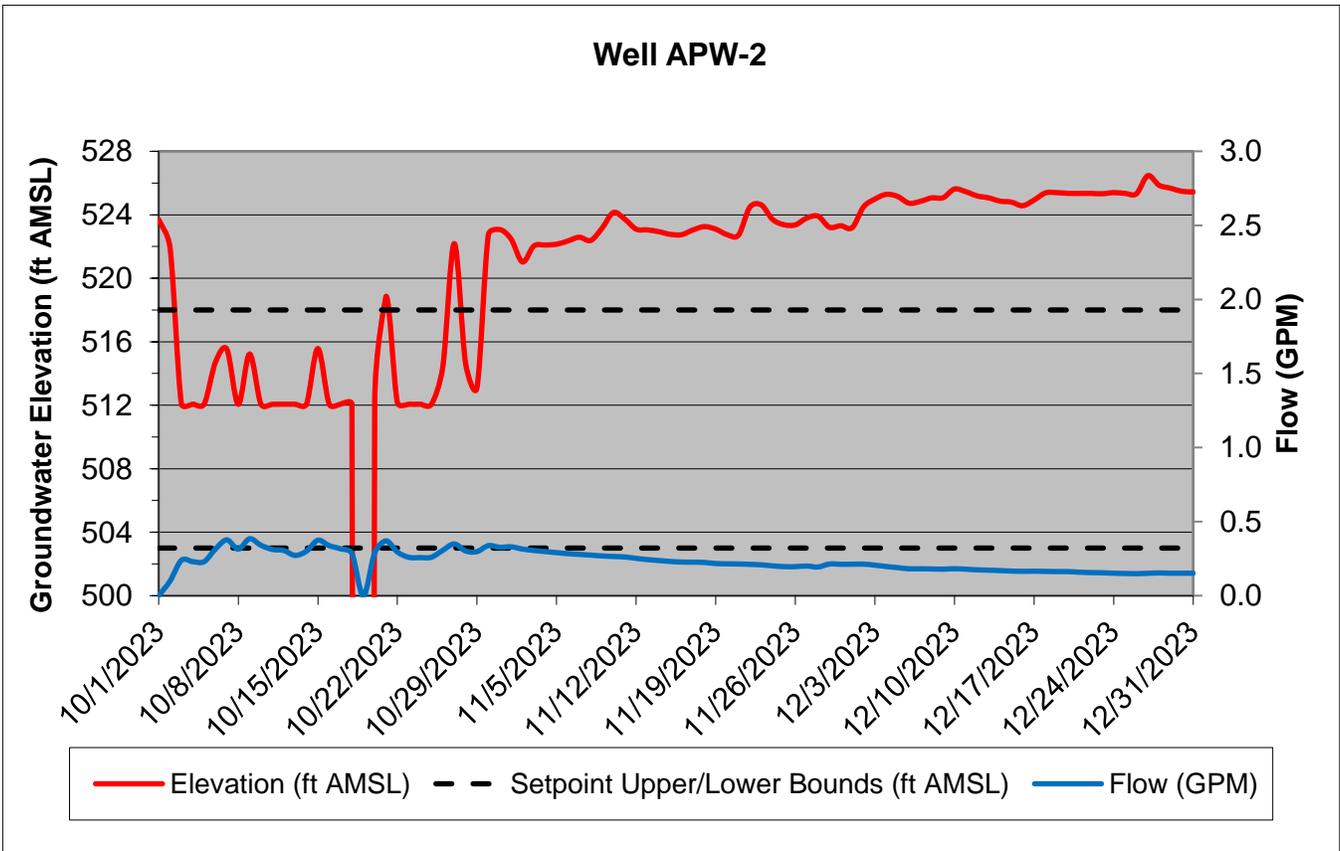
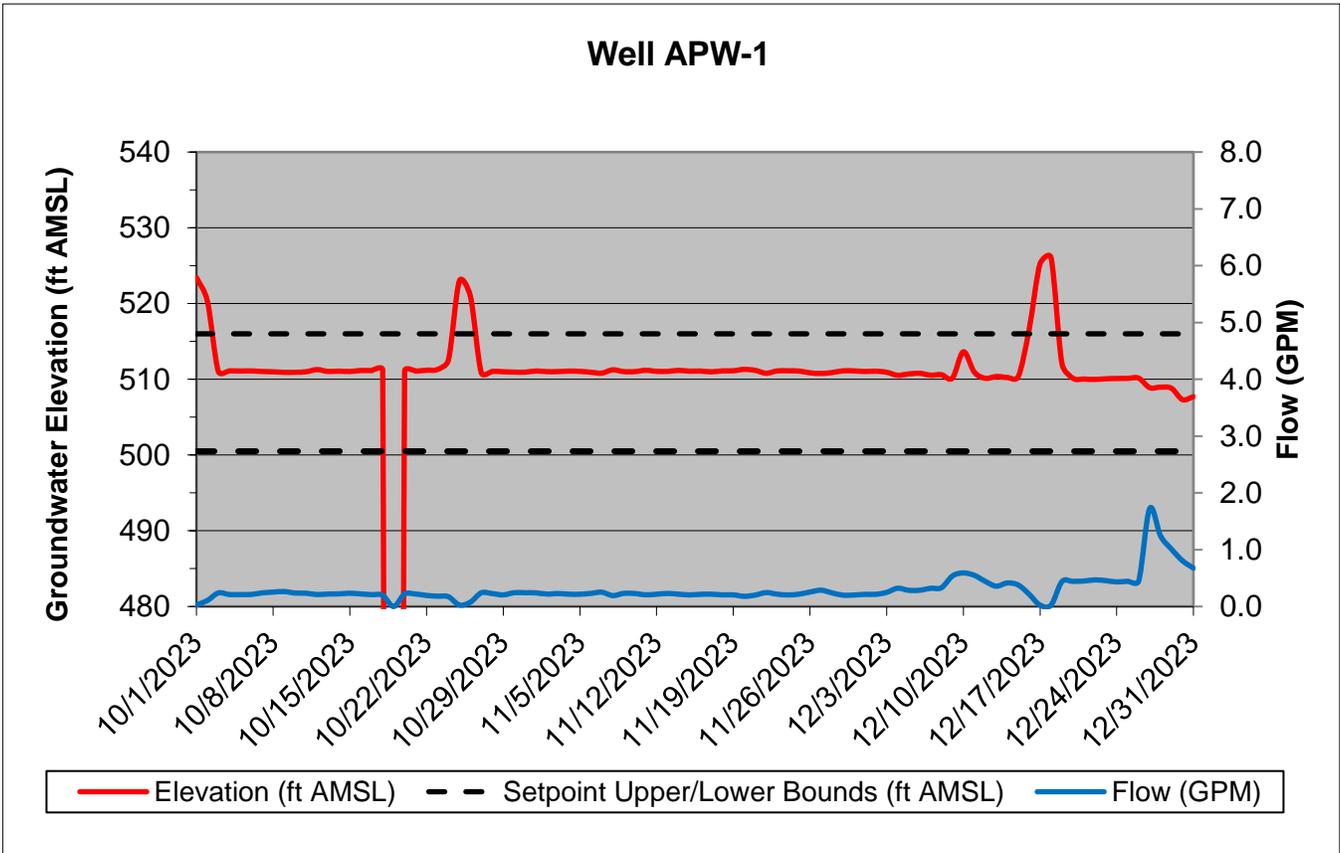
Notes:

"-" - Not applicable

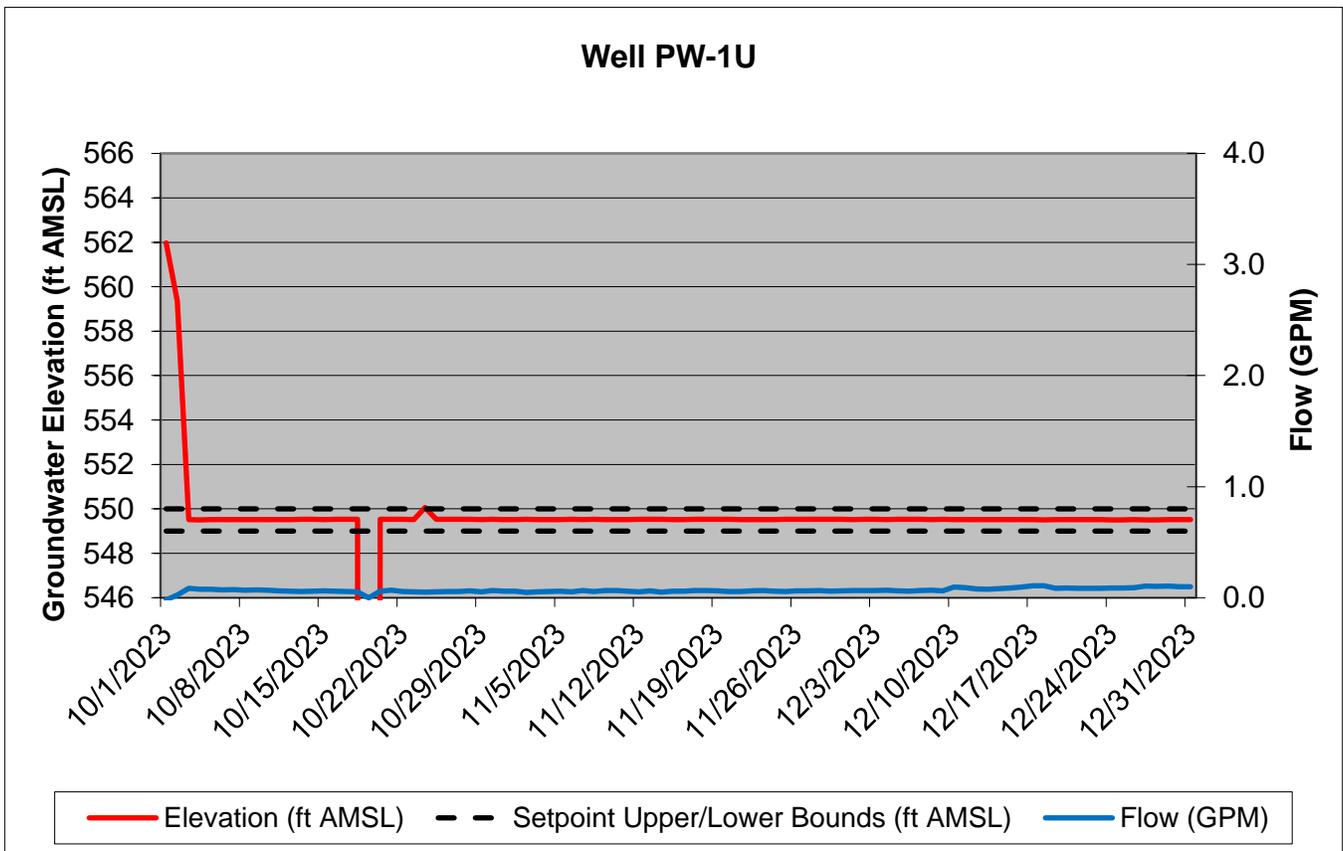
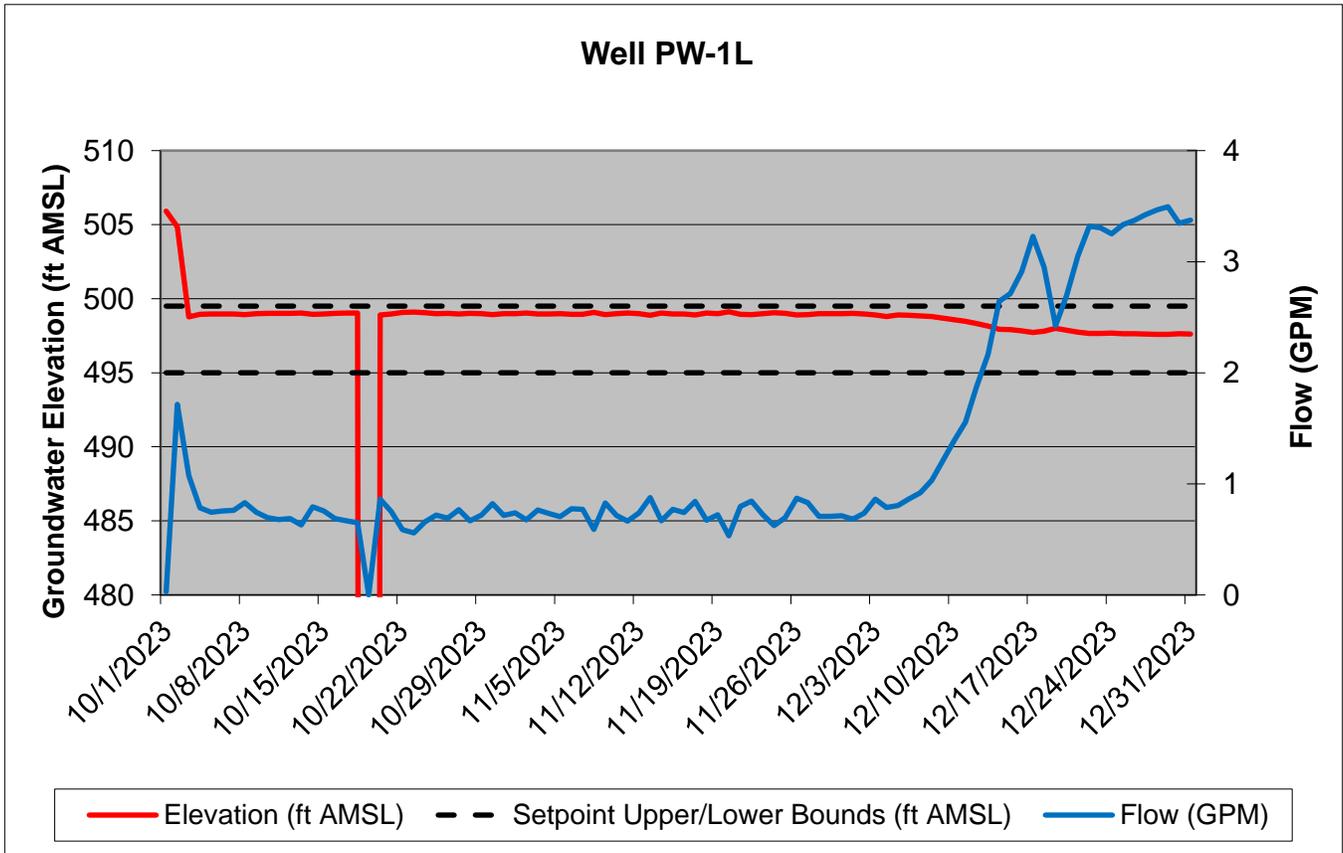
mg/L - Milligrams per liter

µg/L - Micrograms per liter

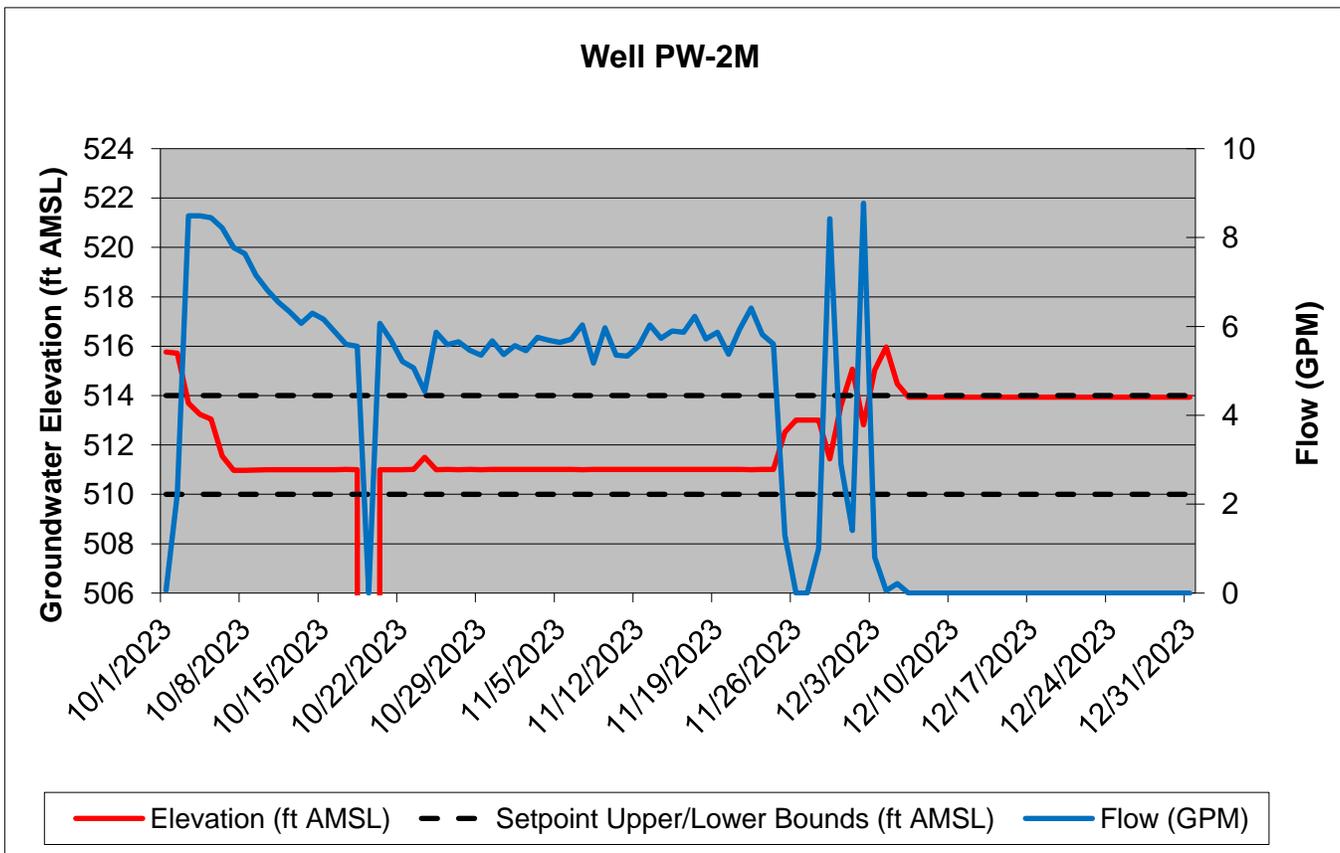
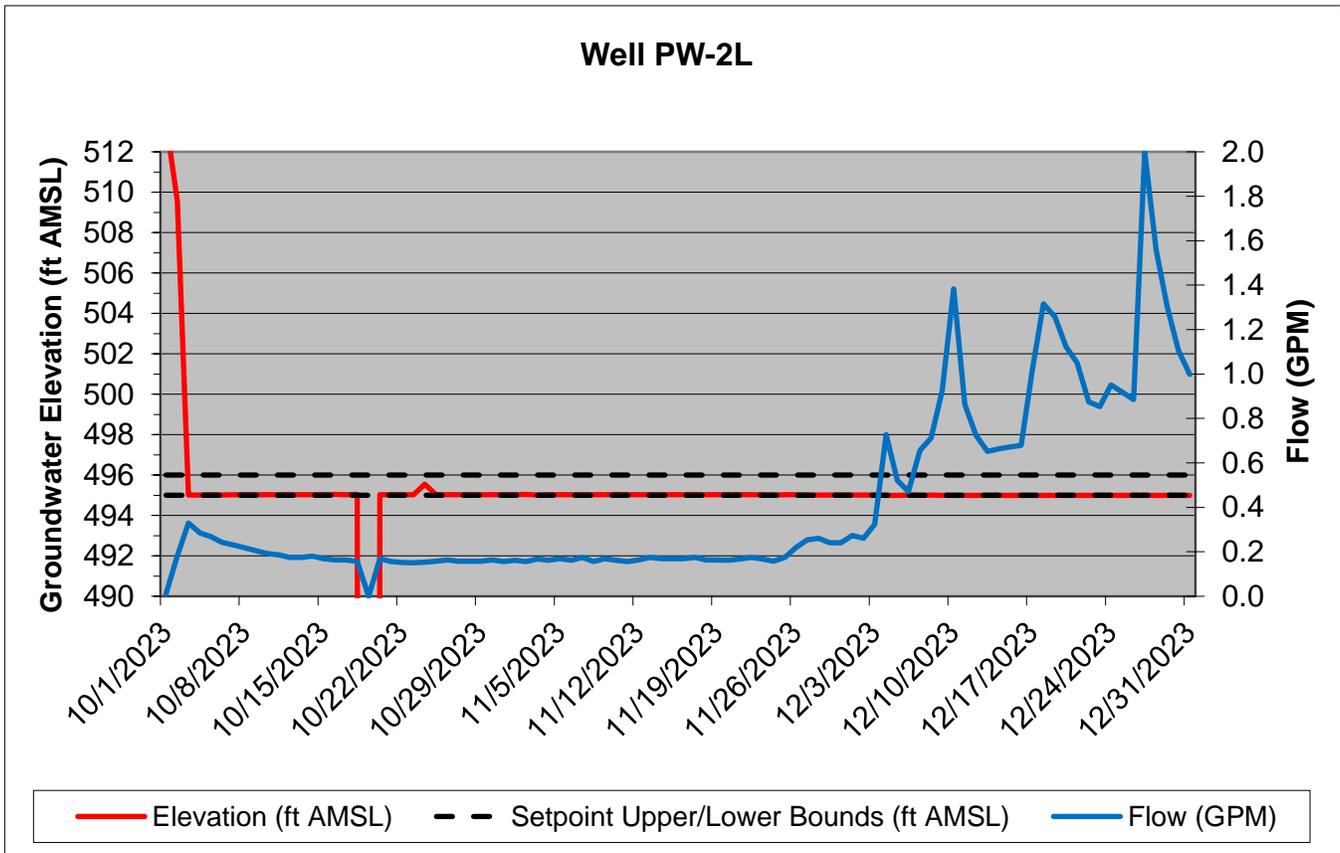
FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



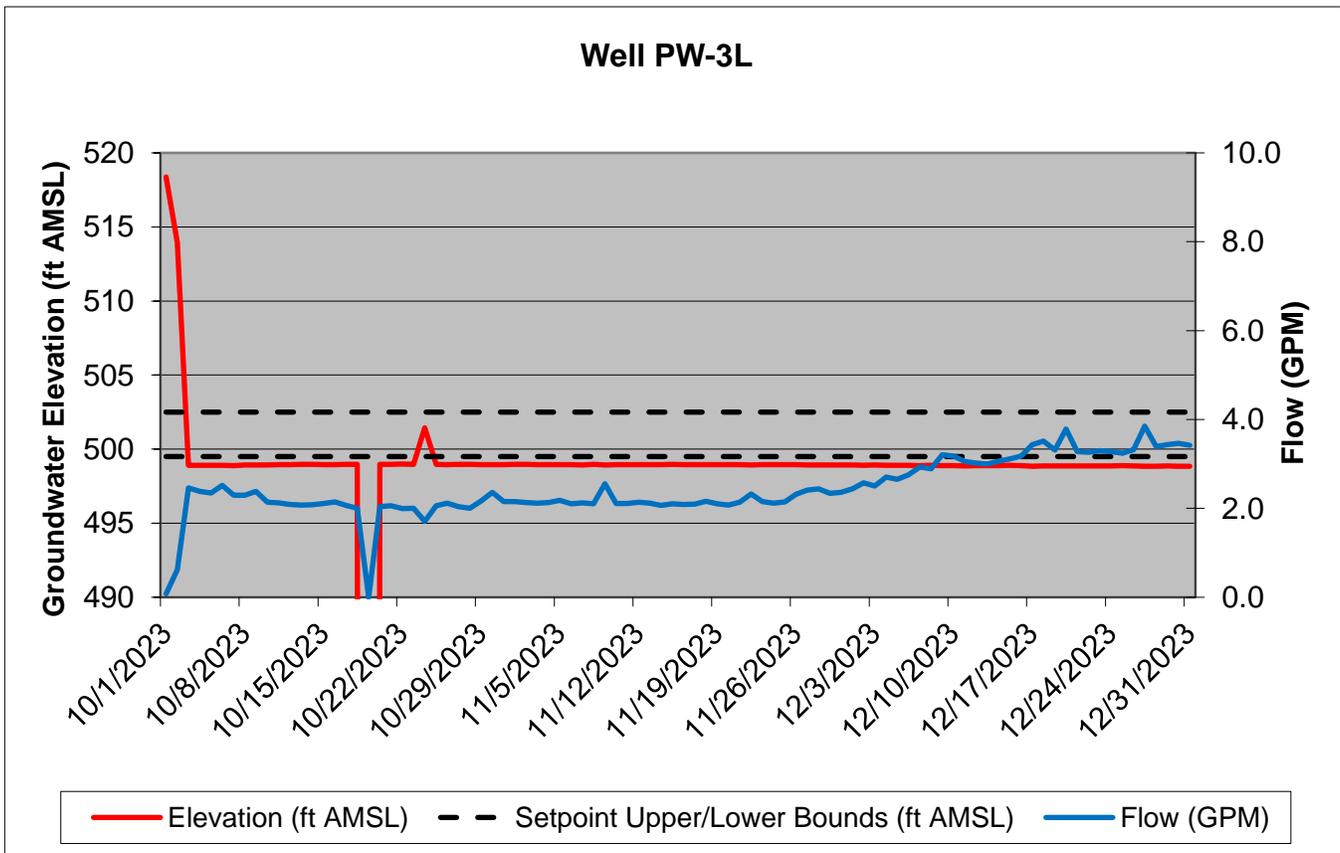
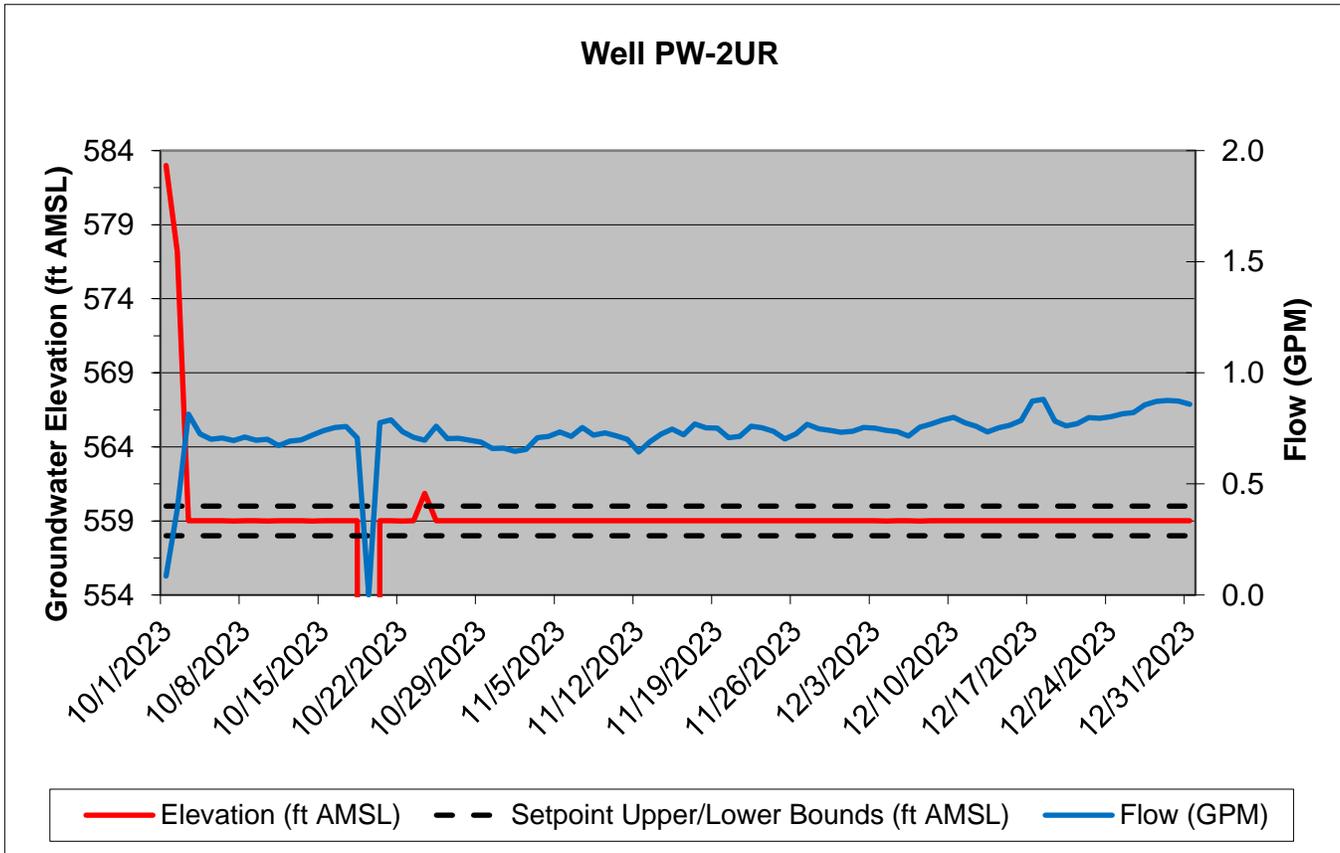
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HYDE PARK



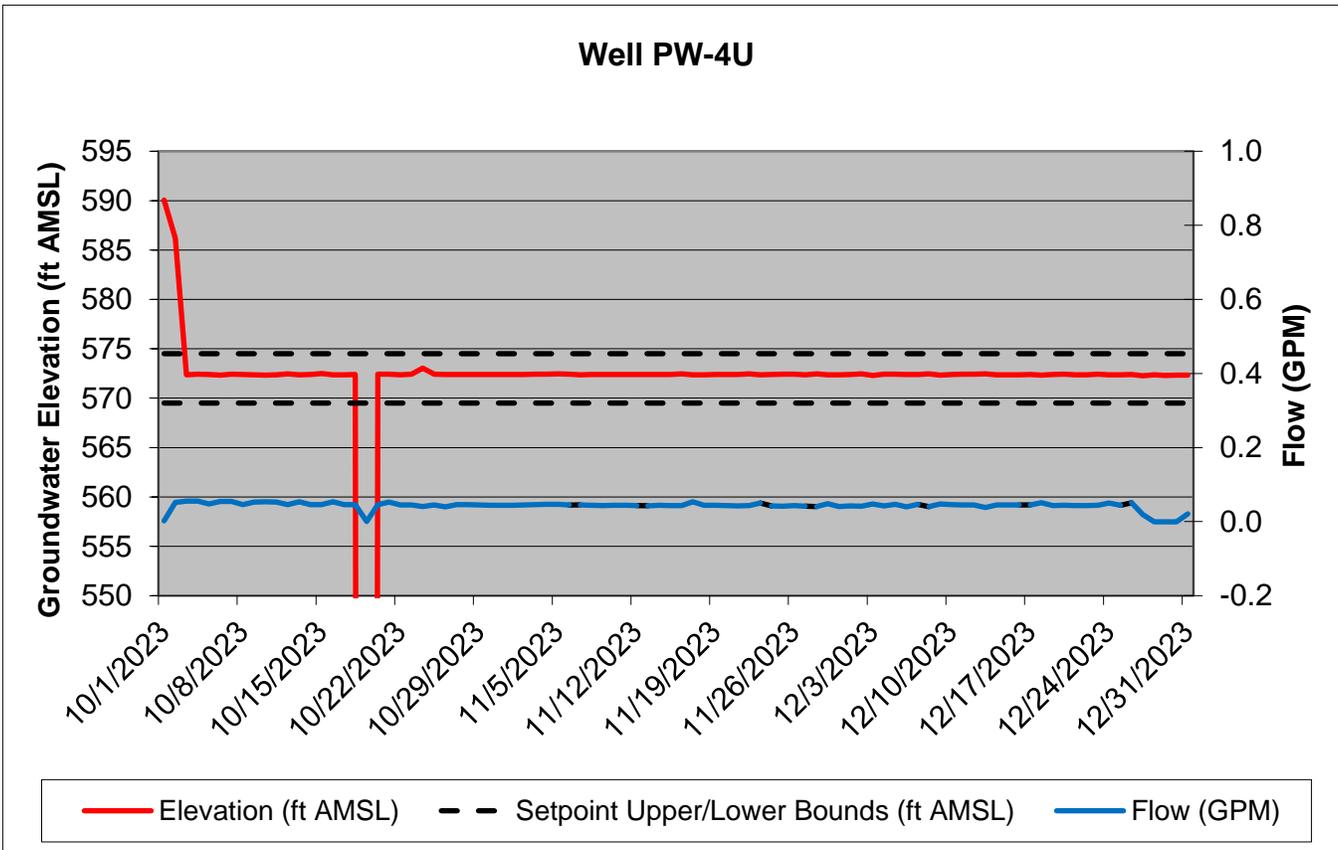
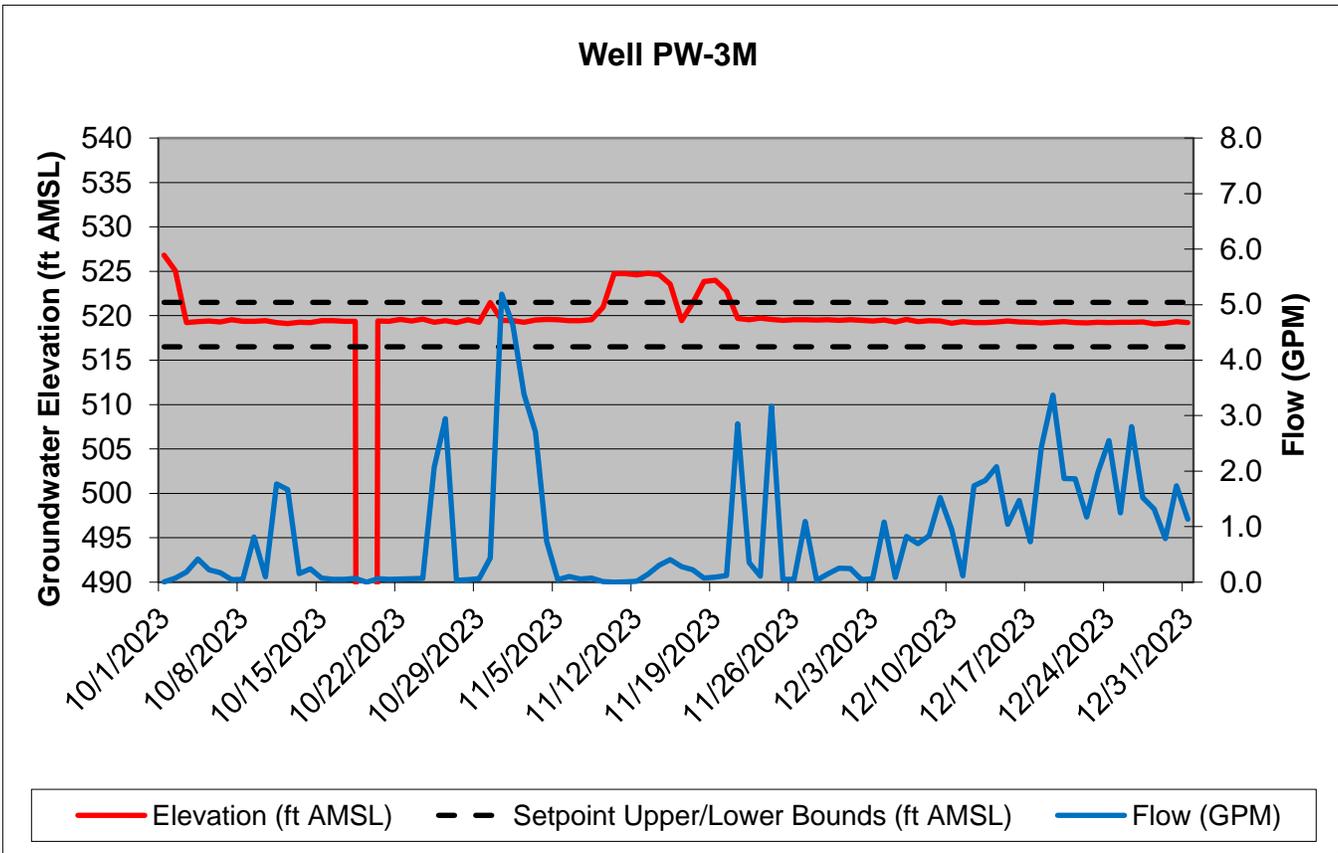
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HYDE PARK



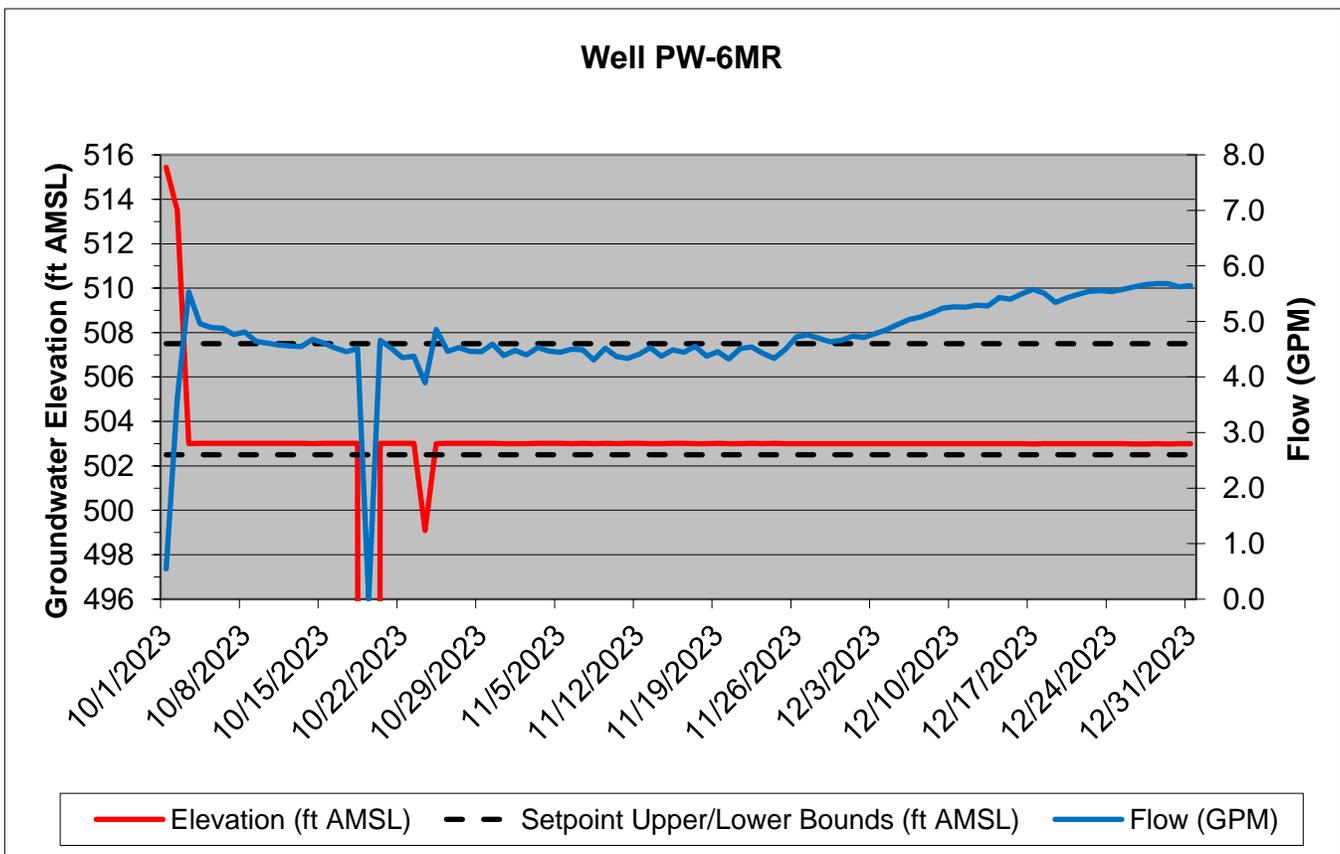
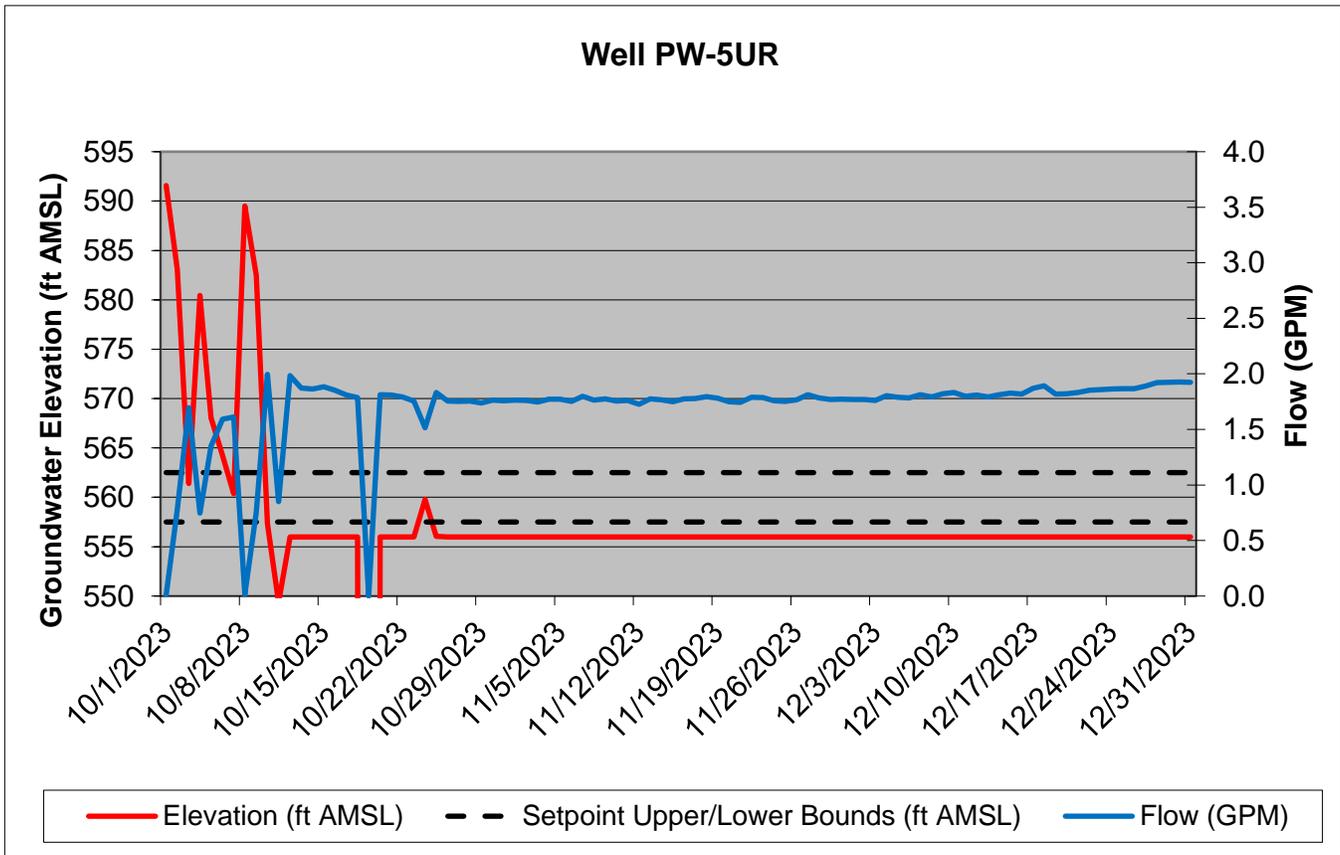
FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



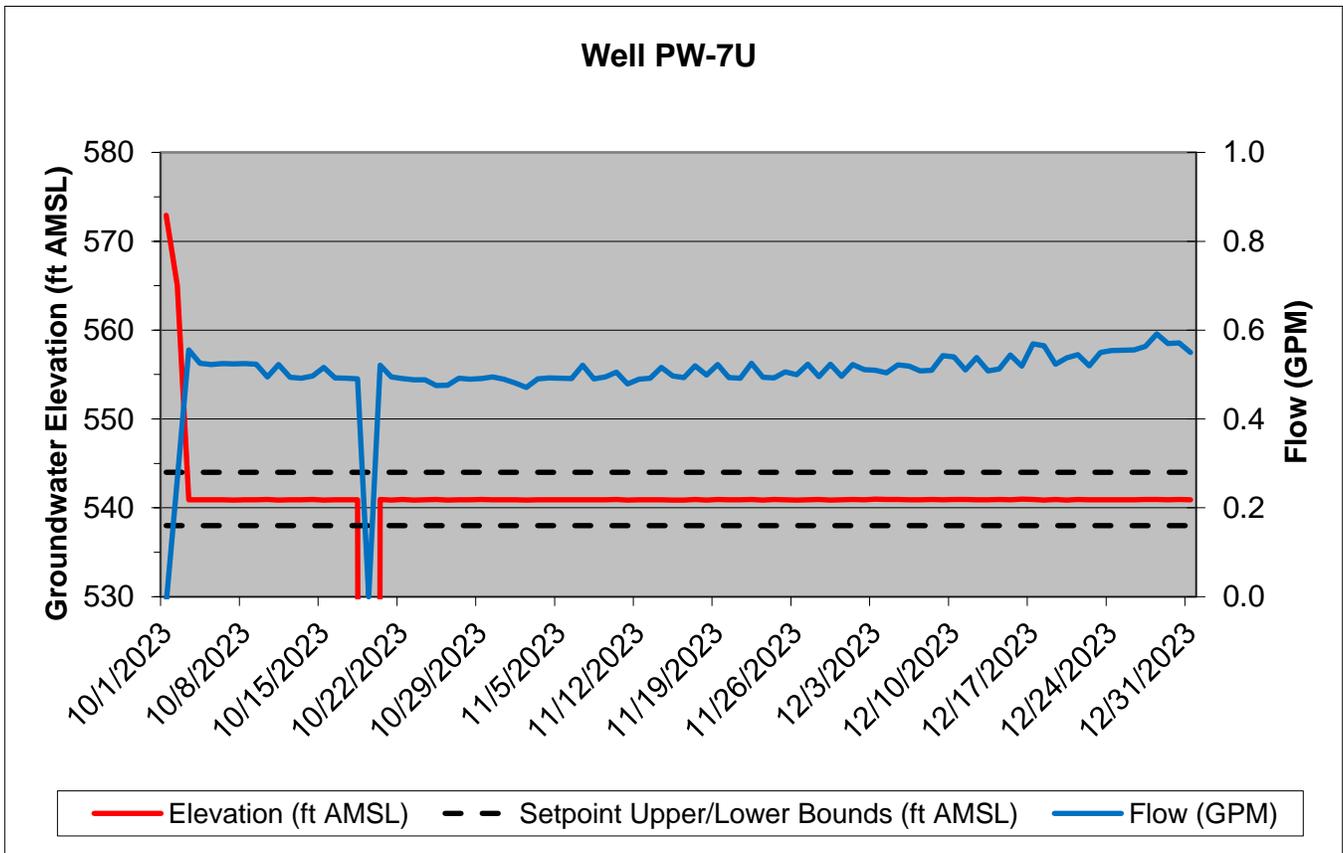
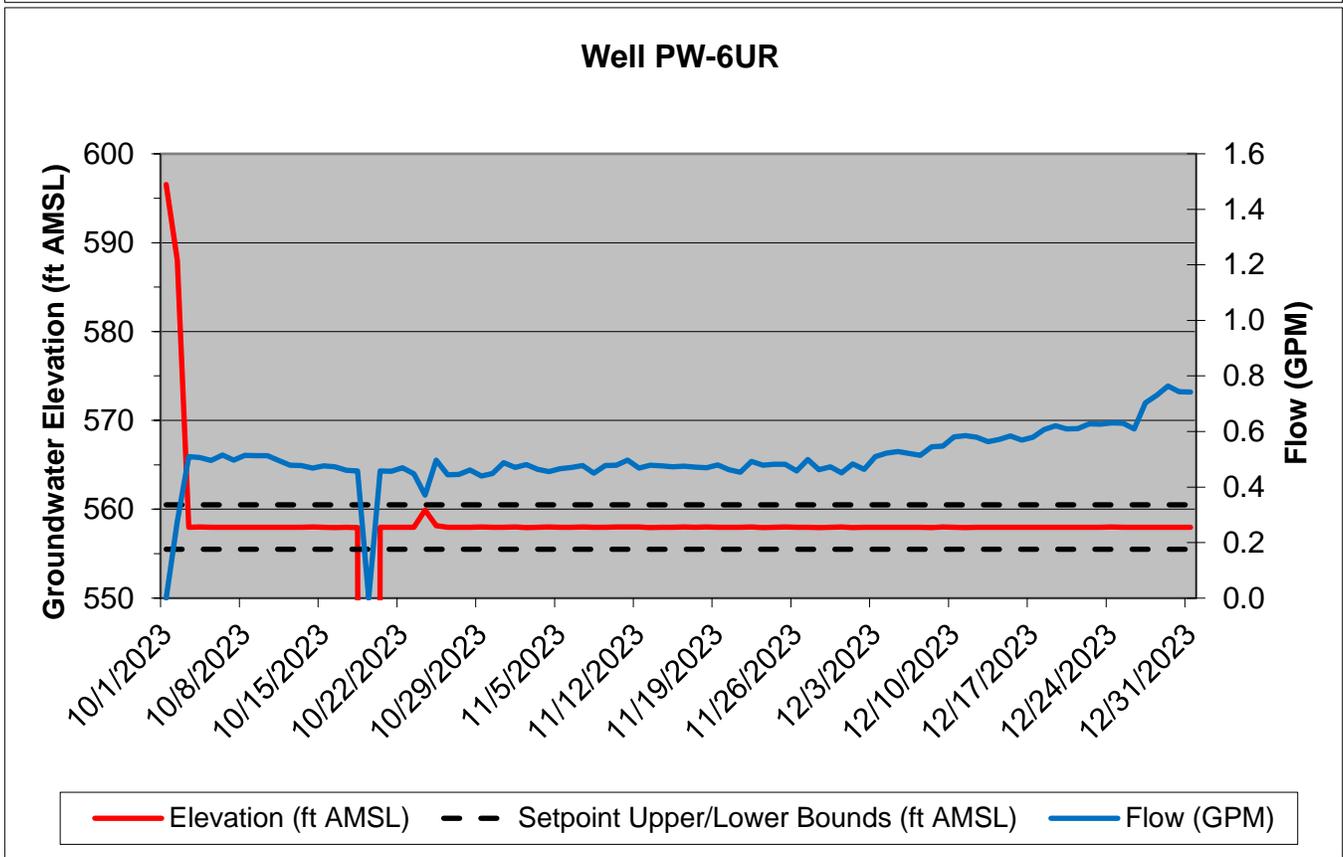
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HYDE PARK



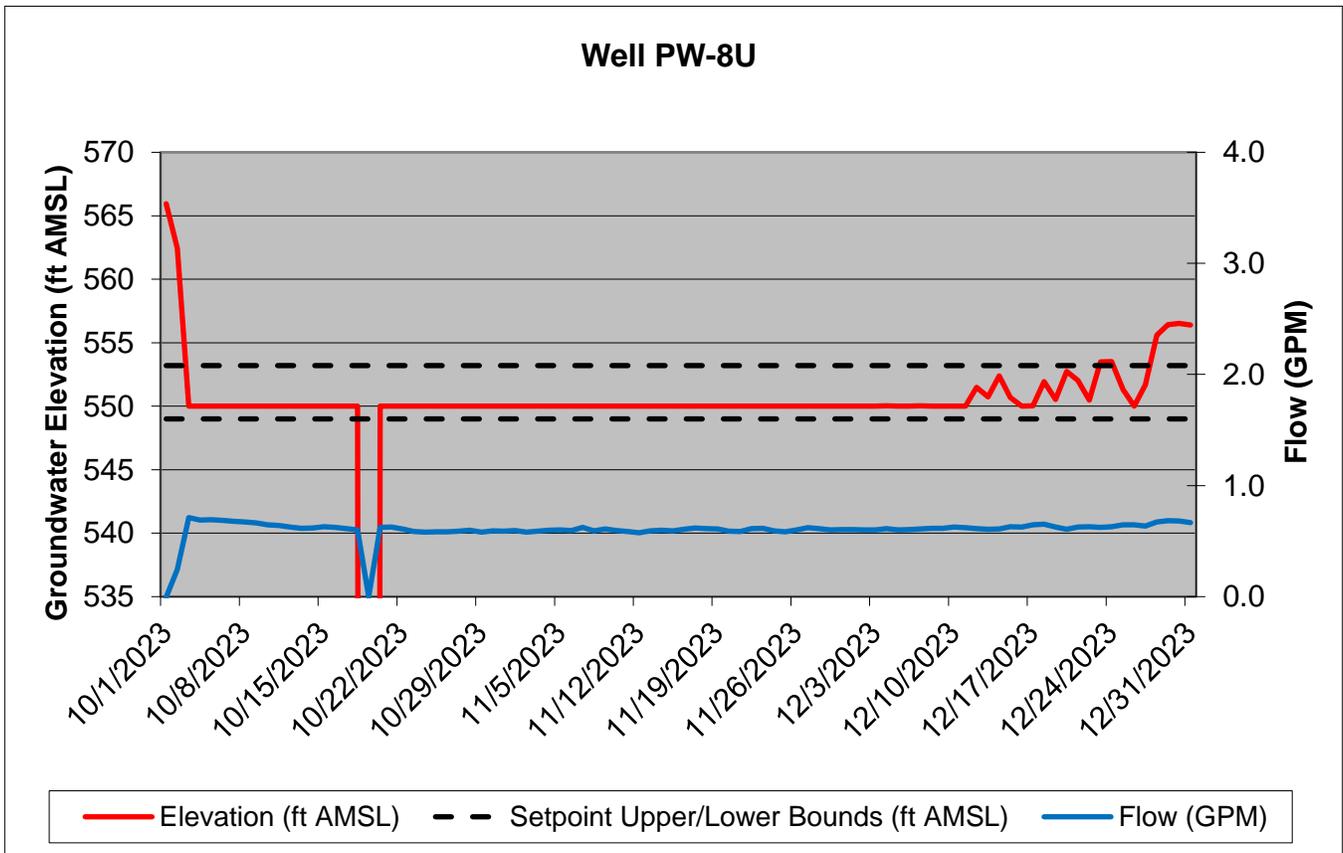
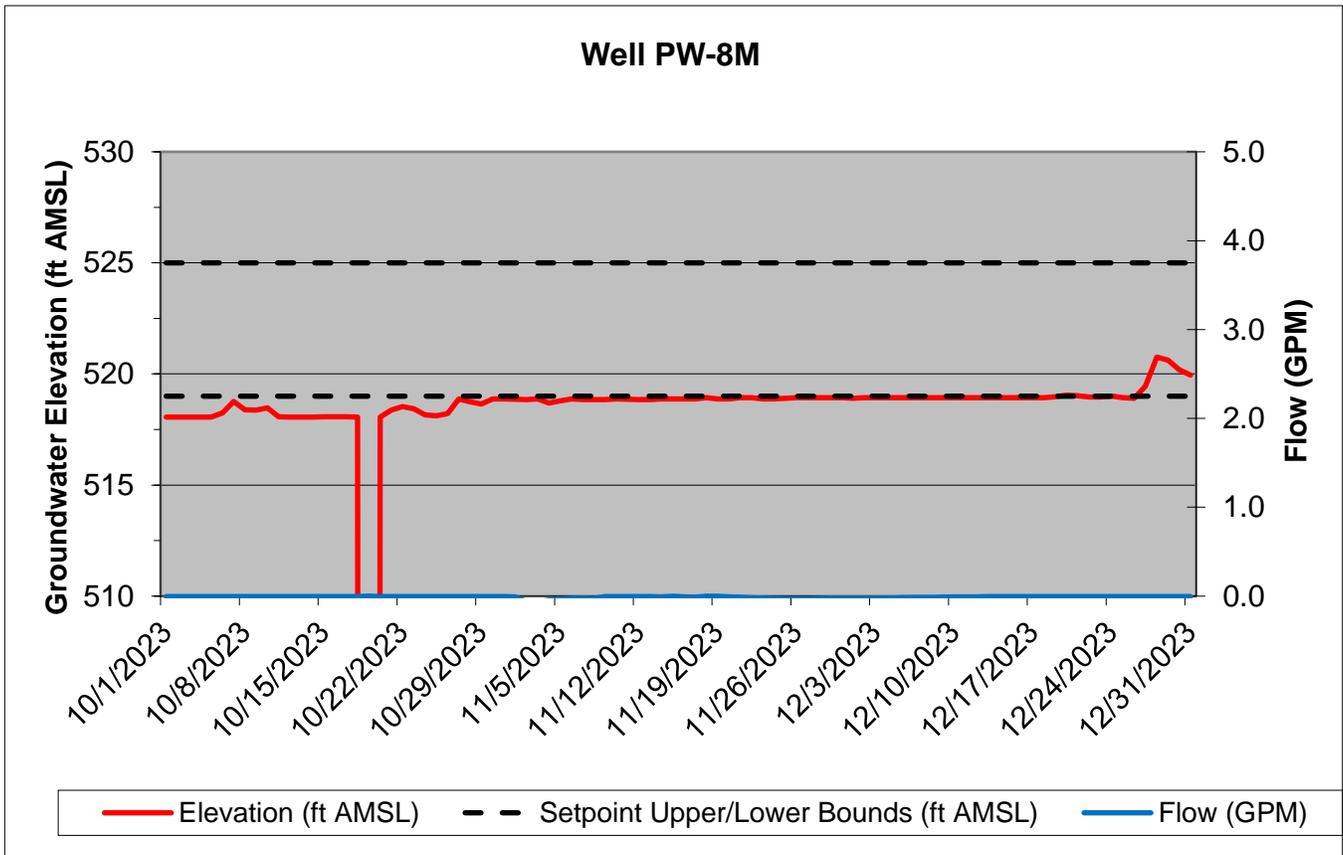
FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK



FOURTH QUARTER 2023 - PUMPING WELL PERFORMANCE GRAPHS
HYDE PARK

