



August 29, 2023

Director of the Division of Enforcement
Department for Environmental Protection
300 Sower Blvd.
Frankfort, KY 40601

Via U.S. Mail and
Email: mark.absher@ky.gov

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611
DOJ Case No. 90-5-1-1-08591

Chief, Drinking and Wastewater Enforcement Branch
Water Protection Division
U.S. Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

Via U.S. Mail and
Email: sayre.dennis@epa.com

Re: Amended Consent Decree Case No. 2:05-CV-199-(WOB)

To Whom It May Concern:

Pursuant to the above-referenced Amended Consent Decree, Sanitation District No. 1 (SD1) is required to submit semi-annual reports that demonstrate SD1's compliance with the Amended Consent Decree:

47. Semi-Annual Reports. The District shall submit to the Cabinet/EPA a Semi-Annual Report no later than sixty days after the end of each six-month calendar period ending June 30 and December 31.

Information contained within the enclosed Semi-Annual Report describes SD1's compliance with Amended Consent Decree Case No. 2:05-CV-199-(WOB) for the period of Jan 1, 2023 through June 30, 2023.

A certification, as required by the Amended Consent Decree (paragraph 70), is also enclosed.

To Whom It May Concern
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August 29, 2023

To the best of my knowledge and belief, the enclosed report is true, accurate, and complete, and further demonstrates SD1's commitment to the mission of protecting and enhancing the water resources and quality of life in Northern Kentucky.

If you have any questions or concerns, do not hesitate to contact me at 859-578-7465 or by e-mail at achaney@sd1.org.

Best regards,



Adam Chaney
Executive Director

AC/jb
Enclosures

CERTIFICATION

Amended Consent Decree Semi-Annual Report
Consent Decree Case No. 2:05-CV-199-(WOB)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Adam Chaney
Executive Director

8-29-2023
Date

COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 29 day of August, 2023 by Adam Chaney, Executive Director of Sanitation District No. 1.

TRACY L WATSON
NOTARY PUBLIC
COMMONWEALTH OF KENTUCKY
ID # KYNP33524
MY COMMISSION EXPIRES July 26, 2025


NOTARY PUBLIC
State At Large County, Kentucky

My commission expires: 7-26-25

AMENDED CONSENT DECREE SEMI-ANNUAL REPORT #8

JAN 1, 2023 – JUNE 30, 2023

August 29, 2023



Sanitation District No. 1

1045 Eaton Drive
Ft. Wright, KY 41017

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LIST OF ACRONYMS AND ABBREVIATIONS

ACD	Amended Consent Decree
Cabinet	Kentucky Energy and Environment Cabinet
CSAP	Continuous Sewer Assessment Program
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
District	Sanitation District No. 1
EPA	U.S. Environmental Protection Agency
hr	Hours
MG	Million Gallons
MH	Manhole
min	Minutes
PS	Pump Station
SD1	Sanitation District No. 1
SSO	Sanitary Sewer Overflow
UT	Unnamed Tributary

SECTION 1. INTRODUCTION

The Semi-Annual Report is submitted to fulfill the reporting requirements of Sanitation District No. 1's (SD1) Amended Consent Decree, as entered on May 22, 2019. The Amended Consent Decree is a legal agreement with the U.S. Environmental Protection Agency (EPA) and the Kentucky Energy and Environment Cabinet (Cabinet). The purpose of the Amended Consent Decree is to address sanitary sewer overflows (SSOs) in SD1's sanitary sewer system and combined sewer overflows (CSOs) in the combined sewer system, to improve water quality throughout SD1's service area. Specifically, Section V Reporting Requirements, states:

47. Semi-Annual Reports. The District shall submit to the Cabinet/EPA a Semi-Annual Report no later than sixty days after the end of each six-month calendar period ending June 30 and December 31.

Information contained within this report describes SD1's compliance with Amended Consent Decree Case No. 2:05-CV-199 (WOB) for the first six months of calendar year 2023.

SECTION 2. OVERFLOW DETAILS

Paragraph 47 of the Amended Consent Decree provides the details to be included in the report:

47. The Semi-Annual Report shall include the date, time, location, estimated volume, estimated duration, receiving water (if any), cause and actions taken to respond to and repair or otherwise resolve the cause of all SSOs and dry weather CSOs occurring in the most recently completed six-month calendar period. For reported SSOs, the Semi-Annual Report shall also identify any project that may be included in Appendix C of the Amended Consent Decree or in an Updated Watershed Plan that is designed to eliminate that SSO. The Semi-Annual Report shall also include such information in a tabulated electronic format.

The Semi-Annual Report provides overflow details from multiple sources. The two categories of Dry Weather CSOs and SSOs Caused by Operational Failures are derived from records that were a result of visual confirmations of the overflows. The category of SSOs at Pumps Stations is derived from records that were a result of telemetry-based alarms of remotely sensed overflows. The category of Model-Predicted Wet Weather SSOs is derived from hydraulic models that are continuously updated and calibrated with a robust flow monitoring program, and simulations of wet weather events that are recorded by SD1's network of 23 rain gauges. All documented SSO events detailed in this report

exceed 1000 gallons. The mean frequency distribution storm periods and recurrence intervals detailed in Sections 2.3 and 2.4 are derived from Rainfall Frequency Atlas of the Midwest - Bulletin 71.

2.1 Dry Weather CSOs

CSO	KPDES Outfall #	Date & Time	Location (x, y)	Estimated Volume (gallons)	Duration (hrs:min)	Receiving Water	Cause	Actions
1480187	30	5/25/2023 1429	39.089, -84.523	3,420	1:30	Ohio River	Blockage – Debris	No cleanup possible as discharge was to river. The manhole was cleaned and the line jetted.

2.2 SSOs Caused by Operational Failures

SSO	Date & Time	Location (x, y)	Estimated Volume (gallons)	Duration (hrs:min)	Receiving Water	Cause	Actions
2230PS1	1/12/2023 11:00	38.990, -84.399	9,966	4:20	Pools Creek	Equipment Malfunction – Mechanical Failure	Pump failure during rain event reduced the PS to one functional pump. PS operated with one pump resulting in bypass until diesel standby pump was activated into service.
0050110	1/28/2023 2:00	39.059, -84.448	5,082	2:34	NA	Blockage – Roots	MH lid was on with minimal overflow contained in natural depression. Area was raked and bagged along with water flush and vactored. Main line was root sawed and line was jetted one line upstream and 2 lines downstream along with CCTV. Line found to be in good condition.
2350812	1/29/2023 8:15	38.943, -84.487	27,360	12:00	NA	Condition of Pipe – Line Break	Force main break with minimal impact due to pump shut down and overflow contained at site. Area at break was dug up and 1 tri-axel of soil/debris removed. Area was backfilled and stabilized with seed and straw.
2410278	2/13/2023 4:30	39.005, -84.683	34,770	3:10	UT Gunpowder Creek	Blockage – Roots	MH lid was on with minimal overflow in natural channel. That channel was flushed and pumped back into the sanitary system. Flushing and pumping of the channel were completed on 2/17/2023 with seed and straw then applied to the area. Release was caused by roots in the invert of the manhole. The roots were removed, and the lines were CCTV'd.

SSO	Date & Time	Location (x, y)	Estimated Volume (gallons)	Duration (hrs:min)	Receiving Water	Cause	Actions
1050034	2/21/2023 11:30	38.986, -84.593	54,000	2:0	UT Bullock Pen Creek	Blockage – Debris	MH lid was 25% displaced and releasing. Line was blocked with heavy rags. Rags removed with 2 upstream and 2 downstream lines CCTV'd. Creek was pumped in multiple natural depressions to remove sewage. All solids were raked and removed. Approximately 8 yards of soil was removed, and the area was stabilized with seed and straw.
0150023	2/21/23 12:00	39.059, -84.478	486,000	4:30	North Branch Threemile Creek	Blockage – Roots	Release caused by roots in manhole. Roots removed and upstream and downstream lines CCTV'd. Cleanup performed by raking and hauling debris. Sewage was contained in a natural depression in creek. 2-in trash pump was used to pump the sewage back into the system as well as the water used to flush the creek. Flush and pump lasted for approximately 6 hrs. No visible solids or noticeable odors after mitigation.
0100016	2/24/2023 6:20	39.038, -84.457	5,700	2:30	UT Threemile Creek	Blockage – Roots	The manhole lid was in place with sewages seeping upon arrival. Heavy roots were determined to be the cause after CCTV investigation. 2 lines upstream and 2 lines downstream were also CCTV'd to ensure no other issues existed. Minimal cleanup. Debris was raked and hauled away. Heavy rain occurred during cleanup with no signs of debris or noticeable odors after mitigation and rain.
2311326	3/5/2023 8:00	38.919, -84.524	24,705	1:15	UT Fowlers Creek	Blockage – Roots	Roots in the manhole around the downstream invert were the cause of the release. Roots were removed and manhole is going to be sealed. Lines upstream and down were CCTV'd to check for any other issues. All lines are open and clean. Area around release was raked and bagged. The frame and lid were replaced and entire area was dug up and soil removed. Seed and straw were applied. Heavy rain event flushed the channel and has no evidence of release.

SSO	Date & Time	Location (x, y)	Estimated Volume (gallons)	Duration (hrs:min)	Receiving Water	Cause	Actions
1050033	5/17/2023 12:08	38.986, -84.592	11,346	1:02	UT Bullock Pen Creek	Blockage – Vandalism	Logs, sticks and rocks were introduced into the manhole resulting in backup and release. Manhole was probed and jetted with all debris being removed. Debris at release was raked and hauled away. Creek was pumped in some holding areas. Area stabilization with seed and straw.
1760047	5/22/2023 8:33	39.002, -84.566	2,470	1:05	UT Bullock Pen Creek	Blockage – Roots	Line was jetted open and through CCTV roots were determined to be the cause of the backup. All lines were root sawed and are open and flowing at this time. Area around manhole was raked and hauled. Channel was flushed with water and seed and straw applied for stabilization.

2.3 SSOs at Pump Stations Caused by Wet Weather

SSO	Date & Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (gallons)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (x, y)	Receiving Water	OF with 2040 Improvements	Related Project
Keavy PS	2/16/2023 0840	9	1.56	6mo	2,200	00:20	0.09	Dormant	39.019, -84.504	UT Licking River	N	Keavy EQ
Lakeview PS	2/16/2023 0910	9	1.68	>6mo	324,365	4:50	0.07	Dormant	39.029, -84.532	Banklick Creek	N	Lakeview EQ
Keavy PS	3/3/2023 1507	12	1.88	6mo	2,530	00:23	0.622	Dormant	39.019, -84.504	UT Licking River	N	Keavy EQ
Lakeview PS	3/3/2023 1104	16	1.77	<6mo	701,454	13:26	0.044	Dormant	39.029, -84.532	Banklick Creek	N	Lakeview EQ
Lakeview PS	3/24/2023 1009	15	1.38	2mo	255,598	19:51	0.23	Dormant	39.029, -84.532	Banklick Creek	N	Lakeview EQ
Keavy PS	3/25/2023 0305	7	0.81	<2mo	3,410	00:31	0.205	Dormant	39.019, -84.504	UT Licking River	N	Keavy EQ

2.4 Model Predicted SSOs

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0050131	2/16/2023 8:50	12	1.56	4-month	0.01	1:41	0.12	Dormant	-84.433274, 39.054857	Threemile Creek	N	HH/SG Improvements (2040)
0060001	1/3/2023 3:42	14	1.37	< 3-month	0.063	9:11	0	Dormant	-84.435000, 39.054000	Threemile Creek	N	HH/SG Improvements (2040)
	1/12/2023 9:22	13	0.77	< 2-month	0.029	3:41	0.04					
	2/16/2023 7:30	12	1.56	4-month	0.067	7:11	0.12					
	3/3/2023 10:11	12	1.84	6-month	0.098	10:41	0.36					
	3/24/2023 1:50	16	1.37	2-month	0.052	6:21	0.22					
	3/25/2023 1:50	7	0.7	< 2-month	0.011	1:37	1.39					
0060002	1/3/2023 3:50	14	1.37	< 3-month	0.083	8:33	0	Dormant	-84.435877, 39.053526	Threemile Creek	N	HH/SG Improvements (2040)
	1/12/2023 9:25	13	0.77	< 2-month	0.044	3:13	0.04					
	2/16/2023 7:35	12	1.56	4-month	0.115	6:28	0.12					
	3/3/2023 10:20	12	1.84	6-month	0.164	9:57	0.36					
	3/24/2023 1:50	16	1.37	2-month	0.062	5:30	0.22					
	3/25/2023 2:04	7	0.7	< 2-month	0.002	0:44	1.39					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0060004	1/3/2023 8:11	14	1.37	< 3-month	0.044	2:54	0	Dormant	-84.436000, 39.053000	Threemile Creek	N	HH/SG Improvements (2040)
	1/12/2023 9:35	13	0.77	< 2-month	0.04	1:56	0.04					
	2/16/2023 7:40	12	1.56	4-month	0.209	5:14	0.12					
	3/3/2023 10:40	12	1.84	6-month	0.128	8:34	0.36					
	3/24/2023 2:05	16	1.37	2-month	0.021	1:45	0.22					
0100001	2/16/2023 8:35	9	1.56	6-month	0.002	0:47	0.09	Dormant	-84.459000, 39.044000	Threemile Creek	N	Licking River Siphon Conveyance (2034)
0100004	1/12/2023 9:55	13	1.16	< 2-month	0.009	0:36	0.04	Dormant	-84.461000, 39.042000	Threemile Creek	N	Licking River Siphon Conveyance (2034)
	2/16/2023 8:10	9	1.56	6-month	0.061	2:28	0.09					
0110010	1/3/2023 3:30	14	1.37	< 3-month	0.278	8:57	0	Dormant	-84.455989, 39.048830	Threemile Creek	N	Licking River Siphon Conveyance at Lift Station Ph 2 (2034)
	1/12/2023 8:10	13	0.77	< 2-month	0.184	5:00	0.04					
	2/16/2023 7:20	12	1.56	4-month	0.415	6:19	0.12					
	3/3/2023 9:30	12	1.84	6-month	0.459	10:36	0.36					
	3/24/2023 1:30	16	1.37	2-month	0.193	6:36	0.22					
	3/25/2023 1:20	7	0.7	< 2-month	0.054	2:44	1.39					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0150009	1/3/2023 9:45	12	1.36	< 3-month	0.019	1:48	0	Dormant	-84.481907, 39.053425	UT to Threemile Creek	N	Licking River Siphon Conveyance (2029)
	1/12/2023 11:00	14	0.89	< 2-month	0.005	0:38	0.03					
	2/16/2023 8:00	9	1.56	6-month	0.361	5:34	0.09					
	3/3/2023 10:55	12	1.88	6-month	0.347	9:43	0.31					
	3/24/2023 3:05	16	1.48	> 2-month	0.021	1:34	0.21					
	3/25/2023 3:05	7	0.81	< 2-month	0.002	0:29	1.51					
0150024	2/16/2023 8:35	12	1.56	4-month	0.053	2:28	0.1	Dormant	-84.478000, 39.060000	North Branch Threemile Creek	N	Licking River Siphon Conveyance (2040)
0150061	1/3/2023 9:20	12	1.36	< 3-month	0.019	4:08	0	Dormant	-84.481442, 39.048237	Threemile Creek	N	Licking River Siphon Conveyance (2029)
	1/12/2023 10:30	14	0.89	< 2-month	0.006	1:23	0.03					
	2/16/2023 8:00	9	1.56	6-month	0.041	7:29	0.09					
	3/3/2023 10:36	12	1.88	6-month	0.052	10:38	0.31					
	3/24/2023 3:06	16	1.48	> 2-month	0.023	7:08	0.21					
	3/25/2023 2:51	7	0.81	< 2-month	0.005	1:07	1.51					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0150063	1/3/2023 10:07	12	1.36	< 3-month	0.001	0:15	0	Dormant	-84.480416, 39.048376	Threemile Creek	N	Licking River Siphon Conveyance (2029)
	1/12/2023 11:22	14	0.89	< 2-month	0.001	0:17	0.03					
	2/16/2023 9:52	9	1.56	6-month	0.003	2:05	0.09					
	3/3/2023 11:25	12	1.88	6-month	0.003	9:27	0.31					
	3/24/2023 3:45	16	1.48	> 2-month	0.001	0:19	0.21					
0150064	1/3/2023 7:25	12	1.36	< 3-month	0.126	6:07	0	Dormant	-84.479495, 39.048569	Threemile Creek	N	Licking River Siphon Conveyance (2029)
	1/12/2023 9:55	14	0.89	< 2-month	0.059	3:19	0.03					
	2/16/2023 7:55	9	1.56	6-month	0.161	7:13	0.09					
	3/3/2023 10:25	12	1.88	6-month	0.251	11:08	0.31					
	3/24/2023 2:50	16	1.48	> 2-month	0.124	6:39	0.21					
	3/25/2023 2:35	7	0.81	< 2-month	0.024	1:51	1.51					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0150065	1/3/2023 7:52	12	1.36	< 3-month	0.098	4:47	0	Dormant	-84.478000, 39.049000	Threemile Creek	N	Licking River Siphon Conveyance (2029)
	1/12/2023 10:01	14	0.89	< 2-month	0.034	2:04	0.03					
	2/16/2023 7:55	9	1.56	6-month	0.206	6:33	0.09					
	3/3/2023 10:35	12	1.88	6-month	0.291	10:14	0.31					
	3/24/2023 2:55	16	1.48	> 2-month	0.025	4:44	0.21					
0150086	2/16/2023 8:00	12	1.56	4-month	0.14	4:46	0.12	Dormant	-84.460735, 39.053303	Threemile Creek	N	Licking River Siphon Conveyance at Lift Station Ph 2 (2034)
	3/3/2023 11:30	12	1.84	6-month	0.065	7:50	0.36					
0150198	2/16/2023 8:25	9	1.56	6-month	0.038	3:09	0.09	Dormant	-84.477000, 39.049000	Threemile Creek	N	Licking River Siphon Conveyance (2029)
0270026	2/16/2023 8:31	12	1.56	4-month	0.002	0:38	0.12	Dormant	-84.451222, 39.074989	UT to Threemile Creek	N	Licking River Siphon Conveyance (2040)
0300035	5/7/2023 7:40	3	1.09	> 2-month	0.004	0:25	0.34	Growing	-84.44618, 39.084106	UT to Ohio River	N	HH/SG Improvements (2040)
0340003	1/12/2023 10:55	13	0.77	< 2-month	0.002	0:23	0.04	Dormant	-84.439774, 39.098779	UT to Ohio River	N	HH/SG Improvements (2040)
	2/16/2023 7:35	12	1.56	4-month	0.074	3:13	0.1					
	3/3/2023 10:55	12	1.84	6-month	0.013	5:32	0.36					
	3/24/2023 2:41	16	1.37	2-month	0.007	0:48	0.22					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0390006	2/16/2023 8:11	9	1.48	> 4-month	0.005	0:59	0.09	Dormant	-84.456785, 39.101429	UT to Taylor Creek	N	Taylor Creek (2040)
0410001	2/16/2023 8:05	12	1.56	4-month	0.045	2:14	0.1	Dormant	-84.464007, 39.093032	UT to Woodlawn Creek	N	Taylor Creek (2040)
0410019	2/16/2023 7:40	12	1.56	4-month	0.029	4:13	0.1	Dormant	-84.459029, 39.086080	UT to Woodlawn Creek	N	Taylor Creek (2040)
	3/3/2023 11:01	12	1.84	6-month	0.028	7:43	0.36					
	3/24/2023 2:55	16	1.37	2-month	0.002	0:32	0.22					
	5/7/2023 7:51	3	1.09	> 2-month	0.002	0:23	0.34	Growing				
0430006	1/3/2023 5:05	12	1.17	< 2-month	0.107	6:58	0	Dormant	-84.469461, 39.095033	UT to Woodlawn Creek	N	Taylor Creek (2040)
	1/12/2023 10:40	14	0.6	< 2-month	0.043	1:24	0.02					
	2/16/2023 7:37	9	1.48	> 4-month	0.273	6:10	0.09					
	3/3/2023 10:30	12	1.99	< 9-month	0.442	10:23	0.3					
	3/24/2023 2:45	15	1.61	> 3-month	0.142	5:36	0.2					
	3/25/2023 2:30	7	0.85	< 2-month	0.062	2:04	1.62					
	4/5/2023 18:18	7	0.83	< 2-month	0.021	1:21	0.73	Growing				
	5/7/2023 8:00	3	0.97	< 2-month	0.022	0:45	0.32					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0430107	2/16/2023 7:50	12	1.56	4-month	0.16	3:52	0.1	Dormant	-84.46625, 39.094213	UT to Woodlawn Creek	N	Taylor Creek (2040)
	3/3/2023 11:10	12	1.84	6-month	0.073	7:32	0.36					
	3/24/2023 3:05	16	1.37	2-month	0.008	1:02	0.22					
0440074	2/16/2023 8:17	9	1.48	> 4-month	0.005	1:25	0.09	Dormant	-84.459567, 39.102626	Taylor Creek	N	Taylor Creek (2040)
0490137	2/16/2023 8:31	12	1.56	4-month	0.009	1:37	0.1	Dormant	-84.479448, 39.078708	UT to Woodlawn Creek	N	Taylor Creek (2040)
0500047	2/16/2023 8:10	12	1.56	4-month	0.064	2:04	0.1	Dormant	-84.480473, 39.079133	UT to Woodlawn Creek	N	Taylor Creek (2040)
0530083	1/3/2023 8:37	12	1.17	< 2-month	0.023	3:47	0	Dormant	-84.473394, 39.093628	UT to Woodlawn Creek	N	Taylor Creek (2040)
	1/12/2023 10:46	14	0.6	< 2-month	0.004	1:18	0.02					
	2/16/2023 7:45	9	1.48	> 4-month	0.219	6:53	0.09					
	3/3/2023 10:35	12	1.99	< 9-month	0.185	11:11	0.3					
	3/24/2023 2:55	15	1.61	> 3-month	0.04	5:54	0.2					
	3/25/2023 2:35	7	0.85	< 2-month	0.017	2:18	1.62					
	4/5/2023 18:31	7	0.83	< 2-month	0.002	0:56	0.73	Growing				
	5/7/2023 8:05	3	0.97	< 2-month	0.003	0:44	0.32					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
0530119	2/16/2023 8:30	12	1.56	4-month	0.146	2:14	0.1	Dormant	-84.475230, 39.091264	UT to Woodlawn Creek	N	Taylor Creek (2040)
0870037	2/16/2023 7:35	9	1.56	6-month	0.07	2:30	0.09	Dormant	-84.494850, 39.046409	None: Returned to CSS	N	James Ave Consolidation Sewer
	3/24/2023 2:46	16	1.48	> 2-month	0.001	0:19	0.21					
1010002	2/16/2023 7:46	12	1.56	4-month	0.044	3:40	0.1	Dormant	-84.459673, 39.084794	UT to Woodlawn Creek	N	Taylor Creek (2040)
	3/3/2023 15:31	12	1.84	6-month	0.008	2:44	0.36					
1010025	2/16/2023 8:10	12	1.56	4-month	0.026	2:19	0.1	Dormant	-84.457872, 39.083938	UT to Woodlawn Creek	N	Taylor Creek (2034)
1010027	2/16/2023 8:35	12	1.56	4-month	0.003	0:49	0.1	Dormant	-84.456180, 39.083566	UT to Woodlawn Creek	N	Taylor Creek (2040)
1110025	2/16/2023 7:23	9	1.68	> 6-month	0.002	3:29	0.07	Dormant	-84.589290, 39.006693	Rice Creek	N	Lakeview (2040)
1110027	1/3/2023 8:32	14	1.45	3-month	0.003	1:37	0.01	Dormant	-84.590242, 39.007487	Rice Creek	N	Lakeview (2040)
	2/16/2023 7:01	9	1.68	> 6-month	0.035	4:48	0.07					
	3/3/2023 14:48	16	1.77	< 6-month	0.018	4:11	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1110067	1/3/2023 6:40	14	1.45	3-month	0.188	7:04	0.01	Dormant	-84.589221, 39.006569	Rice Creek	N	Lakeview (2040)
	1/12/2023 9:15	12	0.88	< 2-month	0.051	2:31	0.02					
	2/16/2023 6:10	9	1.68	> 6-month	0.384	11:17	0.07					
	3/3/2023 9:15	16	1.77	< 6-month	0.479	14:29	0.44					
	3/24/2023 1:45	15	1.38	2-month	0.119	9:45	0.23					
	3/25/2023 0:47	16	0.79	< 2-month	0.108	4:29	0.44					
1110073	1/3/2023 8:35	14	1.45	3-month	0.01	1:58	0.01	Dormant	-84.589687, 39.007039	Rice Creek	N	Lakeview (2040)
	2/16/2023 6:40	9	1.68	> 6-month	0.11	5:47	0.07					
	3/3/2023 14:07	16	1.77	< 6-month	0.072	5:36	0.44					
	3/25/2023 1:40	16	0.79	< 2-month	0.008	1:19	0.44					
1110103	1/3/2023 8:41	14	1.45	3-month	0.011	1:38	0.01	Dormant	-84.590497, 39.007732	Rice Creek	N	Lakeview (2040)
	2/16/2023 6:45	9	1.68	> 6-month	0.103	5:07	0.07					
	3/3/2023 14:36	16	1.77	< 6-month	0.064	4:37	0.44					
	3/25/2023 1:41	16	0.79	< 2-month	0.011	1:12	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1110104	2/16/2023 7:49	9	1.68	> 6-month	0.007	2:15	0.07	Dormant	-84.591316, 39.008412	Rice Creek	N	Lakeview (2040)
1110161	2/16/2023 7:05	9	1.68	> 6-month	0.03	2:42	0.07	Dormant	-84.595484, 39.010650	UT to Rice Creek	N	Lakeview (2040)
	3/3/2023 16:30	16	1.77	< 6-month	0.011	1:03	0.44					
1110164	2/16/2023 7:10	9	1.68	> 6-month	0.013	3:16	0.07	Dormant	-84.597225, 39.010722	Rice Creek	N	Lakeview (2040)
	3/3/2023 16:36	16	1.77	< 6-month	0.004	1:09	0.44					
1110174	2/16/2023 7:20	9	1.68	> 6-month	0.025	2:51	0.07	Dormant	-84.599667, 39.010843	Rice Creek	N	Lakeview (2040)
	3/3/2023 16:41	16	1.77	< 6-month	0.003	0:41	0.44					
1110294	1/3/2023 7:35	14	1.45	3-month	0.021	4:33	0.01	Dormant	-84.588649, 39.006329	Rice Creek	N	Lakeview (2040)
	1/12/2023 9:50	12	0.88	< 2-month	0.001	0:36	0.02					
	2/16/2023 6:37	9	1.68	> 6-month	0.061	8:36	0.07					
	3/3/2023 10:08	16	1.77	< 6-month	0.055	11:11	0.44					
	3/24/2023 2:09	15	1.38	2-month	0.005	4:13	0.23					
	3/25/2023 1:30	16	0.79	< 2-month	0.009	2:01	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1190012	1/3/2023 8:26	14	1.45	3-month	0.004	0:59	0.01	Dormant	-84.608249, 39.015680	UT to Dry Creek	N	Dry Creek (2040)
	1/12/2023 9:37	12	0.88	< 2-month	0.003	0:37	0.02					
	2/16/2023 6:10	9	1.68	> 6-month	0.184	6:47	0.07					
	3/3/2023 9:25	16	1.77	< 6-month	0.128	10:47	0.44					
	3/24/2023 1:30	15	1.38	2-month	0.015	1:48	0.23					
	3/25/2023 1:10	16	0.79	< 2-month	0.025	1:39	0.44					
1200022	2/16/2023 6:30	9	1.68	> 6-month	0.097	4:47	0.07	Dormant	-84.603567, 39.022725	UT to Dry Creek	N	Dry Creek (2040)
	3/3/2023 14:35	16	1.77	< 6-month	0.037	3:44	0.44					
	3/25/2023 1:35	16	0.79	< 2-month	0.006	0:39	0.44					
1220016	1/3/2023 8:05	14	1.45	3-month	0.01	2:39	0.01	Dormant	-84.599485, 39.028552	UT to Dry Creek	N	Dry Creek (2040)
	1/12/2023 9:30	12	0.88	< 2-month	0.004	0:57	0.02					
	2/16/2023 6:20	9	1.68	> 6-month	0.042	7:49	0.07					
	3/3/2023 9:35	16	1.77	< 6-month	0.032	10:54	0.44					
	3/24/2023 1:45	15	1.38	2-month	0.003	1:19	0.23					
	3/25/2023 1:18	16	0.79	< 2-month	0.005	0:56	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1220054	1/3/2023 8:05	14	1.45	3-month	0.034	2:28	0.01	Dormant	-84.601512, 39.026306	UT to Dry Creek	N	Dry Creek (2040)
	1/12/2023 9:30	12	0.88	< 2-month	0.009	0:54	0.02					
	2/16/2023 6:20	9	1.68	> 6-month	0.214	8:44	0.07					
	3/3/2023 9:35	16	1.77	< 6-month	0.175	11:22	0.44					
	3/24/2023 1:45	15	1.38	2-month	0.016	1:34	0.23					
	3/25/2023 1:15	16	0.79	< 2-month	0.033	1:59	0.44					
1230019	2/16/2023 6:25	9	1.68	> 6-month	0.131	5:15	0.07	Dormant	-84.615307, 39.01712	UT to Dry Creek	N	Dry Creek (2040)
	3/3/2023 9:56	16	1.77	< 6-month	0.058	8:36	0.44					
	3/24/2023 1:55	15	1.38	2-month	0.005	1:21	0.23					
	3/25/2023 1:35	16	0.79	< 2-month	0.012	0.041666667	0.44					
1230028	2/16/2023 6:45	9	1.68	> 6-month	0.073	4:02	0.07	Dormant	-84.614096, 39.016710	UT to Dry Creek	N	Dry Creek (2040)
	3/3/2023 16:20	16	1.77	< 6-month	0.008	1:09	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1240008	2/16/2023 5:55	9	1.68	> 6-month	0.149	5:23	0.07	Dormant	-84.615784, 39.013657	UT to Dry Creek	N	Dry Creek (2040)
	3/1/2023 20:00	1	0.19	< 2-month	0.001	0:32	0.47					
	3/3/2023 8:20	16	1.77	< 6-month	0.175	10:51	0.44					
	3/24/2023 1:20	15	1.38	2-month	0.072	6:23	0.23					
	3/24/2023 23:41	16	0.79	< 2-month	0.064	3:59	0.44					
	4/5/2023 17:06	8	0.85	< 2-month	0.014	1:58	0.71	Growing				
1240012	2/16/2023 6:35	9	1.68	> 6-month	0.043	2:38	0.07	Dormant	-84.616000, 39.013000	UT to Dry Creek	N	Dry Creek (2040)
1550053	1/3/2023 8:25	14	1.55	< 4-month	0.007	1:45	0	Dormant	-84.558901, 39.047894	UT to Pleasant Run Creek	N	Bromley Crescent Springs Improvements (2040)
	1/12/2023 9:25	13	0.96	< 2-month	0.008	0:53	0.03					
	2/16/2023 6:35	9	1.64	> 6-month	0.121	6:28	0.1					
	3/3/2023 9:01	13	2.15	> 9-month	0.203	11:42	0.52					
	3/24/2023 2:35	15	1.56	< 3-month	0.037	5:37	0.33					
	3/25/2023 2:10	7	0.89	< 2-month	0.027	2:23	1.62					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1560016	2/16/2023 7:30	9	1.64	> 6-month	0.041	2:07	0.1	Dormant	-84.559151, 39.044140	UT to Pleasant Run Creek	N	Bromley Crescent Springs Improvements (2040)
	3/3/2023 16:40	13	2.15	> 9-month	0.003	0:34	0.52					
1560092	1/3/2023 8:25	14	1.55	< 4-month	0.017	1:49	0	Dormant	-84.559279, 39.046501	UT to Pleasant Run Creek	N	Bromley Crescent Springs Conveyance Ph 2 (2034)
	1/12/2023 9:25	13	0.96	< 2-month	0.027	1:03	0.03					
	2/16/2023 6:30	9	1.64	> 6-month	0.294	6:21	0.1					
	3/3/2023 9:00	13	2.15	> 9-month	0.495	11:26	0.52					
	3/24/2023 2:35	15	1.56	< 3-month	0.067	5:25	0.33					
	3/25/2023 2:10	7	0.89	< 2-month	0.061	2:17	1.62					
1560121	2/16/2023 7:30	9	1.64	> 6-month	0.007	1:42	0.1	Dormant	-84.559066, 39.045134	UT to Pleasant Run Creek	N	Bromley Crescent Springs Improvements (2040)
1570100	2/16/2023 7:10	9	1.64	> 6-month	0.011	2:08	0.1	Dormant	-84.549623, 39.040149	UT to Moser's Branch	N	Lakeview (2040)
	3/3/2023 10:05	13	2.15	> 9-month	0.002	1:08	0.52					
1620001	2/16/2023 7:55	9	1.43	> 4-month	0.001	0:23	0.08	Dormant	-84.568129, 39.050958	UT to Pleasant Run Creek	Y	Not Applicable

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1690043	2/16/2023 7:36	12	1.56	4-month	0.007	1:41	0.08	Dormant	-84.54046, 39.068509	UT to Pleasant Run Creek	N	Bromley Crescent Springs Conveyance Ph 2 (2034)
	3/3/2023 14:52	12	2.25	< 1-year	0.014	3:46	0.49					
	3/24/2023 2:50	15	1.41	2-month	0.001	0:23	0.22					
	3/25/2023 2:11	7	0.94	< 2-month	0.009	1:13	1.43					
1730104	2/16/2023 7:10	9	1.43	> 4-month	0.318	4:30	0.08	Dormant	-84.560897, 39.063439	Pleasant Run Creek	N	Bromley Crescent Springs Improvements (2040)
	3/3/2023 9:35	12	1.87	> 6-month	0.537	11:38	0.39					
	3/24/2023 2:55	40	2.13	< 3-month	0.039	4:58	0.17					
	3/25/2023 2:10	40	2.13	< 3-month	0.073	2:02	0.17					
1760047	1/12/2023 9:55	14	0.89	< 2-month	0.027	4:27	0.03	Dormant	-84.566260, 39.002867	UT to Bullock Pen Creek	N	Lakeview (2040)
	2/16/2023 7:43	16	1.4	< 3-month	0.102	11:42	0.12					
	3/3/2023 10:05	17	1.82	< 6-month	0.165	15:13	0.38					
	3/24/2023 2:40	14	1.44	< 3-month	0.105	12:11	0.35					
	3/25/2023 2:46	9	0.56	< 2-month	0.004	0:56	1.53					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1760048	1/12/2023 10:06	14	0.89	< 2-month	0.006	1:33	0.03	Dormant	-84.566090, 39.003054	UT to Bullock Pen Creek	N	Lakeview (2040)
	2/16/2023 7:47	16	1.4	< 3-month	0.058	7:44	0.12					
	3/3/2023 10:20	17	1.82	< 6-month	0.121	12:54	0.38					
	3/24/2023 2:41	14	1.44	< 3-month	0.031	9:30	0.35					
1760055	3/3/2023 17:17	17	1.82	< 6-month	0.002	1:08	0.38	Dormant	-84.567428, 39.004031	UT to Bullock Pen Creek	N	Lakeview (2040)
1790003	2/16/2023 8:36	9	1.43	> 4-month	0.002	0:51	0.08	Dormant	-84.590424, 39.048497	UT to Dry Creek	N	Dry Creek (2040)
1850140	2/16/2023 8:50	9	1.56	6-month	0.002	0:19	0.09	Dormant	-84.501651, 39.035532	Banklick Creek	N	Banklick EQ/Conveyance
	2/18/2023 20:38	0	0	< 2-month	0.82	44:12:00	1.57					
	3/26/2023 16:18	0	0	< 2-month	0.763	38:37:00	2.32					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1850141	1/3/2023 2:55	12	1.36	< 3-month	0.38	13:29	0	Dormant	-84.501171, 39.034191	Banklick Creek	N	Banklick EQ/Conveyance
	1/12/2023 8:20	14	0.89	< 2-month	0.172	7:45	0.03					
	1/19/2023 0:51	14	0.44	< 2-month	0.009	4:26	1.08					
	2/16/2023 7:00	9	1.56	6-month	0.376	11:08	0.09					
	2/18/2023 21:09	0	0	< 2-month	0.034	43:38:00	1.57					
	3/3/2023 8:40	12	1.88	6-month	0.622	16:35	0.31					
	3/24/2023 2:10	16	1.48	> 2-month	0.309	11:44	0.21					
	3/25/2023 0:25	7	0.81	< 2-month	0.205	7:45	1.51					
	3/26/2023 16:22	0	0	< 2-month	0.053	33:28:00	2.32					
	4/1/2023 0:55	28	0.63	< 2-month	0.004	1:17	2.12	Growing				
	4/5/2023 17:10	5	0.85	< 2-month	0.076	2:11	0.66					
	4/21/2023 22:10	12	0.92	< 2-month	0.025	4:29	0.03					
	4/28/2023 0:29	9	0.74	< 2-month	0.035	1:58	0.92					
	5/7/2023 7:15	5	0.92	< 2-month	0.079	3:53	0.33					
6/11/2023 8:30	12	1.31	> 2-month	0.116	11:49	0.04						

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1860108	1/3/2023 3:25	12	1.36	< 3-month	1.711	19:29	0	Dormant	-84.508653, 39.036049	Banklick Creek	N	Banklick EQ/Conveyance
	1/12/2023 9:10	14	0.89	< 2-month	0.09	7:39	0.03					
	1/19/2023 3:16	14	0.44	< 2-month	0.003	2:02	1.08					
	2/16/2023 7:20	9	1.56	6-month	0.269	11:49	0.09					
	3/3/2023 9:20	12	1.88	6-month	1.576	22:25	0.31					
	3/24/2023 2:30	16	1.48	> 2-month	0.18	12:30	0.21					
	3/25/2023 0:40	7	0.81	< 2-month	0.292	15:11	1.51					
	4/5/2023 17:40	5	0.85	< 2-month	0.01	1:41	0.66	Growing				
	5/7/2023 7:45	5	0.92	< 2-month	0.006	0:34	0.33					
	6/11/2023 9:20	12	1.31	> 2-month	0.004	0:56	0.04					
	6/11/2023 17:50	12	1.31	> 2-month	0.002	0:24	0.04					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1870018	1/3/2023 3:35	12	1.36	< 3-month	0.006	6:34	0	Dormant	-84.499529, 39.033927	Banklick Creek	N	Banklick EQ/Conveyance
	1/12/2023 10:15	14	0.89	< 2-month	0.007	0:54	0.03					
	2/16/2023 7:15	9	1.56	6-month	0.041	3:14	0.09					
	3/3/2023 10:05	12	1.88	6-month	0.031	8:04	0.31					
	3/24/2023 2:20	16	1.48	> 2-month	0.01	0:58	0.21					
	3/25/2023 2:10	7	0.81	< 2-month	0.009	1:03	1.51					
	4/5/2023 17:20	5	0.85	< 2-month	0.008	0:49	0.66	Growing				
	5/7/2023 7:20	5	0.92	< 2-month	0.009	0:49	0.33					
1920086	1/12/2023 9:59	14	1.03	< 2-month	0.002	2:18	0.04	Dormant	-84.433000, 39.029000	Duck Creek	N	Wolpert PS
	2/16/2023 8:12	13	1.46	3-month	0.005	4:31	0.06					
	3/3/2023 11:03	12	1.84	6-month	0.006	8:36	0.44					
1920097	1/3/2023 8:37	14	1.47	3-month	0.006	2:20	0	Dormant	-84.433000, 39.028000	Duck Creek	N	Wolpert PS
	1/12/2023 9:51	14	1.03	< 2-month	0.021	3:33	0.04					
	2/16/2023 8:10	13	1.46	3-month	0.057	6:24	0.06					
	3/3/2023 10:56	12	1.84	6-month	0.056	9:12	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1920127	2/16/2023 8:46	13	1.46	3-month	0.006	2:20	0.06	Dormant	-84.435000, 39.025000	Dry Creek	N	Wolpert PS
1930009	2/16/2023 8:51	12	1.56	4-month	0.002	1:56	0.1	Dormant	-84.480329, 39.063777	UT to Threemile Creek	N	Licking River Siphon Conveyance (2040)
1930010	2/16/2023 8:50	12	1.56	4-month	0.009	1:52	0.1	Dormant	-84.480276, 39.064371	UT to Threemile Creek	N	Licking River Siphon Conveyance (2040)
1930012	2/16/2023 8:55	12	1.56	4-month	0.005	1:18	0.1	Dormant	-84.479361, 39.065882	UT to Threemile Creek	N	Licking River Siphon Conveyance (2040)
1940006	2/16/2023 7:35	9	1.64	> 6-month	0.149	3:29	0.1	Dormant	-84.534620, 39.032334	Moser's Branch	N	Lakeview (2040)
	3/3/2023 10:30	13	2.15	> 9-month	0.275	8:10	0.52					
	3/25/2023 3:15	7	0.89	< 2-month	0.001	0:23	1.62					
1940021	2/16/2023 7:40	9	1.64	> 6-month	0.007	1:45	0.1	Dormant	-84.537071, 39.038332	Moser's Branch	N	Lakeview (2040)
1940023	2/16/2023 7:16	9	1.64	> 6-month	0.012	2:33	0.1	Dormant	-84.537827, 39.039327	Moser's Branch	N	Lakeview (2040)
	3/3/2023 10:06	13	2.15	> 9-month	0.015	7:37	0.52					
1940024	2/16/2023 7:15	9	1.64	> 6-month	0.02	2:23	0.1	Dormant	-84.538356, 39.039696	Moser's Branch	N	Lakeview (2040)
	3/3/2023 10:05	13	2.15	> 9-month	0.017	7:32	0.52					
	3/25/2023 2:45	7	0.89	< 2-month	0.004	0:48	1.62					
1940027	2/16/2023 7:15	9	1.64	> 6-month	0.049	2:09	0.1	Dormant	-84.540022, 39.041449	Moser's Branch	N	Lakeview (2034)

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
	3/3/2023 10:34	13	2.15	> 9-month	0.014	6:50	0.52					
	3/25/2023 2:40	7	0.89	< 2-month	0.012	0:45	1.62					
1950010	1/3/2023 9:10	14	1.55	< 4-month	0.236	6:29	0	Dormant	-84.529224, 39.034633	Banklick Creek	N	Lakeview (2040)
	1/12/2023 10:50	13	0.96	< 2-month	0.218	6:29	0.03					
	2/16/2023 8:35	9	1.64	> 6-month	0.488	11:09	0.1					
	3/3/2023 10:35	13	2.15	> 9-month	0.789	15:55	0.52					
	3/24/2023 4:20	15	1.56	< 3-month	0.556	12:42	0.33					
	3/25/2023 3:00	7	0.89	< 2-month	0.19	5:20	1.62					
1950015	2/16/2023 9:35	9	1.64	> 6-month	0.019	3:19	0.1	Dormant	-84.525685, 39.035583	Banklick Creek	N	Lakeview (2040)
	3/3/2023 11:45	13	2.15	> 9-month	0.024	6:58	0.52					
1950027	1/3/2023 10:20	14	1.55	< 4-month	0.004	1:01	0	Dormant	-84.524989, 39.041148	Banklick Creek	N	Lakeview (2040)
	1/12/2023 12:11	13	0.96	< 2-month	0.001	0:36	0.03					
	2/16/2023 9:05	9	1.64	> 6-month	0.053	4:34	0.1					
	3/3/2023 11:05	13	2.15	> 9-month	0.11	8:39	0.52					
	3/24/2023 5:55	15	1.56	< 3-month	0.003	0:34	0.33					
	3/25/2023 4:00	7	0.89	< 2-month	0.003	0:39	1.62					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
1950036	1/3/2023 9:15	12	1.36	< 3-month	0.269	4:40	0	Dormant	-84.519178, 39.045160	UT to Banklick Creek	N	Lakeview (2040)
	1/12/2023 10:55	14	0.89	< 2-month	0.187	4:05	0.03					
	2/16/2023 8:05	9	1.56	6-month	0.672	0:375	0.09					
	3/3/2023 10:30	12	1.88	6-month	1.226	13:45	0.31					
	3/24/2023 4:15	40	2.13	< 3-month	0.68	10:30	0.17					
	3/25/2023 2:55	7	0.81	< 2-month	0.251	3:55	1.51					
1960002	2/16/2023 8:05	9	1.64	> 6-month	0.002	0:19	0.1	Dormant	-84.536594, 39.031643	Horse Branch	N	Lakeview (2040)
1990018	1/3/2023 10:33	14	1.55	< 4-month	0.001	0:26	0	Dormant	-84.528748, 39.016262	Banklick Creek	N	Lakeview (2040)
	1/12/2023 12:05	13	0.96	< 2-month	0.01	0:53	0.03					
	2/16/2023 9:15	9	1.64	> 6-month	0.555	5:19	0.1					
	3/3/2023 11:15	13	2.15	> 9-month	1.029	11:03	0.52					
	3/24/2023 5:46	15	1.56	< 3-month	0.177	7:16	0.33					
	3/25/2023 4:06	7	0.89	< 2-month	0.012	0:51	1.62					
1990028	2/16/2023 10:00	9	1.64	> 6-month	0.037	1:18	0.1	Dormant	-84.535242, 39.008138	Banklick Creek	N	Lakeview (2034)

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2020035	1/3/2023 7:35	14	1.55	< 4-month	0.109	6:18	0	Dormant	-84.519138, 38.992666	Wayman or Hands Branch	N	Lakeview (2040)
	1/12/2023 9:30	13	0.96	< 2-month	0.067	3:38	0.03					
	2/16/2023 7:05	9	1.64	> 6-month	0.251	12:29	0.1					
	3/3/2023 9:20	13	2.15	> 9-month	0.43	16:34	0.52					
	3/24/2023 3:00	15	1.56	< 3-month	0.236	12:06	0.33					
	3/25/2023 1:35	7	0.89	< 2-month	0.101	5:59	1.62					
	4/5/2023 19:05	4	0.97	2-month	0.009	1:03	0.86	Growing				
2020203	1/3/2023 8:41	14	1.55	< 4-month	0.006	1:33	0	Dormant	-84.518312, 38.992253	Waymans Branch	N	Lakeview (2040)
	1/12/2023 9:45	13	0.96	< 2-month	0.008	1:19	0.03					
	2/16/2023 7:10	9	1.64	> 6-month	0.048	4:49	0.1					
	3/3/2023 9:30	13	2.15	> 9-month	0.095	11:29	0.52					
	3/24/2023 3:05	15	1.56	< 3-month	0.009	1:33	0.33					
	3/25/2023 2:30	7	0.89	< 2-month	0.011	1:42	1.62					
2020255	2/16/2023 8:26	9	1.64	> 6-month	0.007	1:17	0.1	Dormant	-84.512959, 38.984753	Waymans Branch	Y	Not Applicable

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2020860	1/3/2023 8:53	14	1.55	< 4-month	0.001	0:49	0	Dormant	-84.518144, 38.991807	Waymans Branch	N	Lakeview (2040)
	1/12/2023 9:45	13	0.96	< 2-month	0.009	1:08	0.03					
	2/16/2023 7:10	9	1.64	> 6-month	0.099	4:20	0.1					
	3/3/2023 9:31	13	2.15	> 9-month	0.151	10:37	0.52					
	3/24/2023 3:05	15	1.56	< 3-month	0.007	1:22	0.33					
	3/25/2023 2:33	7	0.89	< 2-month	0.012	1:28	1.62					
2030031	2/16/2023 8:51	16	1.4	< 3-month	0.011	1:58	0.12	Dormant	-84.545597, 38.995830	Bullock Pen Creek	N	Brookwood SSO
2030144	2/16/2023 8:45	16	1.4	< 3-month	0.006	1:26	0.12	Dormant	-84.553084, 39.004239	UT to Bullock Pen Creek	N	Brookwood SSO
2100057	1/3/2023 8:46	14	1.45	3-month	0.002	0:42	0.01	Dormant	-84.611764, 39.001294	UT to Bullock Pen Creek	N	Lakeview (2040)
	1/12/2023 9:50	12	0.88	< 2-month	0.001	0:27	0.02					
	2/16/2023 6:20	9	1.68	> 6-month	0.019	4:37	0.07					
	3/3/2023 10:01	16	1.77	< 6-month	0.008	7:58	0.44					
	3/24/2023 1:55	15	1.38	2-month	0.002	0:43	0.23					
	3/25/2023 1:35	16	0.79	< 2-month	0.003	0:59	0.44					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2100081	2/16/2023 6:50	9	1.68	> 6-month	0.03	2:39	0.07	Dormant	-84.611249, 39.002279	UT to Bullock Pen Creek	N	Lakeview (2040)
2100126	2/16/2023 6:20	9	1.68	> 6-month	0.065	4:18	0.07	Dormant	-84.612300, 39.001555	UT to Bullock Pen Creek	N	Lakeview (2040)
	3/3/2023 16:10	16	1.77	< 6-month	0.011	1:28	0.44					
	3/25/2023 1:35	16	0.79	< 2-month	0.004	0:46	0.44					
2100156	2/16/2023 6:51	9	1.68	> 6-month	0.003	2:39	0.07	Dormant	-84.611385, 39.002210	UT to Bullock Pen Creek	N	Lakeview (2040)
2110006	1/3/2023 8:05	14	1.45	3-month	0.034	2:19	0.01	Dormant	-84.606363, 39.004057	UT to Bullock Pen Creek	N	Lakeview (2040)
	1/12/2023 9:30	12	0.88	< 2-month	0.021	1:15	0.02					
	2/16/2023 6:10	9	1.68	> 6-month	0.262	5:47	0.07					
	3/3/2023 9:30	16	1.77	< 6-month	0.159	9:18	0.44					
	3/24/2023 1:35	15	1.38	2-month	0.048	2:09	0.23					
	3/25/2023 1:25	16	0.79	< 2-month	0.036	1:34	0.44					
	4/5/2023 17:05	8	0.85	< 2-month	0.002	0:27	0.71	Growing				
	4/14/2023 20:30	1	0.93	> 4-month	0.015	1:04	0					
2110040	2/16/2023 6:55	9	1.68	> 6-month	0.023	2:17	0.07	Dormant	-84.607765, 39.006177	UT to Bullock Pen Creek	Y	Not Applicable

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2130027	2/16/2023 8:05	9	1.68	> 6-month	0.552	2:55	0.07	Dormant	-84.608932, 39.050507	Dry Creek	N	Dry Creek (2040)
2210009	1/3/2023 10:15	14	1.54	< 4-month	0.006	2:35	0	Dormant	-84.387178, 38.977331	UT to Tug Creek	N	Eastern Regional (2040)
	1/12/2023 10:35	14	1.61	> 4-month	0.028	5:24	0.03					
	2/16/2023 9:30	14	1.53	< 4-month	0.018	4:25	0.04					
	3/3/2023 14:27	16	1.32	> 2-month	0.003	2:37	0.31					
2210050	1/3/2023 8:40	14	1.54	< 4-month	0.021	4:56	0	Dormant	-84.390543, 38.980709	UT to Tug Creek	N	Eastern Regional (2040)
	1/12/2023 9:55	14	1.61	> 4-month	0.057	6:54	0.03					
	2/16/2023 8:30	14	1.53	< 4-month	0.042	7:21	0.04					
	3/3/2023 11:15	16	1.32	> 2-month	0.019	6:37	0.31					
	3/24/2023 3:25	15	1.25	< 2-month	0.011	4:45	0.33					
	3/25/2023 3:00	7	0.74	< 2-month	0.005	1:48	1.34					
2300011	1/3/2023 8:05	15	1.1	< 2-month	0.021	5:35	0	Dormant	-84.538000, 38.985000	Banklick Creek	N	W6 Improvements (2029)/Lakeview (2040)
	1/12/2023 10:20	14	0.89	< 2-month	0.051	5:14	0.03					
	2/16/2023 8:45	16	1.4	< 3-month	0.105	7:56	0.12					
	3/3/2023 10:20	17	1.82	< 6-month	0.155	12:53	0.38					
	3/24/2023 4:05	14	1.44	< 3-month	0.088	11:22	0.35					
	3/25/2023 3:04	9	0.56	< 2-month	0.001	0:57	1.53					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2300013	1/3/2023 8:00	15	1.1	< 2-month	0.328	12:25	0	Dormant	-84.539668, 38.984153	Banklick Creek	N	W6 Improvements (2029)/Lakeview (2040)
	1/12/2023 10:15	14	0.89	< 2-month	0.341	11:33	0.03					
	1/25/2023 11:05	18	0.4	< 2-month	0.068	4:59	0.87					
	2/16/2023 8:45	16	1.4	< 3-month	0.485	14:30	0.12					
	3/3/2023 10:15	17	1.82	< 6-month	0.609	17:04	0.38					
	3/24/2023 3:55	14	1.44	< 3-month	0.504	15:36	0.35					
	3/25/2023 2:40	9	0.56	< 2-month	0.232	11:49	1.53					
2300019	1/3/2023 9:55	15	1.1	< 2-month	0.022	4:24	0	Dormant	-84.543000, 38.978000	Banklick Creek	N	W6 Improvements (2029)/Lakeview (2040)
	1/12/2023 11:00	14	0.89	< 2-month	0.043	4:55	0.03					
	2/16/2023 9:20	16	1.4	< 3-month	0.101	8:33	0.12					
	3/3/2023 11:28	17	1.82	< 6-month	0.179	12:56	0.38					
	3/24/2023 4:45	14	1.44	< 3-month	0.093	9:31	0.35					
	3/25/2023 4:16	9	0.56	< 2-month	0.003	1:00	1.53					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2300027	1/3/2023 10:09	15	1.1	< 2-month	0.047	3:35	0	Dormant	-84.549000, 38.975000	Banklick Creek	N	W6 Improvements (2029)/Lakeview (2040)
	1/12/2023 11:11	14	0.99	< 2-month	0.075	3:49	0.03					
	2/16/2023 9:30	16	1.4	< 3-month	0.143	7:17	0.12					
	3/3/2023 11:40	17	1.82	< 6-month	0.352	12:18	0.38					
	3/24/2023 4:55	14	1.44	< 3-month	0.038	6:41	0.35					
2300107	1/3/2023 9:37	17	1.58	4-month	0.003	0:52	0	Dormant	-84.576681, 38.952319	Banklick Creek	N	Western Regional (2034)
	1/12/2023 10:35	19	1.14	< 2-month	0.006	0:59	0.02					
	2/16/2023 8:50	13	1.41	< 3-month	0.015	2:05	0.12					
	3/3/2023 11:13	16	1.82	< 6-month	0.018	7:47	0.49					
2300121	1/3/2023 8:55	17	1.58	4-month	0.157	4:15	0	Dormant	-84.579000, 38.943000	Banklick Creek	N	Western Regional (2034)
	1/12/2023 10:15	19	1.14	< 2-month	0.163	3:53	0.02					
	2/16/2023 8:30	13	1.41	< 3-month	0.22	4:43	0.12					
	3/3/2023 10:45	16	1.82	< 6-month	0.379	9:43	0.49					
	3/24/2023 3:35	30	2.1	< 3-month	0.094	6:11	0.32					
	3/25/2023 3:40	30	2.1	< 3-month	0.006	0:44	0.32					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2300123	1/3/2023 9:42	17	1.58	4-month	0.015	1:32	0	Dormant	-84.581000, 38.942000	Banklick Creek	N	Western Regional (2034)
	1/12/2023 10:25	19	1.14	< 2-month	0.054	2:13	0.02					
	2/16/2023 8:35	13	1.41	< 3-month	0.097	2:54	0.12					
	3/3/2023 11:00	16	1.82	< 6-month	0.03	2:02	0.49					
	3/24/2023 3:45	30	2.1	< 3-month	0.005	0:45	0.32					
2300621	2/16/2023 9:02	16	1.4	< 3-month	0.005	1:31	0.12	Dormant	-84.533812, 38.987376	Banklick Creek	N	Lakeview (2040)
2301219	1/3/2023 8:30	15	1.1	< 2-month	0.425	9:27	0	Dormant	-84.541256, 38.980638	Banklick Creek	N	W6 Improvements (2029)/Lakeview (2040)
	1/12/2023 10:20	14	0.89	< 2-month	0.577	10:19	0.03					
	2/16/2023 8:45	16	1.4	< 3-month	0.97	13:24	0.12					
	3/3/2023 10:25	17	1.82	< 6-month	1.422	16:13	0.38					
	3/24/2023 4:00	14	1.44	< 3-month	0.826	13:49	0.35					
	3/25/2023 2:50	9	0.56	< 2-month	0.192	10:05	1.53					
2350005	2/16/2023 9:36	16	1.4	< 3-month	0.002	1:12	0.12	Dormant	-84.519640, 38.950606	UT to Fowler Creek or Thompson Branch	N	Lakeview (2040)
2350008	2/16/2023 9:27	16	1.4	< 3-month	0.002	1:10	0.12	Dormant	-84.519492, 38.949020	UT to Fowler Creek or Thompson Branch	N	Lakeview (2040)

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2350055	2/16/2023 9:20	13	1.41	< 3-month	0.005	1:10	0.12	Dormant	-84.519833, 38.947760	UT to Fowler Creek or Thompson Branch	N	Lakeview (2040)
2370003	2/16/2023 9:00	9	1.77	< 9-month	0.214	12:45	0.07	Dormant	-84.738540, 39.074793	Woolper Creek	N	Bullitsville EQ
	3/3/2023 10:10	13	2.02	< 9-month	0.489	14:06	0.41					
	3/24/2023 6:25	15	1.43	2-month	0.109	8:05	0.33					
	3/25/2023 0:55	16	1.11	< 2-month	0.202	13:52	1.46					
	3/31/2023 20:25	28	0.89	< 2-month	0.004	0:58	2.27					
	4/5/2023 18:28	9	1.39	< 4-month	0.105	4:13	0.94	Growing				
2370534	2/16/2023 9:53	9	1.77	< 9-month	0.001	0:46	0.07	Dormant	-84.737336, 39.073675	Woolper Creek	N	Bullitsville EQ
	3/3/2023 11:16	13	2.02	< 9-month	0.016	5:32	0.41					
	4/5/2023 18:37	9	1.39	< 4-month	0.004	0:51	0.94	Growing				
2410387	2/16/2023 7:31	9	1.77	< 9-month	0.054	4:49	0.07	Dormant	-84.689242, 39.005352	UT to Gunpowder Creek	N	Western Regional (2040)
	3/3/2023 15:11	13	2.02	< 9-month	0.03	4:29	0.41					

SSO	Date / Time	Storm Event Duration (hrs)	Total Rainfall (in)	Duration Storm Frequency	Spill Volume (MG)	Spill Duration (hrs:min)	1 Week Antecedent Rainfall (in)	Antecedent Season (Dormant - Nov - Mar; Growing - April - Oct)	Location (Y/X)	Receiving Water	OF with 2040 Improvements	Project
2410459	2/16/2023 8:37	9	1.77	< 9-month	0.063	8:00	0.07	Dormant	-84.689184, 39.013086	Gunpowder Creek	N	Western Regional (2034)
	3/3/2023 9:55	13	2.02	< 9-month	0.102	13:21	0.41					
	3/4/2023 9:52	0	0	< 2-month	0.015	6:16	2.43					
	3/24/2023 9:00	15	1.43	2-month	0.028	7:09	0.33					
	3/25/2023 2:11	16	1.11	< 2-month	0.049	14:18	1.46					
2410468	3/3/2023 13:28	13	2.02	< 9-month	0.006	2:52	0.41	Dormant	-84.688043, 39.015233	Gunpowder Creek	N	Western Regional (2034)

2.4.1 Modeled Wet Weather SSOs without UWSP Mitigation Project

The SSOs indicated above in red do not currently have a mitigating project in the UWSP. SSO 1620001 did overflow on 2/16/2023 (second consecutive reporting period), however, using hourly rainfall data moving forward, SD1 does not anticipate this location being a recurring discharge.

SSOs 2020255 and 2110040 experienced an overflow event on 2/16/2023 (second consecutive reporting period) and are now to be considered TY SSOs. Both SSOs exist upstream of the UWSP Lakeview Conveyance project. SD1 will review the expansion of this project as a potential solution to these overflows.