

December 8, 2023

Ms. Greta White
Project Manager, Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, NY 12233-7014

Re: NYSDEC Site No. 360174; BCP C361074
November - December 2023 Monthly Progress
Report Westchester County Airport
240 Airport Road
Harrison, New York 10604

Dear Ms. White:

Actions Taken/Accomplishments (November to December 2023)

A schedule of completed and projected activities is included as Appendix A.

1. On October 10, 2023, Triumph mobilized to Airport Road to initiate the construction of the backflow preventer vault and building associated with the recently installed water main pipeline. On October 10, 18, 19, 20, and 23 excavation activities associated with preparing the vault foundation were conducted. On November 15, 16, and 17, Triumph conducted excavation associated with a second backflow preventer building on Tower Road. The construction and dewatering associated with the vault completion is expected to continue through mid- to late-December.
2. First Environment, Inc. (First Environment) conducted air monitoring for total organic vapors and air particulates during the intrusive activities as required under the Brownfield Clean up Program's (BCP) Community Air Monitoring Plan (CAMP). Dust monitors and a photoionization detector (PID) were used to monitor the work area air quality for airborne particulate and volatile organic compounds (VOCs) according to the CAMP guidelines. No elevated levels of airborne particulates or VOCs were identified. The data collection tables, hydrographs, and air monitoring results are included in Appendix B.
3. As of September 30, waterline installation has been completed from B0+00 to B40+14, as well as C10+61 to C01+00. The backflow preventer vault area on Airport Road remains under construction and is highlighted in red on Figure 1. A photolog is included in Appendix C illustrating progress made associated with both backflow preventer vaults.

4. Triumph installed two dewatering pumps in the Airport Road vault excavation area which have been running continuously since October 18, 2023. Two additional dewatering pumps were installed in the Tower Road vault excavation area on November 17, 2023 and have been running continuously. As of November 30, 2023, approximately 58,000 gallons have been treated by the GWTT treatment system and discharged to the designated sanitary sewer at 17 gallons per minute (gpm) per Westchester Department of Environment Facilities (DEF) remediation discharge permit requirements. Groundwater that had been dewatered but not yet discharged totaled approximately 70,000 gallons as of November 30, 2023. The total amount of generated groundwater is estimated to be 128,000 gallons.
5. In addition to the GWTT treatment system, First Environment initiated the pilot test treatment system to reduce per- and polyfluoroalkyl substance (PFAS) concentrations discharging to Outfall 7 (OF-7). The purpose of the system is to evaluate the treatment system performance as well as the effectiveness of the treatment system to reduce PFAS concentrations downgradient of the treatment system to Rye Lake. The pilot test operated from mid-July to mid-November 2023. The treatment system is expected to be demobilized by ECT2 in early-mid December.
6. On November 1, 2023, First Environment mobilized to the site to conduct the 3rd round of groundwater performance monitoring following the injection of the permeable reactive barrier of activated carbon associated with the FMW-13R Pilot Test. Water levels were collected from all five wells and the four piezometers. The groundwater samples were submitted to York Labs for PFAS analysis using EPA method 1633. The results continue to indicate a reduction of PFAS concentrations as groundwater passes through and PFAS is removed by the activated carbon permeable reactive barrier. The groundwater total PFAS, perfluorooctane sulfonate acid (PFOS), and perfluorooctanoic acid (PFOA) concentrations pre- and post-injection are illustrated in Figure 2. A comparison of the baseline PFAS to the April and November post-injection analytical results is presented in Table 1.
7. On November 7, 2023, First Environment measured manholes, in the Building 10 area at locations where surface water was leaking, at the request of the County. Those measurement dimensions were provided to the County and Don LeBlanc, PE of DL VEWS to further assess injection sealing at leak locations where the pipeline enters the concrete vaults and at the surface manhole to vault structures.
8. On November 13 and 14, 2023, contractors hired by Westchester County Airport conducted excavation associated with construction of a temporary parking lot. This occurred in the grass area directly adjacent to the overflow parking lot. First Environment was on-site during excavation to conduct air monitoring for total organic vapors and air particulates as required under the

Brownfield Clean Up Program's (BCP) Community Air Monitoring Plan (CAMP). No soil was graded in this area and not removed.

9. On November 30, 2023, First Environment collected a composite soil sample of stockpiled soil from the waterline for PFOS and PFOA analysis using the Synthetic Precipitation Leaching Procedure (SPLP). The purpose of the test is to assess the suitability of the soil for reuse.
10. Continue the update of Electronic Data Deliverables (EDDs) sample locations.

December to January Planned Activities

1. First Environment will continue to provide Continuous Air Monitoring during intrusive construction activities related to the watermain installation or backflow preventer vaults as described in First Environment's CAMP submittal to the NYSDEC/ NYSDOH.
2. Planned activity for December includes installation of the footing and foundation walls for the backflow preventer building on Tower Road and further completion of the backflow preventer building on Airport Road. Triumph will continue dewatering the excavation areas and treating the groundwater through the GWTT treatment system. Treated water will be discharged at 17 gpm, as required by the Westchester DEF Remediation/Discharge Permit, to the designated sanitary sewer location.

First Environment will coordinate with ECT2 to mobilize equipment off the Airport and begin to evaluate the pilot test results. Once the evaluation is completed those findings will be shared with the County, Airport, and NYSDEC.

3. First Environment will continue to work with the NYSDEC to address and respond to RIWP comments.
4. Continue to submit monthly progress reports in an American Disabilities Act (ADA) format to Westchester County.
5. As per DEF permit requirements, First Environment will continue to collect influent and effluent samples from the water line treatment system associated with dewatering activities, evaluate water quality data, and record water flow leaving the treatment system. Triumph, the waterline installation contractor, is responsible for the treatment system operation and maintenance.
6. Prepare Interim Site Management Plan.
7. Revisions of the EDDs will continue for submittal to the NYSDEC.

If you have any questions, please do not hesitate to call.

Regards,

FIRST ENVIRONMENT, INC.



Scott R. Green, P.G.
Director, Insurance Consulting
Service Group



David Luer
Project Manager/Field Team Leader

Att.

- c: B. Tod Delaney, Ph.D., P.E., BCEE - First Environment, Inc.
Arthur Clarke, J.D. - First Environment, Inc.
Hugh Greechan, Jr. P.E. - Westchester County Public Works & Transportation
John Nonna - Westchester County Attorney
April Gasparri – Westchester County Executive Director of Aviation
Francisco Tejada – Airport Manager
John Inserra - Westchester County Airport Environmental
Loren Zeitler - Westchester County
John Benvegna - WSP
K. Thompson - NYSDEC
M. Murphy - NYSDEC
D. Bendell/D. Pollock - NYSDEC
M. Doroski – NYSDOH
K. Kulow – NYSDOH

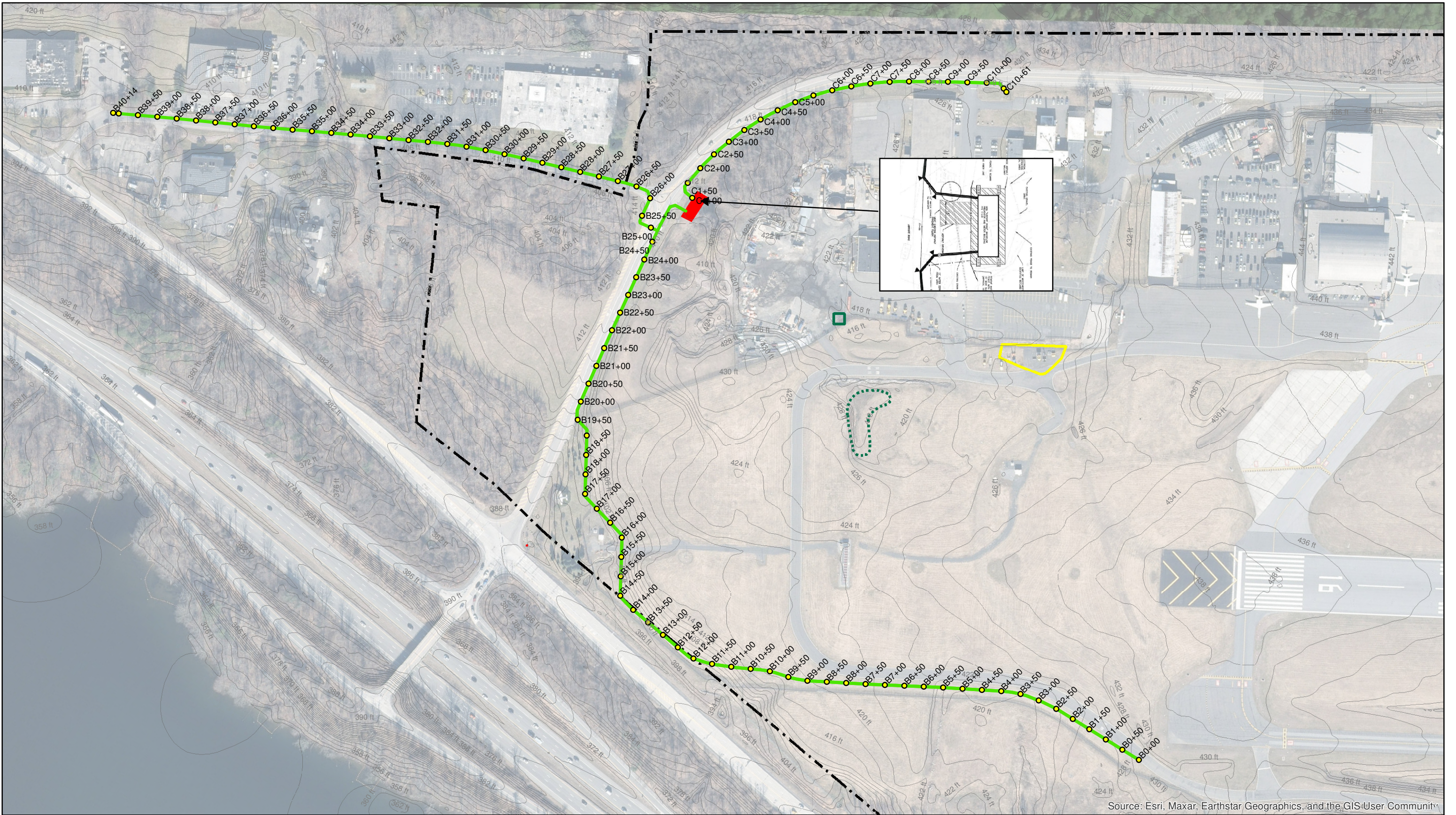
TABLES

Table 1
Pre and Post Pilot Test PFAS and TOC
Groundwater Comparison
Westchester County Airport

Sample ID York ID Sampling Date Client Matrix	FMW-13R	FMW-13R	FMW-13R	FMW-13-R	FMW-13R-A	FMW-13R-A	13R-A	FMW-13-R-A	FMW-13R-B	FMW-13R-B	13R-B	FMW-13-R-B	FMW-13R-C	FMW-13R-C	13R-C	FMW-13-R-C	FMW-13R-D	FMW-13R-D	13R-D	FMW-13-R-D	
	23A0033-01 1/3/2023 10:19:00 AM Water	23D1067-01 4/18/2023 11:25:00 AM Water	23H1504-01 8/18/2023 11:30:00 AM Ground Water	23K0112-03 11/1/2023 12:50:00 PM Ground Water	23A0033-02 1/3/2023 10:25:00 AM Water	23D1067-02 4/18/2023 11:00:00 AM Water	23H1504-02 8/18/2023 12:00:00 PM Ground Water	23K0112-05 11/1/2023 1:26:00 PM Ground Water	23A0033-03 1/3/2023 10:32:00 AM Water	23D1067-03 4/18/2023 11:10:00 AM Water	23H1504-03 8/18/2023 11:45:00 AM Ground Water	23K0112-04 11/1/2023 1:15:00 PM Ground Water	23A0033-04 1/3/2023 10:45:00 AM Water	23D1067-04 4/18/2023 11:40:00 AM Water	23H1504-04 8/18/2023 11:15:00 AM Ground Water	23K0112-01 11/1/2023 11:41:00 AM Ground Water	23A0033-05 1/3/2023 11:00:00 AM Water	23D1067-05 4/18/2023 11:55:00 AM Water	23H1504-05 8/18/2023 11:00:00 AM Ground Water	23K0112-02 11/1/2023 12:20:00 PM Ground Water	
Compound	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	Result ug/L	
Total Organic Carbon	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	
Dilution Factor																					
Total Organic Carbon (TOC)	1,000	4,400	1,200	3.8	1,180	2,790	1.5	1,190	1,000	1,000	6.4	1,840	1,000	1,000	1,000	5.00	1,000	1,000	1,000	1,000	
PFAS, EPA 1633 Target List																					
Dilution Factor	5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
1,1,1-TCF3C0U5	763051-92-9																				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8.2 FTS)	39108-34-4	2.52	2.97			2.88		2.88	2.39	87.20							2.69				
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4.2 FTS)	757124-72-4																				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6.2 FTS)	27619-97-2	217.00	19.40	19.20		246.00	48.40	40.00	38.30	346.00	11.10		139.00	2.07			295.00	1.56		1.35	
3-Perfluorheptyl propanoic acid (PFHpA)	812-79-4																				
3-Perfluoropentyl propanoic acid (PFPeA)	914637-49-3																				
3-Perfluoropropyl propanoic acid (PFPrA)	358-02-5	2.00																			
BCL-PF3ONS	756426-58-1																				
ADONA	919005-14-4																				
HFPO-DA (Gen-X)	13252-13-6									4.49											
N-EtFOA	4151-50-2	2.33	5.66										3.20				3.32				
N-EtFOEA	2991-50-6																				
N-EtFOSE	1691-99-2		21.00			100.00				70.10											
N-MeFOA	31506-32-8	1.67																1.67			
N-MeFOEA	2355-31-9																				
N-MeFOSE	24448-09-7		10.50							13.50											
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	113507-82-7																				
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3		1.49																		
Perfluoro-1-heptanesulfonic acid (PFHPS)	375-92-8	28.30		5.69		19.00	0.92	1.68	1.32	23.10	1.25		20.40				29.50				
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	2.08								1.12			0.96								
Perfluoro-1-octanesulfonamide (FOA)	754-91-6					1.64				0.91	1.36										
Perfluoro-1-pentanesulfonate (PFPeS)	2706-91-4	85.50	6.50	6.04		71.60	8.69	13.60	12.20	74.00	3.34		66.50				111.00			1.04	
Perfluoro-3,6-dioxoheptanoic acid (PFDA)	151772-58-6																				
Perfluoro-4-oxopentanoic acid (PFMPA)	377-73-1																				
Perfluoro-5-oxohexanoic acid (PFMBA)	863090-89-5																				
Perfluorobutanesulfonic acid (PFBS)	375-73-5	36.20	2.84	2.94		32.40	5.22	11.80	6.71	29.50	3.74	0.62	27.90				39.00			1.10	
Perfluorodecanoic acid (PFDA)	335-76-2	3.07		1.05						1.08			1.17				1.54				
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5			1.03		0.83															
Perfluorododecanoic acid (PFDDA)	307-55-1					1.31		2.58													
Perfluorohexanoic acid (PFHxA)	375-85-9	230.00	14.90	9.86		253.00	42.80	43.90	34.40	254.00	15.40	1.75	217.00	1.39	0.70	1.18	301.00	1.87	0.98	2.52	
Perfluorohexanesulfonic acid (PFHS)	355-46-4	994.00	66.00	73.60		675.00	70.00	72.90	63.00	820.00	32.60	2.08	775.00	2.32	1.08	2.19	1080.00	2.81	2.09	4.03	
Perfluorohexanoic acid (PFHxA)	307-24-4	453.00	23.50	9.56		531.00	131.00	131.00	115.00	531.00	46.80	5.17	409.00	3.32	4.40	555.00	5.77	4.46	16.20		
Perfluoro-n-butanoic acid (PFBA)	375-22-4	246.00	17.80	29.70		288.00	221.00	230.00	156.00	294.00	37.80	27.40	245.00	5.81	20.00	102.00	328.00	20.40	35.20	92.10	
Perfluorononanoic acid (PFNA)	375-95-1	81.80	5.35	14.40		44.10	3.79	8.65	3.89	55.60	6.12	0.65	46.90	1.65	0.62	58.30	0.77				
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1130.00	140.00	141.00		502.00	36.90	68.30	36.00	624.00	71.80	3.50	619.00	17.40	5.00	860.00	11.00	3.18	2.48		
Perfluorooctanoic acid (PFOA)	335-67-1	135.00	9.93	6.46		107.00	17.90	15.30	12.60	137.00	13.10	1.16	112.00	0.97	0.45	142.00	0.86	0.65			
Perfluoropentanoic acid (PFPeA)	2706-90-3	950.00	35.40	19.40	32.80	1150.00	423.00	525.00	377.00	1120.00	109.00	17.80	21.00	862.00	4.72	8.84	39.20	1220.00	23.60	30.70	97.70
Perfluorotetradecanoic acid (PFTA)	376-06-7					5.27															
Perfluorotridecanoic acid (PFTDA)	72629-94-8					7.75		205.00													
Perfluoroundecanoic acid (PFUnA)	2058-94-8					1.05															
PFOS + PFOA		1265.00	149.93	147.46	0.00	609.00	54.90	83.60	48.00	761.00	84.90	4.66	11.50	731.00	18.37	5.45	6.38	1002.00	11.86	3.93	2.48
Total PFAS		4600.47	383.24	339.93	32.80	4039.83	1009.02	1369.71	860.21	4314.15	530.92	58.72	77.87	3545.03	39.65	36.70	158.35	5028.02	68.65	77.26	218.52

NOTES:
Blank space - No detectable levels.
Q is the Qualifier Column with definitions as follows:
D=result is from an analysis that required a dilution
U=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
U=analyte not detected at or above the level indicated
B=analyte found in the analysis batch blank
E=result is estimated and cannot be accurately reported due to levels encountered or interferences
NT=this indicates the analyte was not a target for this sample
D=result is from an analysis that required a dilution
--this indicates that no regulatory limit has been established for this analyte

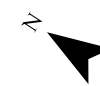
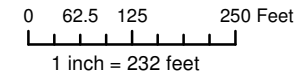
FIGURES



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Station
- Water Line Completed
- Elevation Contour Lines
- ▭ Former AFFF Burn Pit
- ▭ Vault
- ▭ Subsurface Catch Basin
- ⋯ Open Catch Area
- ⋯ Property Boundary



FIRST ENVIRONMENT

10 Park Place, Bldg 1A, Suite 504
Butler, NJ 07405

NYSDEC SITE NO. 360174 WESTCHESTER COUNTY AIRPORT White Plains, Westchester County, New York FIGURE 1 WATER LINE CONSTRUCTION PROGRESS				
Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	11/9/2023

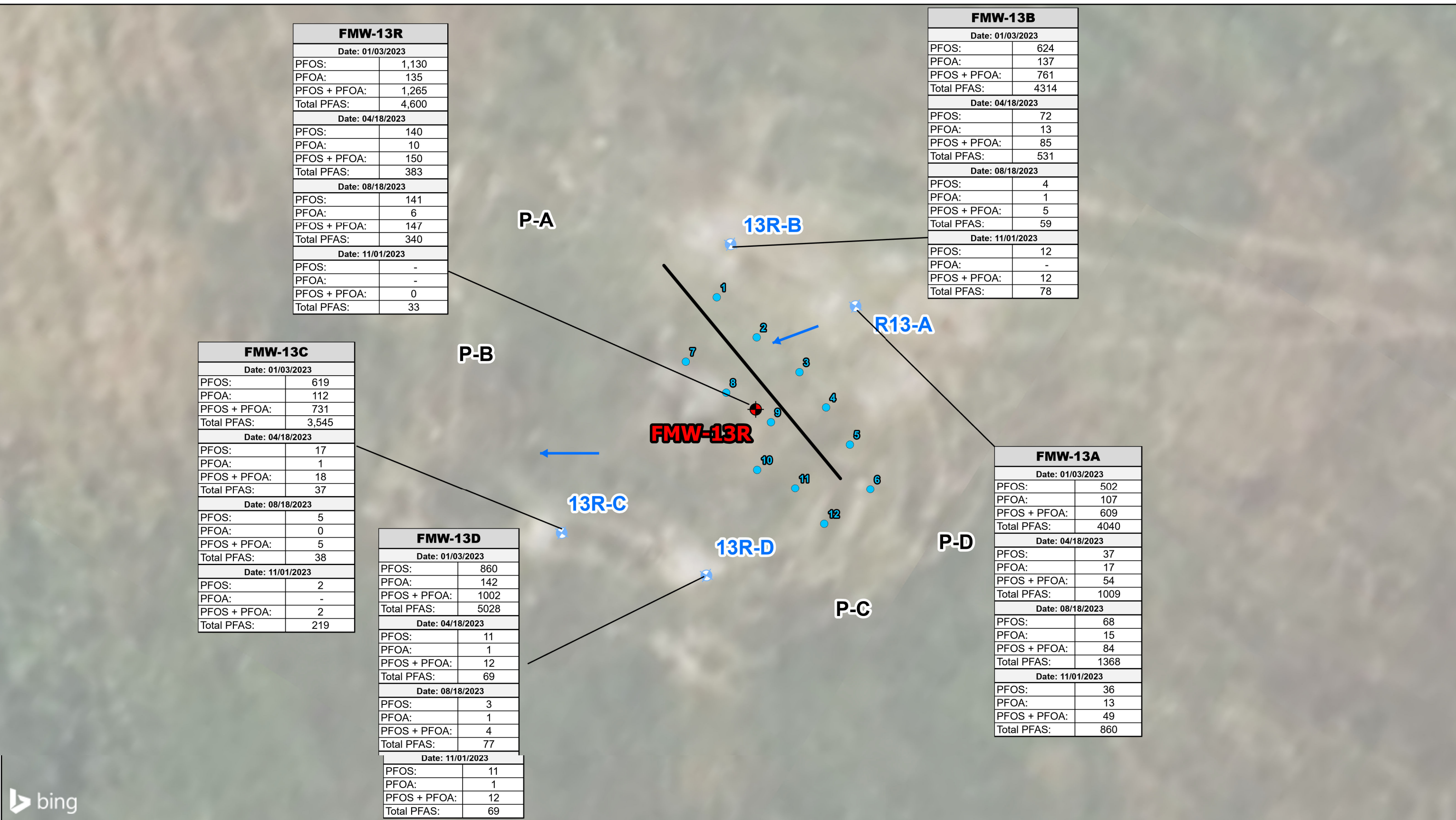
FMW-13R	
Date: 01/03/2023	
PFOS:	1,130
PFOA:	135
PFOS + PFOA:	1,265
Total PFAS:	4,600
Date: 04/18/2023	
PFOS:	140
PFOA:	10
PFOS + PFOA:	150
Total PFAS:	383
Date: 08/18/2023	
PFOS:	141
PFOA:	6
PFOS + PFOA:	147
Total PFAS:	340
Date: 11/01/2023	
PFOS:	-
PFOA:	-
PFOS + PFOA:	0
Total PFAS:	33

FMW-13B	
Date: 01/03/2023	
PFOS:	624
PFOA:	137
PFOS + PFOA:	761
Total PFAS:	4314
Date: 04/18/2023	
PFOS:	72
PFOA:	13
PFOS + PFOA:	85
Total PFAS:	531
Date: 08/18/2023	
PFOS:	4
PFOA:	1
PFOS + PFOA:	5
Total PFAS:	59
Date: 11/01/2023	
PFOS:	12
PFOA:	-
PFOS + PFOA:	12
Total PFAS:	78

FMW-13C	
Date: 01/03/2023	
PFOS:	619
PFOA:	112
PFOS + PFOA:	731
Total PFAS:	3,545
Date: 04/18/2023	
PFOS:	17
PFOA:	1
PFOS + PFOA:	18
Total PFAS:	37
Date: 08/18/2023	
PFOS:	5
PFOA:	0
PFOS + PFOA:	5
Total PFAS:	38
Date: 11/01/2023	
PFOS:	2
PFOA:	-
PFOS + PFOA:	2
Total PFAS:	219

FMW-13D	
Date: 01/03/2023	
PFOS:	860
PFOA:	142
PFOS + PFOA:	1002
Total PFAS:	5028
Date: 04/18/2023	
PFOS:	11
PFOA:	1
PFOS + PFOA:	12
Total PFAS:	69
Date: 08/18/2023	
PFOS:	3
PFOA:	1
PFOS + PFOA:	4
Total PFAS:	77
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PFOS:	11
PFOA:	1
PFOS + PFOA:	12
Total PFAS:	69

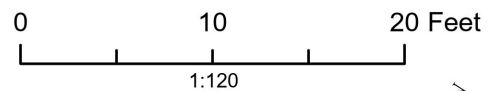
FMW-13A	
Date: 01/03/2023	
PFOS:	502
PFOA:	107
PFOS + PFOA:	609
Total PFAS:	4040
Date: 04/18/2023	
PFOS:	37
PFOA:	17
PFOS + PFOA:	54
Total PFAS:	1009
Date: 08/18/2023	
PFOS:	68
PFOA:	15
PFOS + PFOA:	84
Total PFAS:	1368
Date: 11/01/2023	
PFOS:	36
PFOA:	13
PFOS + PFOA:	49
Total PFAS:	860



Legend

- Injection Points
- Groundwater Flow Direction
- Piezometer Locations
- Pilot Test Wells
- Injection Permeable Reactive Barrier

Note:
 - Sample date was 11/01/23
 - PFOS & PFOA concentrations are measured in ppt



	NYSDEC SITE NO. 360174 WESTCHESTER COUNTY AIRPORT White Plains, Westchester County, New York			
	FIGURE 2 GROUNDWATER PILOT TEST RESULTS			
10 Park Place, Bldg 1A, Suite 504 Butler, NJ 07405	Revised CS	Drawn LS	Checked DL	Approved SG
				Date 4/18/2023

APPENDIX A

APPENDIX A
Work Activity Schedule
2022-2024

Milestone	Estimated Completion Date	Estimated Completion Percentage
OF-7 Storm Sewer Installation	May 2022	100%
OF-7 Performance Monitoring	3 rd Quarter 2023	100%
OF-7 Pilot Test Treatment System	October 2023	100%
New King Street Workplan – Phase 1	January 2022	100%
New King Street Workplan – Phase 2	April 2022	100%
Waterline Workplan	April 2022	100%
Waterline Trench & Installation	November 2023	95%
OF-4 IRM Pilot Test ¹	Winter 2023	55%
Remedial Investigation Workplan Submittal	July 2022	100%
GW Pilot Test Scope of Work	Summer 2022	100%
GW Pilot Test	Winter 2022	100%
GW Pilot Test Performance Monitoring	Winter 2023	85%
Execution of RI workplan ²	Spring 2024	0%
Remedial Investigation Report	Summer 2024	0%
Remedial Action Alternatives Evaluation	2023-2024	0%
Interim Site Management Plan	Spring 2024	10%
Remedial Action Selection Report	TBD	0%
Remedial Action Workplan	TBD	0%
Certificate of Completion	TBD	0%

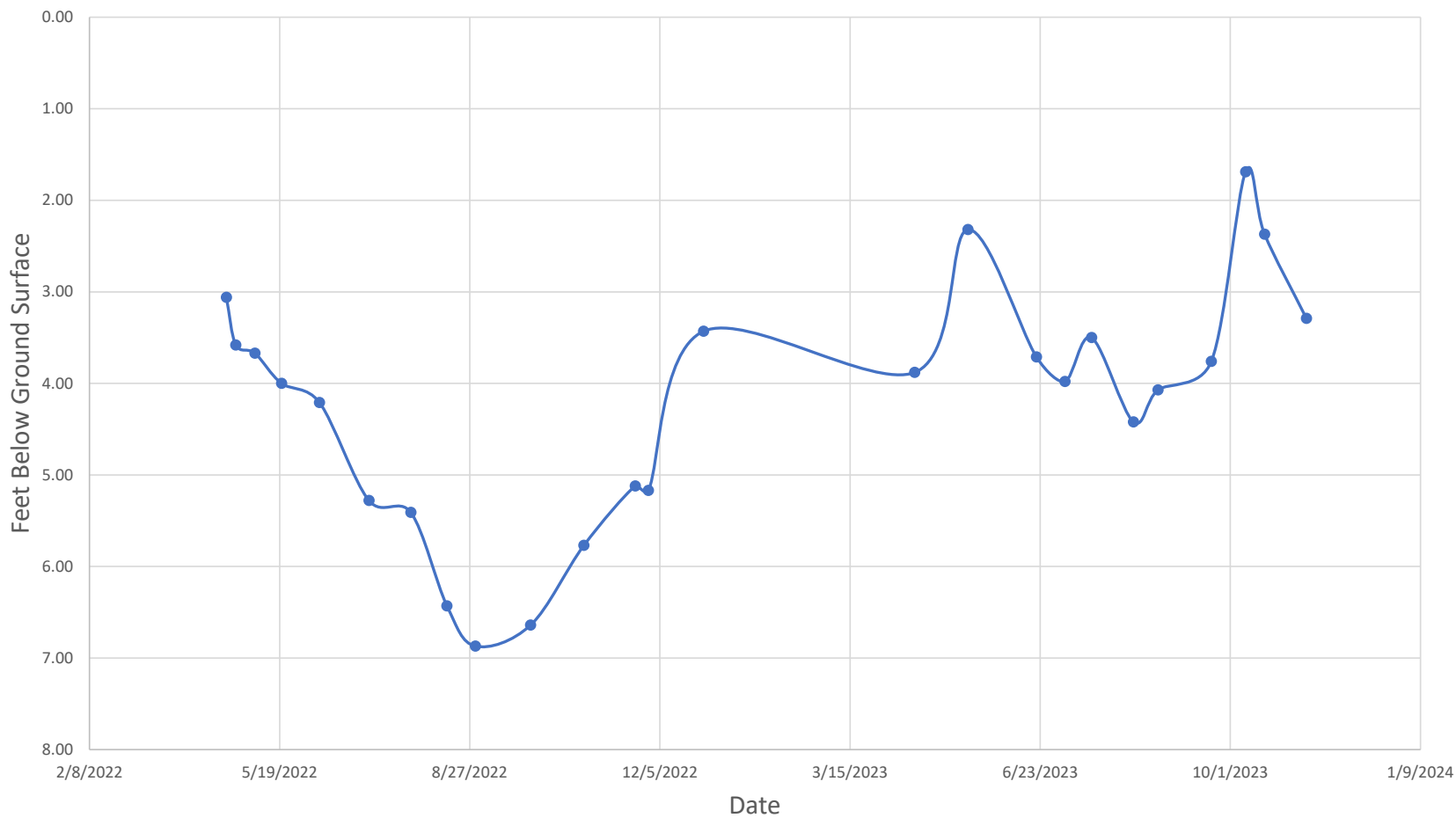
Estimated task durations and completions are tentative and are subject to modification based on site work, progress, weather delays, and other considerations such as contractor availability or Airport access.

¹ Assessing pilot test technology applicability..

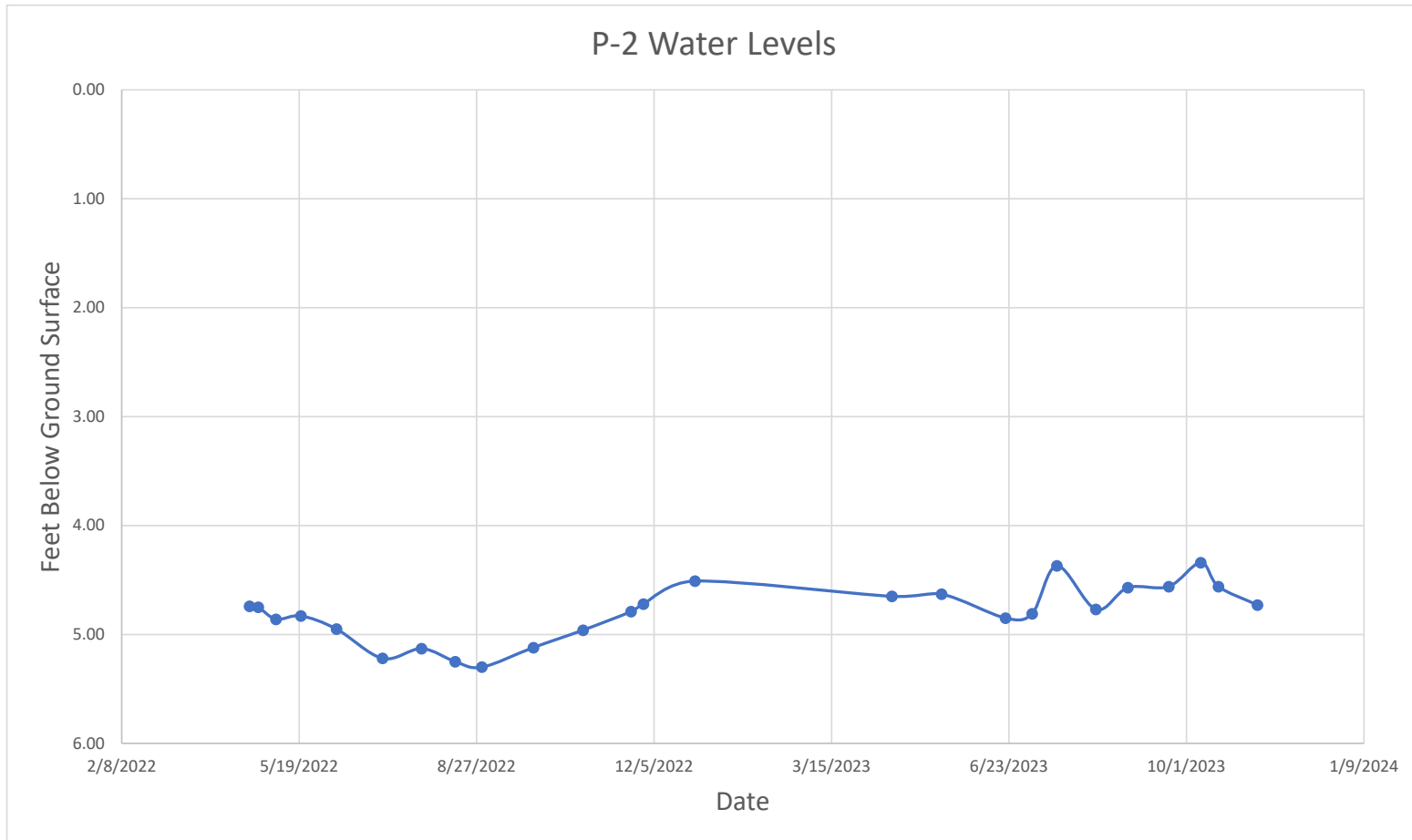
² Start date dependent upon workplan approval.

APPENDIX B

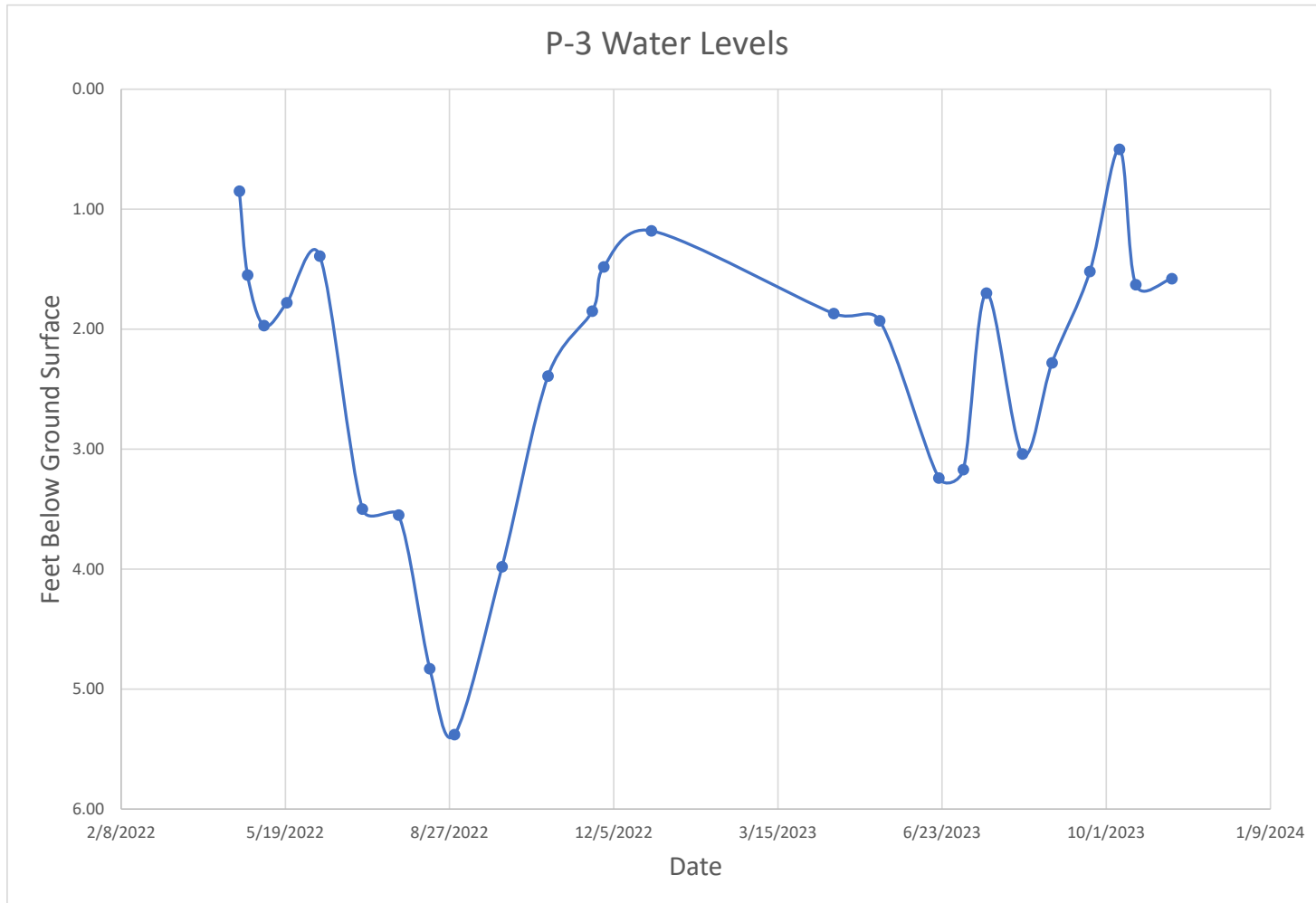
P-1 Water Levels



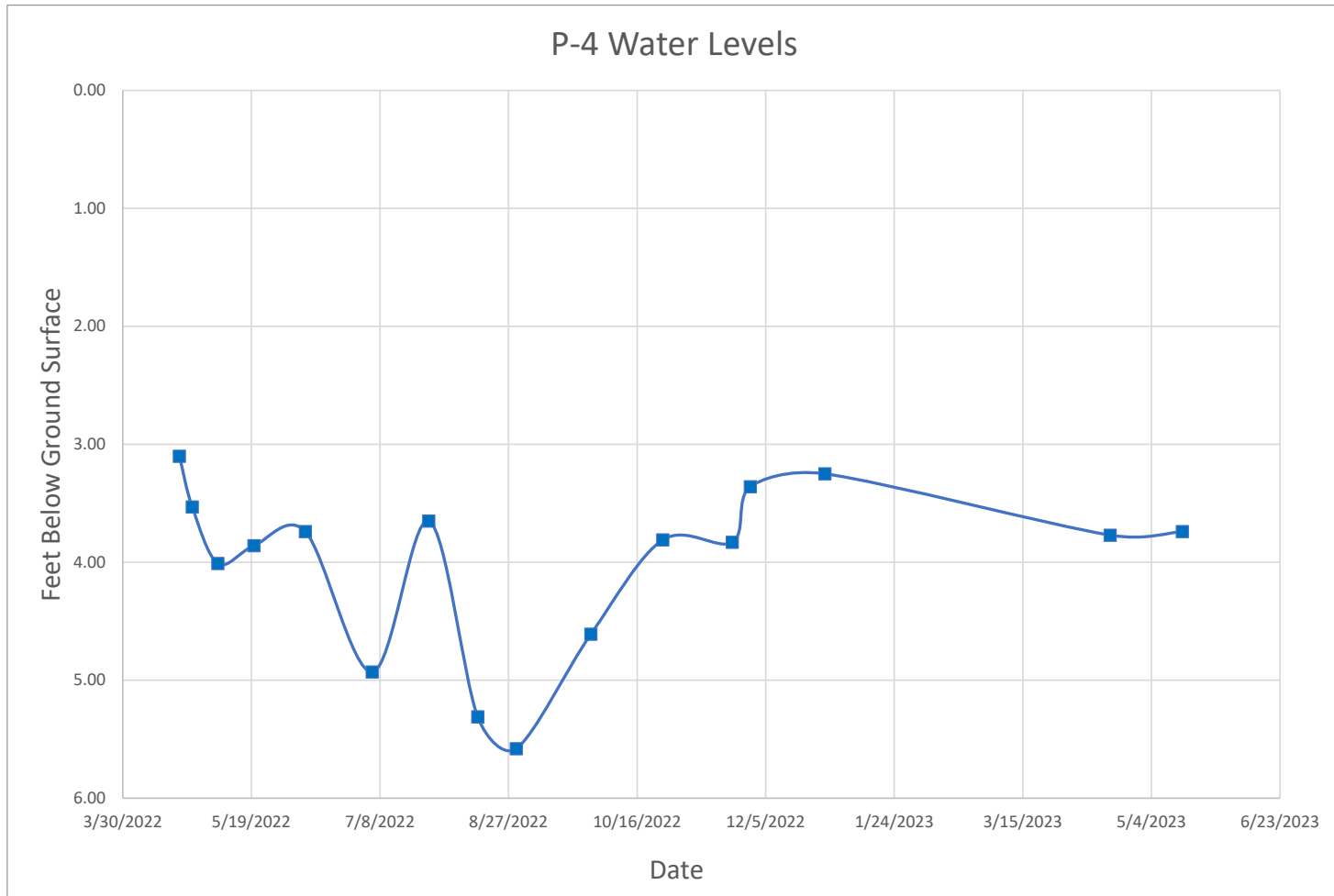
APPENDIX B



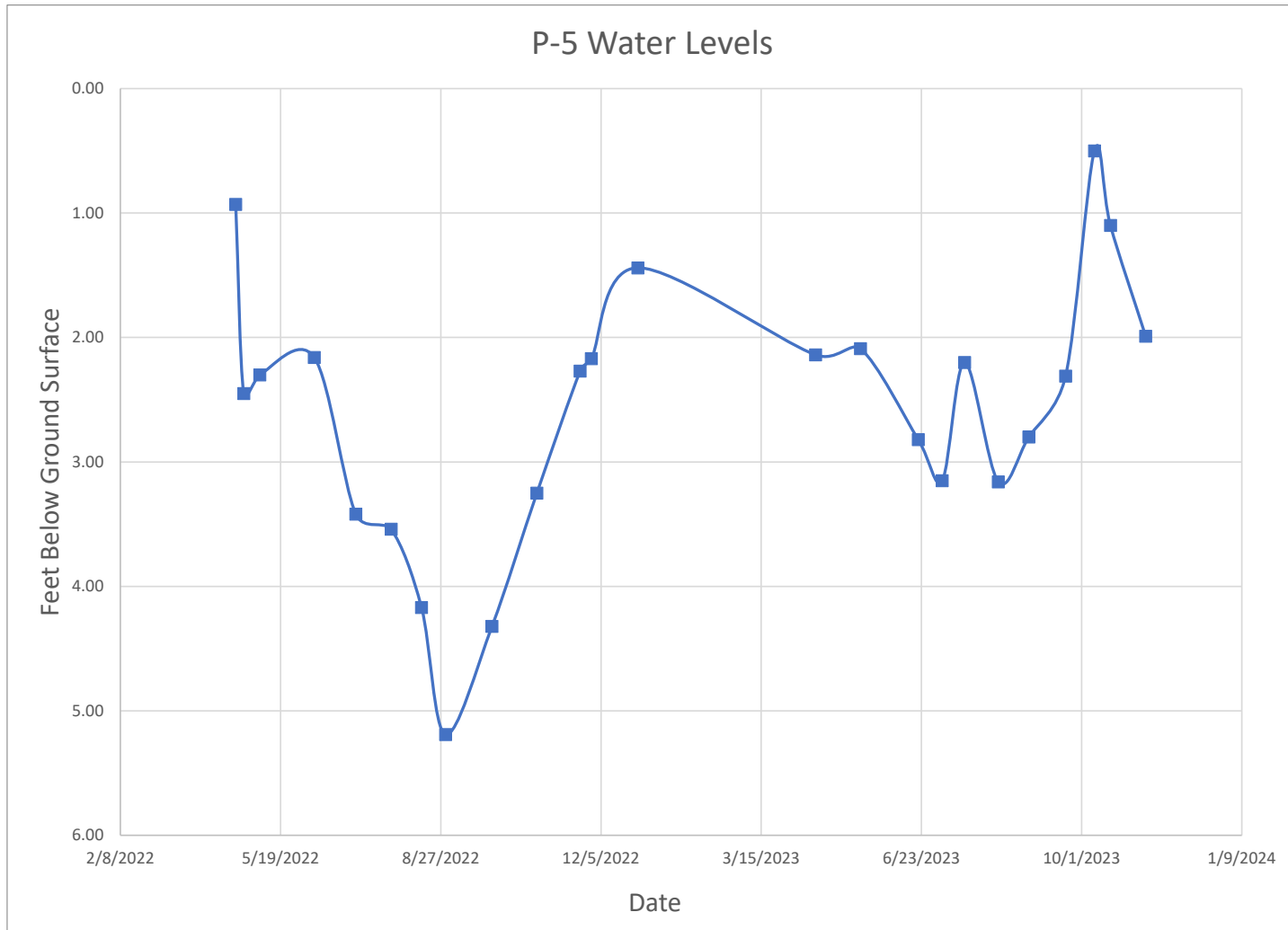
APPENDIX B



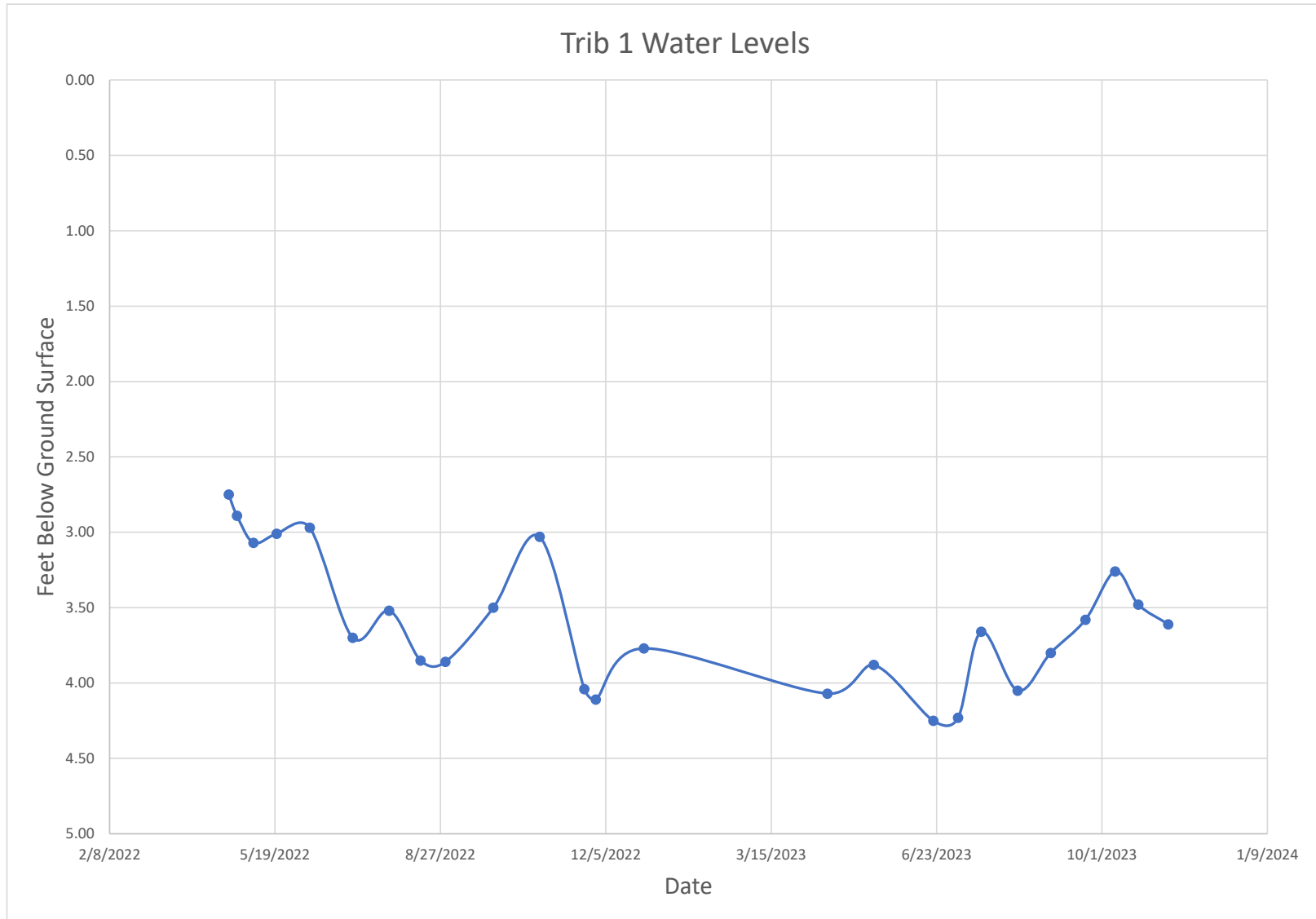
APPENDIX B



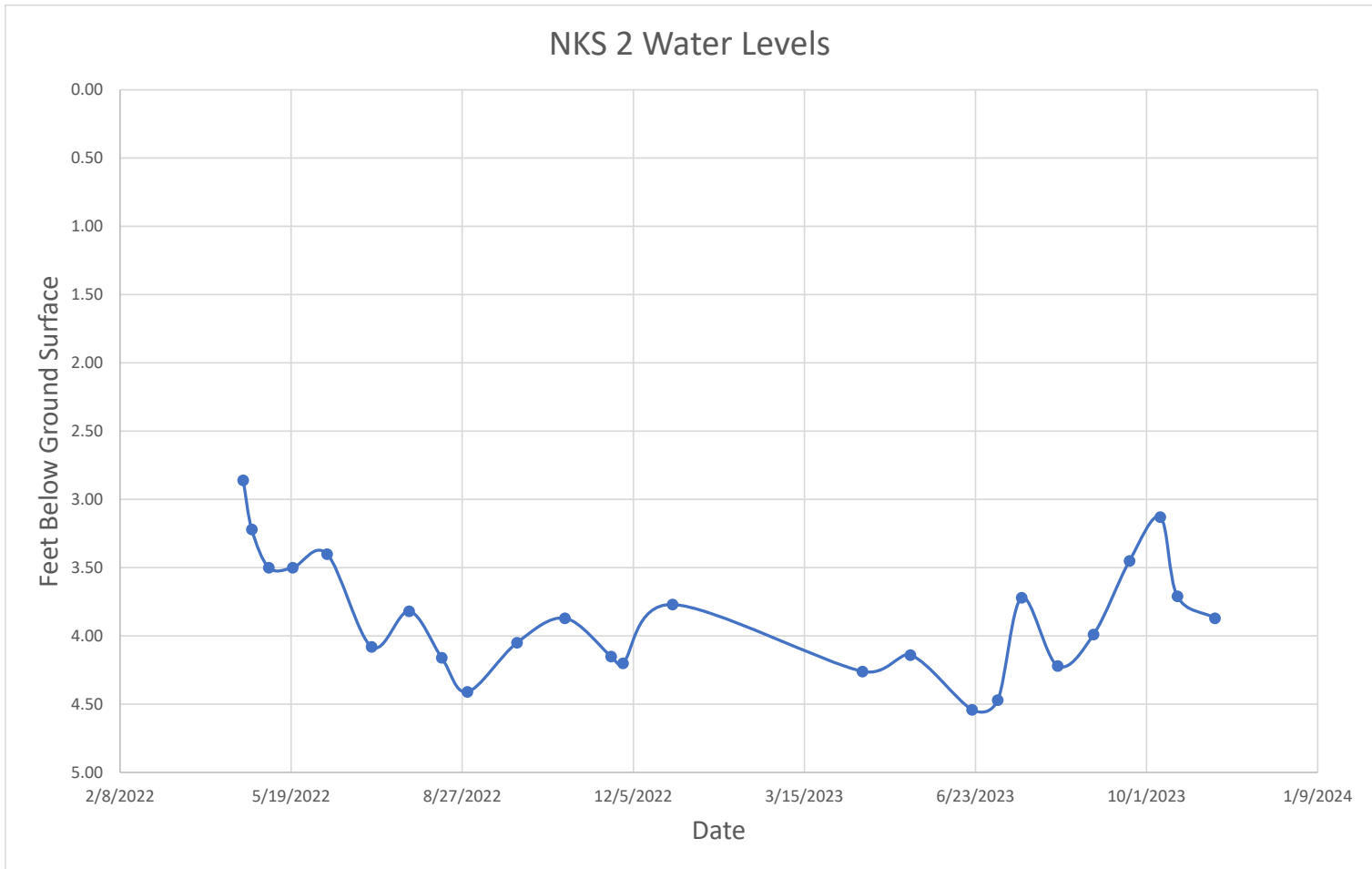
APPENDIX B



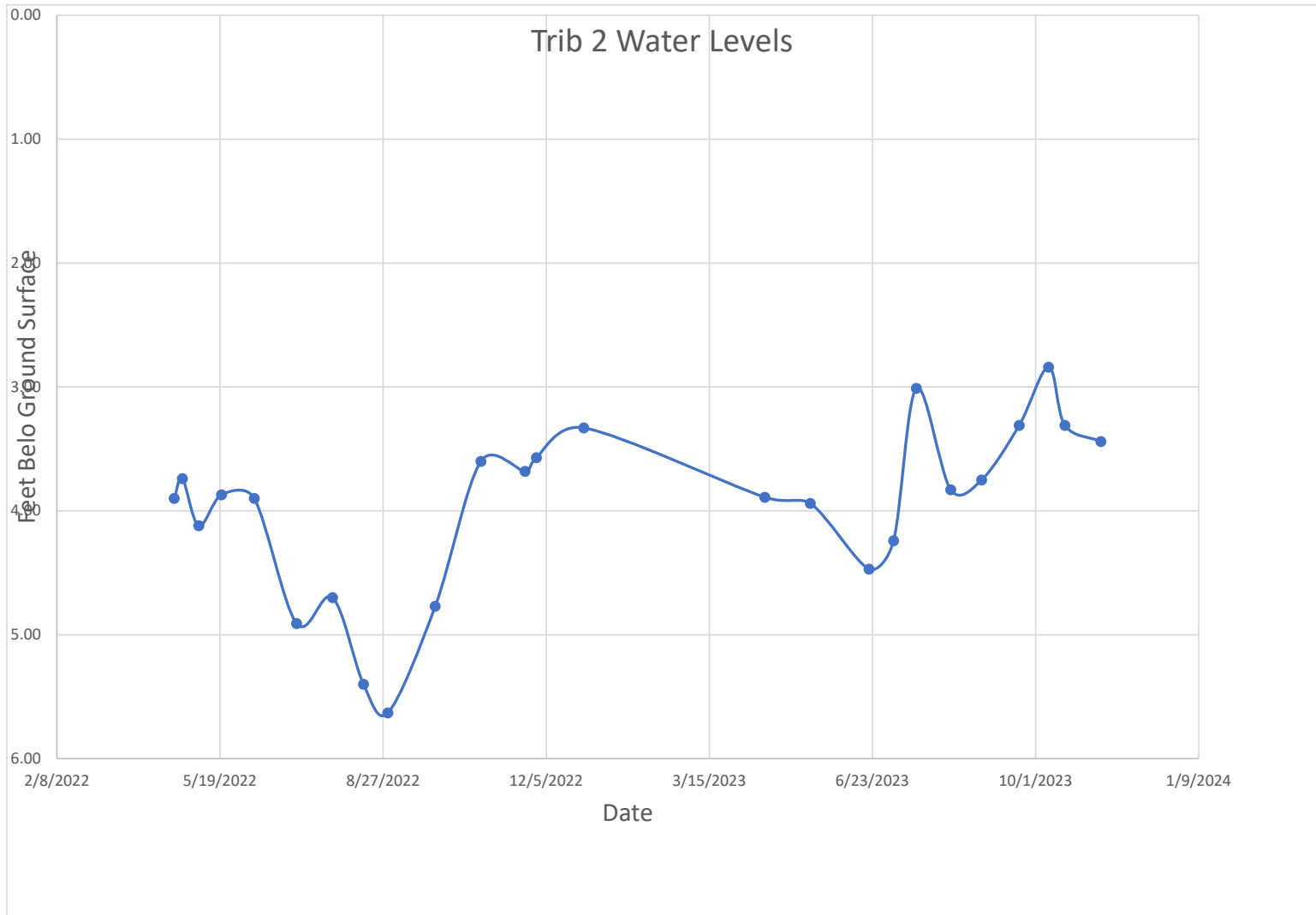
APPENDIX B



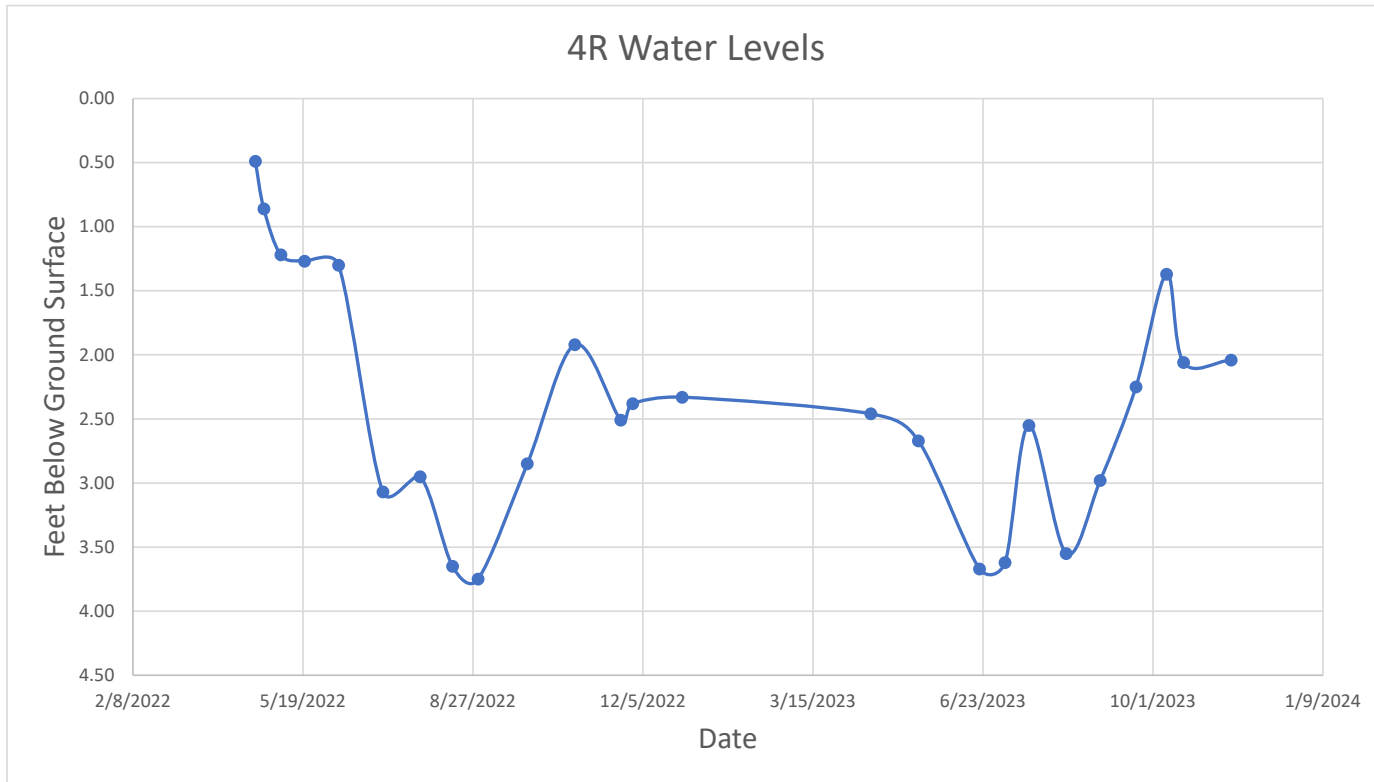
APPENDIX B



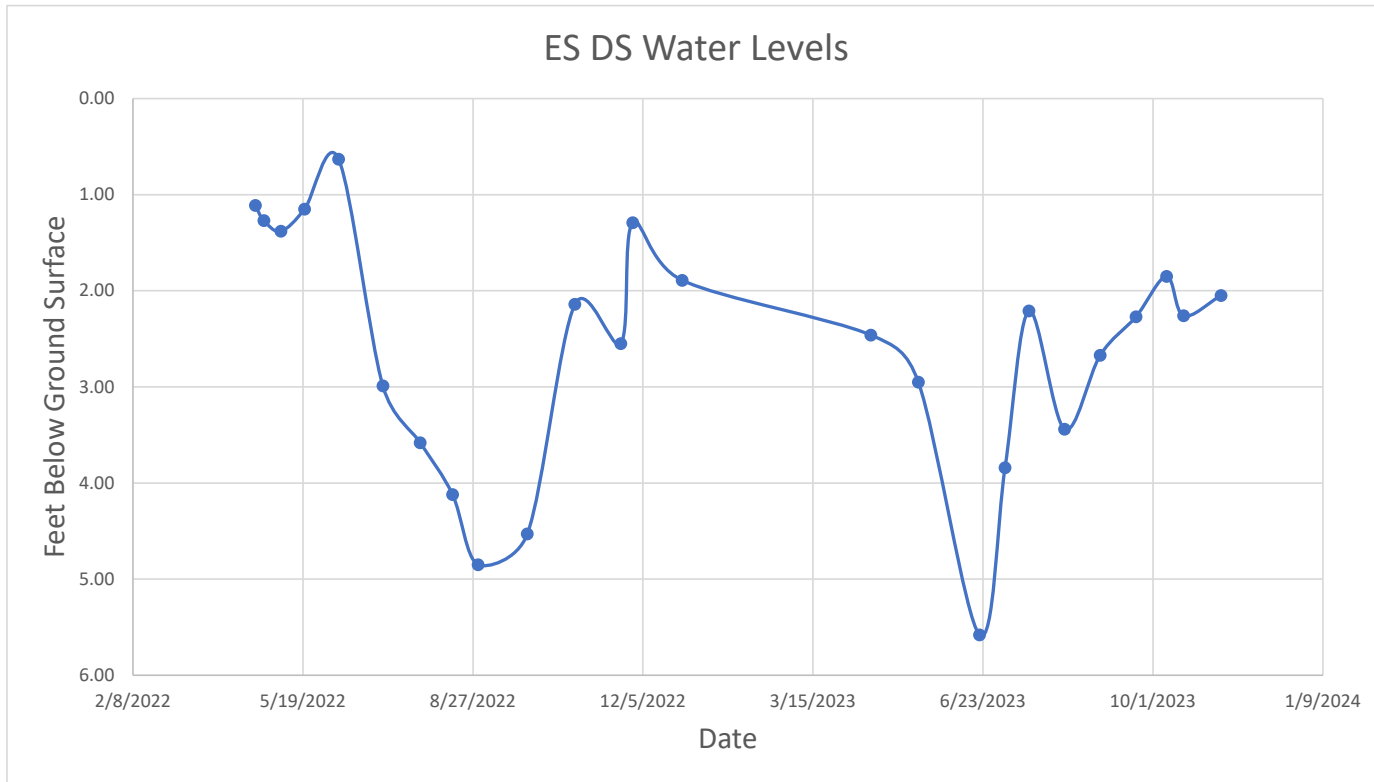
APPENDIX B



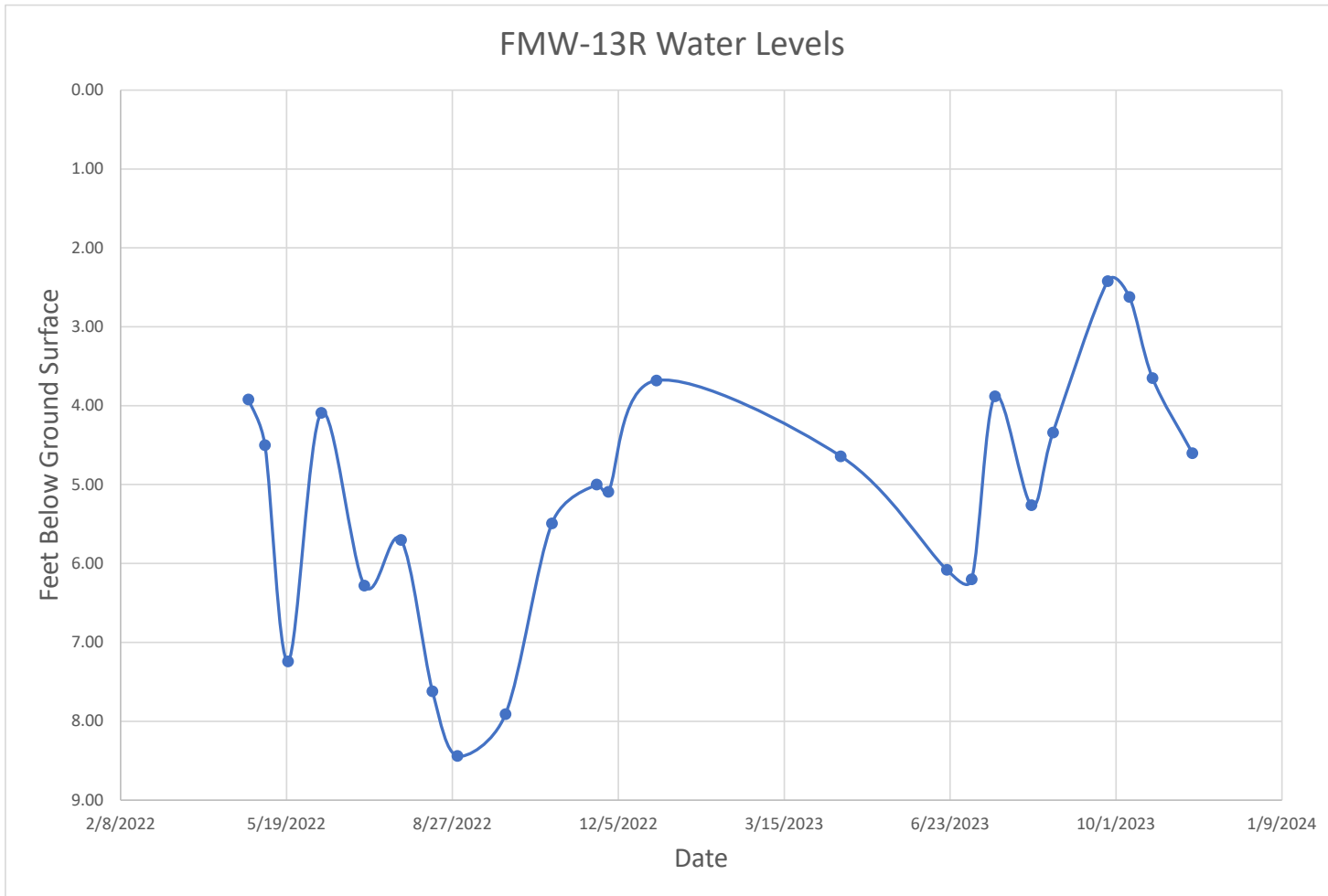
APPENDIX B



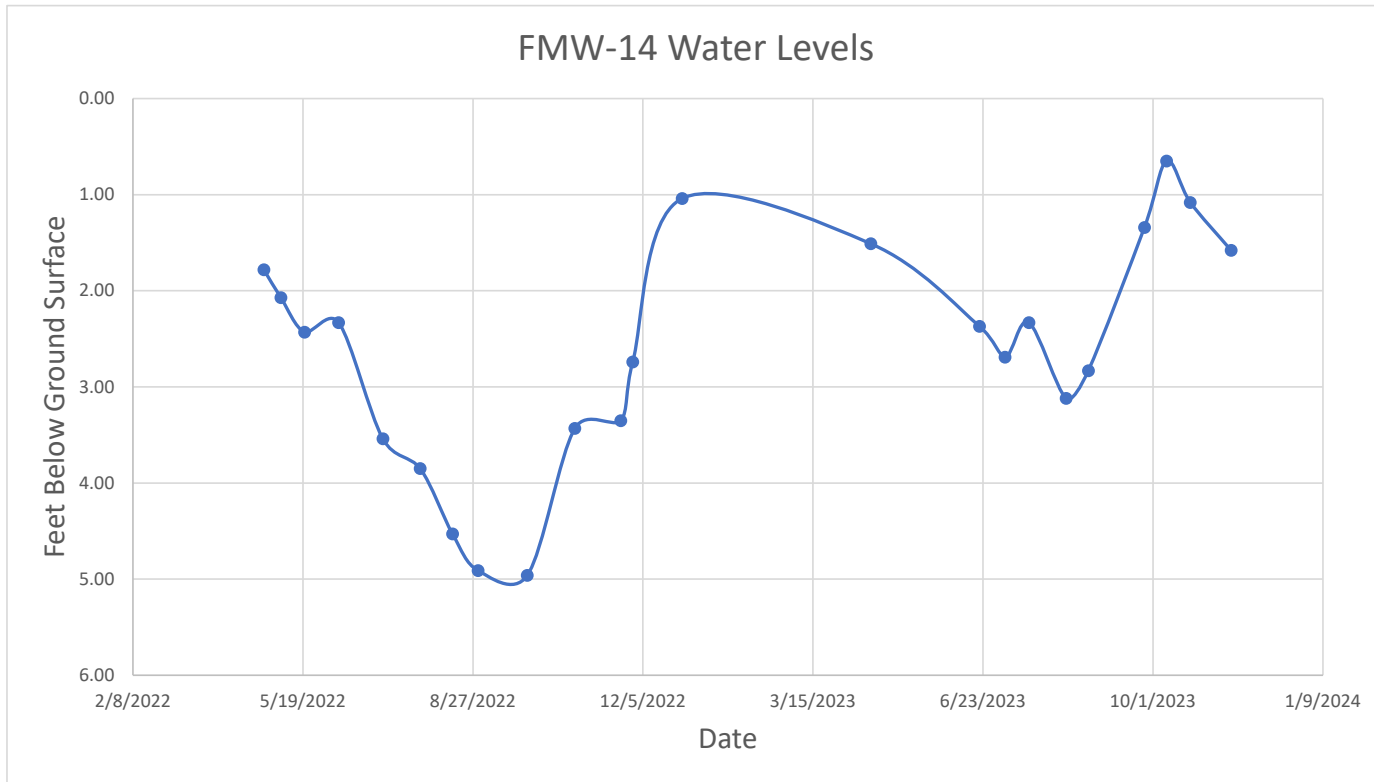
APPENDIX B



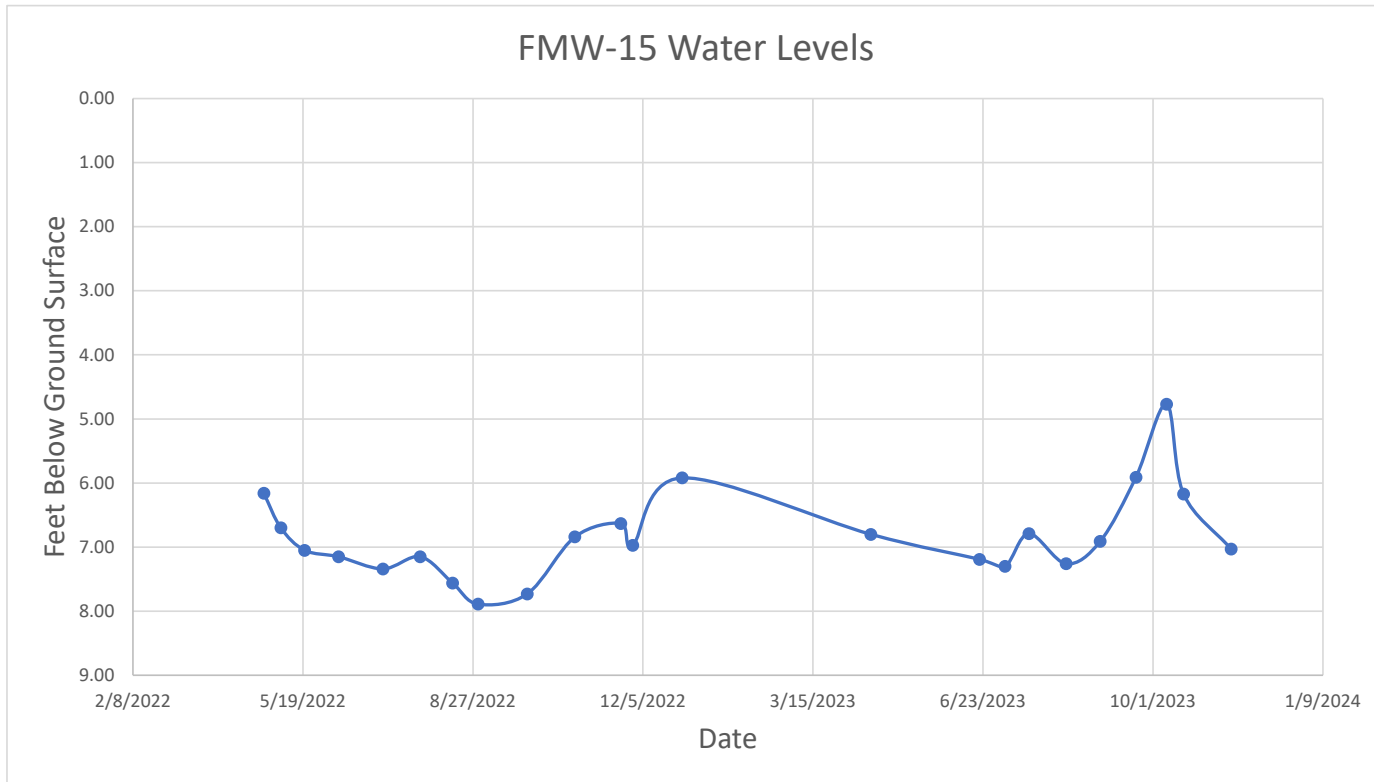
APPENDIX B



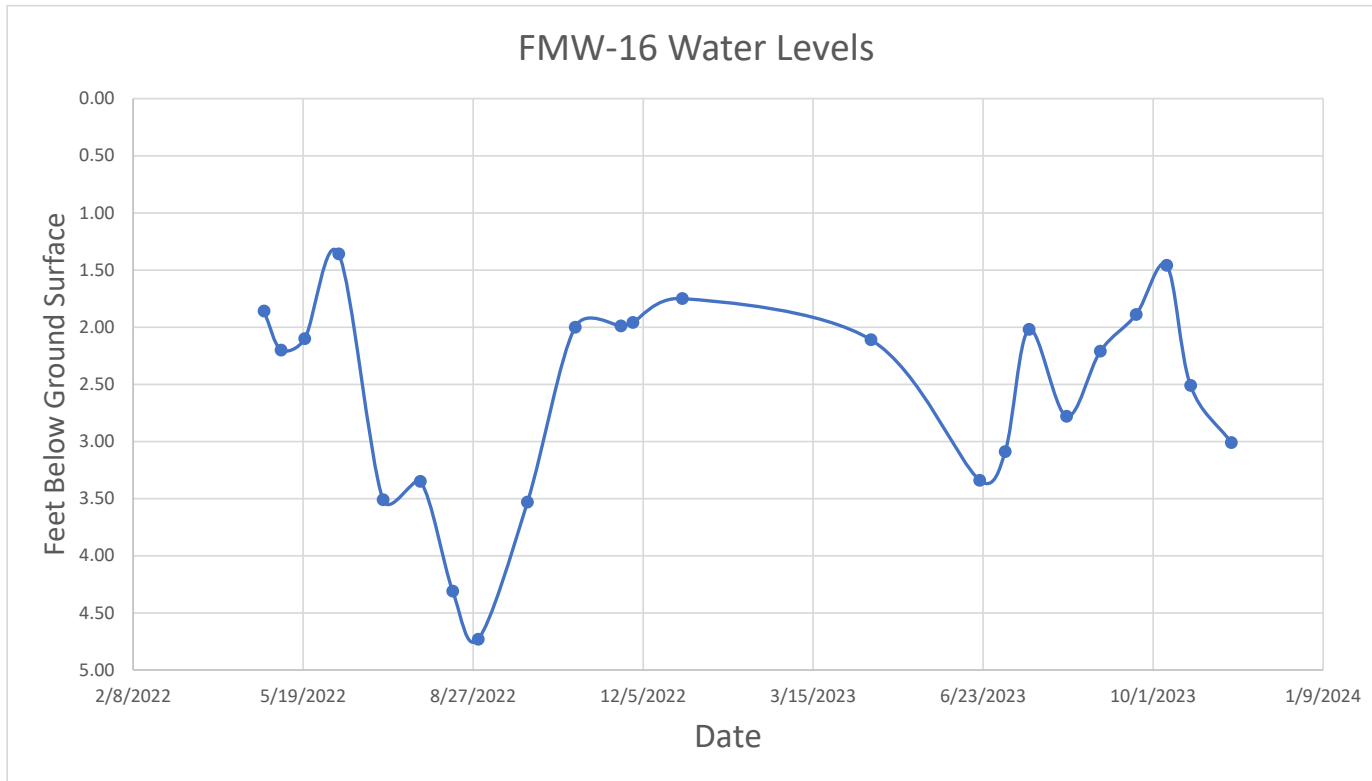
APPENDIX B



APPENDIX B



APPENDIX B



Appendix B
Flow Data Collection Table
Westchester County Airport

Date	Trib 1 (gpm)	Trib 2 (gpm)	OF-7 (gpm)	E-10 (gpm)	E-10 Stream Gauge	Rain Gauge (in)	Rain Bucket (in)
11/2/2023	0.00	8.00	8.70	85.40	0.44	0.00	0.00
11/3/2023	0.00	5.00	~	75.10	0.42	0.00	0.00
11/6/2023	0.00	4.00	8-10*	72.40	0.40	0.00	0.00
11/7/2023	0.00	8.00	8-10*	146.60	0.48	0.30	0.38
11/8/2023	0.00	6.00	6-8*	84.70	0.42	0.00	0.00
11/9/2023	0.00	5.00	12-14*	77.40	0.40	0.00	0.00
11/10/2023	0.00	5.00	5-7*	76.70	0.40	0.00	0.00
11/13/2023	0.00	5.00	7-9*	61.60	0.40	0.00	0.00
11/14/2023	0.00	6.00	3-5*	55.90	0.39	0.00	0.00
11/16/2023	0.00	5.00	1-2*	55.10	0.38	0.00	0.00
11/17/2023	0.00	5.00	1-2*	57.10	0.38	0.00	0.00

*Indicates an estimate

Appendix B
GWTT Totalizer Data
Westchester County Airport

Date/Time	GWTT Totalizer	Total Gallons
10/11/23 9:00	18886	0
10/18/23 12:40	23870	4984
10/18/23 14:20	24988	6102
10/19/23 15:20	30180	11294
10/20/23 14:50	30180	11294
10/23/23 14:35	32096	13210
10/24/23 13:58	35884	16998
10/25/23 13:50	40550	21664
10/26/23 15:00	48928	30042
10/27/23 10:53	48928	30042
10/30/23 12:27	52745	33859
10/31/23 10:35	57271	38385
11/2/23 12:15	57271	38385
11/6/23 13:10	57271	38385
11/10/23 14:00	61336	42450
11/14/23 10:30	61337	42451
11/16/23 14:25	68604	49718
11/17/23 14:10	69111	50225
11/30/23 12:22	76548	57662

APPENDIX C

Appendix C
Vault Foundation Photo Log
Westchester County Airport



Photo 1 – Progress made as of 12/1/23.
The photo shows the footing and foundation walls of the Airport Road backflow preventer building, ready for the watermain to be installed.



Photo 2 – Taken 11/30/23. Shows the progress made on the Tower Road backflow preventer building. Pictured is the installation of forms and rebar for the foundation footing.