Downriver Utility Wastewater Authority

Downriver Sewage Disposal System
System Monitoring Annual Report for 2024

May 21, 2025

Applied Science, Inc.

VEOLIA

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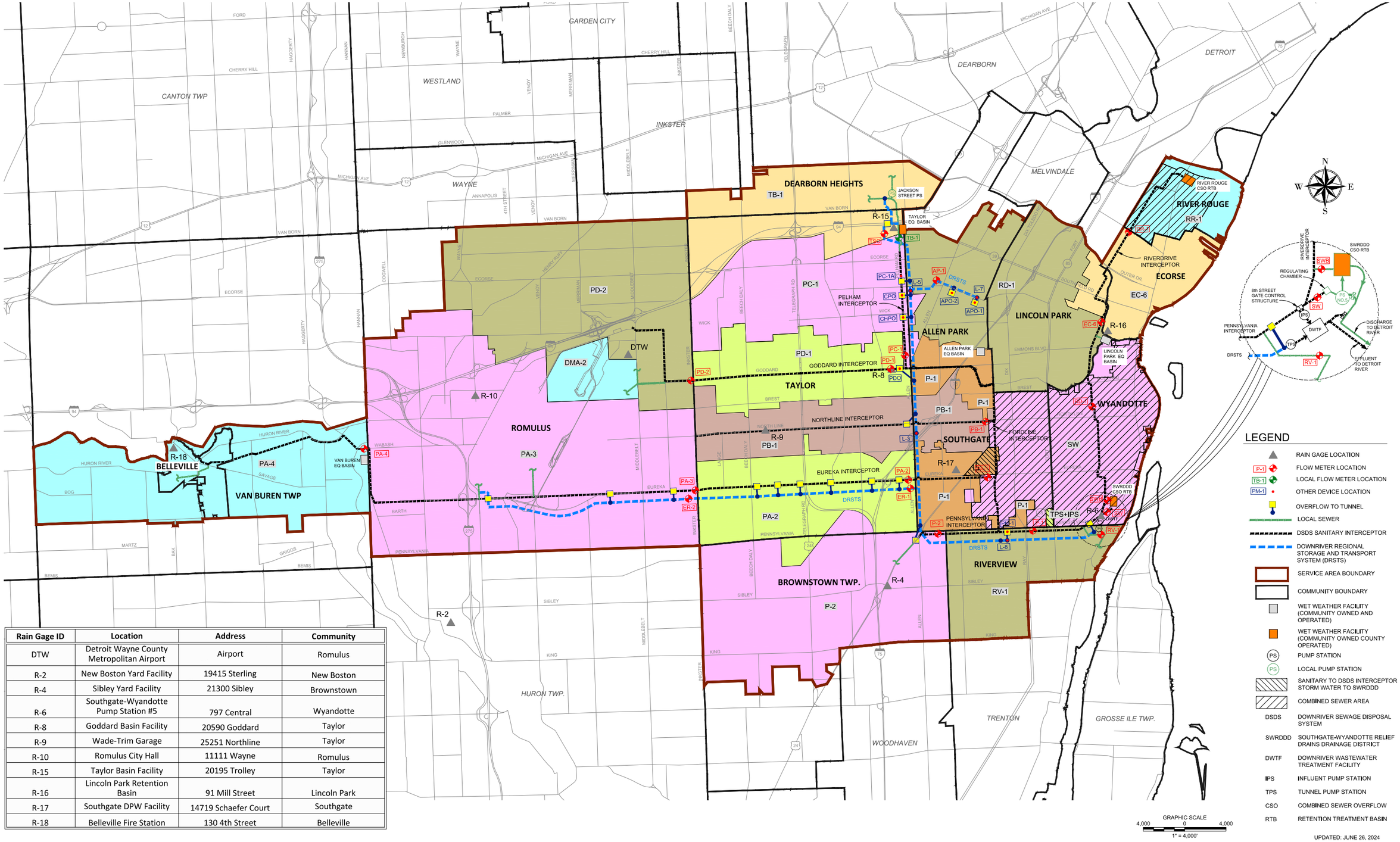
1) INTRODUCTION

The Downriver Sewage Disposal System (DSDS) Annual System Monitoring Report for 2024 provides a summary of the best available flow monitoring data. This report supersedes and consolidates the information previously issued in the quarterly system monitoring reports for 2024. It is intended to provide the best available estimate of flow rates for the entire DSDS, each meter district and community during the dry and wet weather conditions that occurred in 2024. The flow monitoring data was reviewed and missing or erroneous data have been estimated using fill-in techniques to provide a complete data set.

Figure 1-1 is a map of the DSDS showing the flow meter and level sensor locations, incremental meter districts, the interceptor and tunnel system, and the location of rain gauges that may be used to evaluate the wet weather monitoring data.

2) SYSTEM SUMMARY

Major findings from the DSDS 2024 system monitoring are presented in the following subsections: subsection A lists noteworthy items, subsection B presents an overview of the DSDS performance, subsection C presents an overview of the controlled flow communities' performance, and subsection D presents an overview of the non-controlled flow communities' performance.



Rain Gage ID	Location	Address	Community
DTW	Detroit Wayne County Metropolitan Airport	Airport	Romulus
R-2	New Boston Yard Facility	19415 Sterling	New Boston
R-4	Sibley Yard Facility	21300 Sibley	Brownstown
R-6	Southgate-Wyandotte Pump Station #5	797 Central	Wyandotte
R-8	Goddard Basin Facility	20590 Goddard	Taylor
R-9	Wade-Trim Garage	25251 Northline	Taylor
R-10	Romulus City Hall	11111 Wayne	Romulus
R-15	Taylor Basin Facility	20195 Trolley	Taylor
R-16	Lincoln Park Retention Basin	91 Mill Street	Lincoln Park
R-17	Southgate DPW Facility	14719 Schaefer Court	Southgate
R-18	Belleville Fire Station	130 4th Street	Belleville

F				
E				
D				
C				
B				
A				
	DESCRIPTION	CHECKED	APRVD	DATE
	REVISIONS			

DESIGN D. WIEBE
DRAFTING D. HEROLD-J
CHECKED D. WIEBE
APPROVED K. RIDGWAY
ISSUE DATE AUG 2017

DUWA

DOWNRIVER
SEWAGE DISPOSAL SYSTEM

PREPARED BY:

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INCREMENTAL METER DISTRICTS &
INTERCEPTOR & METER LOCATIONS & RAIN GAGES
FOR 2024 SYSTEM MONITORING PLAN

SCALE: 1" = 4000'
JOB No. ASI #1819
FILE No.

FIGURE 1

Jun 26, 2024 – 10:17am
K:\DWGFiles\2018\1819\DSDS System Monitoring Plan.dwg

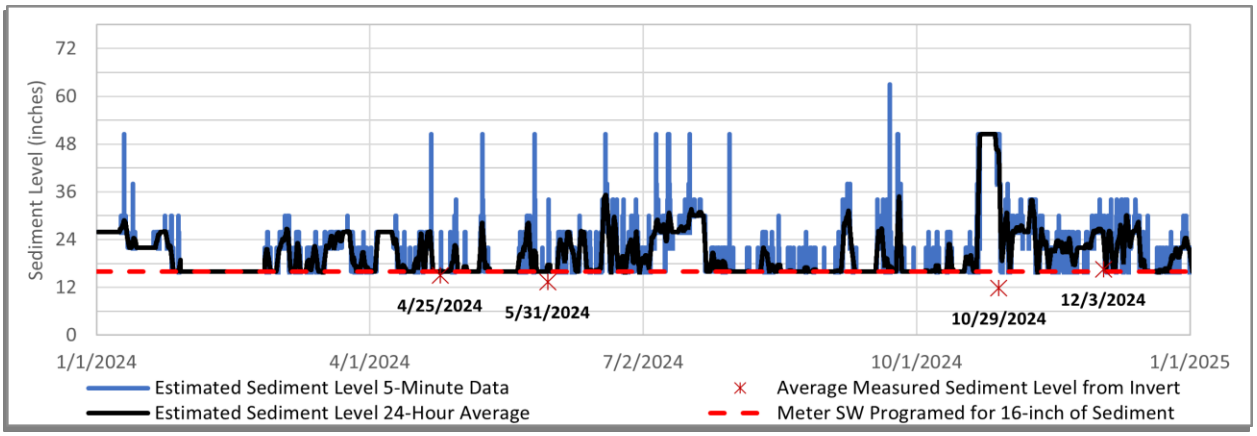
A) NOTEWORTHY ITEMS

1. Meter AP-1 was installed in the Allen Park arm of the Downriver Regional Storage and Transport System (DRSTS) in 2024 Q1. The meter intermittently transmitted data following installation which was insufficient to assess the reliability and accuracy of the meter. Meter AP-1 began recording data consistently on October 14, 2024 and will be evaluated for accuracy once sufficient data has been collected to compare performance to adjacent monitoring devices.

2. The flow rates for Meter P-1 from a May 14, 2021 meter service date through December 2024 have been corrected to reflect meter performance since that date of service. The corrected data does not impact the meter district or community flow rates presented in the DUWA Quarterly and Annual System Monitoring Reports and does not impact the DUWA rates calculations.

3. Four sediment profiles were measured at Meter SW in 2024. Figure 2-1 shows the estimated sediment depths at Meter SW for 2024. Detailed sediment profile measurements and the sediment estimation methodology are provided in Appendix E. Figure 2-1 shows the dynamic nature of sediment accretion/reduction at this location.

Figure 2-1
Sediment Profile Measurements and Estimated Sediment Levels at Meter SW



4. In 2024, dye-dilution testing was conducted for Meters EC-6, P-1, P-2, PA-2, PA-3, PA-4, PB-1, PD-1, PD-2, RR-1, RV-1, SW and TB-1. The results of dye tests currently in-effect for DSDS meters are presented in Appendix F. The data presented in this report reflects the results of these dye-dilution tests.

B) DSDS OVERVIEW

1. The total precipitation at Detroit Metropolitan Wayne County Airport (DTW) for year 2024 was 32.46 inches, which is 1.86 inches below normal.
2. The total annual precipitation at DTW was above normal (34.32 inches) for 2019 (+2.91 inches), 2020 (+5.26 inches), 2021 (+6.52 inches) and 2023 (+2.31 inches), and was below normal for 2022 (-9.92 inches) and 2024 (-1.86 inches).
3. There were eleven significant storm events in 2024. Significant storm events are defined as those with at least 0.5 inches of rainfall occurring on a single day with an event total of at least 1.0 inch of rainfall. Significant storm events are separated by at least 2 consecutive days without precipitation over 0.1 inches. This storm event definition is based on the arithmetic mean of the rainfall recorded by all rain gauges used in the analysis for that storm. Table 2-1 lists the average rainfall depths over the DSDS service area recorded by the DSDS network of rain gauges for the significant storm events for 2024.

Table 2-1
Average Rainfall Depths for Significant Storms during 2024 in the DSDS Service Area

Significant Storm Event	Event Dates	Average Total Rainfall Depth Over the Service Area (inches)
1	1/9-13/2024	1.73
2	1/22-30/2024	2.60
3	4/10-12/2024	1.54
4	4/27-30/2024	1.16
5	5/25-29/2024	1.39
6	6/29/2024	1.08
7	7/9-10/2024	2.33
8	8/5-6/2024	1.47
9	8/25-28/2024	1.93
10	10/12-14/2024	1.43
11	12/29-31/2024	1.76

4. There was one major storm event in 2024. Major storm events are a subgroup of significant storm events which result in the peak hourly influent flow rate to the Downriver Wastewater Treatment Facility (DWTF) reaching or exceeding 175 million gallons per day (MGD), which is equal to 271 cubic feet per second (cfs). Significant Storm Event 2 met the criteria for a major storm and was designated as Major Storm Event A.

5. The peak 24-hour rainfall depths and total rainfall depths at DTW for the significant/major storms are listed in Table 2-2.

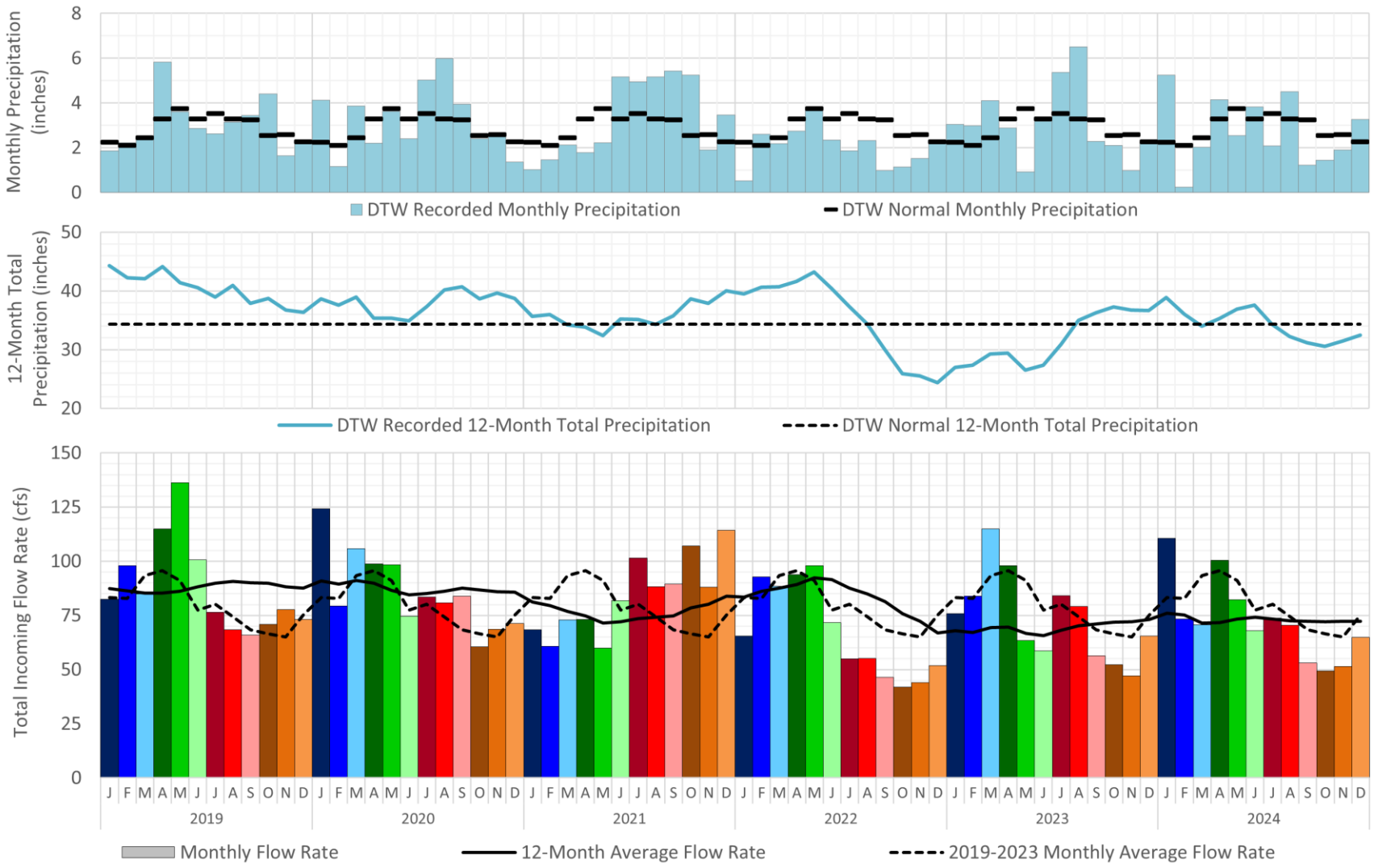
Table 2-2
Rainfall Depths at DTW for Significant Storms during 2024 in the DSDS Service Area

Major Storm Event	Significant Storm Event	Event Dates	Peak 24-hour Rainfall Depth (inches)	Total Rainfall Depth (inches)
-	1	1/9-13/2024	0.76	1.53
A	2	1/22-30/2024	1.07	2.33
-	3	4/10-12/2024	1.17	1.34
-	4	4/27-30/2024	0.61	1.13
-	5	5/25-29/2024	1.10	1.28
-	6	6/29/2024	1.02	1.02
-	7	7/9-10/2024	1.31	1.31
-	8	8/5-6/2024	1.14	1.24
-	9	8/25-28/2024	1.66	2.60
-	10	10/12-14/2024	0.99	1.30
-	11	12/29-31/2024	1.64	1.73

6. Figure 2-2 shows the long-term flow rate versus precipitation trends for the DSDS by month from 2019 through 2024. The incoming flow rate to the DWTF is based on the interceptor system flow meters. The precipitation values are the data recorded at DTW. The figure shows the expected seasonal variations in flow rates, and the trend between precipitation and flow rates.

   On the top graph, the blue vertical bars show the monthly precipitation, and the black markers show the monthly normal precipitation. On the middle graph, the solid blue line shows the 12-month rolling total precipitation, and the gray dashed line shows the 12-month rolling total normal precipitation. On the bottom graph, the vertical bars show the average monthly flow rate, the solid black line shows the 12-month rolling average flow rate, and the black dashed line shows the 2019-2023 average monthly flow rate. The 5-year average from 2019-2023 provides a long-term high-quality dataset for comparison to current conditions.

Figure 2-2
Monthly Influent Flow Rate to DWTF versus Precipitation at DTW for 2019 through 2024



7. Tables 2-3 to 2-6 list the average quarterly flow rates and total flow volumes for years 2019 through 2024. The total incoming flow rate to the DWTF is based on the interceptor system flow meters. The DWTF flow rate is based on the IPS and TPS and includes recycle flow rate.

Table 2-3
Average Q1 Flow Rate and Total Volume for 2019 through 2024

Year	Total Precipitation at DTW (inches)	Average Flow Rate (cfs)			Total Flow Volume (MG)		
		Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle	Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle
2019 Q1	6.54	88.15	86.82	-	5,130	5,050	-
2020 Q1	9.14	103.62	110.07	-	6,090	6,470	-
2021 Q1	4.63	67.49	68.76	64.52	3,930	4,000	3,750
2022 Q1	5.31	81.76	85.73	77.72	4,760	4,990	4,520
2023 Q1	10.15	91.68	98.39	92.55	5,330	5,720	5,380
2024 Q1	7.52	85.02	88.64	84.57	5,000	5,210	4,970
2019-2023 Q1 Average	7.15	86.54	89.95	-	5,050	5,250	-

Notes:
1. DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years DWTF with recycle flow is presented. DWTF Including Recycle = IPS + TPS. DWTF without Recycle = IPS + TPS – Recycle.

Table 2-4
Average Q2 Flow Rate and Total Volume for 2019 through 2024

Year	Total Precipitation at DTW (inches)	Average Flow Rate (cfs)			Total Flow Volume (MG)		
		Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle	Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle
2019 Q2	12.29	117.43	126.62	-	6,910	7,450	-
2020 Q2	8.23	90.64	98.25	-	5,330	5,780	-
2021 Q2	9.18	71.50	73.52	69.72	4,200	4,320	4,100
2022 Q2	8.91	87.87	92.00	83.11	5,170	5,410	4,890
2023 Q2	6.99	73.15	77.62	70.71	4,300	4,570	4,160
2024 Q2	10.53	83.47	85.12	78.74	4,910	5,010	4,630
2019-2023 Q2 Average	9.12	88.12	93.60	-	5,180	5,510	-

Notes:
1. DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years DWTF with recycle flow is presented. DWTF Including Recycle = IPS + TPS. DWTF without Recycle = IPS + TPS – Recycle.

Table 2-5
Average Q3 Flow Rate and Total Volume for 2019 through 2024

Year	Total Precipitation at DTW (inches)	Average Flow Rate (cfs)			Total Flow Volume (MG)		
		Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle	Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle
2019 Q3	9.21	70.32	78.50	-	4,180	4,670	-
2020 Q3	14.96	82.73	89.92	83.14	4,920	5,350	4,940
2021 Q3	15.55	93.07	95.66	90.37	5,530	5,690	5,370
2022 Q3	5.17	52.17	51.43	46.94	3,100	3,060	2,790
2023 Q3	14.15	73.36	77.16	71.17	4,360	4,590	4,230
2024 Q3	7.80	65.85	68.42	62.66	3,920	4,070	3,730
2019-2023 Q3 Average	11.81	74.33	78.54	-	4,420	4,670	-

Notes:
1. DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years DWTF with recycle flow is presented. DWTF Including Recycle = IPS + TPS. DWTF without Recycle = IPS + TPS – Recycle.

Table 2-6
Average Q4 Flow Rate and Total Volume for 2019 through 2024

Year	Total Precipitation at DTW (inches)	Average Flow Rate (cfs)			Total Flow Volume (MG)		
		Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle	Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle
2019 Q4	8.34	73.88	77.49	-	4,390	4,610	-
2020 Q4	6.40	66.78	67.74	63.66	3,970	4,030	3,790
2021 Q4	10.63	103.27	104.99	99.53	6,140	6,240	5,920
2022 Q4	5.01	45.94	47.01	42.65	2,730	2,800	2,540
2023 Q4	5.34	54.99	59.43	54.36	3,270	3,530	3,230
2024 Q4	6.61	55.20	60.12	54.56	3,280	3,570	3,240
2019-2023 Q4 Average	7.14	68.97	71.33	-	4,100	4,240	-

Notes:
1. DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years DWTF with recycle flow is presented. DWTF Including Recycle = IPS + TPS. DWTF without Recycle = IPS + TPS – Recycle.

8. Table 2-7 lists the average annual (Q1 through Q4) flow rate and total flow volume for years 2019 through 2024. The total incoming flow rate to the DWTF is based on the interceptor system flow meters. The DWTF flow rate is based on the IPS and TPS and includes recycle flow rate. The total influent volume to the DWTF for 2024 was lower than the 2019-2023 average.

Table 2-7
Average Annual Flow Rate and Total Volume for 2019 through 2024

Year	Total Precipitation at DTW (inches)	Average Flow Rate (cfs)			Total Flow Volume (MG)		
		Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle	Influent to DWTF	DWTF Including Recycle	DWTF Without Recycle
2019	36.38	87.36	92.29	-	20,610	21,770	-
2020	38.73	85.88	91.43	-	20,320	21,630	-
2021	39.99	83.96	85.86	81.15	19,810	20,250	19,140
2022	24.40	66.80	68.89	62.47	15,760	16,250	14,740
2023	36.63	73.20	78.04	72.09	17,270	18,410	17,010
2024	32.46	72.32	75.51	70.07	17,110	17,860	16,570
2019-2023 Average Annual	35.23	79.44	83.30	-	18,750	19,660	-

Notes:
1. DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years DWTF with recycle flow is presented. DWTF Including Recycle = IPS + TPS. DWTF without Recycle = IPS + TPS – Recycle.

9. Figures 2-3 to 2-6 plot the quarterly average influent flow rates (interceptor system flow meters) to the DWTF versus the quarterly total precipitation at DTW for years 2013 through 2024. This figure shows the trend between precipitation and DSDS flow rates. The total precipitation at DTW for 2024 Q1 and 2024 Q2 was above normal while 2024 Q3 and 2024 Q4 were below normal. For the given precipitation, the influent flow rate to the DWTF was below trend for 2024 Q1, 2024 Q2 and 2024 Q4, and was above trend for 2024 Q3. 2024 Q1, 2024 Q2, 2024 Q3 and 2024 Q4 quarterly influent flow rates to the DWTF were within the 95% confidence interval for the given precipitation.

Figure 2-3
Average Influent Flow Rate to DWTF versus Precipitation at DTW
Q1 January - March for 2013 through 2024

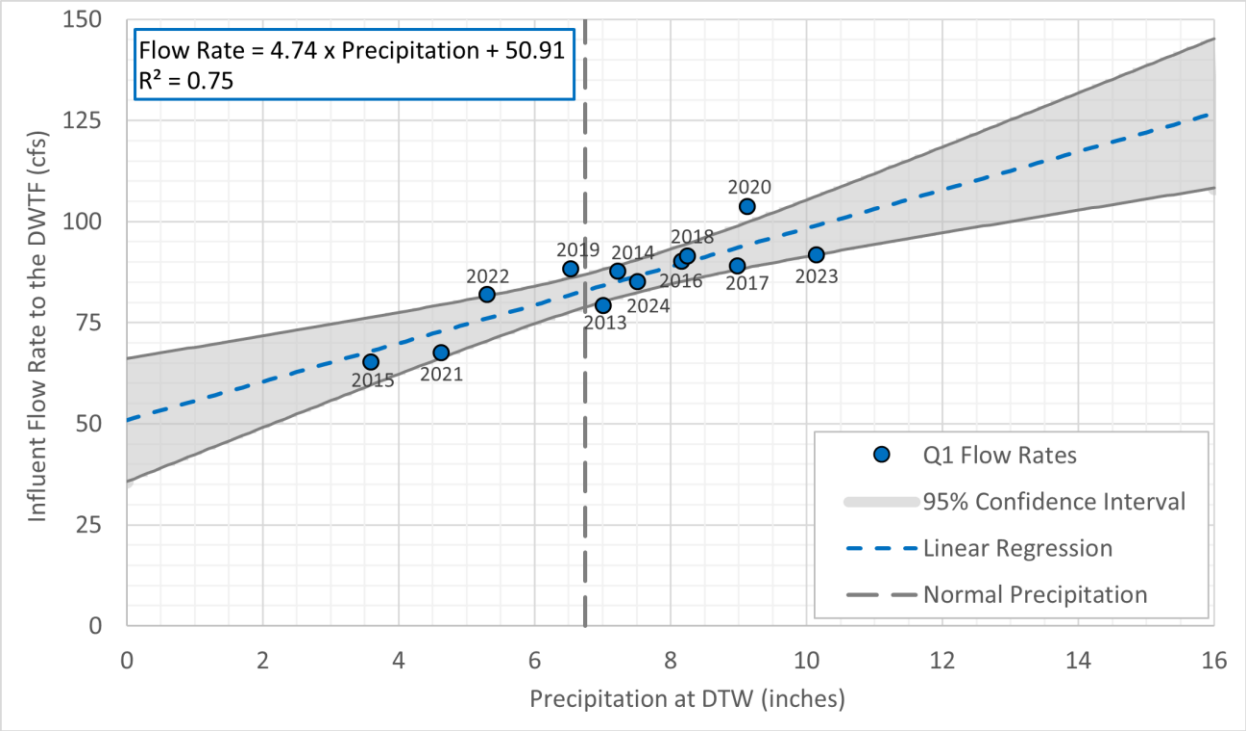


Figure 2-4
Average Influent Flow Rate to DWTF versus Precipitation at DTW
Q2 April - June for 2013 through 2024

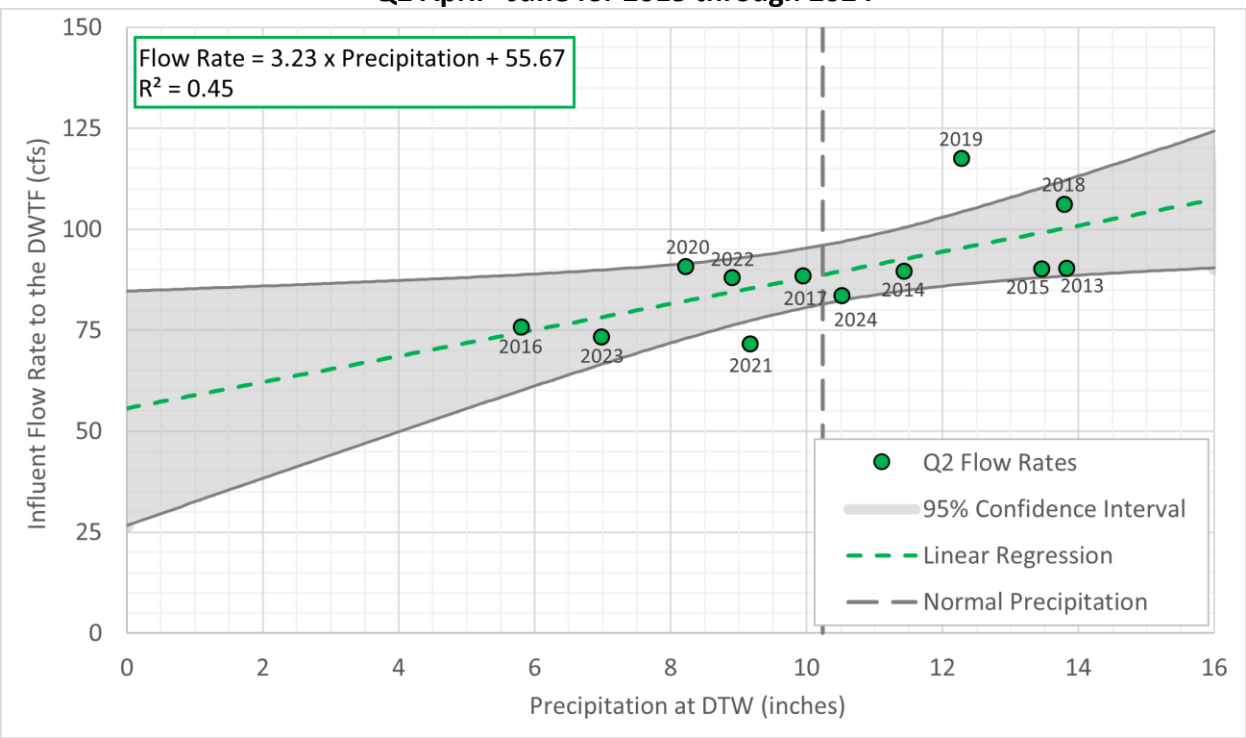


Figure 2-5
Average Influent Flow Rate to DWTF versus Precipitation at DTW
Q3 July - September for 2013 through 2024

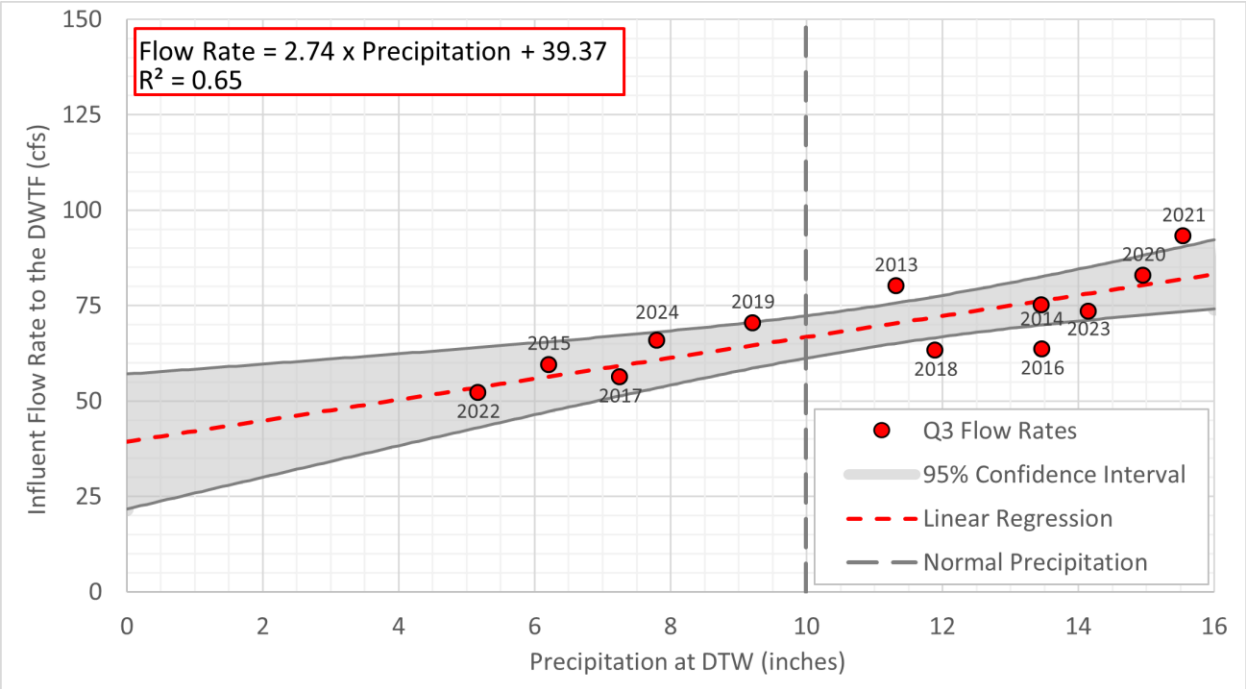
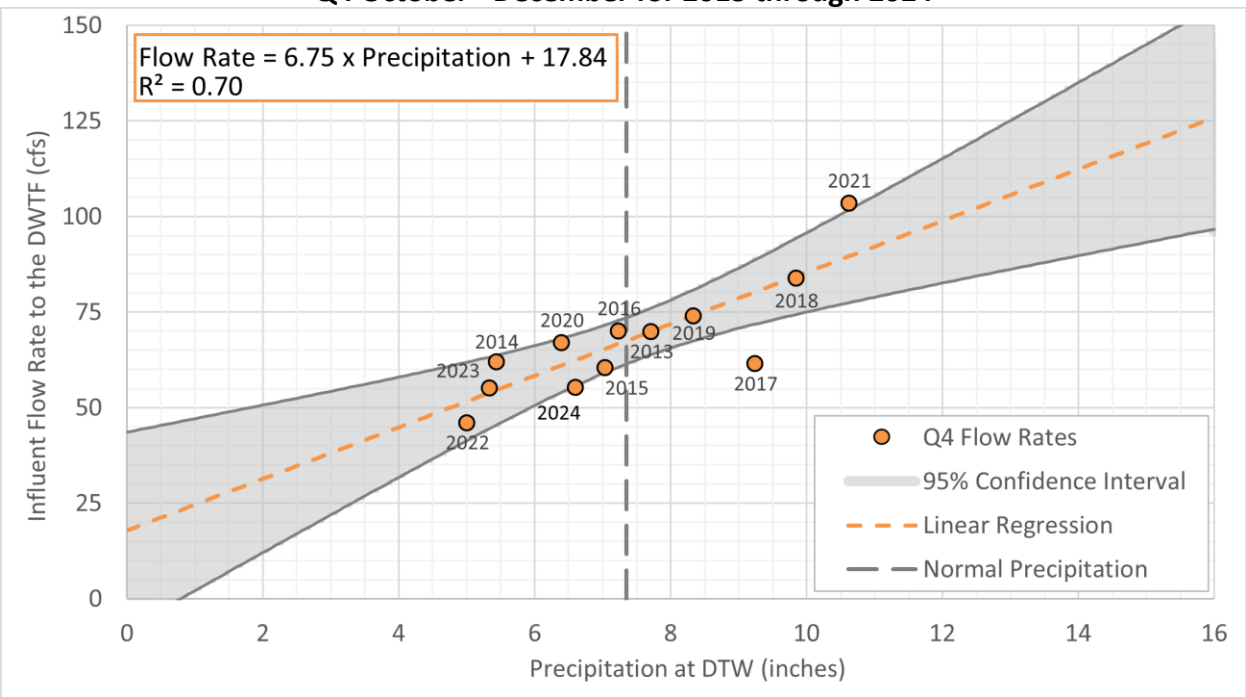


Figure 2-6
Average Influent Flow Rate to DWTF versus Precipitation at DTW
Q4 October - December for 2013 through 2024



10. Figure 2-7 shows the long-term flow rate versus precipitation trends for the Controlled Flow Communities and Non-Controlled Flow Communities by month from 2019 through 2024. The flow rates are based on the interceptor system flow meters and the total precipitation is at DTW.

    On the top graph, the blue vertical bars show the monthly precipitation, and the black markers show the monthly normal precipitation. On the middle graph, the solid blue line shows the 12-month rolling total precipitation, and the gray dashed line shows the 12-month rolling total normal precipitation. On the bottom graph, the vertical bars show the average monthly flow rate and the solid lines show the 12-month rolling average flow rate.

    This figure shows the total flow contribution from the Controlled Flow Communities and Non-Controlled Flow Communities is generally about equal. From 2019 through 2023 the total flow contribution from the Controlled Flow Communities was about 51%, and from the Non-Controlled Flow Communities was about 49%. For 2024 the total flow contribution from the Controlled Flow Communities was about 52%, and from the Non-Controlled Flow Communities was about 48%.

11. For each community, the average Q1 through Q4 flow rate for years 2019 through 2024 are listed in Tables 2-8 to 2-11 and shown in Figures 2-8 to 2-11.

12. For each community, the average annual (Q1 through Q4) flow rate for years 2019 through 2024 are listed in Table 2-12 and shown in Figure 2-12.

Figure 2-7
Monthly Influent Flow Rate to DWTF versus Precipitation at DTW for 2019 through 2024
by Controlled Flow and Non-Controlled Flow Communities

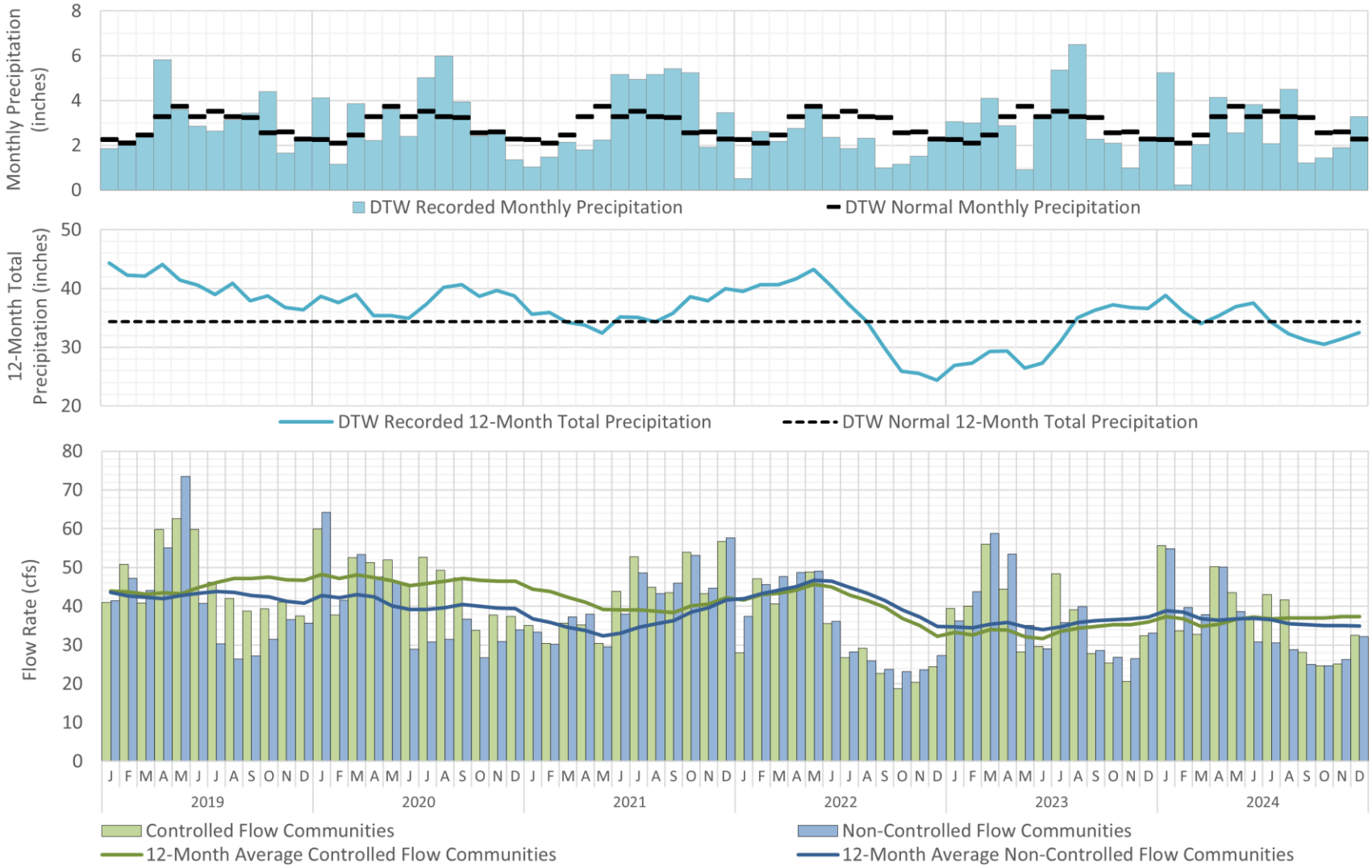


Table 2-8
Average Q1 Flow Rate by Community for 2019 through 2024

Community	Average Flow Rate (cfs)						2019-2023 Q1 Average Flow
	2019 Q1	2020 Q1	2021 Q1	2022 Q1	2023 Q1	2024 Q	
Allen Park	7.55	9.30	4.70	6.81	7.98	6.76	7.27
Belleville	0.74	1.06	0.60	0.74	0.68	0.81	0.76
Brownstown Twp.	2.85	3.16	2.33	2.31	2.29	2.33	2.59
Dearborn Hts.	5.41	6.06	3.71	4.54	5.34	4.94	5.01
Ecorse	2.17	3.10	3.55	2.23	2.15	1.94	2.64
Lincoln Park	11.84	13.20	8.18	10.55	11.72	9.74	11.10
River Rouge	4.02	5.38	2.29	3.42	4.73	4.63	3.97
Riverview	2.88	3.40	2.61	2.76	3.33	2.85	3.00
Romulus	10.38	12.63	8.37	9.67	10.15	11.61	10.24
Southgate	11.48	13.48	9.12	10.22	12.00	11.52	11.26
Taylor	15.31	17.40	10.99	16.92	17.41	14.36	15.61
Van Buren Twp.	1.45	2.08	1.18	1.46	1.33	1.59	1.50
Wyandotte	12.08	13.37	9.85	10.14	12.60	11.93	11.61
Total Incoming Flow Rate	88.15	103.62	67.49	81.76	91.68	85.02	86.54
DWTF Including Recycle (IPS + TPS)	86.82	110.07	68.76	85.73	98.39	88.64	89.95
Total Precipitation DTW (inches) =	6.54	9.14	4.63	5.31	10.15	7.52	7.15

Note: DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years recycle flow has not been deducted from IPS+TPS data for 2020 through 2024.

Table 2-9
Average Q2 Flow Rate by Community for 2019 through 2024

Community	Average Flow Rate (cfs)						2019-2023 Q2 Average Flow
	2019 Q2	2020 Q2	2021 Q2	2022 Q2	2023 Q2	2024 Q2	
Allen Park	10.38	7.06	5.46	7.41	5.28	6.36	7.12
Belleville	0.93	0.75	0.70	0.74	0.71	0.71	0.77
Brownstown Twp.	3.02	2.58	2.41	2.43	2.04	2.21	2.50
Dearborn Hts.	6.62	4.74	3.82	4.88	3.92	4.48	4.79
Ecorse	2.76	3.34	3.16	2.74	2.27	2.01	2.86
Lincoln Park	15.18	11.43	9.05	11.58	7.92	9.95	11.03
River Rouge	6.81	6.48	2.98	3.84	3.58	4.59	4.74
Riverview	3.30	3.12	2.64	2.78	2.25	2.61	2.82
Romulus	14.54	10.19	9.22	10.72	9.33	9.55	10.80
Southgate	16.50	12.30	9.57	11.25	9.75	11.85	11.88
Taylor	18.40	13.22	10.74	16.39	14.70	14.27	14.69
Van Buren Twp.	1.82	1.47	1.38	1.45	1.39	1.40	1.50
Wyandotte	17.17	13.94	10.36	11.67	10.03	13.48	12.63
Total Incoming Flow Rate	117.43	90.64	71.50	87.87	73.15	83.47	88.12
DWTF Including Recycle (IPS + TPS)	126.62	98.25	73.52	92.00	77.62	85.12	93.60
Total Precipitation DTW (inches) =	12.29	8.23	9.18	8.91	6.99	10.53	9.12

Note: DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years recycle flow has not been deducted from IPS+TPS data for 2020 through 2024.

Table 2-10
Average Q3 Flow Rate by Community for 2019 through 2024

Community	Average Flow Rate (cfs)						2019-2023 Q3 Average Flow
	2019 Q3	2020 Q3	2021 Q3	2022 Q3	2023 Q3	2024 Q3	
Allen Park	5.73	7.11	8.63	3.98	5.64	4.94	6.22
Belleville	0.51	0.59	0.73	0.51	0.66	0.58	0.60
Brownstown Twp.	2.26	2.19	2.46	1.79	2.07	1.88	2.16
Dearborn Hts.	2.83	3.71	5.84	2.19	3.06	2.54	3.52
Ecorse	2.90	3.24	3.86	1.82	2.09	2.19	2.78
Lincoln Park	9.75	11.27	11.99	6.40	8.89	7.92	9.66
River Rouge	5.31	7.19	3.87	2.33	4.78	3.57	4.70
Riverview	2.14	2.96	3.02	1.77	2.36	2.18	2.45
Romulus	7.42	6.93	9.43	6.12	7.41	6.17	7.46
Southgate	9.90	11.43	13.17	7.11	9.97	10.12	10.31
Taylor	8.55	11.15	15.47	9.49	13.96	10.26	11.72
Van Buren Twp.	1.01	1.16	1.43	1.01	1.30	1.14	1.18
Wyandotte	12.03	13.79	13.18	7.65	11.17	12.36	11.56
Total Incoming Flow Rate	70.32	82.73	93.07	52.17	73.36	65.85	74.33
DWTF Including Recycle (IPS + TPS)	78.50	89.92	95.66	51.43	77.16	68.42	78.54
Total Precipitation DTW (inches) =	9.21	14.96	15.55	5.17	14.15	7.80	11.81

Note: DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years recycle flow has not been deducted from IPS+TPS data for 2020 through 2024.

Table 2-11
Average Q4 Flow Rate by Community for 2019 through 2024

Community	Average Flow Rate (cfs)						2019-2023 Q4 Average Flow
	2019 Q4	2020 Q4	2021 Q4	2022 Q4	2023 Q4	2024 Q4	
Allen Park	6.48	5.17	8.96	3.45	3.99	4.05	5.61
Belleville	0.61	0.53	0.78	0.42	0.57	0.52	0.58
Brownstown Twp.	2.48	2.19	3.00	1.62	1.86	1.79	2.23
Dearborn Hts.	3.84	3.22	6.62	2.05	2.50	2.47	3.65
Ecorse	2.00	2.48	3.24	1.20	1.42	1.30	2.07
Lincoln Park	10.32	8.62	13.39	5.36	6.21	6.04	8.78
River Rouge	3.80	3.20	4.43	2.10	2.40	2.79	3.18
Riverview	2.59	2.70	3.50	1.74	2.09	2.08	2.52
Romulus	8.61	7.15	11.27	5.93	6.46	6.62	7.88
Southgate	9.81	9.41	13.71	5.99	7.51	7.94	9.28
Taylor	11.25	10.18	18.48	9.29	10.94	9.83	12.03
Van Buren Twp.	1.20	1.05	1.53	0.82	1.11	1.02	1.14
Wyandotte	10.88	10.87	14.37	5.99	7.94	8.76	10.01
Total Incoming Flow Rate	73.88	66.78	103.27	45.94	54.99	55.20	68.97
DWTF Including Recycle (IPS + TPS)	77.49	67.74	104.99	47.01	59.43	60.12	71.33
Total Precipitation DTW (inches) =	8.34	6.40	10.63	5.01	5.34	6.61	7.14

Note: DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years recycle flow has not been deducted from IPS+TPS data for 2020 through 2024.

Figure 2-8
Average Q1 Flow Rate by Community for 2019 through 2024

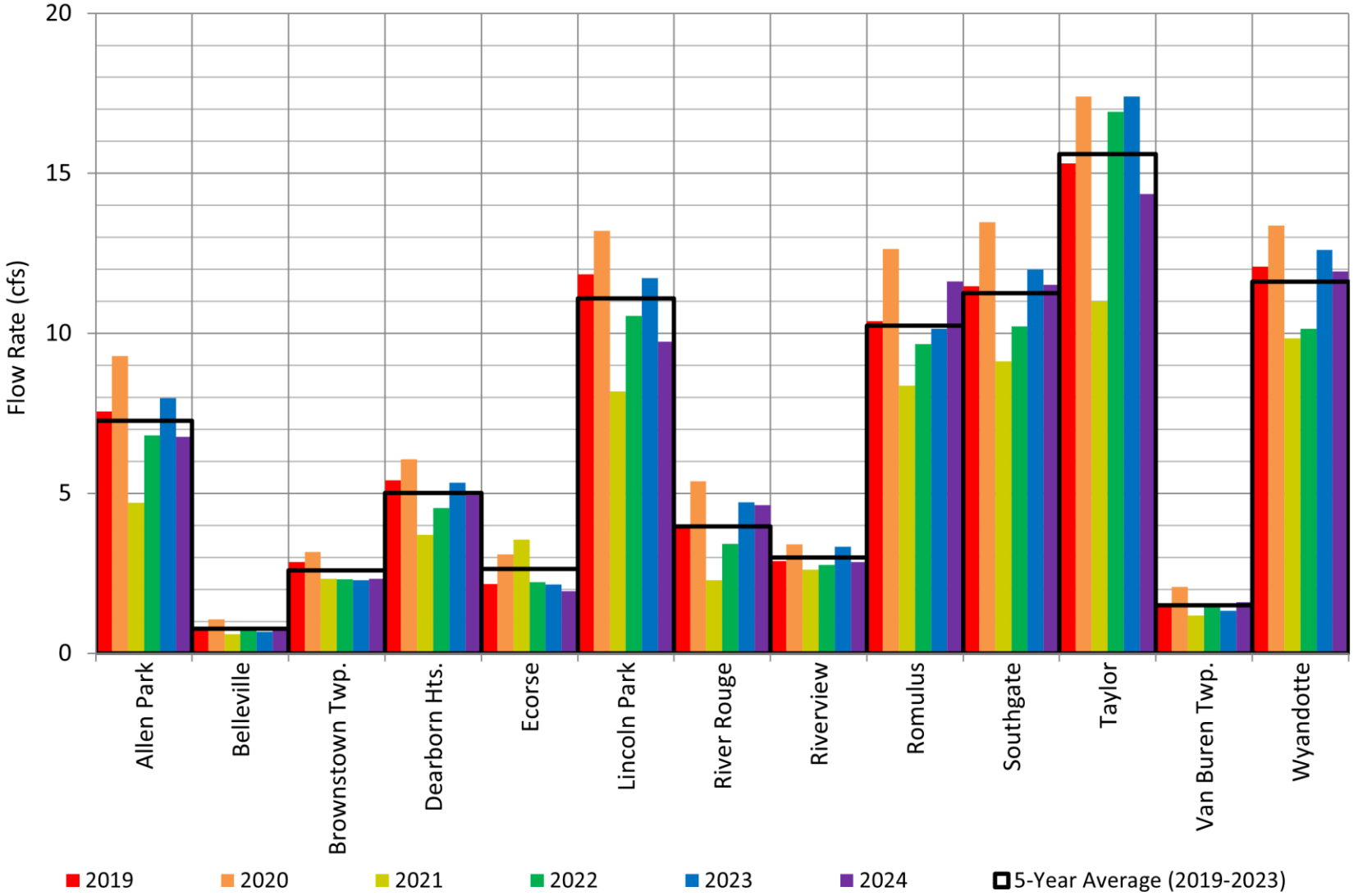


Figure 2-9
Average Q2 Flow Rate by Community for 2019 through 2024

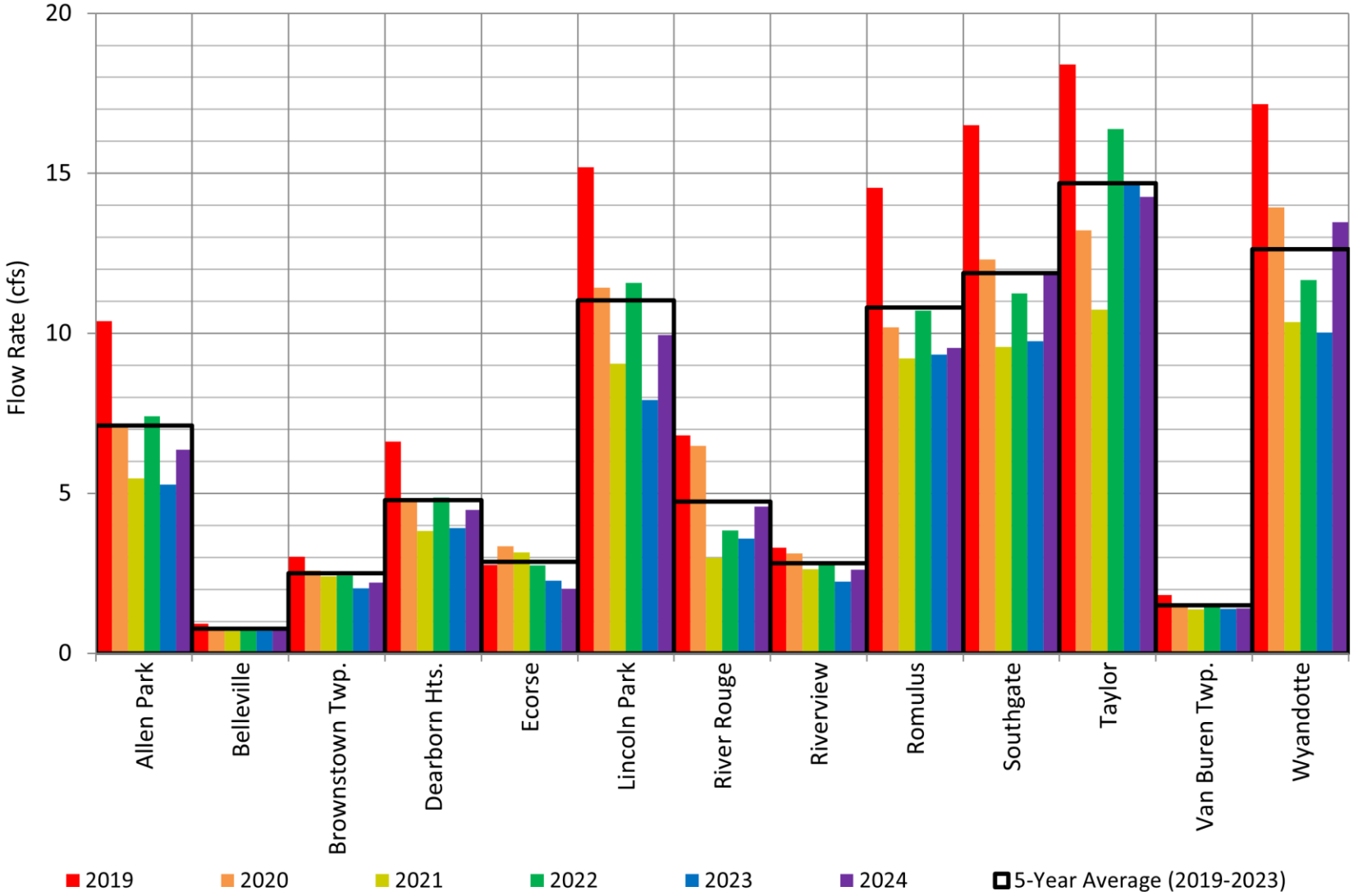


Figure 2-10
Average Q3 Flow Rate by Community for 2019 through 2024

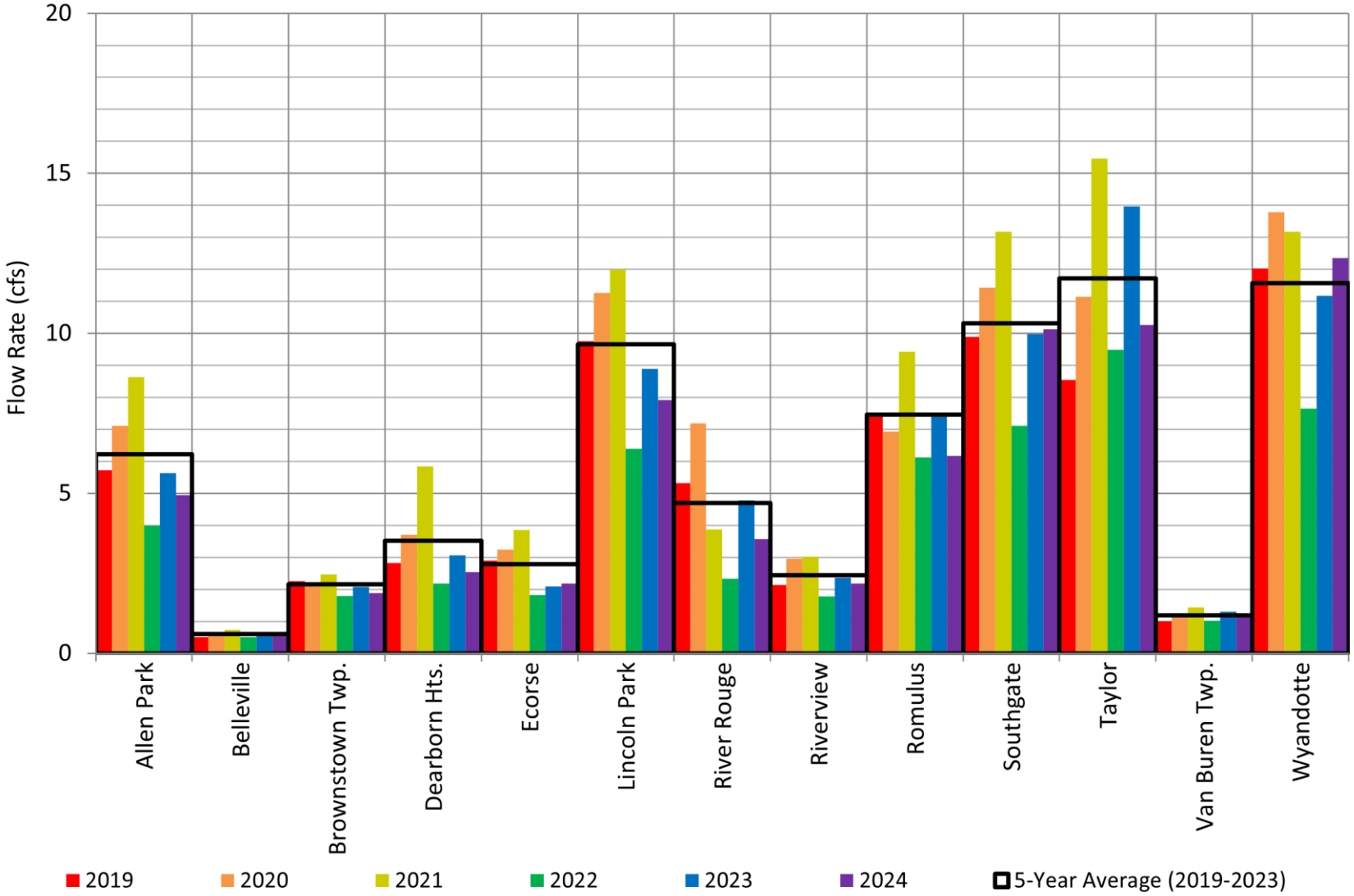


Figure 2-11
Average Q4 Flow Rate by Community for 2019 through 2024

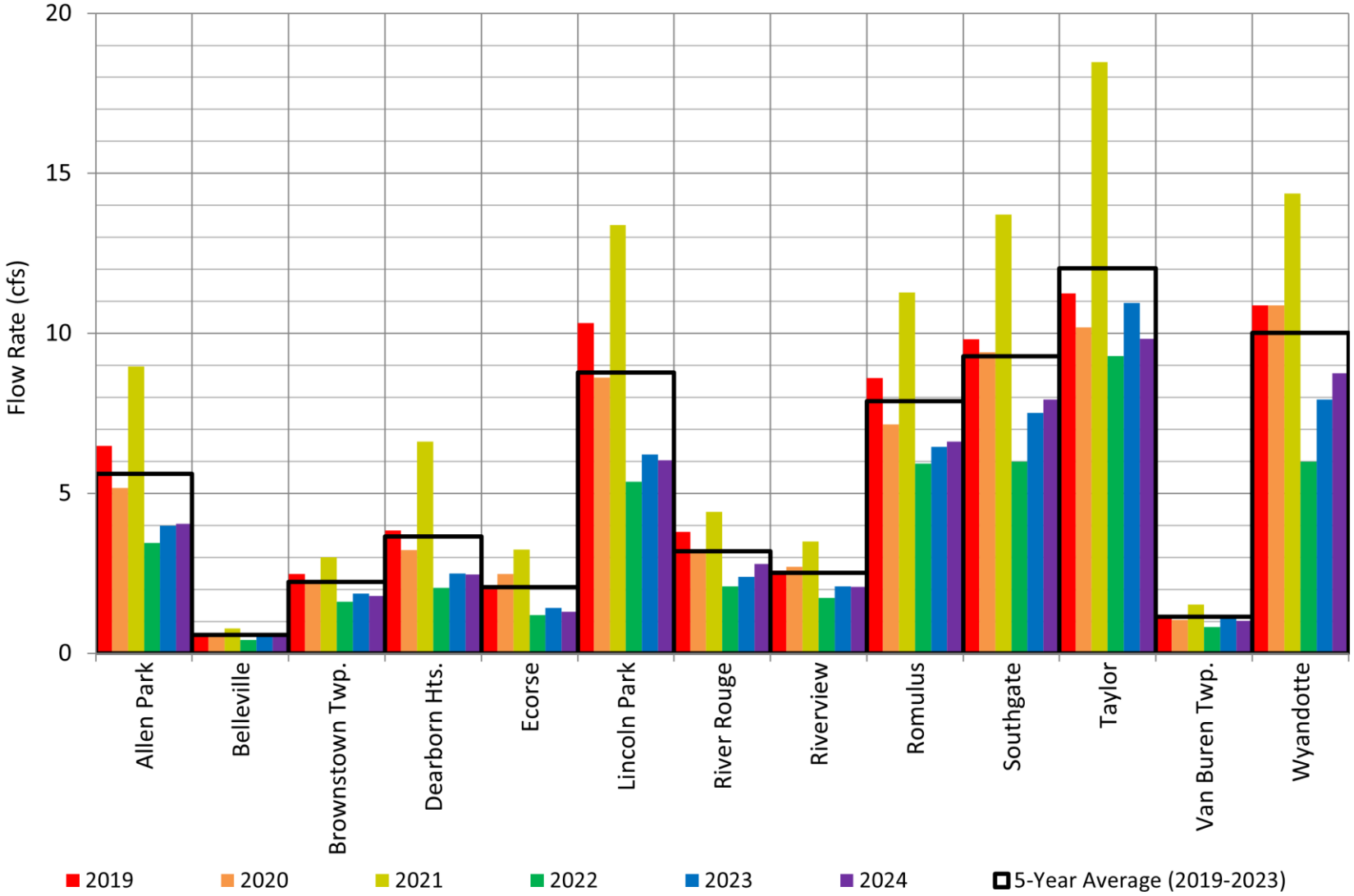
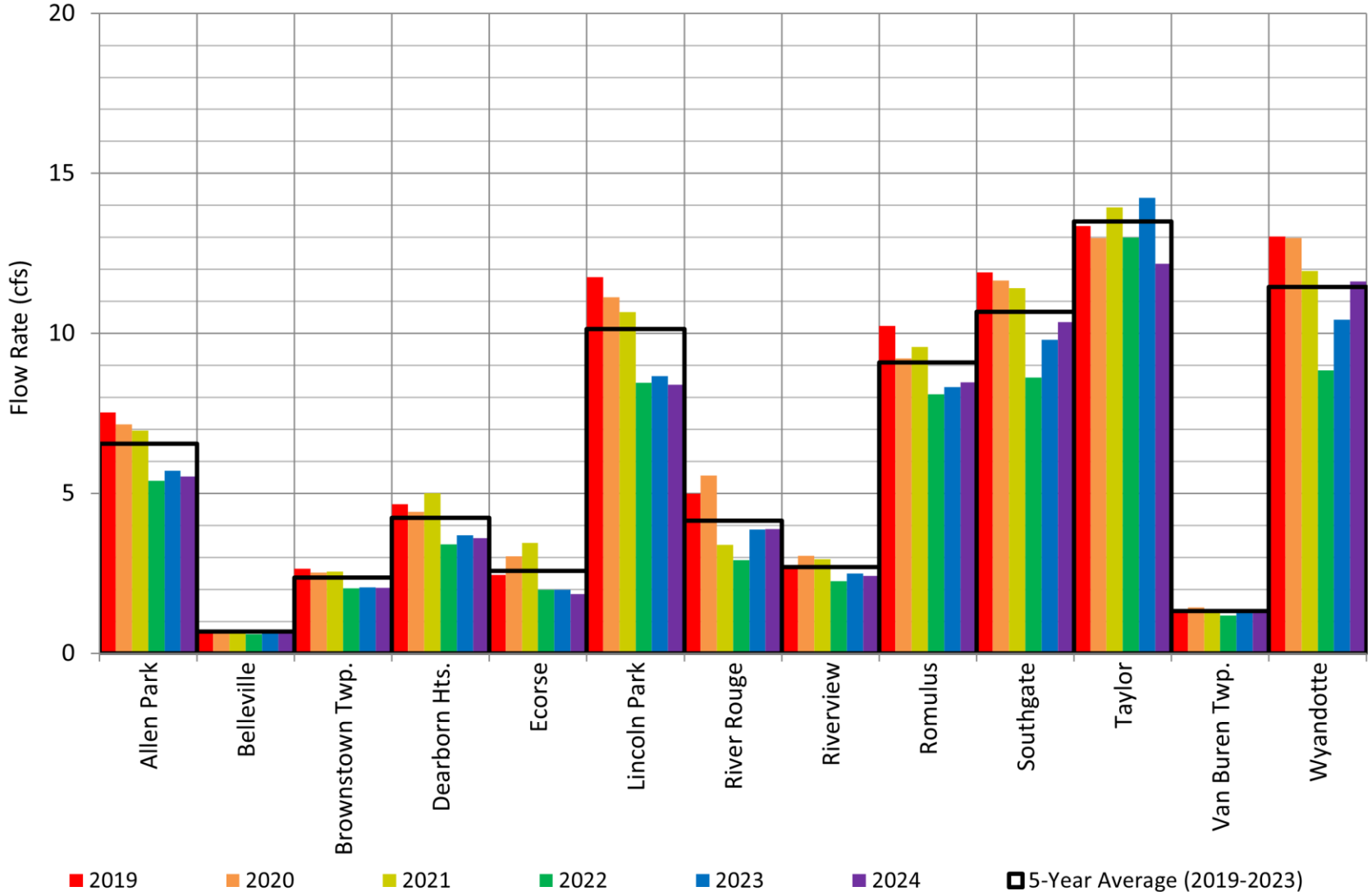


Table 2-12
Average Annual Flow Rate by Community for 2019 through 2024

Community	Average Annual Flow Rate (cfs)						2019-2023 Average Annual Flow Rate (cfs)
	2019	2020	2021	2022	2023	2024	
Allen Park	7.53	7.15	6.96	5.40	5.71	5.52	6.55
Belleville	0.70	0.73	0.70	0.60	0.65	0.66	0.68
Brownstown Twp.	2.65	2.53	2.55	2.04	2.06	2.05	2.37
Dearborn Hts.	4.67	4.43	5.01	3.40	3.69	3.60	4.24
Ecorse	2.46	3.04	3.45	1.99	1.98	1.86	2.58
Lincoln Park	11.76	11.12	10.67	8.45	8.67	8.40	10.14
River Rouge	4.98	5.56	3.40	2.92	3.87	3.89	4.15
Riverview	2.72	3.05	2.95	2.26	2.50	2.43	2.70
Romulus	10.23	9.21	9.58	8.09	8.32	8.48	9.09
Southgate	11.91	11.65	11.41	8.62	9.80	10.35	10.68
Taylor	13.35	12.98	13.94	12.99	14.23	12.17	13.50
Van Buren Twp.	1.37	1.44	1.38	1.18	1.28	1.29	1.33
Wyandotte	13.03	12.99	11.96	8.85	10.42	11.63	11.45
Total Incoming Flow Rate	87.36	85.88	83.96	66.80	73.20	72.32	79.44
DWTF Including Recycle (IPS + TPS)	92.29	91.43	85.86	68.89	78.04	75.51	83.30
Total Precipitation DTW (inches) =	36.38	38.73	39.99	24.40	36.63	32.46	35.23

Note: DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years recycle flow has not been deducted from IPS+TPS data for 2020 through 2024.

Figure 2-12
Average Annual Flow Rate by Community for 2019 through 2024



13. Interceptor inflow and infiltration has not been estimated and has not been deducted from community flow rates.

14. Reverse flow at Meter SW occurs as hydraulically necessary for emergency operating conditions and/or storms greater than the design storm. Table 2-13 lists the estimated volume of reverse flow through Meter SW for the significant storm events in 2024. Reverse flow through Meter SW was estimated to have occurred only for Significant Storm Event 2 in 2024.

15. The DWTF primary and secondary treatment capacities are 150 and 137 MGD, respectively. The peak flow rate capacity of the DWTF is 237 MGD, with flow blending occurring at flow rates greater than 137 MGD. Under peak wet weather flow conditions, about 50 MGD receives both primary and secondary treatment, 100 MGD receives primary treatment only, and 87 MGD receives secondary treatment only. Table 2-13 lists the total volumes which bypassed primary and secondary treatment for each significant storm event. There was one bypass event during Significant Storm Event 2 (Major Storm Event A) in 2024.

Table 2-13
DWTF Primary and Secondary Treatment Bypass and Reverse Flow through Meter SW for Significant Storm Events for 2024

Major Storm Event	Significant Storm Event	Event Dates	Bypass of Primary Treatment (MG)	Bypass of Secondary Treatment (MG)	Reverse Flow through Meter SW (MG)
-	1	1/9-13/2024	-	-	-
A	2	1/22-30/2024	106.25	83.13	9.50
-	3	4/10-12/2024	-	-	-
-	4	4/27-30/2024	-	-	-
-	5	5/25-29/2024	-	-	-
-	6	6/29/2024	-	-	-
-	7	7/9-10/2024	-	-	-
-	8	8/5-6/2024	-	-	-
-	9	8/25-28/2024	-	-	-
-	10	10/12-14/2024	-	-	-
-	11	12/29-31/2024	-	-	-
Total			106.25	83.13	9.50

C) CONTROLLED FLOW COMMUNITIES OVERVIEW

1. The controlled flow communities are tributary to the Riverdrive Interceptor. Peak flow rates regulated to the MAFLs promote good performance of the Riverdrive Interceptor without surcharging at the monitoring locations. The peak hourly flow rates and peak depths for the flow meters along the Riverdrive Interceptor for the significant storm events are listed in Table 2-14. The total wet weather MAFLs are also given and are used to check whether the incoming flow rates are being regulated properly. The total wet weather MAFLs at the flow meter locations are the sum of the MAFLs for the upstream communities.

   Flow rates above the MAFL which occur after the peak of the storm event during dewatering operations of the Lincoln Park equalization basin or the Southgate Wyandotte Relief Drains Drainage District (SWRDDD) Combined Sewer Overflow (CSO) Retention Treatment Basin (RTB) and were coordinated with Veolia to minimize bypass operations at the DWTF and discharges to the Detroit River from SWRDDD, are not considered an exceedance.

Table 2-14
Peak Hourly Flow Rates and Depth for Controlled Flow Communities along the Riverdrive Interceptor for Significant Storms Events for 2024

Major Storm Event	Significant Storm Event	Peak Hourly Flow Rate (cfs)				Peak Depth (ft)			
		RR-1	EC-6	RD-1	SW+SWB	RR-1	EC-6	RD-1	SW
-	1	13.82	23.48	59.69	49.75	-	5.2	4.3	9.7
A	2	13.82	29.73	70.76	116.63	-	16.4	-	16.1
-	3	11.74	20.01	71.06	60.88	-	8.7	7.6	9.6
-	4	11.29	18.05	63.43	60.99	2.5	5.2	5.3	9.4
-	5	11.53	16.64	58.47	61.05	2.7	5.2	6.9	9.9
-	6	12.23	19.79	69.37	29.10	>3.6	-	7.8	10.3
-	7	13.78	23.47	83.74	61.98	-	-	13.4	10.8
-	8	11.66	28.42	70.56	45.90	-	10.0	8.1	10.4
-	9	12.27	32.32	77.47	62.66	>3.6	10.3	-	10.1
-	10	11.38	22.17	55.17	62.28	2.5	5.0	4.0	9.7
-	11	13.09	20.63	71.27	51.37	3.2	9.5	9.0	12.3
Total MAFL (cfs)		11.26	23.46	65.82	31.73				
Pipe Diameter (ft)						3.0	4.5	6.0	6.5
Manhole Depth (ft)						16.0	24.8	27.2	40.0

Legend:

XX.XX	Exceeds wet weather MAFL by 0 to 5%
XX.XX	Exceeds wet weather MAFL by > 5%
XX.XX	Exceeds wet weather MAFL, coordinated with Veolia
XX.XX	Wastewater level exceeded sewer crown

Note:

1) Meter RR-1 was out of service during storm event 1, 2, 3, 7 and 8. Flow rate estimated from correlation to adjacent meters and adjusted to the pumping capacity of the River Rouge CSO RTB
2) Meter EC-6 was out of service during storm event 6 and 7. Flow rate estimated from correlation to adjacent meters along the Riverdrive Interceptor
3) Meter RD-1 was out of service during storm event 2 and 9. Flow rate estimated from correlation to adjacent meters along the Riverdrive Interceptor

2. The peak hourly flow rates at Meter RD-1 were below the total wet weather MAFL for four significant storm events and exceeded the MAFL by more than 5% for seven significant storm events in 2024.

3. The peak hourly flow rate at Meter SW was above the total wet weather MAFL for ten of the eleven significant storm events in 2024. However, the flow limit exceedances were operational decisions by Veolia to minimize discharges to the Detroit River from the SWRDDD.

4. Incremental flow rates are estimated for storm events when the metered peak hourly flow rate exceeded the MAFL by 5% or more. Table 2-15 lists the estimated incremental peak hourly flow rates for the flow meters along the Riverdrive Interceptor for these storm events. Incremental flow rates are used to check whether the incoming flow rates are being regulated properly.

Table 2-15
Estimated Incremental Peak Hourly Flow Rates for Controlled Flow Communities along the Riverdrive Interceptor for Significant Storms Events for 2024

Major Storm Event	Significant Storm Event	Incremental Peak Hourly Flow Rate (cfs)			
		RR-1	EC-6	RD-1	SW+SWB
-	1	13.82	9.66	46.84	49.75
A	2	13.82	15.91	49.60	116.63
-	3	11.74	9.16	51.97	60.88
-	4	11.29	7.45	47.99	60.99
-	5	11.53	8.28	45.75	61.05
-	6	12.23	7.84	50.45	29.10
-	7	13.78	9.86	60.74	61.98
-	8	11.66	18.21	51.16	45.90
-	9	12.27	23.34	56.26	62.66
-	10	11.38	11.96	38.65	62.28
-	11	13.09	9.68	55.02	51.37
Incremental MAFL (cfs)		11.26	12.20	42.36	31.73

Legend:

XX.XX	Exceeds wet weather MAFL by 0 to 5%
XX.XX	Exceeds wet weather MAFL by > 5%
XX.XX	Exceeds wet weather MAFL, coordinated with Veolia

Note:

1) Meter RR-1 was out of service during storm event 1, 2, 3, 7 and 8. Flow rate estimated from correlation to adjacent meters and adjusted to the pumping capacity of the River Rouge CSO RTB
2) Meter EC-6 was out of service during storm event 6 and 7. Flow rate estimated from correlation to adjacent meters along the Riverdrive Interceptor
3) Meter RD-1 was out of service during storm event 2 and 9. Flow rate estimated from correlation to adjacent meters along the Riverdrive Interceptor

5. The Meter RR-1 district includes all of River Rouge. Wastewater from River Rouge is pumped from the River Rouge CSO RTB to the Riverdrive Interceptor. No flow meter exists on the pump station discharge pipe. The pumps are operated to maintain a maximum level in the Riverdrive Interceptor immediately downstream of the River Rouge CSO RTB. This sometimes results in an exceedance of the MAFL. The flow rates estimated for the Meter RR-1 district exceeded the MAFL for all eleven significant storm events in 2024.

6. The Meter EC-6 district includes all of Ecorse and a portion of Lincoln Park. The district has three connection points from Ecorse which flow by gravity and have orifice plates installed to regulate the flow rates. The district has two connection points from Lincoln Park. The larger connection flows by gravity and has a vortex valve installed to regulate the flow rate into the Riverdrive Interceptor. The smaller connection flows by gravity without restriction into the Riverdrive Interceptor and serves the Libra Hospital of Southeastern Michigan on Outer Drive. The incremental flow rates estimated for the Meter EC-6 district exceeded the MAFL for three of the eleven significant storm events in 2024.

7. The Meter RD-1 district includes most of the portion of Allen Park served by DUWA (the northern portion of Allen Park is served by GLWA) and most of Lincoln Park. Flow from a portion of Allen Park flows through Lincoln Park to the Riverdrive Interceptor. The district has three connection points from Lincoln Park which flow by gravity and have either an orifice plate or vortex valve installed to regulate the flow rates. The Lincoln Park equalization basin dewatering pipe is controlled via a ball valve to regulate the flow rate into the Riverdrive Interceptor. Flow rates above the MAFL which occur after the peak of the storm event during dewatering operations of the Lincoln Park equalization basin and are coordinated with Veolia to minimize bypass operations at the DWTF, are not considered an exceedance. The incremental flow rates estimated for the Meter RD-1 district exceeded the MAFL for ten of the eleven significant storm events in 2024.

8. The Meter SW district serves the SWRDDD. The SWRDDD is a combined sewer area that includes part of Southgate and all of Wyandotte. Veolia coordinates operations of the SWRDDD facilities and the DWTF to minimize bypass of secondary treatment at the DWTF and discharges to the Detroit River from SWRDDD. As previously discussed, the peak hourly flow rate at Meter SW was above the total wet weather MAFL for ten of the eleven significant storm events in 2024. However, the flow limit exceedances were operational decisions by Veolia to minimize discharges to the Detroit River from the SWRDDD. Therefore, SWRDDD had permission to exceed its MAFL for these events.

D) NON-CONTROLLED FLOW COMMUNITIES OVERVIEW

1. The non-controlled flow communities are tributary to both the Pennsylvania Interceptor system and the Downriver Regional Storage and Transport System (DRSTS) and have allowable peak 96-hour volumes that were established for the 4.42-inch design storm. There was one major storm event in 2024. The estimated peak 96-hour total volumes for the major storm events are listed in Table 2-16.

Table 2-16
Peak 96-Hour Total Volumes for Non-Controlled Flow Communities for Major Storms Events for 2024

Community	Total Volume (MG)	
	4.42 inch Design Storm	***Major Storm Event A 1/22-30/2024 2.33 inches***
Allen Park (part)	29.23	39.26
Belleville	4.86	3.73
Brownstown Twp.	20.90	12.02
Dearborn Heights	43.76	45.59
Riverview	28.30	22.34
Romulus	88.43	53.09
Southgate (part)	31.24	66.82
Taylor	164.45	118.63
Van Buren Twp.	7.04	7.31
Total	418.21	368.79

Legend:

XX.XX	Exceeds design storm volume by 0 to 20%
XX.XX	Exceeds design storm volume by > 20%

2. Monitoring devices indicated no issues with the DRSTS performance during significant storm events for 2024.

3. The connections from the interceptor system to the DRSTS are termed as "overflows". These overflows are from one part of the DSDS to another part of the DSDS and are not overflows to the environment. Table 2-17 lists the monitored overflow structures that were indicated to have overflowed to the DRSTS for each significant storm event in 2024. At least one of the monitored overflow structures overflowed to the DRSTS during each significant storm event.

Table 2-17
Downriver Regional Storage and Transport System Usage
for Significant Storm Events for 2024

Major Storm Event	Significant Storm Event	Event Dates	Meter								
			TSO	CHPO	CPO	PDO	ER-2	ER-1	APO-2	APO-1	PM-1
-	1	1/9-13/2024	×	✓	×	×	×	×	×	×	×
A	2	1/22-30/2024	✓	✓	✓	×	✓	✓	✓	✓	✓
-	3	4/10-12/2024	✓	✓	✓	×	✓	✓	✓	✓	×
-	4	4/27-30/2024	×	✓	×	×	×	×	×	×	×
-	5	5/25-29/2024	×	✓	✓	×	×	×	×	×	×
-	6	6/29/2024	✓	✓	✓	×	×	×	×	×	×
-	7	7/9-10/2024	✓	✓	✓	×	✓	✓	✓	✓	×
-	8	8/5-6/2024	✓	✓	✓	×	×	×	✓	✓	×
-	9	8/25-28/2024	✓	✓	✓	×	×	×	✓	✓	×
-	10	10/12-14/2024	×	✓	×	×	×	×	×	×	×
-	11	12/29-31/2024	✓	✓	✓	×	✓	✓	✓	✓	×
Number of Overflow Events			7/12	11/12	8/12	0/12	5/12	4/12	6/12	6/12	1/12

Legend:

✓
×

4. Figures 2-13 and 2-14 plot the total 96-hour volume for the non-controlled flow communities versus precipitation for the major storm events from 2013 through 2024. Figure 2-13 shows the growing season events (those that occurred between May 1st and September 30th), and Figure 2-14 shows the non-growing season events (those that occurred between October 1st and April 30th). The 4.42-inch design storm volume is shown for comparison. There was one major storm event in 2024.

Figure 2-13
Total 96-Hour Volume for the Non-Controlled Flow Communities for Major Storms Events
Growing Season from 2013 through 2024

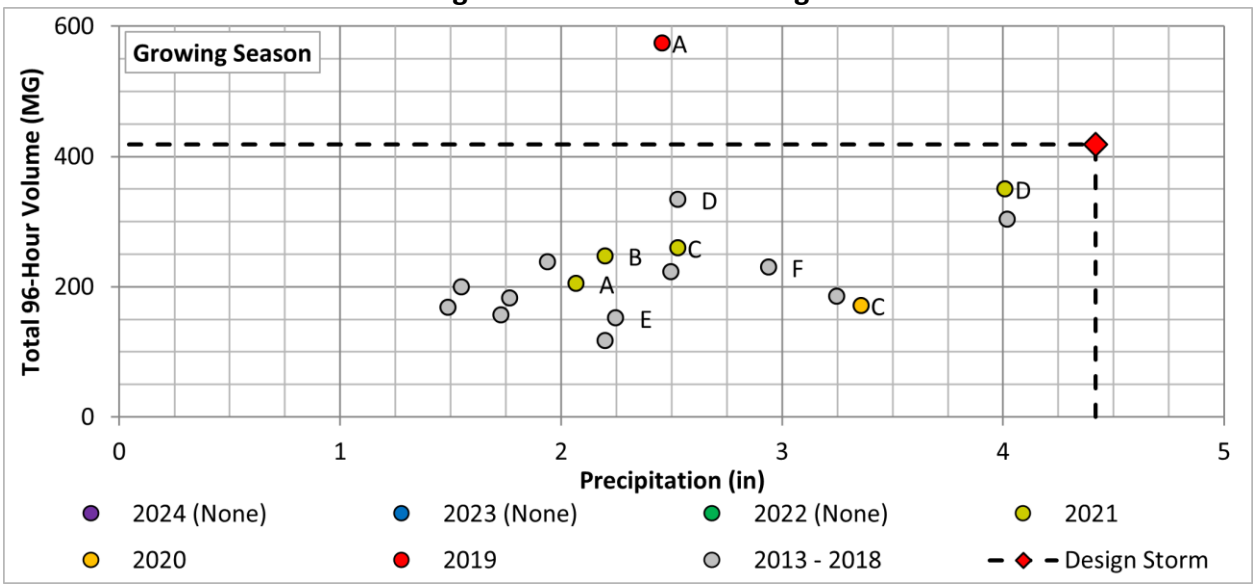
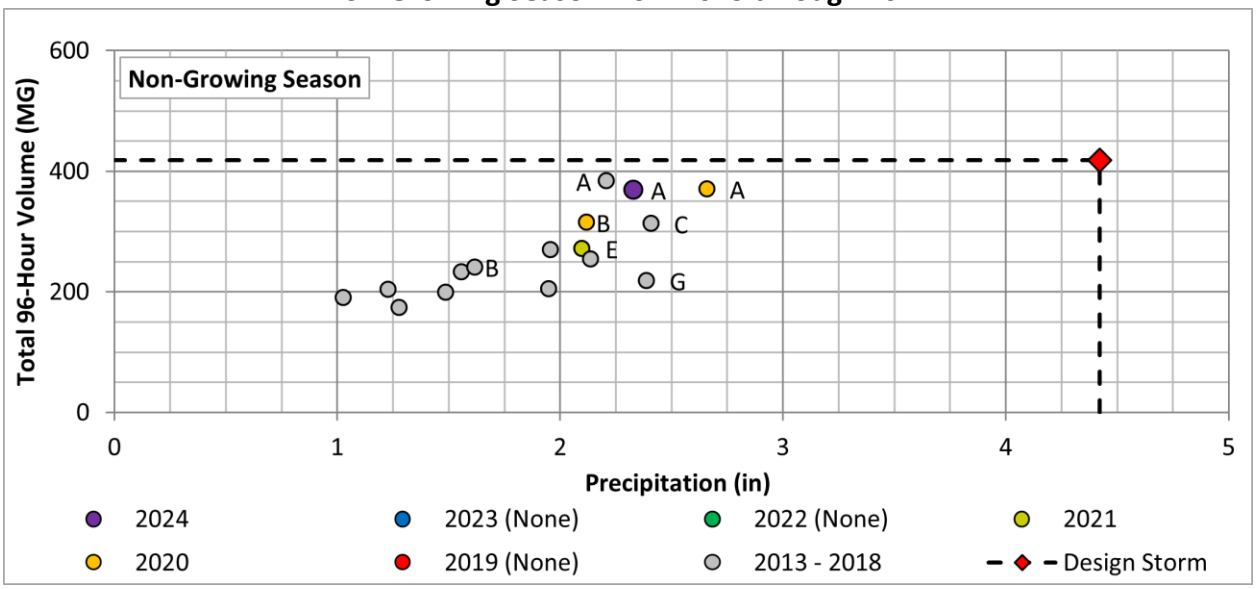


Figure 2-14
Total 96-Hour Volume for the Non-Controlled Flow Communities for Major Storms Events
Non-Growing Season from 2013 through 2024



5. The non-controlled flow communities have dry weather MAFLs. The portion of Meter District PA-2 in Taylor was estimated to have exceeded its proportion of the total Taylor dry weather MAFL for January through December 2024. No portion of any other meter district was estimated to have exceeded its dry weather MAFL for any month in 2024. No community was estimated to have exceeded its dry weather MAFL on a total community basis for any month in 2024.

3) SUMMARY BY COMMUNITY

Table 3-1 presents the estimated average monthly flow rate for each community in the DSDS for each month in 2024. The average monthly flow rate includes all days – both dry and wet weather. Table 3-1 also shows the percentages for each community of the incoming flow rate to the DWTF. The estimated average monthly flow rates are plotted on Figure 3-1, and the percentages are plotted on Figure 3-2.

The incoming flow rate to the DWTF is based on the interceptor system flow meters. It is given on Table 3-1 along with the average monthly influent pumping rate at the DWTF. The DWTF influent pumping rate includes recycle flow rates where the incoming flow rate measured by the interceptor system meters does not include DWTF recycle flow rates. Therefore, it is expected that the incoming flow rate measured by the sum of the interceptor system meters will be slightly less than the DWTF influent flow rate.

DWTF recycle flows have been metered since April 2020. To provide a consistent comparison to previous years, the table presents the IPS and TPS data with and without the recycle flow deducted.

The average monthly flow rates are subtotaled for controlled flow communities and for non-controlled flow communities. Tables 3-2 and 3-3 provide the breakdown of average monthly flow rates for controlled flow communities and non-controlled flow communities, respectively.

Table 3-1
Average Monthly Flow Rates by Community for 2024

Community	Flow Rate (cfs)												
	January	February	March	April	May	June	July	August	September	October	November	December	Average Annual
Allen Park	11.09	4.52	4.53	8.39	5.74	4.96	5.89	5.74	3.15	3.16	3.25	5.70	5.52
Belleville	0.84	0.90	0.70	0.86	0.70	0.59	0.64	0.58	0.52	0.51	0.51	0.54	0.66
Brownstown Twp.	2.69	2.18	2.13	2.54	2.14	1.97	1.96	1.88	1.79	1.75	1.70	1.92	2.05
Dearborn Hts.	6.76	4.35	3.67	6.08	4.06	3.33	3.13	2.56	1.91	1.97	2.15	3.27	3.60
Ecorse	2.28	1.83	1.69	2.17	2.07	1.79	2.56	2.38	1.60	1.30	1.19	1.40	1.86
Lincoln Park	15.04	6.99	7.02	12.82	9.13	7.93	9.56	9.00	5.10	4.99	5.04	8.05	8.41
River Rouge	6.39	4.12	3.33	5.13	4.44	4.20	3.93	3.92	2.82	2.55	2.50	3.32	3.89
Riverview	4.00	2.18	2.33	3.32	2.52	1.98	2.40	2.23	1.90	1.85	1.92	2.47	2.43
Romulus	11.81	10.95	12.04	12.25	9.49	6.91	6.51	6.29	5.69	5.74	6.89	7.24	8.47
Southgate	14.49	10.10	9.87	13.29	12.21	10.03	11.13	10.82	8.37	7.31	7.63	8.86	10.35
Taylor	18.82	12.82	11.33	17.53	14.02	11.27	11.02	10.50	9.23	9.02	9.03	11.43	12.17
Van Buren Twp.	1.65	1.77	1.37	1.69	1.37	1.15	1.26	1.13	1.03	0.99	1.00	1.06	1.29
Wyandotte	14.60	10.56	10.55	14.28	14.29	11.83	13.66	13.41	9.93	8.18	8.54	9.54	11.63
Subtotal Controlled Flow Communities	55.66	33.62	32.77	50.23	43.53	37.21	43.06	41.62	28.09	24.63	25.16	32.57	37.40
Subtotal Non-Controlled Flow Communities	54.79	39.66	37.80	50.13	38.64	30.72	30.60	28.82	24.96	24.70	26.21	32.22	34.92
Total Incoming Flow Rate	110.46	73.28	70.57	100.36	82.17	67.93	73.66	70.44	53.05	49.33	51.37	64.79	72.32
DWTF Including Recycle (IPS + TPS)	118.29	73.73	72.94	103.21	83.47	68.74	75.44	73.61	55.82	56.98	57.43	65.85	75.52
DWTF without Recycle (IPS + TPS - Recycle)	111.29	73.57	68.14	96.93	77.16	62.18	69.68	67.83	50.08	51.58	51.91	60.09	70.06
Recycle	7.00	0.16	4.80	6.28	6.32	6.56	5.76	5.78	5.74	5.40	5.52	5.76	5.46
Total Precipitation DTW (inches)	5.25	0.24	2.03	4.15	2.55	3.83	2.08	4.50	1.22	1.44	1.90	3.27	32.46
Normal Precipitation at DTW (inches)	2.23	2.08	2.43	3.26	3.72	3.26	3.51	3.26	3.22	2.53	2.57	2.25	34.32
Departure from Normal (inches)	+3.02	-1.84	-0.40	+0.89	-1.17	+0.57	-1.43	+1.24	-2.00	-1.09	-0.67	+1.02	-1.86

Percentage of Total Incoming Flow Rate by Community for 2024

Community	January	February	March	April	May	June	July	August	September	October	November	December	Average Annual
Allen Park	10.0%	6.2%	6.4%	8.4%	7.0%	7.3%	8.0%	8.1%	5.9%	6.4%	6.3%	8.8%	7.4%
Belleville	0.8%	1.2%	1.0%	0.9%	0.8%	0.9%	0.9%	0.8%	1.0%	1.0%	1.0%	0.8%	0.9%
Brownstown Twp.	2.4%	3.0%	3.0%	2.5%	2.6%	2.9%	2.7%	2.7%	3.4%	3.6%	3.3%	3.0%	2.9%
Dearborn Hts.	6.1%	5.9%	5.2%	6.1%	4.9%	4.9%	4.2%	3.6%	3.6%	4.0%	4.2%	5.1%	4.8%
Ecorse	2.1%	2.5%	2.4%	2.2%	2.5%	2.6%	3.5%	3.4%	3.0%	2.6%	2.3%	2.2%	2.6%
Lincoln Park	13.6%	9.5%	10.0%	12.8%	11.1%	11.7%	13.0%	12.8%	9.6%	10.1%	9.8%	12.4%	11.4%
River Rouge	5.8%	5.6%	4.7%	5.1%	5.4%	6.2%	5.3%	5.6%	5.3%	5.2%	4.9%	5.1%	5.3%
Riverview	3.6%	3.0%	3.3%	3.3%	3.1%	2.9%	3.3%	3.2%	3.6%	3.7%	3.7%	3.8%	3.4%
Romulus	10.7%	14.9%	17.1%	12.2%	11.6%	10.2%	8.8%	8.9%	10.7%	11.6%	13.4%	11.2%	11.8%
Southgate	13.1%	13.8%	14.0%	13.2%	14.9%	14.8%	15.1%	15.4%	15.8%	14.8%	14.9%	13.7%	14.4%
Taylor	17.0%	17.5%	16.0%	17.5%	17.1%	16.6%	15.0%	14.9%	17.4%	18.3%	17.6%	17.6%	16.9%
Van Buren Twp.	1.5%	2.4%	1.9%	1.7%	1.7%	1.7%	1.7%	1.6%	1.9%	2.0%	2.0%	1.6%	1.8%
Wyandotte	13.2%	14.4%	15.0%	14.2%	17.4%	17.4%	18.5%	19.0%	18.7%	16.6%	16.6%	14.7%	16.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 3-1
Total Incoming Flow Rate to the DWTF for 2024

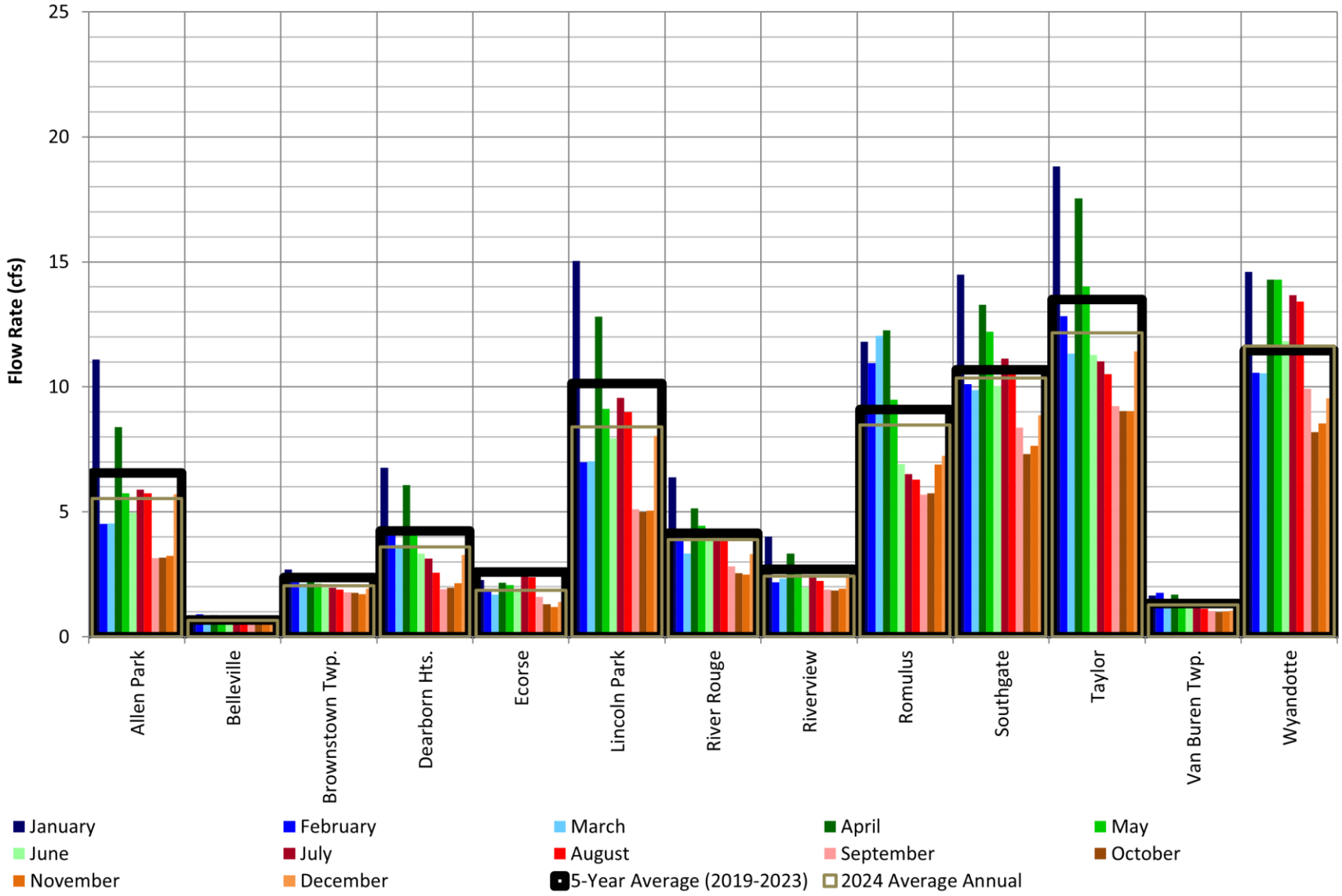


Figure 3-2
Percent of Total Incoming Flow Rate to the DWTF for 2024

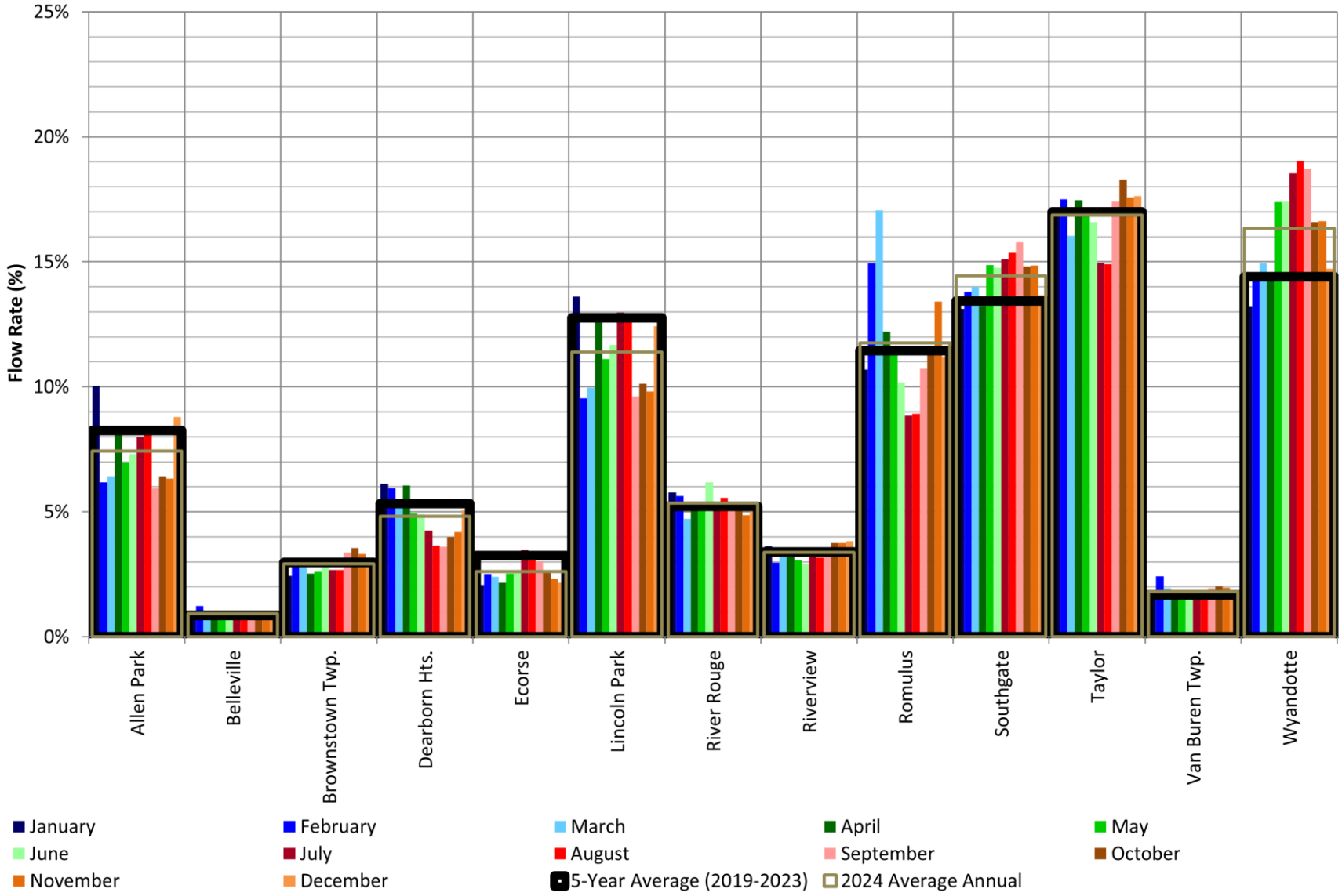


Table 3-2
Average Monthly Flow Rates for Controlled Flow Communities for 2024

Community	Flow Rate (cfs)												
	January	February	March	April	May	June	July	August	September	October	November	December	Average Annual
Allen Park (part)	8.61	3.79	3.85	7.28	5.04	4.38	5.17	4.88	2.69	2.71	2.77	4.56	4.65
Ecorse	2.28	1.83	1.69	2.17	2.07	1.79	2.56	2.38	1.60	1.30	1.19	1.40	1.86
Lincoln Park	15.04	6.99	7.02	12.82	9.13	7.93	9.56	9.00	5.10	4.99	5.04	8.05	8.40
River Rouge	6.39	4.12	3.33	5.13	4.44	4.20	3.93	3.92	2.82	2.55	2.50	3.32	3.89
Southgate - Wyandotte RDDD	23.34	16.88	16.87	22.84	22.85	18.91	21.84	21.44	15.87	13.08	13.66	15.25	18.59
Total	55.66	33.62	32.77	50.23	43.53	37.21	43.06	41.62	28.09	24.63	25.16	32.57	37.39
Total Precipitation DTW (inches)	5.25	0.24	2.03	4.15	2.55	3.83	2.08	4.50	1.22	1.44	1.90	3.27	32.46

Table 3-3
Average Monthly Flow Rates for Non-Controlled Flow Communities for 2024

Community	Flow Rate (cfs)												
	January	February	March	April	May	June	July	August	September	October	November	December	Average Annual
Allen Park (part)	2.48	0.74	0.68	1.12	0.70	0.58	0.71	0.86	0.46	0.45	0.48	1.14	0.87
Belleville	0.84	0.90	0.70	0.86	0.70	0.59	0.64	0.58	0.52	0.51	0.51	0.54	0.66
Brownstown Twp.	2.69	2.18	2.13	2.54	2.14	1.97	1.96	1.88	1.79	1.75	1.70	1.92	2.05
Dearborn Hts.	6.76	4.35	3.67	6.08	4.06	3.33	3.13	2.56	1.91	1.97	2.15	3.27	3.60
Riverview	4.00	2.18	2.33	3.32	2.52	1.98	2.40	2.23	1.90	1.85	1.92	2.47	2.43
Romulus	11.81	10.95	12.04	12.25	9.49	6.91	6.51	6.29	5.69	5.74	6.89	7.24	8.48
Southgate (part)	5.75	3.78	3.56	4.73	3.66	2.95	2.95	2.79	2.43	2.41	2.52	3.15	3.39
Taylor	18.82	12.82	11.33	17.53	14.02	11.27	11.02	10.50	9.23	9.02	9.03	11.43	12.17
Van Buren Twp.	1.65	1.77	1.37	1.69	1.37	1.15	1.26	1.13	1.03	0.99	1.00	1.06	1.29
Total	54.79	39.66	37.80	50.13	38.64	30.72	30.60	28.82	24.96	24.70	26.21	32.22	34.93
Total Precipitation DTW (inches)	5.25	0.24	2.03	4.15	2.55	3.83	2.08	4.50	1.22	1.44	1.90	3.27	32.46

4) DRY WEATHER SUMMARY

Table 4-1 lists the incremental monthly flow rates for each community summarized by meter district component. Incremental average daily flow rates are given along with an estimate of the average daily dry weather flow rates. The Year 2020 residential population is given on Table 4-1 and it is used to estimate per-capita dry weather flow rates. Appendix A contains a set of tables that further support the monthly flow rates presented on Tables 3-1, 3-2, 3-3 and 4-1. In addition, Table 4-1 lists MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017).

A single set of dry days was used to estimate the dry weather flow rates for all the meters, with the number of dry days in each month listed in Table 5-1. Daily average flow rates for Meters P-2, PA-1, PB-1, PC-1, RD-1, and RV-1 were used for screening out dry and wet weather days. These meters were chosen because they are near the downstream end of the interceptor system, include some dewatering flow rates, and provide a well-defined sort of dry/wet days. Details of the dry and wet weather day selection process are provided in the *Wayne County Downriver Sewage Disposal System - System Monitoring Plan* dated May 7, 2018.

Table 4-1
Monthly Incremental Flow Rates Summarized by Community

Community	Sewage Flow Meter Math	Meter District	Year 2020 Incremental Residential Population	January 2024			February 2024			March 2024			Dry Weather MAFLs for Controlled Flow Communities[1] (cfs)	Dry Weather MAFLs for Non-Controlled Flow Communities[1] (cfs)
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather			
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)		
Allen Park	2.7%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	716	0.19	0.11	99	0.14	0.12	109	0.12	0.11	100	-	0.43
	+ 17.4%([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1	2,338	0.93	0.50	139	0.60	0.54	149	0.57	0.54	149	-	1.58
	+ 38.1%([RD-1]-[EC-6])	RD-1	22,170	8.61	3.75	109	3.79	3.11	91	3.85	3.04	89	17.20	-
	+ ([APO-1] + [APO-2])	APO-1 + APO-2	0	1.35	0.00	-	0.00	0.00	-	0.00	0.00	-	-	-
		Total	25,224	11.09	4.36	112	4.52	3.77	97	4.53	3.69	95	-	2.01
Belleville	33.8%[PA-4]	PA-4	4,008	0.84	0.63	101	0.90	0.83	134	0.70	0.68	110	-	1.32
Brownstown Twp.	99.9%[P-2]	P-2	11,002	2.67	2.04	120	2.17	2.05	121	2.12	2.05	120	-	3.91
	+ 0.2%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	29	0.01	0.01	168	0.01	0.01	142	0.01	0.01	154	-	0.06
		Total	11,031	2.69	2.05	120	2.18	2.06	121	2.13	2.06	120	-	3.97
Dearborn Hts.	77.7%([TB-1]+[TSO])	TB-1	19,472	6.76	3.17	105	4.35	3.54	118	3.67	3.27	108	-	8.22
Ecorse	69.1%([EC-6]-[RR-1])	EC-6	9,305	2.28	1.45	101	1.83	1.79	125	1.69	1.61	112	9.20	-
Lincoln Park	30.9%([EC-6]-[RR-1])	EC-6	4,169	1.02	0.65	101	0.82	0.80	125	0.76	0.72	112	3.00	-
	+ 61.9%([RD-1]-[EC-6])	RD-1	36,076	14.02	6.10	109	6.17	5.06	91	6.26	4.95	89	25.16	-
		Total	40,245	15.04	6.75	108	6.99	5.87	94	7.02	5.67	91	28.16	-
River Rouge	[RR-1]	RR-1	7,224	6.39	3.35	300	4.12	3.61	323	3.33	2.94	263	11.26	-
Riverview	[RV-1]	RV-1	12,490	4.00	2.18	113	2.18	2.01	104	2.33	2.07	107	-	3.61
Romulus	([PA-3]+[ER-2]-[PA-4])	PA-3	14,420	5.80	4.45	200	5.51	5.16	231	4.83	4.81	216	-	6.39
	+ [DTW Pond 3 West]	DTW Pond 3 West	0	1.76	1.94	-	1.85	1.94	-	3.85	3.84	-	-	9.02
	+ ([PD-2] - [DTW Pond 3 West])	PD-2	8,069	4.25	2.93	234	3.59	3.32	266	3.36	3.24	260	-	
		Total	22,489	11.81	9.32	268	10.95	10.42	299	12.04	11.89	342	-	15.41
Southgate	(82.6% + 5.4%)([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1 & TPS+IPS	11,797	4.72	2.53	139	3.02	2.72	149	2.86	2.72	149	-	3.71
	+ 38.9%[PB-1]	PB-1	3,214	1.03	0.65	130	0.76	0.68	137	0.70	0.64	129	-	1.42
	+ 37.5%([SW]+[SWB])	SW	15,003	8.74	5.49	237	6.32	5.61	242	6.32	5.11	220	11.88	-
		Total	30,014	14.49	8.67	187	10.10	9.02	194	9.87	8.48	183	-	5.13
Taylor	0.1%[P-2]	P-2	10	0.00	0.00	120	0.00	0.00	121	0.00	0.00	120	-	0.08
	+ 99.8%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	14,125	5.63	***3.67***	168	3.51	***3.10***	142	3.59	***3.36***	154	-	2.40
	+ 61.1%[PB-1]	PB-1	5,040	1.62	1.02	130	1.19	1.07	137	1.09	1.01	129	-	2.15
	+ 22.3%([TB-1]+[TSO])	TB-1	5,574	1.93	0.91	105	1.25	1.01	118	1.05	0.94	108	-	2.29
	+ 97.3%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	25,577	6.88	3.90	99	4.87	4.30	109	4.21	3.95	100	-	11.03
	+ ([PD-1]-[PD-2])	PD-1	13,083	2.76	1.67	83	2.01	1.71	84	1.38	1.27	62	-	4.01
		Total	63,409	18.82	11.17	114	12.82	11.19	114	11.33	10.52	107	-	21.96
Van Buren Twp.	66.2%[PA-4]	PA-4	7,865	1.65	1.23	101	1.77	1.64	134	1.37	1.34	110	-	2.37
Wyandotte	62.5%([SW]+[SWB])	SW	25,058	14.60	9.17	237	10.56	9.38	242	10.55	8.54	220	19.85	-
Subtotal Controlled Flow Communities			119,005	55.66	29.96	163	33.62	29.37	160	32.77	26.92	146	97.55	-
Subtotal Non-Controlled Flow Communities			158,829	53.44	33.54	136	39.66	35.75	145	37.80	35.84	146	-	64.00
Total Incoming Flow			277,834	110.46	63.50	148	73.28	65.12	151	70.57	62.76	146	-	-
DWTF Including Recycle (IPS + TPS)			277,834	118.29	68.26	159	73.73	65.01	151	72.94	65.38	152	-	-
DWTF without Recycle (IPS + TPS - Recycle)			277,834	111.29	61.29	143	73.57	65.00	151	68.14	61.28	143	-	-
Recycle			-	7.00	6.96	-	0.16	0.01	-	4.80	4.11	-	-	-

Note:
1) Dry weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017).
2) The MAFL for each community component of Meter Distict SW is population weighted. Southgate and Wyandotte have MAFLs of 7.67 and 24.06 cfs, respectively. Therefore, the combined MAFL is 31.73 cfs.
The population weighted MAFL for Southgate and Wyandotte are allocated to be 11.88 and 19.85 cfs, respectively.
3) The meter district flow rates are split into community components based on relative 2020 residential population.

Legend:

XX.XX	Exceeds the weighted proportion of the dry weather MAFL by 0 to 20%
XX.XX	Exceeds the weighted proportion of the dry weather MAFL by greater than 20%

Table 4-1 (Cont.)
Monthly Incremental Flow Rates Summarized by Community

Community	Sewage Flow Meter Math	Meter District	Year 2020 Incremental Residential Population	April 2024			May 2024			June 2024			Dry Weather MAFLs for Controlled Flow Communities[1] (cfs)	Dry Weather MAFLs for Non-Controlled Flow Communities[1] (cfs)
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather			
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)		
Allen Park	2.7%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	716	0.16	0.13	119	0.12	0.11	96	0.10	0.09	85	-	0.43
	+ 17.4%([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1	2,338	0.75	0.61	170	0.58	0.55	152	0.46	0.43	120	-	1.58
	+ 38.1%([RD-1]-[EC-6])	RD-1	22,170	7.28	3.78	110	5.04	3.69	108	4.38	2.94	86	17.20	-
	+ ([APO-1] + [APO-2])	APO-1 + APO-2	0	0.21	0.00	-	0.00	0.00	-	0.02	0.00	-	-	-
		Total	25,224	8.39	4.52	116	5.74	4.34	111	4.96	3.47	89	-	2.01
Belleville	33.8%[PA-4]	PA-4	4,008	0.86	0.76	123	0.70	0.69	111	0.59	0.58	94	-	1.32
Brownstown Twp.	99.9%[P-2]	P-2	11,002	2.53	2.25	132	2.13	2.05	120	1.96	1.90	112	-	3.91
	+ 0.2%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	29	0.01	0.01	214	0.01	0.01	199	0.01	0.01	176	-	0.06
		Total	11,031	2.54	2.26	132	2.14	2.06	121	1.97	1.91	112	-	3.97
Dearborn Hts.	77.7%([TB-1]+[TSO])	TB-1	19,472	6.08	4.20	139	4.06	3.48	116	3.33	2.97	98	-	8.22
Ecorse	69.1%([EC-6]-[RR-1])	EC-6	9,305	2.17	1.91	133	2.07	2.00	139	1.79	1.64	114	9.20	-
Lincoln Park	30.9%([EC-6]-[RR-1])	EC-6	4,169	0.97	0.86	133	0.93	0.90	139	0.80	0.73	114	3.00	-
	+ 61.9%([RD-1]-[EC-6])	RD-1	36,076	11.84	6.15	110	8.20	6.00	108	7.13	4.78	86	25.16	-
		Total	40,245	12.82	7.00	112	9.13	6.90	111	7.93	5.51	89	28.16	-
River Rouge	[RR-1]	RR-1	7,224	5.13	3.63	325	4.44	3.83	343	4.20	3.04	272	11.26	-
Riverview	[RV-1]	RV-1	12,490	3.32	2.35	121	2.52	2.19	114	1.98	1.78	92	-	3.61
Romulus	([PA-3]+[ER-2]-[PA-4])	PA-3	14,420	5.33	4.98	223	4.73	4.67	209	4.30	4.17	187	-	6.39
	+ [DTW Pond 3 West]	DTW Pond 3 West	0	2.79	2.41	-	1.63	1.80	-	0.00	0.00	-	-	9.02
	+ ([PD-2] - [DTW Pond 3 West])	PD-2	8,069	4.14	3.55	284	3.13	3.09	248	2.61	2.52	202	-	
		Total	22,489	12.25	10.94	314	9.49	9.57	275	6.91	6.69	192	-	15.41
Southgate	(82.6% + 5.4%)([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1 & TPS+IPS	11,797	3.77	3.09	170	2.91	2.77	152	2.32	2.19	120	-	3.71
	+ 38.9%[PB-1]	PB-1	3,214	0.96	0.74	149	0.74	0.69	138	0.63	0.57	115	-	1.42
	+ 37.5%([SW]+[SWB])	SW	15,003	8.55	6.22	268	8.56	7.38	318	7.08	5.74	247	11.88	-
		Total	30,014	13.29	10.06	217	12.21	10.83	233	10.03	8.51	183	-	5.13
Taylor	0.1%[P-2]	P-2	10	0.00	0.00	132	0.00	0.00	120	0.00	0.00	112	-	0.08
	+ 99.8%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	14,125	5.92	***4.68***	214	4.57	***4.35***	199	3.92	***3.85***	176	-	2.40
	+ 61.1%[PB-1]	PB-1	5,040	1.51	1.16	149	1.17	1.08	138	0.99	0.90	115	-	2.15
	+ 22.3%([TB-1]+[TSO])	TB-1	5,574	1.74	1.20	139	1.16	1.00	116	0.95	0.85	98	-	2.29
	+ 97.3%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	25,577	5.67	4.71	119	4.28	3.79	96	3.69	3.38	85	-	11.03
	+ ([PD-1]-[PD-2])	PD-1	13,083	2.69	2.41	119	2.84	2.84	140	1.72	1.65	81	-	4.01
		Total	63,409	17.53	14.16	144	14.02	13.06	133	11.27	10.63	108	-	21.96
Van Buren Twp.	66.2%[PA-4]	PA-4	7,865	1.69	1.49	123	1.37	1.35	111	1.15	1.14	94	-	2.37
Wyandotte	62.5%([SW]+[SWB])	SW	25,058	14.28	10.39	268	14.29	12.32	318	11.83	9.59	247	19.85	-

Subtotal Controlled Flow Communities	119,005	50.23	32.93	179	43.53	36.12	196	37.21	28.45	155	97.55	-
Subtotal Non-Controlled Flow Communities	158,829	49.92	40.74	166	38.64	36.50	149	30.71	29.00	118	-	64.00
Total Incoming Flow	277,834	100.36	73.67	171	82.17	72.63	169	67.93	57.45	134	-	-
DWTF Including Recycle (IPS + TPS)	277,834	103.21	73.50	171	83.47	73.07	170	68.74	58.50	136	-	-
DWTF without Recycle (IPS + TPS - Recycle)	277,834	96.93	68.28	159	77.16	67.19	156	62.18	52.54	122	-	-
Recycle	-	6.28	5.21	-	6.32	5.88	-	6.56	5.96	-	-	-

Note:
1) Dry weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017).
2) The MAFL for each community component of Meter Distict SW is population weighted. Southgate and Wyandotte have MAFLs of 7.67 and 24.06 cfs, respectively. Therefore, the combined MAFL is 31.73 cfs.
The population weighted MAFL for Southgate and Wyandotte are allocated to be 11.88 and 19.85 cfs, respectively.
3) The meter district flow rates are split into community components based on relative 2020 residential population.

Legend:
XX.XX Exceeds the weighted proportion of the dry weather MAFL by 0 to 20%
XX.XX Exceeds the weighted proportion of the dry weather MAFL by greater than 20%

Table 4-1 (Cont.)
Monthly Incremental Flow Rates Summarized by Community

Community	Sewage Flow Meter Math	Meter District	Year 2020 Incremental Residential Population	July 2024			August 2024			September 2024			Dry Weather MAFLs for Controlled Flow Communities[1] (cfs)	Dry Weather MAFLs for Non-Controlled Flow Communities[1] (cfs)
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather			
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)		
Allen Park	2.7%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	716	0.11	0.10	88	0.11	0.09	81	0.09	0.09	82	-	0.43
	+ 17.4%([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1	2,338	0.45	0.41	112	0.42	0.37	102	0.37	0.36	100	-	1.58
	+ 38.1%([RD-1]-[EC-6])	RD-1	22,170	5.17	3.28	96	4.88	2.75	80	2.69	2.45	71	17.20	-
	+ ([APO-1] + [APO-2])	APO-1 + APO-2	0	0.15	0.00	-	0.32	0.00	-	0.00	0.00	-	-	-
		Total	25,224	5.89	3.79	97	5.74	3.21	82	3.15	2.90	74	-	2.01
Belleville	33.8%[PA-4]	PA-4	4,008	0.64	0.61	98	0.58	0.55	89	0.52	0.52	84	-	1.32
Brownstown Twp.	99.9%[P-2]	P-2	11,002	1.96	1.81	107	1.88	1.76	103	1.78	1.79	105	-	3.91
	+ 0.2%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	29	0.01	0.01	154	0.01	0.01	142	0.01	0.01	141	-	0.06
		Total	11,031	1.96	1.82	107	1.88	1.77	103	1.79	1.80	105	-	3.97
Dearborn Hts.	77.7%([TB-1]+[TSO])	TB-1	19,472	3.13	2.66	88	2.56	1.93	64	1.91	1.83	61	-	8.22
Ecorse	69.1%([EC-6]-[RR-1])	EC-6	9,305	2.56	2.05	142	2.38	2.00	139	1.60	1.58	110	9.20	-
Lincoln Park	30.9%([EC-6]-[RR-1])	EC-6	4,169	1.15	0.92	142	1.07	0.90	139	0.72	0.71	110	3.00	-
	+ 61.9%([RD-1]-[EC-6])	RD-1	36,076	8.42	5.34	96	7.94	4.48	80	4.38	3.98	71	25.16	-
		Total	40,245	9.56	6.26	100	9.00	5.38	86	5.10	4.69	75	28.16	-
River Rouge	[RR-1]	RR-1	7,224	3.93	2.92	261	3.92	2.61	233	2.82	2.77	248	11.26	-
Riverview	[RV-1]	RV-1	12,490	2.40	1.77	92	2.23	1.70	88	1.90	1.81	94	-	3.61
Romulus	([PA-3]+[ER-2]-[PA-4])	PA-3	14,420	3.82	3.61	162	3.68	3.53	158	3.28	3.29	148	-	6.39
	+ [DTW Pond 3 West]	DTW Pond 3 West	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	-	9.02
	+ ([PD-2] - [DTW Pond 3 West])	PD-2[5]	8,069	2.69	2.56	205	2.61	2.40	192	2.41	2.39	192	-	
		Total	22,489	6.51	6.17	177	6.29	5.93	170	5.69	5.69	163	-	15.41
Southgate	(82.6% + 5.4%)([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1 & TPS+IPS	11,797	2.27	2.05	112	2.14	1.86	102	1.86	1.83	100	-	3.71
	+ 38.9%[PB-1]	PB-1	3,214	0.67	0.58	116	0.65	0.55	111	0.57	0.56	112	-	1.42
	+ 37.5%([SW]+[SWB])	SW	15,003	8.18	6.67	287	8.03	5.67	244	5.94	5.43	234	11.88	-
		Total	30,014	11.13	9.30	200	10.82	8.09	174	8.37	7.82	168	-	5.13
Taylor	0.1%[P-2]	P-2	10	0.00	0.00	107	0.00	0.00	103	0.00	0.00	105	-	0.08
	+ 99.8%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	14,125	3.61	***3.37***	154	3.36	***3.10***	142	3.12	***3.07***	141	-	2.40
	+ 61.1%[PB-1]	PB-1	5,040	1.06	0.90	116	1.01	0.87	111	0.89	0.87	112	-	2.15
	+ 22.3%([TB-1]+[TSO])	TB-1	5,574	0.90	0.76	88	0.73	0.55	64	0.55	0.52	61	-	2.29
	+ 97.3%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	25,577	3.92	3.49	88	3.91	3.20	81	3.33	3.26	82	-	11.03
	+ ([PD-1]-[PD-2])	PD-1	13,083	1.54	1.35	67	1.49	1.25	62	1.34	1.31	65	-	4.01
		Total	63,409	11.02	9.88	101	10.50	8.97	91	9.23	9.03	92	-	21.96
Van Buren Twp.	66.2%[PA-4]	PA-4	7,865	1.26	1.20	98	1.13	1.08	89	1.03	1.02	84	-	2.37
Wyandotte	62.5%([SW]+[SWB])	SW	25,058	13.66	11.13	287	13.41	9.48	244	9.93	9.07	234	19.85	-

Subtotal Controlled Flow Communities	119,005	43.06	32.30	175	41.62	27.90	152	28.09	25.98	141	97.55	-
Subtotal Non-Controlled Flow Communities	158,829	30.45	27.24	111	28.50	24.80	101	24.96	24.55	100	-	64.00
Total Incoming Flow	277,834	73.66	59.54	139	70.44	52.69	123	53.05	50.53	118	-	-
DWTF Including Recycle (IPS + TPS)	277,834	75.44	60.71	141	73.61	53.13	124	55.82	52.66	122	-	-
DWTF without Recycle (IPS + TPS - Recycle)	277,834	69.68	55.49	129	67.83	48.08	112	50.08	46.86	109	-	-
Recycle	-	5.76	5.21	-	5.78	5.05	-	5.74	5.80	-	-	-

Note:
1) Dry weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017).
2) The MAFL for each community component of Meter Distict SW is population weighted. Southgate and Wyandotte have MAFLs of 7.67 and 24.06 cfs, respectively. Therefore, the combined MAFL is 31.73 cfs.
The population weighted MAFL for Southgate and Wyandotte are allocated to be 11.88 and 19.85 cfs, respectively.
3) The meter district flow rates are split into community components based on relative 2020 residential population.

Legend:
XX.XX Exceeds the weighted proportion of the dry weather MAFL by 0 to 20%
XX.XX Exceeds the weighted proportion of the dry weather MAFL by greater than 20%

Table 4-1 (Cont.)
Monthly Incremental Flow Rates Summarized by Community

Community	Sewage Flow Meter Math	Meter District	Year 2020 Incremental Residential Population	October 2024			November 2024			December 2024			Dry Weather MAFLs for Controlled Flow Communities[1] (cfs)	Dry Weather MAFLs for Non-Controlled Flow Communities[1] (cfs)
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather			
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)		
Allen Park	2.7%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	716	0.09	0.08	76	0.09	0.09	77	0.11	0.09	82	-	0.43
	+ 17.4%([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1	2,338	0.37	0.35	96	0.39	0.37	102	0.48	0.40	110	-	1.58
	+ 38.1%([RD-1]-[EC-6])	RD-1	22,170	2.71	2.00	58	2.77	2.20	64	4.56	2.55	74	17.20	-
	+ ([APO-1] + [APO-2])	APO-1 + APO-2	0	0.00	0.00	-	0.00	0.00	-	0.56	0.00	-	-	-
		Total	25,224	3.16	2.43	62	3.25	2.66	68	5.70	3.04	78	-	2.01
Belleville	33.8%[PA-4]	PA-4	4,008	0.51	0.50	80	0.51	0.50	81	0.54	0.52	83	-	1.32
Brownstown Twp.	99.9%[P-2]	P-2	11,002	1.75	1.63	96	1.70	1.56	92	1.91	1.76	103	-	3.91
	+ 0.2%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	29	0.01	0.01	136	0.01	0.01	142	0.01	0.01	154	-	0.06
		Total	11,031	1.75	1.64	96	1.70	1.57	92	1.92	1.76	103	-	3.97
Dearborn Hts.	77.7%([TB-1]+[TSO])	TB-1	19,472	1.97	1.76	59	2.15	1.90	63	3.27	2.19	73	-	8.22
Ecorse	69.1%([EC-6]-[RR-1])	EC-6	9,305	1.30	1.25	87	1.19	1.09	76	1.40	1.13	78	9.20	-
Lincoln Park	30.9%([EC-6]-[RR-1])	EC-6	4,169	0.58	0.56	87	0.54	0.49	76	0.63	0.51	78	3.00	-
	+ 61.9%([RD-1]-[EC-6])	RD-1	36,076	4.41	3.26	58	4.51	3.59	64	7.42	4.15	74	25.16	-
		Total	40,245	4.99	3.82	61	5.04	4.07	65	8.05	4.66	75	28.16	-
River Rouge	[RR-1]	RR-1	7,224	2.55	2.21	197	2.50	2.21	198	3.32	2.29	205	11.26	-
Riverview	[RV-1]	RV-1	12,490	1.85	1.71	88	1.92	1.76	91	2.47	1.86	96	-	3.61
Romulus	([PA-3]+[ER-2]-[PA-4])	PA-3	14,420	3.33	3.29	147	3.25	3.16	142	3.73	3.44	154	-	6.39
	+ [DTW Pond 3 West]	DTW Pond 3 West	0	0.00	0.00	-	1.35	1.19	-	0.78	0.82	-	-	9.02
	+ ([PD-2] - [DTW Pond 3 West])	PD-2[5]	8,069	2.41	2.37	190	2.29	2.19	176	2.74	2.51	201	-	
		Total	22,489	5.74	5.66	163	6.89	6.54	188	7.24	6.77	194	-	15.41
Southgate	(82.6% + 5.4%)([P-1]+[PM-1]-[P-2]-[PA-2]-[PB-1]-[PD-1]-[PC-1])	P-1 & TPS+IPS	11,797	1.84	1.76	96	1.96	1.86	102	2.40	2.00	110	-	3.71
	+ 38.9%[PB-1]	PB-1	3,214	0.57	0.53	107	0.56	0.53	107	0.75	0.58	117	-	1.42
	+ 37.5%([SW]+[SWB])	SW	15,003	4.90	4.11	177	5.11	4.04	174	5.71	4.25	183	11.88	-
		Total	30,014	7.31	6.40	138	7.63	6.43	139	8.86	6.83	147	-	5.13
Taylor	0.1%[P-2]	P-2	10	0.00	0.00	96	0.00	0.00	92	0.00	0.00	103	-	0.08
	+ 99.8%([PA-2]+[ER-1]-[PA-3]-[ER-2])	PA-2	14,125	3.07	***2.97***	136	3.14	***3.11***	142	3.75	***3.37***	154	-	2.40
	+ 61.1%[PB-1]	PB-1	5,040	0.89	0.83	107	0.88	0.83	107	1.18	0.92	117	-	2.15
	+ 22.3%([TB-1]+[TSO])	TB-1	5,574	0.56	0.51	59	0.62	0.54	63	0.94	0.63	73	-	2.29
	+ 97.3%([PC-1]+[CPO]+[CHPO]-[TB-1])	PC-1	25,577	3.21	3.02	76	3.22	3.05	77	3.93	3.25	82	-	11.03
	+ ([PD-1]-[PD-2])	PD-1	13,083	1.29	1.24	61	1.16	1.14	57	1.64	1.34	66	-	4.01
		Total	63,409	9.02	8.57	87	9.03	8.68	88	11.43	9.51	97	-	21.96
Van Buren Twp.	66.2%[PA-4]	PA-4	7,865	0.99	0.97	80	1.00	0.99	81	1.06	1.01	83	-	2.37
Wyandotte	62.5%([SW]+[SWB])	SW	25,058	8.18	6.86	177	8.54	6.76	174	9.54	7.09	183	19.85	-

Subtotal Controlled Flow Communities	119,005	24.63	20.24	110	25.16	20.38	111	32.57	21.96	119	97.55	-
Subtotal Non-Controlled Flow Communities	158,829	24.70	23.53	96	26.21	24.79	101	31.66	26.69	109	-	64.00
Total Incoming Flow	277,834	49.33	43.77	102	51.37	45.16	105	64.79	48.65	113	-	-
DWTF Including Recycle (IPS + TPS)	277,834	56.98	51.56	120	57.43	50.65	118	65.85	48.38	113	-	-
DWTF without Recycle (IPS + TPS - Recycle)	277,834	51.58	46.33	108	51.91	45.24	105	60.09	42.95	100	-	-
Recycle	-	5.40	5.22	-	5.52	5.41	-	5.76	5.43	-	-	-

Note:
1) Dry weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017).
2) The MAFL for each community component of Meter Distict SW is population weighted. Southgate and Wyandotte have MAFLs of 7.67 and 24.06 cfs, respectively. Therefore, the combined MAFL is 31.73 cfs.
The population weighted MAFL for Southgate and Wyandotte are allocated to be 11.88 and 19.85 cfs, respectively.
3) The meter district flow rates are split into community components based on relative 2020 residential population.

Legend:
XX.XX Exceeds the weighted proportion of the dry weather MAFL by 0 to 20%
XX.XX Exceeds the weighted proportion of the dry weather MAFL by greater than 20%

5) PRECIPITATION DATA

Table 5-1 lists the monthly precipitation at DTW, the departure from normal, and the number of wet/dry days included for each month. Monthly precipitation data for the DSDS rain gauges is summarized on Table 5-2. Daily precipitation data for the DSDS rain gauges for each month in 2024 are summarized on Tables 5-3 to 5-14. Data for the rain gauge at DTW is included in these tables. The total precipitation for 2024 at DTW was 32.46 inches, which is 1.86 inches below normal.

Significant storm events are defined as those with at least 0.5 inches of rainfall occurring on a single day with an event total of at least 1.0 inch of rainfall. Significant storm events are separated by at least 2 consecutive days without precipitation over 0.1 inches. This storm event definition is based on the arithmetic mean of the rainfall recorded by all rain gauges used in the analysis for that storm. Major storm events are a subgroup of significant storm events which result in the peak hourly influent flow rate to the DWTF reaching or exceeding 175 MGD (271 cfs).

There were eleven significant storm events in 2024, these events were designated as Significant Storm Events 1 through 11. There was one major storm event in 2024, Significant Storm Event 2 was also designated as Major Storm Event A. Precipitation data for significant/major storm events are summarized in Table 5-15. None of these events equaled or exceeded the 25-year, 24-hour design storm rainfall total of 4.42 inches on which the DRSTS was based.

A quality assurance (QA) and quality control (QC) review of the DUWA rain gauge data was performed and involved a review of the maintenance logs and a comparison of the recorded precipitation to other nearby rain gauges. The maintenance logs identified rain gauge issues which were detected during site visits. In almost all cases, these issues were resolved during the site visit. In general, when a rain gauge had an issue, it recorded zero precipitation. All rain gauge data with documented maintenance log issues were flagged.

Table 5-1
Dry/Wet Weather Count by Month and Monthly Precipitation at DTW for 2024

Month	Number of Dry Weather Days	Number of Wet Weather Days	Monthly Total Precipitation (in)	
			DTW[1]	Departure From Normal[2]
January	15	16	5.25	+3.02
February	23	6	0.24	-1.84
March	23	8	2.03	-0.40
April	13	17	4.15	+0.89
May	20	11	2.55	-1.17
June	19	11	3.83	+0.57
July	21	10	2.08	-1.43
August	18	13	4.50	+1.24
September	27	3	1.22	-2.00
October	26	5	1.44	-1.09
November	22	8	1.90	-0.67
December	21	10	3.27	+1.02
Total	248	118	32.46	-1.86

Note:
1) Detroit Metropolitan Wayne County Airport (DTW)
2) The National Centers for Environmental Information generates the official U.S. Climate Normals every 10-years and are calculated for a uniform 30-year period. Climate Normal precipitation values used in this report are from 1991-2020 and are the latest available.

Table 5-2
Monthly Precipitation for 2024

Date	Monthly Precipitation (inches)											DTW Monthly Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
January	3.67	3.91	4.64	5.25	4.18	5.65	4.30	5.14	4.58	5.27	5.02	32	23	28
February	0.20	0.09	0.26	0.24	0.11	0.21	0.07	0.20	0.19	0.28	0.21	47	28	37
March	2.04	1.89	2.27	2.03	1.87	2.43	1.71	1.89	1.98	2.16	1.99	51	33	42
April	4.52	4.58	4.49	4.15	4.37	5.22	4.42	4.00	4.11	4.84	4.51	63	44	53
May	2.84	2.88	2.28	2.55	2.96	3.63	3.18	3.03	2.85	2.78	2.92	75	54	65
June	3.48	3.63	3.99	3.83	1.95*	4.17	3.61	3.43	3.68	3.26	4.24	82	63	72
July	3.61	2.10	2.37	2.08	0.29*	4.70	2.78	3.41	4.88	4.62	6.24	83	65	74
August	3.57	4.02	4.45	4.50	4.17	5.25	2.50*	3.93	4.92	5.59	5.71	83	63	73
September	1.29	1.50	1.39	1.22	1.28	1.84	1.16	0.97	1.37	1.54	1.21	78	58	68
October	1.53	1.77	1.64	1.44	1.51	1.88	1.52	1.47	1.80	1.84	1.70	68	45	57
Novembert	1.85	1.81	1.95	1.90	1.68	2.03	1.62	1.69	1.68	1.82	1.78	53	40	47
December	2.77	2.73	3.11	3.27	2.82	3.75	3.09	3.28	3.14	3.33	3.21	39	28	33
Total	31.37	30.91	32.84	32.46	25.24*	40.76	29.96*	32.44	35.18	37.33	38.74	63	45	54

Legend

X.XX*	Missing or suspect data.

Table 5-3
Daily Precipitation for January 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
1/1/2024	0	0	0	t	0	0	0	0	0	0	0	36	31	34
1/2/2024	0	0	0	0	0	0	0	0	0	0	0	36	30	32
1/3/2024	0	0.03	0	0.04	0.01	0.02	0.02	0.03	0.01	0.01	0.04	35	32	34
1/4/2024	0	0	0	t	0	0	0	0	0	0	0	32	19	26
1/5/2024	0	0	0	0	0	0	0	0.01	0	0	0	32	19	26
1/6/2024	0.01	0	0.01	0.03	0.01	0.02	0.02	0.01	0.02	0.02	0.02	37	28	33
1/7/2024	0.03	0.02	0.03	0.06	0.03	0.05	0.03	0.07	0.03	0.03	0.03	36	30	33
1/8/2024	0	0	0	0	0	0	0	0	0	0	0	36	32	34
1/9/2024	0.45	0.70	0.84	0.86	0.72	0.99	0.77	0.89	0.83	1.02	0.91	44	33	39
1/10/2024	0.02	0	0	0.01	0.02	0.03	0.02	0.03	0.02	0.01	0.02	40	33	37
1/11/2024	0.07	0.06	0.06	0.09	0.07	0.10	0.04	0.08	0.08	0.09	0.10	37	31	34
1/12/2024	0.72	0.81	0.93	1.04	0.74	1.12	0.73	0.62	0.86	1.13	0.96	38	30	34
1/13/2024	0.01	0.01	0	0.04	0.01	0.16	0.02	0.14	0.01	0.05	0.02	37	17	27
1/14/2024	0	0	0	0.02	0	0	0	0	0	0	0	17	-2	8
1/15/2024	0	0	0	0	0	0	0	0	0	0	0	9	-3	3
1/16/2024	0	0	0	0.03	0	0.01	0	0	0	0.01	0.01	12	3	8
1/17/2024	0	0	0	0	0	0	0	0	0	0	0	18	2	10
1/18/2024	0.04	0.04	0.05	0.12	0.06	0.12	0.07	0	0.07	0.11	0.13	25	18	22
1/19/2024	0.01	0.01	0.03	0.11	0.04	0.09	0.05	0	0.09	0.08	0.08	23	8	16
1/20/2024	0	0	0	t	0	0	0	0	0	0	0	19	2	11
1/21/2024	0	0	0	0.01	0	0	0	0.06	0	0	0	25	7	16
1/22/2024	0.02	0.01	0.03	0.05	0.03	0.02	0.04	0	0.01	0.02	0.05	33	9	21
1/23/2024	0.39	0.30	0.42	0.45	0.42	0.49	0.39	0.73	0.41	0.45	0.45	34	32	33
1/24/2024	0.29	0.27	0.34	0.35	0.32	0.38	0.34	0.41	0.35	0.38	0.39	39	33	36
1/25/2024	0.17	0.19	0.17	0.17	0.15	0.23	0.15	0.19	0.17	0.23	0.17	40	36	38
1/26/2024	0.88	0.91	1.03	1.07	1.01	1.24	1.10	1.24	1.06	1.10	1.11	41	32	37
1/27/2024	0	0	0	0.01	0	0.01	0	0	0.01	0.03	0	41	35	38
1/28/2024	0.32	0.33	0.40	0.41	0.33	0.38	0.40	0.40	0.38	0.32	0.33	39	33	36
1/29/2024	0	0	0	t	0	0	0	0.01	0.01	0	0	37		35
1/30/2024	0.24	0.22	0.30	0.28	0.21	0.19	0.11	0.21	0.16	0.18	0.20	34	31	33
1/31/2024	0	0	0	0	0	0	0	0.01	0	0	0	39	33	36
Total	3.67	3.91	4.64	5.25	4.18	5.65	4.30	5.14	4.58	5.27	5.02	32	23	28

X.XX*	Missing or suspect data.
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-4
Daily Precipitation for February 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
2/1/2024	0	0	0	0	0	0	0	0	0	0	0	45	36	41
2/2/2024	0	0	0	0	0	0	0	0	0	0	0	42	29	36
2/3/2024	0	0	0	0	0	0	0	0	0	0	0	36	26	31
2/4/2024	0	0	0	0	0	0	0	0.01	0	0	0	49	23	36
2/5/2024	0	0	0	0	0	0	0	0	0	0	0	39	26	33
2/6/2024	0	0	0	0	0	0	0	0	0	0	0	43	28	36
2/7/2024	0	0	0	0	0	0	0	0	0	0	0	48	26	37
2/8/2024	0	0	0	t	0	0	0	0	0	0	0	61	33	47
2/9/2024	0.04	0	0	t	0	0	0	0.01	0	0	0	64	49	57
2/10/2024	0	0	0	0	0	0	0	0	0	0	0	53	33	43
2/11/2024	0	0	0	0	0	0	0	0	0	0	0	42	27	35
2/12/2024	0	0	0	0	0	0	0	0	0	0	0	42	27	35
2/13/2024	0	0	0.02	0.01	0	0.01	0.01	0.01	0.01	0.01	0	36	25	31
2/14/2024	0	0	0	t	0	0	0	0	0	0	0	39	28	34
2/15/2024	0.09	0.07	0.11	0.11	0.09	0.12	0.04	0.08	0.09	0.12	0.11	40	29	35
2/16/2024	0	0	0	0	0	0	0	0	0	0	0	31	24	28
2/17/2024	0	0	0	0.02	0	0	0	0	0.01	0.01	0	29	17	23
2/18/2024	0	0	0	t	0	0	0	0	0	0	0	39	17	28
2/19/2024	0	0	0	0	0	0	0	0	0	0	0	38	20	29
2/20/2024	0	0	0	0	0	0	0	0.01	0	0	0	47	23	35
2/21/2024	0	0	0	0	0	0	0	0	0	0	0	61	28	45
2/22/2024	0	0	0	0	0	0	0	0	0	0	0	54	37	46
2/23/2024	0	0	0	t	0	0	0	0	0	0	0	54	25	40
2/24/2024	0	0	0	t	0	0	0	0	0	0	0	34	21	28
2/25/2024	0	0	0	0	0	0	0	0	0	0	0	51	23	37
2/26/2024	0	0	0	0	0	0	0	0	0	0	0	55	36	46
2/27/2024	0.05	0.01	0.04	t	0	0.01	0	0	0	0	0	73	43	58
2/28/2024	0.02	0.01	0.09	0.10	0.02	0.07	0.02	0.08	0.08	0.14	0.10	64	22	43
2/29/2024	0	0	0	0	0	0	0	0	0	0	0	39	21	30
Total	0.20	0.09	0.26	0.24	0.11	0.21	0.07	0.20	0.19	0.28	0.21	47	28	37

X.XX*	Missing or suspect data.
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-5
Daily Precipitation for March 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
3/1/2024	0	0	0	t	0	0	0	0	0	0	0	46	27	37
3/2/2024	0	0	0	t	0	0	0	0	0	0	0	53	37	45
3/3/2024	0	0	0	0	0	0	0	0	0	0	0	59	33	46
3/4/2024	0	0	0	0	0	0	0	0	0	0	0	74	40	57
3/5/2024	0.11	0.09	0.14	0.10	0.09	0.15	0.09	0.08	0.09	0.08	0.08	62	43	53
3/6/2024	0	0	0	t	0	0	0	0	0	0	0.01	48	38	43
3/7/2024	0	0	0	0	0	0	0	0	0	0	0	53	39	46
3/8/2024	0.45	0.44	0.57	0.57	0.46	0.50	0.46	0.48	0.47	0.50	0.47	52	42	47
3/9/2024	0.27	0.27	0.38	0.29	0.26	0.26	0.20	0.27	0.25	0.26	0.25	54	35	45
3/10/2024	0	0	0.01	t	0	0	0	0	0	0	0	40	30	35
3/11/2024	0	0	0	0	0	0	0	0	0	0	0	56	28	42
3/12/2024	0	0	0	0	0	0	0	0	0	0	0	69	40	55
3/13/2024	0	0	0	0	0	0	0	0	0	0	0	73	51	62
3/14/2024	0.39	0.45	0.43	0.40	0.44	0.58	0.42	0.37	0.53	0.53	0.50	56	46	51
3/15/2024	0	0	0	0	0	0	0	0	0	0	0	55	37	46
3/16/2024	0.25	0.22	0.22	0.23	0.19	0.33	0.22	0.26	0.21	0.24	0.21	60	33	47
3/17/2024	0	0	0	t	0	0.01	0	0	0	0	0	45	30	38
3/18/2024	0	0	0	t	0	0	0	0	0	0	0	36	27	32
3/19/2024	0	0	0	0	0	0	0	0	0	0	0	48	29	39
3/20/2024	0	0	0	t	0	0	0	0	0	0	0	38	23	31
3/21/2024	0	0	0	0	0	0	0	0	0	0	0	38	19	29
3/22/2024	0.01	0.01	0.01	0.03	0.01	0.04	0.01	0.03	0.02	0.02	0.01	35	28	32
3/23/2024	0	0	0	t	0	0	0	0	0	0	0	40	26	33
3/24/2024	0	0	0	0	0	0	0	0	0	0	0	40	24	32
3/25/2024	0	0	0	0	0	0	0	0	0	0	0	64	33	49
3/26/2024	0.41	0.28	0.37	0.26	0.29	0.34	0.18	0.28	0.26	0.35	0.33	59	41	50
3/27/2024	0	0	0	0	0	0	0	0	0	0	0	42	28	35
3/28/2024	0	0	0	0	0	0	0	0	0	0	0	50	26	38
3/29/2024	0	0	0	0	0	0	0	0	0	0	0	54	27	41
3/30/2024	0.15	0.13	0.14	0.15	0.13	0.22	0.13	0.12	0.15	0.18	0.13	44	38	41
3/31/2024	0	0	0	t	0	0	0	0	0	0	0	44	38	41
Total	2.04	1.89	2.27	2.03	1.87	2.43	1.71	1.89	1.98	2.16	1.99	51	33	42

X.XX*	Missing or suspect data.
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-6
Daily Precipitation for April 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
4/1/2024	0.29	0.36	0.24	0.22	0.18	0.36	0.18	0.19	0.18	0.22	0.18	54	38	46
4/2/2024	0.55	0.42	0.57	0.43	0.36	0.55	0.42	0.62	0.47	0.48	0.46	49	41	45
4/3/2024	0.04	0	0.03	0	0.02	0	0	0.03	0.01	0.01	0.01	48	37	43
4/4/2024	0.01	0	0	0	0	0.03	0.04	0.04	0.04	0.08	0.06	51	36	44
4/5/2024	0	0	0	0	0.01	0	0	0	0	0	0	49	34	42
4/6/2024	0	0	0	0	0	0	0	0	0	0	0	59	38	49
4/7/2024	0	0	0	0	0	0	0	0	0	0	0	57	32	45
4/8/2024	0.02	0	0.01	0	0	0.02	0	0	0.02	0.02	0.01	71	47	59
4/9/2024	0	0	0	0	0	0	0	0	0	0	0	76	47	62
4/10/2024	0.04	0.05	0.04	0.06	0.05	0.04	0.04	0.03	0.04	0.02	0.02	65	48	57
4/11/2024	1.56	1.29	1.31	1.14	1.24	1.67	1.22	1.19	1.25	1.40	1.33	60	46	53
4/12/2024	0.16	0.09	0.15	0.17	0.18	0.26	0.25	0.18	0.18	0.15	0.22	51	46	49
4/13/2024	0	0	0	0	0	0	0	0	0	0	0	64	42	53
4/14/2024	0	0	0	0	0	0	0	0	0	0	0	80	46	63
4/15/2024	0	0	0	0	0	0	0	0	0	0	0	69	47	58
4/16/2024	0	0	0	0	0	0	0	0	0	0	0	69	46	58
4/17/2024	0.39	0.58	0.43	0.54	0.58	0.26	0.65	0.54	0.24	0.39	0.41	76	52	64
4/18/2024	0	0	0	0	0	0	0	0	0	0	0	69	52	61
4/19/2024	0.43	0.37	0.45	0.37	0.35	0.45	0.36	0.23	0.39	0.37	0.40	60	45	53
4/20/2024	0	0	0	0	0	0	0	0	0	0	0	48	39	44
4/21/2024	0	0	0	0	0	0	0	0	0	0	0	56	38	47
4/22/2024	0	0	0	0	0	0	0	0	0	0	0	64	36	50
4/23/2024	0.15	0.27	0.09	0.07	0.06	0.16	0.03	0.02	0.07	0.11	0.04	58	48	53
4/24/2024	0.01	0	0.03	0.01	0.07	0.09	0.09	0.05	0.08	0.12	0.08	49	31	40
4/25/2024	0	0	0	0	0	0	0	0	0	0	0	55	28	42
4/26/2024	0	0	0	0	0	0	0	0	0	0	0	63	37	50
4/27/2024	0.10	0.14	0.15	0.25	0.24	0.21	0.25	0.15	0.16	0.21	0.16	81	53	67
4/28/2024	0.31	0.43	0.41	0.27	0.50	0.46	0.42	0.29	0.45	0.66	0.48	80	63	72
4/29/2024	0.43	0.56	0.52	0.60	0.51	0.56	0.45	0.44	0.49	0.52	0.59	82	60	71
4/30/2024	0.03	0.02	0.06	0.01	0.02	0.10	0.02	0	0.04	0.08	0.06	72	54	63
Total	4.52	4.58	4.49	4.15	4.37	5.22	4.42	4.00	4.11	4.84	4.51	63	44	53

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-7
Daily Precipitation for May 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
5/1/2024	0	0	0	0	0	0	0	0	0	0	0	82	51	67
5/2/2024	0	0	0	0	0	0	0	0	0	0	0	71	51	61
5/3/2024	0.16	0.31	0.19	0.26	0.40	0.65	0.49	0.49	0.53	0.62	0.55	72	55	64
5/4/2024	0.01	0.01	0.01	0	0	0.16	0	0	0.02	0.06	0.07	71	56	64
5/5/2024	0	0	0.01	0	0	0	0	0	0	0	0	71	54	63
5/6/2024	0	0	0	0	0	0	0	0	0	0	0	67	48	58
5/7/2024	0.10	0.16	0	0.10	0.13	0.18	0.10	0.05	0.28	0.09	0.18	69	47	58
5/8/2024	0	0	0	0	0.01	0	0.01	0	0	0	0	78	52	65
5/9/2024	0.40	0.47	0.43	0.40	0.43	0.59	0.40	0.46	0.48	0.47	0.43	57	50	54
5/10/2024	0	0	0	0	0	0	0	0.01	0	0	0	66	45	56
5/11/2024	0.27	0.22	0.28	0.30	0.25	0.24	0.33	0.35	0.29	0.25	0.32	58	49	54
5/12/2024	0	0	0	0	0.01	0	0	0	0	0	0	71	44	58
5/13/2024	0	0	0	0	0	0	0	0	0	0	0	82	58	70
5/14/2024	0	0	0	0	0	0	0	0	0	0	0	73	56	65
5/15/2024	0	0	0	0	0	0	0	0	0	0	0	76	54	65
5/16/2024	0	0	0	0	0	0	0	0	0	0	0	75	50	63
5/17/2024	0.01	0.01	0.01	0.02	0.11	0.19	0.06	0.03	0.09	0.16	0.16	75	62	69
5/18/2024	0	0	0	0	0	0.01	0	0	0	0	0	76	60	68
5/19/2024	0.01	0.02	0.10	0.15	0.02	0.01	0.09	0.11	0.01	0	0.10	88	58	73
5/20/2024	0.21	0.10	0.14	0.04	0.02	0	0	0.08	0	0	0	89	61	75
5/21/2024	0	0	0	0	0	0	0	0	0	0	0	88	65	77
5/22/2024	0	0	0	0	0	0	0.01	0	0	0	0	88	65	77
5/23/2024	0	0	0	0	0	0	0	0	0	0	0	81	57	69
5/24/2024	0	0	0	0	0	0	0	0	0	0	0	81	57	69
5/25/2024	0.05	0.09	0.05	0.09	0.31	0.14	0.64	0.25	0.14	0	0.26	81	63	72
5/26/2024	1.06	1.00	0.55	0.73	0.68	0.68	0.58	0.57	0.43	0.39	0.47	79	57	68
5/27/2024	0.38	0.24	0.45	0.37	0.45	0.32	0.34	0.52	0.24	0.12	0.18	72	61	67
5/28/2024	0.02	0.23	0.01	0	0	0	0	0.01	0	0	0.02	73	56	65
5/29/2024	0.16	0.02	0.05	0.09	0.14	0.46	0.13	0.10	0.34	0.62	0.18	70	51	61
5/30/2024	0	0	0	0	0	0	0	0	0	0	0	72	44	58
5/31/2024	0	0	0	0	0	0	0	0	0	0	0	76	48	62
Total	2.84	2.88	2.28	2.55	2.96	3.63	3.18	3.03	2.85	2.78	2.92	75	54	65

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-8
Daily Precipitation for June 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
6/1/2024	0.05	0.05	0.01	0.12	0.01	0.05	0.05	0.04	0.04	0.04	0.04	77	56	67
6/2/2024	0.32	0.33	0.26	0.20	0.28	0.48	0.30	0.27	0.36	0.32	0.32	76	63	70
6/3/2024	0.01	0	0	0	0	0.01	0.01	0	0.01	0	0	76	60	68
6/4/2024	0	0	0	0	0	0	0	0	0	0	0	84	62	73
6/5/2024	0.37	0.36	0.20	0.23	0*	0.24	0.14	0.23	0.13	0.18	0.21	83	66	75
6/6/2024	0	0.01	0	0	0	0	0	0	0	0	0	80	62	71
6/7/2024	0	0	0	0	0	0	0	0	0	0	0	71	57	64
6/8/2024	0.39	0.30	0.40	0.38	0.28	0.30	0.33	0.20	0.32	0.30	0.37	78	54	66
6/9/2024	0.01	0.02	0.02	0	0.03	0.04	0.03	0.16	0.04	0.04	0.05	76	54	65
6/10/2024	0	0	0	0	0	0	0	0	0	0	0	70	53	62
6/11/2024	0	0	0	0	0	0	0	0	0	0	0	72	48*	60
6/12/2024	0	0	0	0	0	0	0	0	0	0	0	85	61	73
6/13/2024	0.02	0	0.01	0.01	0.03	0.02	0.02	0.01	0.02	0.01	0.02	91	68	80
6/14/2024	0	0	0	0	0	0	0	0	0	0	0	83	61	72
6/15/2024	0	0	0	0	0	0	0	0	0	0	0	79	55	67
6/16/2024	0	0	0	0	0	0	0	0	0	0	0	84	59	72
6/17/2024	0.58	0.32	0.42	0.56	0.44	0.48	0.37	0.32	0.60	0.45	0.50	95*	69	82
6/18/2024	0	0.01	0	0	0	0	0	0	0	0	0	90	72	81
6/19/2024	0.01	0.01	0.02	0.01	0	0	0	0	0	0	0	91	75	83
6/20/2024	0.03	0.48	0.55	0.43	0.76	0.66	0.41	0.07	0.51	0.31	0.87	92	73	83
6/21/2024	0	0	0	0	0	0	0.01	0.25	0	0	0.03	88	68	78
6/22/2024	0	0	0	0	0	0	0	0.05	0	0	0	92	72	82
6/23/2024	0.17	0.21	0.14	0.08	0.12	0.26	0.10	0.06	0.13	0.23	0.10	83	69	76
6/24/2024	0	0	0	0	0	0	0	0	0	0	0	81	65	73
6/25/2024	0.47	0.36	0.45	0.57	0*	0.44	0.50	0.63	0.39	0.39	0.54	84	67	76
6/26/2024	0	0.06	0.40	0.22	0*	0.22	0.04	0.02	0.07	0.03	0.01	80	65	73
6/27/2024	0	0.01	0	0	0*	0	0	0	0	0	0	75	57	66
6/28/2024	0	0	0	0	0*	0	0	0	0	0	0	73	59	66
6/29/2024	1.05	1.10	1.11	1.02	0*	0.97	1.30	1.12	1.06	0.96	1.18	88	66	77
6/30/2024	0	0	0	0	0*	0	0	0	0	0	0	75	58	67
Total	3.48	3.63	3.99	3.83	1.95*	4.17	3.61	3.43	3.68	3.26	4.24	82	63	72

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-9
Daily Precipitation for July 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
7/1/2024	0	0	0	0	0	0	0	0	0	0	0	75	53	64
7/2/2024	0	0	0	0	0	0	0	0	0	0	0	78	58	68
7/3/2024	0	0	0	0	0	0	0	0	0	0	0	86	70	78
7/4/2024	0	0	0	0	0	0	0	0	0	0	0	83	67	75
7/5/2024	0.10	0.03	0.09	0.10	0.01	0.05	0.06	0.20	0.02	0.01	0.02	80	67	74
7/6/2024	0	0	0.01	0	0.02	0.01	0.01	0	0.01	0	0	81	65	73
7/7/2024	0	0.01	0	0	0	0	0	0	0	0	0	85	61	73
7/8/2024	0	0	0	0	0	0	0	0	0	0	0	88	68	78
7/9/2024	0.15	0.09	0.08	0.09	0*	0.05	0.04	0.03	0.05	0.04	0.04	81	71	76
7/10/2024	1.98	1.34	1.68	1.22	0*	3.15	1.90	1.89	2.99	3.09	3.47	74	65	70
7/11/2024	0	0	0	0	0*	0	0	0	0.01	0	0	85	63	74
7/12/2024	0.02	0.02	0.01	0.01	0*	0	0.01	0.02	0	0	0	83	68	76
7/13/2024	0.15	0.19	0	0	0*	0	0	0	0	0	0	87	65	76
7/14/2024	0	0	0	0	0*	0.01	0	0	0	0	0	86	71	79
7/15/2024	0.01	0.01	0	0.01	0*	0	0	0.01	0	0.01	0	87	71	79
7/16/2024	0.31	0.24	0.37	0.54	0*	0.84	0.54	0.42	0.58	0.68	0.57	87	69	78
7/17/2024	0.02	0	0	0	0	0	0.05	0.25	0.02	0.03	0.03	83	68	76
7/18/2024	0	0	0	0	0	0	0	0	0	0	0	76	59	68
7/19/2024	0	0	0	0	0	0	0	0	0	0	0	80	56	68
7/20/2024	0	0	0	0	0	0	0	0	0	0	0	80	61	71
7/21/2024	0	0	0	0	0	0	0	0	0	0	0	83	63	73
7/22/2024	0	0	0	0.02	0	0.01	0.02	0.02	0.66	0.16	1.36	80	66	73
7/23/2024	0.02	0.03	0.06	0.02	0.10	0.01	0.07	0.32	0.01	0	0.02	85	65	75
7/24/2024	0	0.01	0.01	0	0	0	0.05	0	0.01	0.01	0	79	67	73
7/25/2024	0	0	0	0	0	0	0	0	0	0	0	81	64	73
7/26/2024	0	0	0	0	0	0	0	0	0	0	0	80	60	70
7/27/2024	0	0	0	0	0	0	0	0	0	0	0	82	59	71
7/28/2024	0	0	0	0	0	0	0	0	0	0	0	88	62	75
7/29/2024	0.59	0.11	0.06	0.02	0	0.52	0.02	0.01	0.23	0.30	0.17	85	73	79
7/30/2024	0	0	0	0.05	0.10	0.05	0.01	0.11	0.25	0.28	0.44	86	70	78
7/31/2024	0.26	0.02	0	0	0.06	0	0	0.13	0.04	0.01	0.12	91	68	80
Total	3.61	2.10	2.37	2.08	0.29*	4.70	2.78	3.41	4.88	4.62	6.24	83	65	74

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-10
Daily Precipitation for August 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
8/1/2024	0	0	0	0	0	0	0	0	0	0	0	90	71	81
8/2/2024	0.17	0	0	0	0.02	0	0	0.04	0.03	0	0	84	73	79
8/3/2024	0	0	0	0	0	0	0	0	0	0.01	0	90	71	81
8/4/2024	0	0	0	0	0	0	0	0	0	0	0	90	67	79
8/5/2024	0.06	0.08	0.11	0.10	0.14	0.11	0*	0.06	0.07	0.06	0.07	86	73	80
8/6/2024	1.23	1.81	1.34	1.14	1.18	1.38	0*	1.40	1.49	1.47	1.45	73	61	67
8/7/2024	0	0	0	0	0	0	0*	0	0	0	0	80	60	70
8/8/2024	0	0	0	0	0	0	0*	0	0	0	0	84	64	74
8/9/2024	0	0	0	0	0	0	0*	0	0	0	0	80	62	71
8/10/2024	0	0	0	0	0	0	0*	0	0	0	0	76	56	66
8/11/2024	0	0	0.04	0.01	0	0	0*	0.01	0	0	0.06	78	56	67
8/12/2024	0	0	0	0	0	0	0*	0	0	0	0	82	56	69
8/13/2024	0	0	0	0	0	0	0*	0	0	0	0	82	61	72
8/14/2024	0	0	0	0	0	0	0*	0	0	0	0	84	62	73
8/15/2024	0	0	0	0	0	0	0*	0	0	0	0	81	63	72
8/16/2024	0.22	0.26	0.41	0.25	0.22	0.29	0*	0.21	0.53	0.36	0.36	81	66	74
8/17/2024	0.05	0.28	0.01	0.02	0.15	0.27	0*	0.05	0.36	0.60	0.22	81	67	74
8/18/2024	0.10	0.07	0.14	0.16	0.24	0.35	0*	0.18	0.53	0.44	0.63	82	67	75
8/19/2024	0*	0	0	0	0*	0	0*	0	0	0	0	74	58	66
8/20/2024	0	0	0	0	0	0*	0*	0*	0	0.01*	0*	73	55	64
8/21/2024	0	0*	0*	0	0	0	0*	0	0*	0	0	76	51	64
8/22/2024	0	0	0	0	0	0	0	0	0	0	0	78	53	66
8/23/2024	0	0	0	0	0	0	0	0	0	0	0	80	56	68
8/24/2024	0	0	0	0	0	0	0	0	0	0	0	85	61	73
8/25/2024	0	0	0.29	0.34	0.25	0.20	0.16	0.14	0.11	0.10	0.08	91	67	79
8/26/2024	0	0	0	0	0	0	0	0	0.01	0	0	92	68	80
8/27/2024	0.23	0.22	0.76	0.74	0.48	0.34	0.42	0.26	0.39	0.60	0.50	95	71	83
8/28/2024	1.35	1.02	1.19	1.52	1.14	1.55	1.52	1.43	0.88	1.24	1.80	85	70	78
8/29/2024	0	0	0	0	0	0	0	0	0	0	0	80	67	74
8/30/2024	0	0	0	0	0.01	0	0.01	0	0.01	0	0	91	67	79
8/31/2024	0.16	0.28	0.16	0.22	0.34	0.76	0.39	0.15	0.51	0.70	0.54	84	66	75
Total	3.57	4.02	4.45	4.50	4.17	5.25	2.50*	3.93	4.92	5.59	5.71	83	63	73

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-11
Daily Precipitation for September 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
9/1/2024	0	0	0	0	0	0	0	0	0	0	0	80	62	71
9/2/2024	0	0	0	0	0	0	0	0	0	0	0	72	52	62
9/3/2024	0	0	0	0	0	0	0	0	0	0	0	74	50	62
9/4/2024	0	0	0	0	0	0	0	0	0	0	0	77	54	66
9/5/2024	0	0	0	0	0	0	0	0	0	0	0	84	57	71
9/6/2024	0.05	0.19	0.06	0.06	0.20	0.35	0.09	0.13	0.18	0.34	0.16	75	55	65
9/7/2024	0	0	0	0	0	0.01	0	0	0	0	0.01	62	47	55
9/8/2024	0	0	0	0	0	0	0	0	0	0	0	73	44	59
9/9/2024	0	0	0	0	0	0	0	0	0	0	0	80	52	66
9/10/2024	0	0	0	0	0	0	0	0	0	0	0	82	55	69
9/11/2024	0	0.01	0	0	0	0	0.01	0	0.01	0.01	0	83	60	72
9/12/2024	0.01	0	0	0	0.01	0	0	0	0	0.01	0	85	60	73
9/13/2024	0	0	0	0	0	0	0	0	0	0	0	82	62	72
9/14/2024	0	0	0	0	0	0	0	0	0	0	0	82	61	72
9/15/2024	0	0	0	0	0	0	0	0	0	0	0	83	62	73
9/16/2024	0	0	0	0	0	0	0.01	0	0	0	0	82	58	70
9/17/2024	0	0	0	0	0	0	0	0	0.01	0	0	80	57	69
9/18/2024	0	0	0	0	0	0	0	0	0	0	0	82	62	72
9/19/2024	0	0	0	0	0	0	0.01	0	0	0	0	84	62	73
9/20/2024	0.02	0.01	0.01	0	0.01	0.01	0.01	0.01	0.01	0.01	0	83	61	72
9/21/2024	0	0.01	0	0	0.01	0	0.01	0	0.01	0.02	0.01	88	64	76
9/22/2024	0.26	0.24	0.39	0.26	0.15	0.12	0.13	0.13	0.13	0.10	0.12	83	60	72
9/23/2024	0	0	0	0	0	0	0	0	0	0	0	71	61	66
9/24/2024	0.13	0.26	0.09	0.07	0.14	0.38	0.12	0.16	0.27	0.29	0.36	72	61	67
9/25/2024	0.01	0.01	0.01	0	0.01	0	0.01	0.01	0	0	0.01	79	62	71
9/26/2024	0	0	0	0	0	0	0	0	0	0	0	73	60	67
9/27/2024	0.04	0	0.01	0	0	0.06	0	0	0	0	0	74	61	68
9/28/2024	0.73	0.75	0.80	0.81	0.74	0.89	0.75	0.51	0.74	0.75	0.53	68	64	66
9/29/2024	0.04	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01	70	64	67
9/30/2024	0	0	0	0	0	0	0	0	0	0	0	74	62	68
Total	1.29	1.50	1.39	1.22	1.28	1.84	1.16	0.97	1.37	1.54	1.21	78	58	68

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-12
Daily Precipitation for October 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
10/1/2024	0.02	0.20	0.14	0.09	0.10	0.10	0.15	0.26	0.23	0.19	0.32	78	52	65
10/2/2024	0	0	0	0	0	0.01	0.01	0	0.01	0	0	68	48	58
10/3/2024	0	0	0	0	0	0	0	0	0	0	0	77	48	63
10/4/2024	0	0	0	0	0	0	0	0	0	0	0	73	52	63
10/5/2024	0	0	0.01	0	0	0	0.01	0.01	0	0	0	69	50	60
10/6/2024	0	0	0	0	0	0	0	0	0	0	0	78	57	68
10/7/2024	0	0	0	0	0	0	0	0	0	0	0	66	49	58
10/8/2024	0	0	0	0	0	0	0	0	0	0	0	70	45	58
10/9/2024	0	0	0	0	0	0	0	0	0	0	0	66	42	54
10/10/2024	0	0	0	0	0	0	0	0	0	0	0	65	40	53
10/11/2024	0	0	0	0	0	0	0	0	0	0	0	79	43	61
10/12/2024	0.91	0.89	0.93	0.89	0.83	1.00	0.80	0.73	0.99	1.04	0.85	67	50	59
10/13/2024	0.45	0.51	0.36	0.29	0.46	0.62	0.41	0.31	0.45	0.50	0.40	54	48	51
10/14/2024	0.10	0.11	0.16	0.13	0.08	0.12	0.10	0.11	0.10	0.08	0.10	56	42	49
10/15/2024	0	0	0	0	0	0	0	0	0	0	0	54	39	47
10/16/2024	0	0	0	0	0	0	0	0	0	0	0	56	38	47
10/17/2024	0	0	0	0	0	0	0	0	0	0	0	60	37	49
10/18/2024	0	0	0	0	0	0	0	0	0	0	0	66	38	52
10/19/2024	0	0	0	0	0	0	0	0.01	0	0	0	70	40	55
10/20/2024	0	0.01	0	0	0	0	0	0	0	0	0	75	41	58
10/21/2024	0	0	0	0	0	0	0	0	0	0	0	80	51	66
10/22/2024	0	0	0	0.02	0	0	0	0	0	0	0	76	48	62
10/23/2024	0.01	0.01	0.01	0	0.01	0.01	0.01	0.01	0	0.01	0	69	46	58
10/24/2024	0	0	0	0	0	0	0	0	0	0	0	60	38	49
10/25/2024	0.04	0.04	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.02	0.03	61	41	51
10/26/2024	0	0	0	0	0	0	0	0	0	0	0	57	40	49
10/27/2024	0	0	0	0	0	0	0	0	0	0	0	59	33	46
10/28/2024	0	0	0	0	0	0	0	0	0	0	0	60	37	49
10/29/2024	0	0	0	0	0	0	0	0	0	0	0	79	49	64
10/30/2024	0	0	0	0	0	0	0	0	0	0	0	77	64	71
10/31/2024	0	0	0	0	0	0	0	0	0	0	0	76	54	65
Total	1.53	1.77	1.64	1.44	1.51	1.88	1.52	1.47	1.80	1.84	1.70	68	45	57

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-13
Daily Precipitation for November 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
11/1/2024	0	0	0.01	0	0	0.01	0	0	0	0	0	55	39	47
11/2/2024	0	0	0	0	0	0	0	0	0	0	0	56	34	45
11/3/2024	0	0	0	0	0	0	0	0	0	0	0	61	38	50
11/4/2024	0.06	0.02	0.04	0.03	0.02	0.02	0.01	0.02	0.02	0.02	0.02	71	58	65
11/5/2024	0	0	0	0	0	0	0	0	0	0	0	75	61	68
11/6/2024	0.05	0.06	0.03	0.02	0.06	0.10	0.06	0.04	0.06	0.08	0.07	70	50	60
11/7/2024	0	0	0	0	0	0	0	0	0	0	0	60	46	53
11/8/2024	0	0	0	0	0	0	0	0	0	0	0	62	42	52
11/9/2024	0	0	0	0	0	0	0	0	0	0	0	56	37	47
11/10/2024	0.68	0.76	0.74	0.76	0.62	0.74	0.61	0.63	0.63	0.69	0.62	59	47	53
11/11/2024	0	0	0	0	0	0	0	0	0	0	0	59	44	52
11/12/2024	0	0	0	0	0	0	0	0	0	0	0	50	36	43
11/13/2024	0.01	0	0	0	0	0	0	0	0	0	0	53	33	43
11/14/2024	0.56	0.48	0.60	0.47	0.46	0.56	0.39	0.45	0.48	0.52	0.48	51	44	48
11/15/2024	0.01	0	0	0	0	0	0	0	0	0	0	51	47	49
11/16/2024	0	0	0	0	0	0	0	0	0	0	0	51	46	49
11/17/2024	0.03	0.01	0.03	0.03	0.03	0.01	0.03	0.02	0.03	0.03	0.03	55	45	50
11/18/2024	0.01	0	0.01	0	0	0.01	0	0.01	0	0	0	58	40	49
11/19/2024	0.17	0.14	0.19	0.15	0.12	0.14	0.08	0.11	0.13	0.13	0.13	61	47	54
11/20/2024	0.19	0.18	0.17	0.17	0.17	0.20	0.19	0.17	0.13	0.12	0.17	50	37	44
11/21/2024	0.02	0.01	0.03	0.08	0.08	0.06	0.10	0.15	0.09	0.09	0.11	38	32	35
11/22/2024	0	0	0	0.01	0	0	0.01	0.01	0	0	0	46	33	40
11/23/2024	0	0	0.01	0	0	0	0	0	0.01	0	0	46	42	44
11/24/2024	0	0	0	0	0	0	0	0	0	0	0	43	40	42
11/25/2024	0.04	0.01	0.03	0.04	0.02	0.04	0.02	0.04	0.02	0.04	0.03	51	41	46
11/26/2024	0	0	0	0	0	0	0	0	0	0	0	50	33	42
11/27/2024	0.01	0.02	0.03	0.04	0.03	0.04	0.02	0.03	0.03	0.03	0.02	47	31	39
11/28/2024	0	0	0	0	0	0	0	0	0	0	0	42	33	38
11/29/2024	0.01	0.12	0.03	0.10	0.07	0.10	0.10	0.01	0.05	0.07	0.10	33	24	29
11/30/2024	0	0	0	0	0	0	0	0	0	0	0	26	23	25
Total	1.85	1.81	1.95	1.90	1.68	2.03	1.62	1.69	1.68	1.82	1.78	53	40	47

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-14
Daily Precipitation for December 2024

Date	Daily Precipitation (inches)											DTW Daily Temperature (°F)		
	R-18	R-02	R-10	DTW	R-09	R-04	R-08	R-15	R-17	R-06	R-16	Max.	Min.	Avg.
12/1/2024	0	0	0	0	0	0	0	0	0	0	0	30	23	27
12/2/2024	0	0	0	0	0	0	0	0.06	0	0	0	36	22	29
12/3/2024	0	0	0	0	0	0	0	0	0	0	0	35	21	28
12/4/2024	0	0.04	0	0.03	0.01	0.05	0.01	0.01	0.02	0.02	0.02	38	24	31
12/5/2024	0	0	0	0	0	0	0	0	0	0	0	31	19	25
12/6/2024	0	0	0	0	0	0	0	0	0	0	0	35	19	27
12/7/2024	0	0	0	0	0	0	0	0	0	0	0	42	28	35
12/8/2024	0	0	0	0	0	0	0	0	0	0	0	52	34	43
12/9/2024	0.35	0.33	0.39	0.39*	0.31	0.37	0.32	0.34	0.34	0.40	0.38	51	37	44
12/10/2024	0	0	0	0	0	0	0	0	0	0	0	50	33	42
12/11/2024	0	0.03	0	0.01	0	0.05	0	0	0.01	0.02	0	37	24	31
12/12/2024	0	0	0	0.01	0	0	0	0	0	0	0	24	13	19
12/13/2024	0	0	0	0.02	0	0	0	0	0	0	0	23	10	17
12/14/2024	0	0	0	0	0	0	0	0	0	0	0	37	15	26
12/15/2024	0.53	0.50	0.55	0.42*	0.46	0.56	0.48	0.52	0.46	0.56	0.47	41	34	38
12/16/2024	0.19	0.18	0.21	0.19	0.19	0.30	0.17	0.17	0.24	0.27	0.25	54	39	47
12/17/2024	0	0	0	0	0	0	0	0	0	0	0	45	37	41
12/18/2024	0	0	0	0	0	0	0	0	0	0	0	37	33	35
12/19/2024	0	0	0	0	0	0	0	0	0	0	0	33	29	31
12/20/2024	0.05	0.04	0.05	0.07	0.05	0.08	0.06	0.05	0.05	0.05	0.05	33	25	29
12/21/2024	0	0	0	0	0	0	0	0	0	0	0	27	15	21
12/22/2024	0	0	0	0	0	0	0	0	0	0	0	28	11	20
12/23/2024	0.14	0.12	0.16	0.19	0.19	0.25	0.18	0.19	0.19	0.23	0.25	34	25	30
12/24/2024	0	0	0	0	0	0	0	0.04	0	0	0	36	33	35
12/25/2024	0	0	0	0	0	0	0	0	0	0	0	37	31	34
12/26/2024	0	0	0	0	0	0	0	0.01	0	0	0	42	36	39
12/27/2024	0.07	0.06	0.10	0.09	0.06	0.08	0.07	0.08	0.09	0.12	0.11	47	37	42
12/28/2024	0.01	0.01	0	0.02	0.02	0.02	0.03	0.01	0.02	0	0.02	58	42	50
12/29/2024	1.32	1.26	1.53	1.43	1.29	1.64	1.49	1.56	1.47	1.37	1.34	46	38	42
12/30/2024	0.11	0.16	0.12	0.23	0.24	0.35	0.28	0.24	0.25	0.29	0.32	49	34	42
12/31/2024	0.04	0.03	0.04	0.08	0.03	0.18	0.13	0.11	0.14	0.13	0.15	42	33	38
Total	2.77	2.73	3.11	3.27*	2.82	3.75	3.09	3.28	3.14	3.33	3.21	39	28	33

Legend

X.XX*	Missing or suspect data
t	Trace amount of precipitation (less than 0.01 inches)

Table 5-15
Summary of Precipitation Data for Significant Storm Events

Period: 1/1/2024 through 12/31/2024

Significant Event No.[1]	Major Storm Event[2]	DWTF Peak Hourly Flow Rate (cfs)	Start Date	Stop Date	Preceding Week Rainfall (inches)	Event Precipitation Depth (inches)				Coefficient of Variation[4]
						Minimum	Average[3]	Maximum	Std. Dev	
1	-	181	1/9/2024	1/13/2024	0.10	1.25	1.73	2.21	0.30	17%
2	A	324	1/22/2024	1/30/2024	0.14	2.23	2.60	3.18	0.28	11%
3	-	207	4/10/2024	4/12/2024	0.03	1.34	1.54	1.97	0.18	12%
4	-	175	4/27/2024	4/30/2024	0.15	0.86	1.16	1.47	0.18	15%
5	-	159	5/25/2024	5/29/2024	0.11	1.11	1.39	1.69	0.24	17%
6	-	163	6/29/2024	6/29/2024	0.67	0.96	1.08	1.29	0.36	33%
7	-	211	7/9/2024	7/10/2024	0.06	1.31	2.33	3.50	0.80	34%
8	-	189	8/5/2024	8/6/2024	0.36	1.24	1.47	1.86	0.17	12%
9	-	186	8/25/2024	8/28/2024	0.26	1.23	1.93	2.60	0.41	21%
10	-	145	10/12/2024	10/14/2024	0.01	1.12	1.43	1.73	0.17	12%
11	-	211	12/29/2024	12/31/2024	0.29	1.45	1.76	2.17	0.21	12%

Notes:

1) Significant storm events are defined as those with at least 0.5 inches of rainfall occurring on a single day with an event total of at least 1.0 inch of rainfall. Significant storm events are separated by at least 2 consecutive days without precipitation over 0.1 inches. This storm event definition is based on the arithmetic mean of the rainfall recorded by all rain gauges used in the analysis for that storm.

2) Major storm events are a subgroup of significant storm events which result in the peak hourly influent flow rate to the DWTF reaching or exceeding 175 MGD (271 cfs).

3) The average precipitation value is an arithmetic average of the collection of point gauges.

4) The coefficient of variation is the ratio of the standard deviation to the average. It provides a normalized assessment of the degree of spatial variability for a given event. This allows comparisons to be made between events regarding their uniformity over the service area independent of the magnitude of each event. A low coefficient of variation means the storm event was spatially uniform over the district, high coefficient of variation means the storm event was highly variable over the district.

6) PEAK FLOW RATES FOR CONTROLLED FLOW COMMUNITIES

Table 6-1 lists the peak hourly flow rates for the flow meters along the Riverdrive Interceptor for each significant/major storm event. The wet weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017) are also given. These MAFLs are used to check whether or not the incoming flow rates are being regulated properly for the significant/major storm events. Exceedances of the MAFLs are highlighted (if any).

Incremental peak hourly flow rates are estimated if the total peak hourly flow rates for the flow meters exceed the MAFLs by 5% or more. Table 6-2 lists the incremental peak hourly flow rates for the flow meters along the Riverdrive Interceptor for these events. The incremental wet weather MAFLs from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017) are also given. Exceedances of the incremental MAFLs are highlighted (if any).

Appendix D includes hydrographs at select locations for the major storm events, if any.

Table 6-1
Downriver Sewage Disposal System
Peak Hourly Flow Rates by Meter for Controlled Flow Communities

Meter =		RR-1		EC-6		RD-1		SW	
Total Flow Formula =		[RR-1]		[EC-6]		[RD-1]		[SW] + [SWB]	
Location =		River Rouge CSO Basin Outlet		Riverdrive Interceptor South of Southfield Road		Riverdrive Interceptor North of Northline Road		SWRDDD Connection	
Communities Included in Total Flow =		River Rouge		River Rouge, Ecorse, & Lincoln Park (part)		River Rouge, Ecorse, Lincoln Park (part), & Allen Park (part)		Southgate (part) & Wyandotte	
Total Wet Weather MAFL =		11.26 cfs		23.46 cfs		65.82 cfs		31.73 cfs	
		Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume
Significant Storm Event 1 January 9-13, 2024 1.73 inches	Start of First Exceedence	1/9/24 12:30	--	1/9/24 20:50	--	--	--	1/11/24 9:45	--
	End of Last Exceedence	1/13/24 15:05	--	1/9/24 20:50	--	--	--	1/15/24 3:40	--
	Total Time of Exceedence	35:25	--	0:05	--	--	--	64:15	--
	Total Volume Above MAFL	--	1.89 MG	--	0.00 MG	--	--	--	13.68 MG
	Peak Hourly Flow Rate	1/9/24 14:00	13.82 cfs	1/9/24 20:50	23.48 cfs	1/10/24 12:05	59.69 cfs	1/11/24 11:40	49.75 cfs
Significant Storm Event 2 January 22-30, 2024 2.60 inches	Start of First Exceedence	1/23/24 14:40	--	1/24/24 19:10	--	1/26/24 0:30	--	1/24/24 15:30	--
	End of Last Exceedence	1/29/24 8:15	--	1/27/24 1:00	--	1/28/24 20:25	--	2/1/24 13:35	--
	Total Time of Exceedence	103:05	--	18:10	--	52:15	--	147:15	--
	Total Volume Above MAFL	--	6.37 MG	--	1.40 MG	--	3.54 MG	--	65.52 MG
	Peak Hourly Flow Rate	1/24/24 16:00	13.82 cfs	1/26/24 15:55	29.73 cfs	1/26/24 5:05	70.76 cfs	1/28/24 12:00	116.63 cfs
Significant Storm Event 3 April 10-12, 2024 1.54 inches	Start of First Exceedence	4/11/24 21:00	--	--	--	4/11/24 21:35	--	4/11/24 1:25	--
	End of Last Exceedence	4/12/24 10:00	--	--	--	4/12/24 16:30	--	4/13/24 23:55	--
	Total Time of Exceedence	3:20	--	--	--	17:25	--	33:55	--
	Total Volume Above MAFL	--	0.02 MG	--	--	--	0.77 MG	--	11.53 MG
	Peak Hourly Flow Rate	4/11/24 21:25	11.74 cfs	4/12/24 8:25	20.01 cfs	4/11/24 22:25	71.06 cfs	4/13/24 23:50	60.88 cfs
Significant Storm Event 4 April 27-30, 2024 1.16 inches	Start of First Exceedence	4/28/24 11:50	--	--	--	--	--	4/27/24 5:20	--
	End of Last Exceedence	4/28/24 12:30	--	--	--	--	--	4/29/24 19:05	--
	Total Time of Exceedence	0:45	--	--	--	--	--	18:40	--
	Total Volume Above MAFL	--	0.00 MG	--	--	--	--	--	4.18 MG
	Peak Hourly Flow Rate	4/28/24 12:05	11.29 cfs	4/29/24 22:10	18.05 cfs	4/30/24 2:30	63.43 cfs	4/28/24 7:40	60.99 cfs
Significant Storm Event 5 May 25-29, 2024 1.39 inches	Start of First Exceedence	5/27/24 8:00	--	--	--	--	--	5/25/24 3:35	--
	End of Last Exceedence	5/27/24 12:50	--	--	--	--	--	5/29/24 16:55	--
	Total Time of Exceedence	4:45	--	--	--	--	--	32:25	--
	Total Volume Above MAFL	--	0.02 MG	--	--	--	--	--	6.78 MG
	Peak Hourly Flow Rate	5/27/24 9:05	11.53 cfs	5/27/24 7:00	16.64 cfs	5/26/24 23:10	58.47 cfs	5/29/24 15:10	61.05 cfs
Significant Storm Event 6 June 29, 2024 1.08 inches	Start of First Exceedence	6/29/24 6:40	--	--	--	6/29/24 7:20	--	--	--
	End of Last Exceedence	6/30/24 0:40	--	--	--	6/29/24 20:25	--	--	--
	Total Time of Exceedence	18:05	--	--	--	12:05	--	--	--
	Total Volume Above MAFL	--	0.25 MG	--	--	--	0.38 MG	--	--
	Peak Hourly Flow Rate	6/29/24 7:35	12.23 cfs	6/29/24 8:35	19.79 cfs	6/29/24 8:25	69.37 cfs	6/29/24 3:30	29.10 cfs
Significant Storm Event 7 July 9-10, 2024 2.33 inches	Start of First Exceedence	7/10/24 8:20	--	7/10/24 13:45	--	7/10/24 4:30	--	7/9/24 7:25	--
	End of Last Exceedence	7/10/24 22:35	--	7/10/24 13:45	--	7/11/24 13:00	--	7/14/24 0:10	--
	Total Time of Exceedence	13:10	--	0:05	--	27:05	--	65:20	--
	Total Volume Above MAFL	--	0.35 MG	--	0.00 MG	--	3.33 MG	--	10.95 MG
	Peak Hourly Flow Rate	7/10/24 12:35	13.78 cfs	7/10/24 13:45	23.47 cfs	7/10/24 13:35	83.74 cfs	7/9/24 8:00	61.98 cfs
Significant Storm Event 8 August 5-6, 2024 1.47 inches	Start of First Exceedence	8/6/24 13:15	--	8/6/24 12:55	--	8/6/24 13:50	--	8/6/24 4:30	--
	End of Last Exceedence	8/6/24 23:55	--	8/6/24 16:05	--	8/7/24 2:30	--	8/8/24 17:40	--
	Total Time of Exceedence	7:25	--	3:15	--	12:45	--	43:00	--
	Total Volume Above MAFL	--	0.03 MG	--	0.22 MG	--	0.82 MG	--	5.39 MG
	Peak Hourly Flow Rate	8/6/24 14:35	11.66 cfs	8/6/24 13:20	28.42 cfs	8/6/24 15:35	70.56 cfs	8/6/24 5:05	45.90 cfs
Significant Storm Event 9 August 25-28, 2024 1.93 inches	Start of First Exceedence	--	--	--	--	--	--	8/16/24 2:05	--
	End of Last Exceedence	--	--	--	--	--	--	8/20/24 15:55	--
	Total Time of Exceedence	--	--	--	--	--	--	57:55	--
	Total Volume Above MAFL	--	--	--	--	--	--	--	16.03 MG
	Peak Hourly Flow Rate	8/16/24 15:45	8.26 cfs	8/18/24 20:55	14.48 cfs	8/18/24 19:45	57.84 cfs	8/16/24 12:40	64.18 cfs
Significant Storm Event 10 October 12-14, 2024 1.43 inches	Start of First Exceedence	8/28/24 0:40	--	8/28/24 1:10	--	8/28/24 1:10	--	8/27/24 17:10	--
	End of Last Exceedence	8/29/24 7:55	--	8/28/24 9:35	--	8/29/24 0:45	--	8/31/24 17:55	--
	Total Time of Exceedence	16:55	--	7:15	--	14:55	--	52:40	--
	Total Volume Above MAFL	--	0.21 MG	--	0.81 MG	--	3.21 MG	--	12.06 MG
	Peak Hourly Flow Rate	8/28/24 22:45	12.27 cfs	8/28/24 2:10	32.32 cfs	8/28/24 1:50	77.47 cfs	8/31/24 13:05	62.66 cfs
Significant Storm Event 11 December 29-31, 2024 1.76 inches	Start of First Exceedence	12/29/24 19:45	--	--	--	12/29/24 11:10	--	12/29/24 5:45	--
	End of Last Exceedence	12/31/24 4:15	--	--	--	12/30/24 22:25	--	1/3/25 14:25	--
	Total Time of Exceedence	30:25	--	--	--	24:20	--	42:35	--
	Total Volume Above MAFL	--	0.74 MG	--	--	--	1.05 MG	--	7.96 MG
	Peak Hourly Flow Rate	12/30/24 11:35	13.09 cfs	12/29/24 19:00	20.63 cfs	12/30/24 14:05	71.27 cfs	12/31/24 23:50	51.37 cfs

Notes:

1. The Wet Weather MAFLs for Controlled Flow Communities are from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017). The communities are responsible for regulating their flow rates to the Riverdrive Interceptor to these flow limits. The MAFLs for each community are listed below:
   i. The MAFL for River Rouge at RR-1 is 11.26 cfs.
   ii. The MAFL for Ecorse at EC-6 is 9.20 cfs.
   iii. The MAFL for Lincoln Park is 28.16 cfs.
   iv. The MAFL for Lincoln Park is divided between two meters 3.00 cfs at EC-6 and 25.16 cfs at RD-1. The Reg-U-Flo Vortex Valve on the Applewood connection restricts Lincoln Parks flow rate to about 3.00 cfs.
   v. The MAFL for Allen Park at RD-1 (via Lincoln Park) is 17.20 cfs.
   vi. The MAFL for Southgate at SW is 7.67 cfs.
   vii. The MAFL for Wyandotte at SW is 24.06 cfs.

Legend:

XX.XX	Exceeds wet weather MAFL by 0 to 5%
XX.XX	Exceeds wet weather MAFL by > 5%
XX.XX	Exceeds wet weather MAFL, coordinated with Veolia

Table 6-2
Downriver Sewage Disposal System
Incremental Peak Hourly Flow Rates by Meter District for Controlled Flow Communities

Meter District =		RR-1		EC-6		RD-1		SW	
Incremental Flow Formula =		[RR-1]		[EC-6] - [RR-1r]		[RD-1] - [EC-6r]		[SW] + [SWB]	
Location =		River Rouge CSO Basin Outlet		Riverdrive Interceptor South of Southfield Road		Riverdrive Interceptor North of Northline Road		SWRDDD Connection	
Communities Included in Total Flow =		River Rouge		Ecorse & Lincoln Park (part)		Lincoln Park (part) & Allen Park (part)		Southgate (part) & Wyandotte	
Incremental Wet Weather MAFL =		11.26 cfs		12.20 cfs		42.36 cfs		31.73 cfs	
		Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume	Date/Time of Occurrence	Flow Rate / Volume
Significant Storm Event 1 January 9-13, 2024 1.73 inches	Start of First Exceedence	1/9/24 12:30	--	--	--	1/10/24 9:45	--	1/11/24 9:45	--
	End of Last Exceedence	1/13/24 15:05	--	--	--	1/10/24 15:05	--	1/15/24 3:40	--
	Total Time of Exceedence	35:25	--	--	--	5:25	--	64:15	--
	Total Volume Above MAFL	--	1.89 MG	--	--	--	0.36 MG	--	13.68 MG
	Peak Hourly Flow Rate	1/9/24 14:00	13.82 cfs	1/9/24 20:50	9.66 cfs	1/10/24 12:00	46.84 cfs	1/11/24 11:40	49.75 cfs
Significant Storm Event 2 Major Storm Event A January 22-30, 2024 2.60 inches	Start of First Exceedence	1/23/24 14:40	--	1/26/24 1:50	--	1/24/24 14:20	--	1/24/24 15:30	--
	End of Last Exceedence	1/29/24 8:15	--	1/26/24 19:20	--	1/31/24 4:10	--	2/1/24 13:35	--
	Total Time of Exceedence	103:05	--	9:45	--	134:25	--	147:15	--
	Total Volume Above MAFL	--	6.37 MG	--	0.49 MG	--	12.12 MG	--	65.52 MG
	Peak Hourly Flow Rate	1/24/24 16:00	13.82 cfs	1/26/24 15:55	15.91 cfs	1/28/24 11:45	49.60 cfs	1/28/24 12:00	116.63 cfs
Significant Storm Event 3 April 10-12, 2024 1.54 inches	Start of First Exceedence	4/11/24 21:00	--	--	--	4/11/24 4:30	--	4/11/24 1:25	--
	End of Last Exceedence	4/12/24 10:00	--	--	--	4/13/24 15:20	--	4/13/24 23:55	--
	Total Time of Exceedence	3:20	--	--	--	58:40	--	33:55	--
	Total Volume Above MAFL	--	0.02 MG	--	--	--	7.75 MG	--	11.53 MG
	Peak Hourly Flow Rate	4/11/24 21:25	11.74 cfs	4/11/24 21:15	9.16 cfs	4/12/24 12:55	51.97 cfs	4/13/24 23:50	60.88 cfs
Significant Storm Event 4 April 27-30, 2024 1.16 inches	Start of First Exceedence	4/28/24 11:50	--	--	--	4/29/24 18:50	--	4/27/24 5:20	--
	End of Last Exceedence	4/28/24 12:30	--	--	--	4/30/24 9:10	--	4/29/24 19:05	--
	Total Time of Exceedence	0:45	--	--	--	14:25	--	18:40	--
	Total Volume Above MAFL	--	0.00 MG	--	--	--	1.09 MG	--	4.18 MG
	Peak Hourly Flow Rate	4/28/24 12:05	11.29 cfs	4/29/24 22:10	7.45 cfs	4/30/24 2:45	47.99 cfs	4/28/24 7:40	60.99 cfs
Significant Storm Event 5 May 25-29, 2024 1.39 inches	Start of First Exceedence	5/27/24 8:00	--	--	--	5/26/24 20:45	--	5/25/24 3:35	--
	End of Last Exceedence	5/27/24 12:50	--	--	--	5/27/24 15:05	--	5/29/24 16:55	--
	Total Time of Exceedence	4:45	--	--	--	12:40	--	32:25	--
	Total Volume Above MAFL	--	0.02 MG	--	--	--	0.61 MG	--	6.78 MG
	Peak Hourly Flow Rate	5/27/24 9:05	11.53 cfs	5/26/24 21:00	8.28 cfs	5/27/24 11:10	45.75 cfs	5/29/24 15:10	61.05 cfs
Significant Storm Event 6 June 29, 2024 1.08 inches	Start of First Exceedence	6/29/24 6:40	--	--	--	6/29/24 5:00	--	--	--
	End of Last Exceedence	6/30/24 0:40	--	--	--	6/29/24 23:35	--	--	--
	Total Time of Exceedence	18:05	--	--	--	18:40	--	--	--
	Total Volume Above MAFL	--	0.25 MG	--	--	--	2.37 MG	--	--
	Peak Hourly Flow Rate	6/29/24 7:35	12.23 cfs	6/29/24 9:05	7.84 cfs	6/29/24 8:00	50.45 cfs	6/29/24 3:30	29.10 cfs
Significant Storm Event 7 July 9-10, 2024 2.33 inches	Start of First Exceedence	7/10/24 8:20	--	--	--	7/10/24 2:40	--	7/9/24 7:25	--
	End of Last Exceedence	7/10/24 22:35	--	--	--	7/12/24 6:15	--	7/14/24 0:10	--
	Total Time of Exceedence	13:10	--	--	--	51:40	--	65:20	--
	Total Volume Above MAFL	--	0.35 MG	--	--	--	7.83 MG	--	10.95 MG
	Peak Hourly Flow Rate	7/10/24 12:35	13.78 cfs	7/10/24 13:55	9.86 cfs	7/10/24 13:35	60.74 cfs	7/9/24 8:00	61.98 cfs
Significant Storm Event 8 August 5-6, 2024 1.47 inches	Start of First Exceedence	8/6/24 13:15	--	8/6/24 12:50	--	8/6/24 13:00	--	8/6/24 4:30	--
	End of Last Exceedence	8/6/24 23:55	--	8/6/24 15:55	--	8/7/24 12:40	--	8/8/24 17:40	--
	Total Time of Exceedence	7:25	--	3:10	--	22:20	--	43:00	--
	Total Volume Above MAFL	--	0.03 MG	--	0.25 MG	--	2.82 MG	--	5.39 MG
	Peak Hourly Flow Rate	8/6/24 14:35	11.66 cfs	8/6/24 13:20	18.21 cfs	8/7/24 0:45	51.16 cfs	8/6/24 5:05	45.90 cfs
Significant Storm Event 9 August 25-28, 2024 1.93 inches	Start of First Exceedence	--	--	--	--	8/18/24 17:05	--	8/16/24 2:05	--
	End of Last Exceedence	--	--	--	--	8/18/24 20:40	--	8/20/24 15:55	--
	Total Time of Exceedence	--	--	--	--	3:10	--	57:55	--
	Total Volume Above MAFL	--	--	--	--	--	0.13 MG	--	16.03 MG
	Peak Hourly Flow Rate	8/16/24 15:45	8.26 cfs	8/18/24 17:35	8.79 cfs	8/18/24 19:55	45.70 cfs	8/16/24 12:40	64.18 cfs
Significant Storm Event 10 October 12-14, 2024 1.43 inches	Start of First Exceedence	8/28/24 0:40	--	8/28/24 1:05	--	8/28/24 0:55	--	8/27/24 17:10	--
	End of Last Exceedence	8/29/24 7:55	--	8/28/24 9:45	--	8/29/24 1:25	--	8/31/24 17:55	--
	Total Time of Exceedence	16:55	--	8:20	--	19:30	--	52:40	--
	Total Volume Above MAFL	--	0.21 MG	--	1.18 MG	--	3.15 MG	--	12.06 MG
	Peak Hourly Flow Rate	8/28/24 22:45	12.27 cfs	8/28/24 3:30	23.34 cfs	8/28/24 1:25	56.26 cfs	8/31/24 13:05	62.66 cfs
Significant Storm Event 11 December 29-31, 2024 1.76 inches	Start of First Exceedence	12/29/24 19:45	--	--	--	12/29/24 9:10	--	12/29/24 5:45	--
	End of Last Exceedence	12/31/24 4:15	--	--	--	1/1/25 2:40	--	1/3/25 14:25	--
	Total Time of Exceedence	30:25	--	--	--	64:45	--	42:35	--
	Total Volume Above MAFL	--	0.74 MG	--	--	--	11.07 MG	--	7.96 MG
	Peak Hourly Flow Rate	12/30/24 11:35	13.09 cfs	12/29/24 19:15	9.68 cfs	12/30/24 19:25	55.02 cfs	12/31/24 23:50	51.37 cfs

Notes:

1. The Wet Weather MAFLs for Controlled Flow Communities are from the Downriver Utility Wastewater Authority Service Agreement (March 21, 2017). The communities are responsible for regulating their flow rates to the Riverdrive Interceptor to these flow limits. The MAFLs for each community are listed below:
   i. The MAFL for River Rouge at RR-1 is 11.26 cfs.
   ii. The MAFL for Ecorse at EC-6 is 9.20 cfs.
   iii. The MAFL for Lincoln Park is 28.16 cfs.
   iv. The MAFL for Lincoln Park is divided between two meters 3.00 cfs at EC-6 and 25.16 cfs at RD-1. The Reg-U-Flo Vortex Valve on the Applewood connection restricts Lincoln Parks flow rate to about 3.00 cfs.
   v. The MAFL for Allen Park at RD-1 (via Lincoln Park) is 17.20 cfs.
   vi. The MAFL for Southgate at SW is 7.67 cfs.
   vii. The MAFL for Wyandotte at SW is 24.06 cfs.

Legend:

XX.XX	Exceeds wet weather MAFL by 0 to 5%
XX.XX	Exceeds wet weather MAFL by > 5%
XX.XX	Exceeds wet weather MAFL, coordinated with Veolia

7) WET WEATHER VOLUMES FOR NON-CONTROLLED FLOW COMMUNITIES

The peak 96-hour wet weather volumes for the non-controlled flow communities during the major storm events were estimated using the flow monitoring data set. These volumes were compared to those for the 4.42-inch storm event used in the design of the Downriver tunnel system as given on Table 7-1. Exceedances of the peak 96-hour volumes allocated to each community during the major storm events during this reporting period are highlighted, if any. Table 7-2 lists the peak 96-hour incremental volumes for each community by meter district component. Table 7-3 lists the peak 96-hour incremental volumes for each meter district by community component. Table 7-4 lists the peak hourly flow rates and 96-hour volumes at each meter, and Table 7-5 lists the peak hydraulic grade lines at each meter for the major storm event.

Table 7-1
Peak 96 Hour Total Volumes for Non-Controlled Flow Communities

Community	Total Volume (MG)	
	4.42 inch Design Storm	Major Storm Event A
Allen Park (part)	29.23	39.26
Belleville	4.86	3.73
Brownstown Twp.	20.90	12.02
Dearborn Heights	43.76	45.59
Riverview	28.30	22.34
Romulus	88.43	53.09
Southgate (part)	31.24	66.82
Taylor	164.45	118.63
Van Buren Twp.	7.04	7.31
Total	418.21	368.79

Legend:

XX.XX	Exceeds design storm volume by 0 to 20%
XX.XX	Exceeds design storm volume by > 20%

Table 7-2
Peak 96 Hour Total Volumes for Major Storm Events Summarized by Community

Community	Meter District	*Major Storm Event A*	
		Total Peak 96 Hour Incremental Volume (MG)	Peak 96 Hour Incremental Volume (MG)
Allen Park	PC-1	50.58	1.38
	P-1	69.79	12.16
	RD-1	117.96	44.90
	APO-1 + APO-2	25.72	25.72
	Total	264.05	84.16
Belleville	PA-4	11.04	3.73
Brownstown Twp.	P-2	11.96	11.95
	PA-2	32.27	0.07
	Total	44.23	12.02
Dearborn Hts.	TB-1	58.64	45.59
Ecorse	EC-6	18.43	12.73
Lincoln Park	EC-6	18.43	5.70
	RD-1	117.96	73.06
	Total	136.39	78.76
River Rouge	RR-1	34.40	34.40
Riverview	RV-1	22.34	22.34
Romulus	PA-3	27.98	27.98
	PD-2	25.11	25.11
	Total	53.09	53.09
Southgate	P-1	69.79	57.63
	PB-1	14.02	5.46
	SW	138.27	51.78
	TPS+IPS	3.73	3.73
	Total	225.81	118.61
Taylor	P-2	11.96	0.01
	PA-2	32.27	32.20
	PB-1	14.02	8.56
	TB-1	58.64	13.05
	PC-1	50.58	49.20
	PD-1	15.61	15.61
	Total	183.07	118.63
Van Buren Twp.	PA-4	11.04	7.31
Wyandotte	SW	138.27	86.49

Table 7-3
Peak 96 Hour Total Volumes for Major Storm Events Summarized by Meter District

Meter District	Incremental Meter District Formula	Community	Year 2020 Incremental Residential Population	Meter District Percentage	Major Storm Event A	
					Meter District Peak 96 Hour Volume (MG)	Peak 96 Hour Incremental Volume (MG)
APO-1 + APO-2	[APO-1]+[APO-2]	Allen Park	0	100.0%	25.72	25.72
EC-6	[EC-6]-[RR-1]	Ecorse	9,305	69.1%	18.43	12.73
		Lincoln Park	4,169	30.9%		5.70
		Total	13,474	100%		18.43
P-1	[P-1]+[PM-1]-[P-2] -[PA-2]-[PB-1]-[PD-1]-[PC-1]	Allen Park	2,338	17.4%	69.79	12.16
		Southgate	11,079	82.6%		57.63
		Total	13,417	100%		69.79
P-2	[P-2]	Brownstown Twp.	11,002	99.9%	11.96	11.95
		Taylor	10	0.1%		0.01
		Total	11,012	100%		11.96
PA-2	[PA-2]+[ER-1] -[PA-3]-[ER-2]	Brownstown Twp.	29	0.2%	32.27	0.07
		Taylor	14,125	99.8%		32.20
		Total	14,154	100%		32.27
PA-3	[PA-3]+[ER-2] -[PA-4]	Romulus	14,420	100.0%	27.98	27.98
PA-4	[PA-4]	Belleville	4,008	33.8%	11.04	3.73
		Van Buren Twp.	7,865	66.2%		7.31
		Total	11,873	100%		11.04
PB-1	[PB-1]	Southgate	3,214	38.9%	14.02	5.46
		Taylor	5,040	61.1%		8.56
		Total	8,254	100%		14.02
PC-1	[PC-1]+[CPO] +[CHPO]-[TB-1]	Allen Park	716	2.7%	50.58	1.38
		Taylor	25,577	97.3%		49.20
		Total	26,293	100%		50.58
PD-1	[PD-1]-[PD-2]+[PDO]	Taylor	13,083	100.0%	15.61	15.61
PD-2	[PD-2]	Romulus	8,069	100.0%	25.11	25.11
RD-1	[RD-1]-[EC-6]	Allen Park	22,170	38.1%	117.96	44.90
		Lincoln Park	36,076	61.9%		73.06
		Total	58,246	100%		117.96
RR-1	[RR-1]	River Rouge	7,224	100.0%	34.40	34.40
RV-1	[RV-1]	Riverview	12,490	100.0%	22.34	22.34
SW	[SW]+[SWB]	Southgate	15,003	37.5%	138.27	51.78
		Wyandotte	25,058	62.5%		86.49
		Total	40,061	100%		138.27
TB-1	[TB-1]+[TSO]	Dearborn Hts.	19,472	77.7%	58.64	45.59
		Taylor	5,574	22.3%		13.05
		Total	25,046	100%		58.64
TPS+IPS	Population Ratio of Meter District P-1	Southgate	718	100.0%	3.73	3.73

Notes:

1) [TPS+IPS] = (TPS+TPS Inc. Pop. / P-1 Inc. Pop.) x [P-1]

Table 7-4
Peak Flow Rates for Major Storm Events

System	Meter	Location	Major Storm Event A			
			Peak Hour		Peak 96 Hour	
			Date/Time	Flow Rate (cfs)	Date/Time	Cumulative Volume (MG)
Tunnel (Non-Controlled)	TB-1	Taylor Basin	1/27/24 4:15	14.65	1/24/24 21:10	36.27
	PC-1	Pelham Interceptor North of Goddard Road	1/28/24 16:10	26.12	1/26/24 13:30	60.31
	PD-2	Goddard Interceptor West of Inkster Road	1/26/24 6:20	19.69	1/25/24 15:15	25.11
	PD-1	Goddard Interceptor West of Allen Road	1/26/24 7:00	30.27	1/25/24 19:55	40.71
	PB-1	Northline Interceptor West of Fordline Road	1/26/24 4:15	15.94	1/24/24 17:20	14.02
	PA-4	Eureka Interceptor near Hannan Road	1/26/24 2:45	6.20	1/26/24 0:30	11.04
	PA-3	Eureka Interceptor at Inkster Road	1/26/24 3:15	20.70	1/25/24 23:20	35.32
	PA-2	Eureka Interceptor at Allen Road	1/26/24 3:50	35.68	1/25/24 23:55	60.34
	PA-1	Eureka Interceptor West of Fordline Road	1/26/24 2:45	29.30	1/25/24 23:15	53.38
	P-2	Pennsylvania Interceptor East of Dix-Toledo Road	1/26/24 5:15	10.09	1/25/24 12:45	11.96
	P-1	Pennsylvania Interceptor East of Fort Street	1/26/24 3:55	142.83	1/25/24 14:40	241.42
	RV-1	Pennsylvania Interceptor West of Jefferson Avenue	1/26/24 3:55	27.71	1/24/24 14:45	22.34
Riverdrive (Controlled)	RR-1	River Rouge CSO Basin Outlet Jefferson North of Victoria	1/24/24 16:00	13.82	1/24/24 21:15	34.40
	EC-6	Riverdrive Interceptor South of Southfield Road	1/26/24 15:55	29.73	1/24/24 16:20	52.83
	RD-1	Riverdrive Interceptor North of Northline Road	1/26/24 5:05	70.76	1/25/24 9:40	170.79
	SW + SWB	Southgate-Wyandotte Connection	1/28/24 12:00	116.63	1/27/24 16:05	138.27
Tunnel Connection Meters	TSO	At Pelham Basin	1/26/24 8:35	44.04	1/24/24 20:15	22.37
	APO-1	Belmont and Rosedale	1/26/24 5:10	57.96	1/26/24 1:45	9.56
	APO-2	Belmont and Quandt	1/26/24 4:20	47.12	1/26/24 1:40	16.16
	CHPO	Pelham Road South of R.R.	1/26/24 5:10	139.26	1/24/24 18:40	15.28
	CPO	Pelham Road North of Haskell	1/26/24 5:10	134.18	1/23/24 0:00	11.27
	PDO	Allen Road and Goddard	1/24/24 0:00	0.00	1/23/24 0:00	0.00
	ER-2	Eureka Road and Inkster	1/26/24 4:50	6.54	1/26/24 2:35	3.70
	ER-1	Allen Road and Eureka Road	1/26/24 6:05	13.97	1/26/24 3:50	10.95
	PM-1	Pennsylvania Ave. at Fordline	1/26/24 5:15	191.20	1/23/24 0:00	15.72
DWTF	IPS + TPS	DWTF Influent	1/26/24 7:40	323.59	1/25/24 10:05	617.15

Table 7-5
Peak Hydraulic Grade Lines for Major Storm Events

System	Meter	Location	Rim Elevation (ft)	Invert Elevation (ft)	Diameter (ft)	Major Storm Event A			
						Date/Time of Occurrence	Peak Depth (ft)	Peak HGL (ft)	
Tunnel (Non-Controlled)	PC-1	Pelham Interceptor North of Goddard Road	601.9	565.0	4.5	1/26/2024 2:55-11:50	≥4.7	≥570	⊘
	PD-2	Goddard Interceptor West of Inkster Road	623.3	598.3	4.5	1/26/24 9:25	4.4	602.7	○
	PD-1	Goddard Interceptor West of Allen Road	602.2	575.5	4.0	1/26/24 5:25	2.7	578.3	○
	PB-1	Northline Interceptor West of Fordline Road	596.1	569.5	3.0	1/26/24 4:50	2.1	571.6	○
	PA-4	Eureka Interceptor near Hannan Road	656.9	635.1	3.5	-	-	-	-
	PA-3	Eureka Interceptor at Inkster Road	622.6	601.0	3.5	-	-	-	-
	PA-2	Eureka Interceptor at Allen Road	601.5	576.2	4.0	1/26/24 4:55	4.1	580.3	⦿
	PA-1	Eureka Interceptor West of Fordline Road	594.9	570.4	4.0	-	-	-	-
	P-2	Pennsylvania Interceptor East of Dix-Toledo Road	598.9	577.3	3.0	1/26/24 5:40	1.9	579.2	○
	P-1	Pennsylvania Interceptor East of Fort Street	591.4	545.4	6.5	1/26/24 5:35	15.5	560.9	⦿
	RV-1	Pennsylvania Interceptor West of Jefferson Avenue	578.3	544.1	3.5	1/26/24 5:05	11.9	556.0	⦿
Riverdrive (Controlled)	RR-1	Riverdrive Interceptor South of Visger Road	582.2	566.2	3.0	-	-	-	-
	EC-6	Riverdrive Interceptor South of Southfield Road	579.3	554.5	4.5	1/26/24 5:15	16.4	570.9	⦿
	RD-1	Riverdrive Interceptor North of Northline Road	577.8	550.7	6.0	-	-	-	-
	SW	On Southgate-Wyandotte Connection	578.0	538.0	6.5	1/26/24 5:15	16.1	554.1	⦿
Tunnel Connection Meters	TSO	Connection to Tunnel at Pelham Basin	609.2	585.3	4.0	1/26/24 9:10	2.8	588.1	○
	APO-1	Allen Park Overflow at Belmont Road and Rosedale Road	594.6	565.5	3.0	1/26/24 4:25	10.3	575.7	⦿
	APO-2	Allen Park Overflow at Belmont Road and Quandt Road	597.2	571.0	3.0	1/26/24 2:35	4.9	575.9	⦿
	CHPO	Pelham Interceptor South of R.R.	603.0	566.5	4.5	1/26/24 5:35	9.3	575.7	⦿
	CPO	Pelham Interceptor North of Haskell Road	601.5	568.0	4.5	1/26/24 5:35	9.6	577.6	⦿
	PDO	Goddard Interceptor at Allen Road	602.0	570.0	4.0	1/26/24 6:35	2.3	572.3	○
	ER-2	Eureka Relief Sewer Extention on Eureka Road at Inkster Road	623.7	591.5	4.5	-	-	-	-
	ER-1	Eureka Relief Sewer at Allen Road	602.8	560.5	4.5	1/26/24 5:50	6.9	567.4	⦿
	PM-1	Pennsylvania Interceptor at Fordline Road	593.1	548.9	6.5	1/26/24 5:20	13.5	562.4	⦿
Tunnel Level Sensors	L-3	Allen and I-75 (North)	602.6	543.0	7.0	1/26/24 5:15	9.1	552.2	⦿
	L-5	Pelham and Champaign	601.3	546.8	7.0	-	-	-	-
	L-7	Rosedale and Belmont	593.2	552.9	6.5	1/26/24 4:55	10.1	562.9	⦿
	L-8	Pennsylvania Ave. at Fordline	592.2	537.5	7.5	1/26/2024 5:05-8:20	≥7.3	≥545.0	⊘
DWTF	IPS	Main Influent Pump Station Wet Well	-	528.5	NA	1/26/24 5:15	21.4	549.8	○
	TPS	Tunnel Pump Station Wet Well	-	524.7	NA	1/26/24 5:20	24.8	549.5	○

Notes:
1) Elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).
2) Devices PA-4, PA-3, PA-1, RR-1, RD-1, ER-2 and L-5 were out of service for the duration of Major Storm Event A

Key
Within sewer: ○
Surcharging sewer, grade elevation unknown: ⊗
Surcharging sewer, level exceeded top of range for sensor: ⊘
Surcharging sewer, grade elevation known: ⦿
Above grade: ●
Data not available: -

8) METER DATA SUMMARY

The flow monitoring data were reviewed and edited as summarized on Table 8-1. The flow monitoring data is summarized in more detail in Appendix C. This appendix includes: charts detailing data and meter maintenance issues that occurred during these months, and average daily flow rate plots for each meter. Data for each meter was carried through the analysis with the following exceptions:

- Flow rates are recalculated to account for sediment deposits for Meter SW. Details of the flow rate recalculation are provided in the Wayne County Downriver Sewage Disposal System Annual System Monitoring Report for 2013.
- The incremental flow rate for Meter District P-1 cannot be confidently and accurately calculated because it is too small relative to the total flow rate. Therefore, the incremental flow rate for Meter District P-1 is estimated using a ratio of the district's incremental population to the cumulative population of the upstream meters (Meters PC-1, PD-1, PB-1, PA-2 and P-2) multiplied by the sum of the cumulative district flow rates for Meters PC-1, PD-1, PB-1, PA-2 and P-2.
- The incremental flow rate for Meter District TPS + IPS cannot be confidently and accurately calculated because it is too small relative to the total flow rate. Therefore, the incremental flow rate for Meter District TPS + IPS is estimated using a ratio of the district's incremental population to the incremental population of the upstream Meter District P-1 multiplied by the incremental flow rate for Meter District P-1.
- Overflows to the DRSTS were calculated using the level sensor data and the previously developed ratings curves except for Meter TSO. The flow rates calculated with the area-velocity measurements were used for Meter TSO.

Table 8-1
Meter Data Review and Fixes for 2024

Meter	Start	Stop	Description of the Problem	Dry Period	Wet Period	Fix
APO-1	8/27/2024	8/29/2024	Missing data due to lost communication, batteries replaced		x	Correlation to APO-2
EC-6	6/22/2024	7/24/2024	Missing data due to lost communication, batteries replaced		x	Correlation to RD-1
ER-1	3/14/2024	5/7/2024	Missing data, communication cable replaced		x	Correlation to ER-2
	5/22/2024	5/31/2024	Missing data, communication cable replaced	x		Correlation to ER-2
	7/18/2024	8/16/2024	Missing data due to lost communication, batteries replaced	x		Correlation to ER-2
	9/6/2024	10/12/2024	Missing data due to lost communication, batteries replaced	x		Correlation to ER-2
	10/27/2024	11/10/2024	Missing data due to lost communication, manual collect	x		Correlation to ER-2
	12/8/2024	12/31/2024	Bad data		x	Correlation to ER-2
ER-2	1/26/2024	2/7/2024	Missing data, communication cable replaced		x	Correlation to ER-1
	5/7/2024	5/22/2024	Missing data due to lost communication, batteries replaced	x		Correlation to ER-1
L-3	12/5/2024	12/31/2024	Bad data		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
L-5	1/1/2024	3/27/2024	Missing data due to lost communication, batteries replaced		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
	5/26/2024	6/4/2024	Missing data due to lost communication, manual collect		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
	8/14/2024	8/28/2024	Bad data	x		No fix, device used to monitor system performance but not used to compute system or community flow rates
L-7	12/29/2024	12/31/2024	Bad data		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
L-8	2/2/2024	2/8/2024	Missing data due to lost communication, batteries replaced	x		No fix, device used to monitor system performance but not used to compute system or community flow rates
	3/2/2024	3/19/2024	Missing data due to lost communication, batteries replaced		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
	6/6/2024	7/19/2024	Missing data, Ayyeka Wavelet replaced		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
	9/5/2024	10/1/2024	Missing data due to lost communication, manual collect		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
	10/17/2025	11/18/2025	Missing data	x	x	No fix, device used to monitor system performance but not used to compute system or community flow rates

Table 8-1
Meter Data Review and Fixes for 2024

Meter	Start	Stop	Description of the Problem	Dry Period	Wet Period	Fix
P-1	1/14/2024	1/17/2024	Missing data due to lost communication, batteries replaced	x		Diurnal Pattern
P-2	1/16/2024	1/25/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PB-1
	2/10/2024	2/15/2024	Missing data due to lost communication, batteries replaced	x		Diurnal Pattern
	2/19/2024	3/15/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PB-1
	4/26/2024	6/10/2024	Depth sensors failed, parts replaced		x	Correlation to PB-1
	7/11/2024	8/14/2024	Missing data due to lost communication, manual collect		x	Correlation to P-1
	10/12/2024	11/18/2024	Missing data due to lost communication, batteries replaced		x	Correlation to P-1 & PB-1
	11/30/2024	12/12/2024	Missing data due to lost communication, batteries replaced		x	Correlation to P-1 & PB-1
PA-1	1/20/2024	3/14/2024	Depth sensors failed, parts replaced		x	Correlation to PA-2
	4/23/2024	5/14/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-4
PA-2	2/9/2024	3/28/2024	Bad velocity data	x		Continuity from depth to velocity
	3/28/2024	4/3/2024	Missing data, device removed for maintenance		x	Correlation to P-1
	4/24/2024	5/9/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-4
	5/29/2024	6/17/2024	Bad depth data, sensor reset		x	Correlation to PA-4

Table 8-1
Meter Data Review and Fixes for 2024

Meter	Start	Stop	Description of the Problem	Dry Period	Wet Period	Fix
PA-3	1/1/2024	1/14/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	1/21/2024	2/1/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	2/1/2024	2/8/2024	Bad data, sensors reset	x		Diurnal Pattern
	3/1/2024	3/18/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	3/29/2024	3/31/2024	Missing data due to lost communication, batteries replaced	x		Diurnal
	4/1/2024	4/6/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	4/8/2024	5/28/2024	Missing data due to lost communication, communication cable/Triton replaced		x	Correlation to PA-4
	7/8/2024	8/12/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	10/24/2024	11/2/2024	Missing data due to lost communication, manual collect	x		Diurnal
	11/18/2024	12/4/2024	Missing data due to lost communication, communication reestablished		x	Correlation to PA-2
	12/9/2024	12/20/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
PA-4	1/25/2024	1/29/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-2
	7/13/2024	8/19/2024	Missing data due to lost communication, manual collect		x	Correlation to PA-2
	9/9/2024	10/1/2024	Missing data due to lost communication, manual collect		x	Correlation to PA-2
	10/4/2024	10/7/2024	Bad data	x		Diurnal
	10/10/2024	11/2/2024	Missing data due to lost communication, manual collect		x	Correlation to PA-2 & PA-3
	11/22/2024	11/28/2024	Missing data due to lost communication, manual collect		x	Correlation to PA-2 & PA-3
PB-1	2/2/2024	2/9/2024	Missing data due to lost communication, batteries replaced	x		Diurnal Pattern
	8/2/2024	8/8/2024	Missing data due to lost communication, batteries replaced		x	Correlation to PA-3
	12/29/2024	12/31/2024	Bad depth data, sensor reset		x	Correlation to P-1
PC-1	6/11/2024	7/9/2024	Missing data due to lost communication, batteries replaced		x	Depth estimated with a correlation to CHPO. Flow rate estimated with a rating curve to depth
	7/12/2024	7/27/2024	Missing data due to lost communication, batteries replaced		x	Correlation to P-1

Table 8-1
Meter Data Review and Fixes for 2024

Meter	Start	Stop	Description of the Problem	Dry Period	Wet Period	Fix
PC-1A	3/20/2024	3/28/2024	Missing data due to lost communication, batteries replaced		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
PD-1	4/20/2024	5/29/2024	Missing data, faulty wiring replaced		x	Correlation to PD-2
	9/3/2024	9/5/2024	Missing data due to lost communication, manual collect	x		Diurnal Pattern
RD-1	1/14/2024	2/15/2024	Missing data due to lost communication, phoneline reset		x	RD-1 depth correlated to EC-6 depth. RD-1 flow rate estimated with rating curve from correlated depth
	8/28/2024	9/3/2024	Missing data		x	Correlation to EC-6
	10/23/2024	10/28/2024	Missing data due to lost communication, flow meter clock reset	x		Diurnal
RR-1	1/1/2024	2/7/2024	Missing data due to lost communication, batteries replaced		x	Correlation to EC-6
	2/27/2024	3/1/2024	Missing data due to lost communication, batteries replaced	x		Diurnal Pattern
	4/11/2024	4/17/2024	Missing data due to lost communication, batteries replaced		x	Correlation to RD-1, adjusted to River Rouge CSO RTB pumping capacity
	7/7/2024	8/14/2024	Missing data due to lost communication, batteries replaced		x	Correlation to RD-1, adjusted to River Rouge CSO RTB pumping capacity
	11/1/2024	12/10/2024	Missing data due to lost communication, communication reestablished		x	Correlation to RD-1
RV-1	4/27/2024	4/30/2024	Bad velocity data, sensor replaced		x	Velocity estimated with rating curve to depth
SW	1/29/2024	2/26/2024	Accusonics data unavailable due to communication issues. Accusonic parameters were reset. Flow rate data was available from SCADA, but velocity data was unavailable		x	SCADA flow rate data was adjusted to account for an assumed sediment depth of 16" due to missing velocity data
SWB	6/8/2024	6/10/2024	Missing data		x	No fix, device used to monitor system performance but not used to compute system or community flow rates
TB-1	3/13/2024	3/21/2024	Bad data, sensors reset		x	Correlation to PC-1
	4/29/2024	7/21/2024	Missing data		x	Correlation to PC-1
TSO	2/10/2024	2/13/2024	Missing data due to lost communication, batteries replaced	x		Dry weather period, flow rate assumed to be zero
	8/21/2024	8/26/2024	Missing data due to lost communication, batteries replaced	x		Correlation to CHPO

Appendix A

Additional Monthly Summary Tables

Table A-1

Incremental Flow Rates Summarized by Meter District with Community Components

Meter District	Community	Year 2020 Incremental Residential Population	Meter District Percentage	January 2024			February 2024			March 2024			April 2024			May 2024			June 2024		
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
TB-1	Dearborn Heights	19,472	77.7%	6.76	3.17	105	4.35	3.54	118	3.67	3.27	108	6.08	4.20	139	4.06	3.48	116	3.33	2.97	98
	Taylor	5,574	22.3%	1.93	0.91		1.25	1.01		1.05	0.94		1.74	1.20		1.16	1.00		0.95	0.85	
	Total	25,046	100.0%	8.69	4.08		5.60	4.56		4.72	4.20		7.82	5.40		5.22	4.48		4.28	3.82	
PC-1	Allen Park	716	2.7%	0.19	0.11	99	0.14	0.12	109	0.12	0.11	100	0.16	0.13	119	0.12	0.11	96	0.10	0.09	85
	Taylor	25,577	97.3%	6.88	3.90		4.87	4.30		4.21	3.95		5.67	4.71		4.28	3.79		3.69	3.38	
	Total	26,293	100.0%	7.07	4.01		5.01	4.42		4.33	4.06		5.83	4.84		4.40	3.90		3.79	3.47	
DTW Pond 3 West	Romulus	0	100.0%	1.76	1.94	--	1.85	1.94	--	3.85	3.84	--	2.79	2.41	--	1.63	1.80	--	0.00	0.00	--
PD-2	Romulus	8,069	100.0%	4.25	2.93	234	3.59	3.32	266	3.36	3.24	260	4.14	3.55	284	3.13	3.09	248	2.61	2.52	202
PD-1	Taylor	13,083	100.0%	2.76	1.67	83	2.01	1.71	84	1.38	1.27	62	2.69	2.41	119	2.84	2.84	140	1.72	1.65	81
PB-1	Taylor	5,040	61.1%	1.62	1.02	130	1.19	1.07	137	1.09	1.01	129	1.51	1.16	149	1.17	1.08	138	0.99	0.90	115
	Southgate	3,214	38.9%	1.03	0.65	130	0.76	0.68	137	0.70	0.64	129	0.96	0.74	149	0.74	0.69	138	0.63	0.57	115
	Total	8,254	100.0%	2.66	1.67	130	1.95	1.75	137	1.79	1.65	129	2.47	1.90	149	1.91	1.76	138	1.62	1.47	115
PA-4	Belleville	4,008	33.8%	0.84	0.63	101	0.90	0.83	134	0.70	0.68	110	0.86	0.76	123	0.70	0.69	111	0.59	0.58	94
	Van Buren Twp	7,865	66.2%	1.65	1.23		1.77	1.64		1.37	1.34		1.69	1.49		1.37	1.35		1.15	1.14	
	Total	11,873	100.0%	2.49	1.86		2.67	2.47		2.07	2.02		2.55	2.25		2.07	2.03		1.74	1.72	
PA-3	Romulus	14,420	100.0%	5.80	4.45	200	5.51	5.16	231	4.83	4.81	216	5.33	4.98	223	4.73	4.67	209	4.30	4.17	187
PA-2	Taylor	14,125	99.8%	5.63	3.67	168	3.51	3.10	142	3.59	3.36	154	5.92	4.68	214	4.57	4.35	199	3.92	3.85	176
	Brownstown Twp	29	0.2%	0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01	
	Total	14,154	100.0%	5.64	3.68		3.51	3.11		3.59	3.37		5.94	4.69		4.58	4.36		3.92	3.86	
P-2	Brownstown Twp	11,002	99.9%	2.67	2.04	120	2.17	2.05	121	2.12	2.05	120	2.53	2.25	132	2.13	2.05	120	1.96	1.90	112
	Taylor	10	0.1%	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
	Total	11,012	100.0%	2.68	2.04		2.17	2.06		2.12	2.05		2.53	2.25		2.13	2.05		1.96	1.90	
P-1	Allen Park	2,338	17.4%	0.93	0.50	139	0.60	0.54	149	0.57	0.54	149	0.75	0.61	170	0.58	0.55	152	0.46	0.43	120
	Southgate	11,079	82.6%	4.43	2.37		2.84	2.55		2.69	2.56		3.54	2.91		2.73	2.60		2.18	2.06	
	Total	13,417	100.0%	5.37	2.88		3.44	3.09		3.25	3.10		4.29	3.52		3.31	3.15		2.64	2.49	
RV-1	Riverview	12,490	100.0%	4.00	2.18	113	2.18	2.01	104	2.33	2.07	107	3.32	2.35	121	2.52	2.19	114	1.98	1.78	92
RR-1	River Rouge	7,224	100.0%	6.39	3.35	300	4.12	3.61	323	3.33	2.94	263	5.13	3.63	325	4.44	3.83	343	4.20	3.04	272
EC-6	Ecorse	9,305	69.1%	2.28	1.45	101	1.83	1.79	125	1.69	1.61	112	2.17	1.91	133	2.07	2.00	139	1.79	1.64	114
	Lincoln Park	4,169	30.9%	1.02	0.65		0.82	0.80		0.76	0.72		0.97	0.86		0.93	0.90		0.80	0.73	
	Total	13,474	100.0%	3.30	2.10		2.66	2.60		2.45	2.33		3.15	2.77		3.00	2.90		2.59	2.37	
RD-1	Allen Park	22,170	38.1%	8.61	3.75	109	3.79	3.11	91	3.85	3.04	89	7.28	3.78	110	5.04	3.69	108	4.38	2.94	86
	Lincoln Park	36,076	61.9%	14.02	6.10		6.17	5.06		6.26	4.95		11.84	6.15		8.20	6.00		7.13	4.78	
	Total	58,246	100.0%	22.63	9.84		9.96	8.17		10.11	7.99		19.12	9.92		13.24	9.69		11.51	7.71	
SW + SWB	Southgate	15,003	37.5%	8.74	5.49	237	6.32	5.61	242	6.32	5.11	220	8.55	6.22	268	8.56	7.38	318	7.08	5.74	247
	Wyandotte	25,058	62.5%	14.60	9.17		10.56	9.38		10.55	8.54		14.28	10.39		14.29	12.32		11.83	9.59	
	Total	40,061	100.0%	23.34	14.67		16.88	14.99		16.87	13.66		22.84	16.61		22.85	19.70		18.91	15.33	
APO-1 + APO-2	Allen Park	0	100.0%	1.35	0.00	--	0.00	0.00	--	0.00	0.00	--	0.21	0.00	--	0.00	0.00	--	0.02	0.00	--
TPS+IPS	Southgate	718	100.0%	0.29	0.15	139	0.18	0.17	149	0.17	0.17	149	0.23	0.19	170	0.18	0.17	152	0.14	0.13	120
Subtotal Controlled Flow Communities		119,005	42.8%	55.66	29.96	163	33.62	29.37	160	32.77	26.92	146	50.23	32.93	179	43.53	36.12	196	37.21	28.45	155
Subtotal Non-Controlled Flow Communities		158,829	57.2%	54.79	33.54	136	39.66	35.75	145	37.80	35.84	146	50.13	40.74	166	38.64	36.50	149	30.72	29.00	118
Total Incoming Flow		277,834	100.0%	110.46	63.50	148	73.28	65.12	151	70.57	62.76	146	100.36	73.67	171	82.17	72.63	169	67.93	57.45	134
DWTF Including Recycle (IPS + TPS)		277,834	100.0%	118.29	68.26	159	73.73	65.01	151	72.94	65.38	152	103.21	73.50	171	83.47	73.07	170	68.74	58.50	136
DWTF without Recycle (IPS + TPS - Recycle)		277,834	100.0%	111.29	61.29	143	73.57	65.00	151	68.14	61.28	143	96.93	68.28	159	77.16	67.19	156	62.18	52.54	122
Recycle		0	-	7.00	6.96	-	0.16	0.01	-	4.80	4.11	-	6.28	5.21	-	6.32	5.88	-	6.56	5.96	-

Table A-1 (Cont.)

Incremental Flow Rates Summarized by Meter District with Community Components

Meter District	Community	Year 2020 Incremental Residential Population	Meter District Percentage	July 2024			August 2024			September 2024			October 2024			November 2024			December 2024		
				Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
				Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
TB-1	Dearborn Heights	19,472	77.7%	3.13	2.66	88	2.56	1.93	64	1.91	1.83	61	1.97	1.76	59	2.15	1.90	63	3.27	2.19	73
	Taylor	5,574	22.3%	0.90	0.76		0.73	0.55		0.55	0.52		0.56	0.51		0.62	0.54		0.94	0.63	
	Total	25,046	100.0%	4.03	3.43		3.30	2.48		2.46	2.35		2.54	2.27		2.77	2.45		4.21	2.82	
PC-1	Allen Park	716	2.7%	0.11	0.10	88	0.11	0.09	81	0.09	0.09	82	0.09	0.08	76	0.09	0.09	77	0.11	0.09	82
	Taylor	25,577	97.3%	3.92	3.49		3.91	3.20		3.33	3.26		3.21	3.02		3.22	3.05		3.93	3.25	
	Total	26,293	100.0%	4.02	3.59		4.02	3.29		3.42	3.35		3.30	3.11		3.31	3.14		4.04	3.34	
DTW Pond 3 West	Romulus	0	100.0%	0.00	0.00	--	0.00	0.00	--	0.00	0.00	--	0.00	0.00	--	1.35	1.19	--	0.78	0.82	--
PD-2	Romulus	8,069	100.0%	2.69	2.56	205	2.61	2.40	192	2.41	2.39	192	2.41	2.37	190	2.29	2.19	176	2.74	2.51	201
PD-1	Taylor	13,083	100.0%	1.54	1.35	67	1.49	1.25	62	1.34	1.31	65	1.29	1.24	61	1.16	1.14	57	1.64	1.34	66
PB-1	Taylor	5,040	61.1%	1.06	0.90	116	1.01	0.87	111	0.89	0.87	112	0.89	0.83	107	0.88	0.83	107	1.18	0.92	117
	Southgate	3,214	38.9%	0.67	0.58	116	0.65	0.55	111	0.57	0.56	112	0.57	0.53	107	0.56	0.53	107	0.75	0.58	117
	Total	8,254	100.0%	1.73	1.48	116	1.66	1.42	111	1.46	1.43	112	1.46	1.36	107	1.44	1.37	107	1.92	1.50	117
PA-4	Belleville	4,008	33.8%	0.64	0.61	98	0.58	0.55	89	0.52	0.52	84	0.51	0.50	80	0.51	0.50	81	0.54	0.52	83
	Van Buren Twp	7,865	66.2%	1.26	1.20		1.13	1.08		1.03	1.02		0.99	0.97		1.00	0.99		1.06	1.01	
	Total	11,873	100.0%	1.91	1.81		1.71	1.63		1.55	1.54		1.50	1.47		1.52	1.49		1.60	1.53	
PA-3	Romulus	14,420	100.0%	3.82	3.61	162	3.68	3.53	158	3.28	3.29	148	3.33	3.29	147	3.25	3.16	142	3.73	3.44	154
PA-2	Taylor	14,125	99.8%	3.61	3.37	154	3.36	3.10	142	3.12	3.07	141	3.07	2.97	136	3.14	3.11	142	3.75	3.37	154
	Brownstown Twp	29	0.2%	0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01		0.01	0.01	
	Total	14,154	100.0%	3.62	3.37		3.36	3.11		3.13	3.08		3.08	2.98		3.15	3.11		3.76	3.38	
P-2	Brownstown Twp	11,002	99.9%	1.96	1.81	107	1.88	1.76	103	1.78	1.79	105	1.75	1.63	96	1.70	1.56	92	1.91	1.76	103
	Taylor	10	0.1%	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
	Total	11,012	100.0%	1.96	1.82		1.88	1.76		1.78	1.80		1.75	1.63		1.70	1.56		1.91	1.76	
P-1	Allen Park	2,338	17.4%	0.45	0.41	112	0.42	0.37	102	0.37	0.36	100	0.37	0.35	96	0.39	0.37	102	0.48	0.40	110
	Southgate	11,079	82.6%	2.13	1.93		2.01	1.75		1.75	1.72		1.73	1.65		1.84	1.74		2.25	1.88	
	Total	13,417	100.0%	2.59	2.34		2.44	2.12		2.11	2.08		2.09	2.00		2.23	2.11		2.73	2.28	
RV-1	Riverview	12,490	100.0%	2.40	1.77	92	2.23	1.70	88	1.90	1.81	94	1.85	1.71	88	1.92	1.76	91	2.47	1.86	96
RR-1	River Rouge	7,224	100.0%	3.93	2.92	261	3.92	2.61	233	2.82	2.77	248	2.55	2.21	197	2.50	2.21	198	3.32	2.29	205
EC-6	Ecorse	9,305	69.1%	2.56	2.05	142	2.38	2.00	139	1.60	1.58	110	1.30	1.25	87	1.19	1.09	76	1.40	1.13	78
	Lincoln Park	4,169	30.9%	1.15	0.92		1.07	0.90		0.72	0.71		0.58	0.56		0.54	0.49		0.63	0.51	
	Total	13,474	100.0%	3.70	2.96		3.44	2.90		2.32	2.28		1.88	1.81		1.73	1.58		2.03	1.63	
RD-1	Allen Park	22,170	38.1%	5.17	3.28	96	4.88	2.75	80	2.69	2.45	71	2.71	2.00	58	2.77	2.20	64	4.56	2.55	74
	Lincoln Park	36,076	61.9%	8.42	5.34		7.94	4.48		4.38	3.98		4.41	3.26		4.51	3.59		7.42	4.15	
	Total	58,246	100.0%	13.59	8.62		12.81	7.24		7.07	6.42		7.12	5.26		7.28	5.79		11.97	6.70	
SW + SWB	Southgate	15,003	37.5%	8.18	6.67	287	8.03	5.67	244	5.94	5.43	234	4.90	4.11	177	5.11	4.04	174	5.71	4.25	183
	Wyandotte	25,058	62.5%	13.66	11.13		13.41	9.48		9.93	9.07		8.18	6.86		8.54	6.76		9.54	7.09	
	Total	40,061	100.0%	21.84	17.80		21.44	15.15		15.87	14.50		13.08	10.96		13.66	10.80		15.25	11.34	
APO-1 + APO-2	Allen Park	0	100.0%	0.15	0.00	--	0.32	0.00	--	0.00	0.00	--	0.00	0.00	--	0.00	0.00	--	0.56	0.00	--
TPS+IPS	Southgate	718	100.0%	0.14	0.12	112	0.13	0.11	102	0.11	0.11	100	0.11	0.11	96	0.12	0.11	102	0.15	0.12	110
Subtotal Controlled Flow Communities		119,005	42.8%	43.06	32.30	175	41.62	27.90	152	28.09	25.98	141	24.63	20.24	110	25.16	20.38	111	32.57	21.96	119
Subtotal Non-Controlled Flow Communities		158,829	57.2%	30.60	27.24	111	28.82	24.80	101	24.96	24.55	100	24.70	23.53	96	26.21	24.79	101	32.22	26.69	109
Total Incoming Flow		277,834	100.0%	73.66	59.54	139	70.44	52.69	123	53.05	50.53	118	49.33	43.77	102	51.37	45.16	105	64.79	48.65	113
DWTF Including Recycle (IPS + TPS)		277,834	100.0%	75.44	60.71	141	73.61	53.13	124	55.82	52.66	122	56.98	51.56	120	57.43	50.65	118	65.85	48.38	113
DWTF without Recycle (IPS + TPS - Recycle)		277,834	100.0%	69.68	55.49	129	67.83	48.08	112	50.08	46.86	109	51.58	46.33	108	51.91	45.24	105	60.09	42.95	100
Recycle		0	-	5.76	5.21	-	5.78	5.05	-	5.74	5.80	-	5.40	5.22	-	5.52	5.41	-	5.76	5.43	-

Table A-2
Incremental Flow Rates by Meter District

Meter District	Incremental Meter District Formula	Year 2020 Incremental Residential Population	January 2024			February 2024			March 2024			April 2024			May 2024			June 2024		
			Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
			Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
TB-1	[TB-1]+[TSO]	25,046	8.69	4.08	105	5.60	4.56	118	4.72	4.20	108	7.82	5.40	139	5.22	4.48	116	4.28	3.82	98
PC-1	[PC-1]+[CPO] +[CHPO]-[TB-1]	26,293	7.07	4.01	99	5.01	4.42	109	4.33	4.06	100	5.83	4.84	119	4.40	3.90	96	3.79	3.47	85
DTW Pond 3 West	[DTW Pond 3 West]	0	1.76	1.94	-	1.85	1.94	-	3.85	3.84	-	2.79	2.41	-	1.63	1.80	-	0.00	0.00	-
PD-2	[PD-2] - [DTW Pond 3 West]	8,069	4.25	2.93	234	3.59	3.32	266	3.36	3.24	260	4.14	3.55	284	3.13	3.09	248	2.61	2.52	202
PD-1	[PD-1]-[PD-2]+[PDO]	13,083	2.76	1.67	83	2.01	1.71	84	1.38	1.27	62	2.69	2.41	119	2.84	2.84	140	1.72	1.65	81
PB-1	[PB-1]	8,254	2.66	1.67	130	1.95	1.75	137	1.79	1.65	129	2.47	1.90	149	1.91	1.76	138	1.62	1.47	115
PA-4	[PA-4]	11,873	2.49	1.86	101	2.67	2.47	134	2.07	2.02	110	2.55	2.25	123	2.07	2.03	111	1.74	1.72	94
PA-3	[PA-3]+[ER-2] -[PA-4]	14,420	5.80	4.45	200	5.51	5.16	231	4.83	4.81	216	5.33	4.98	223	4.73	4.67	209	4.30	4.17	187
PA-2	[PA-2]+[ER-1] -[PA-3]-[ER-2]	14,154	5.64	3.68	168	3.51	3.11	142	3.59	3.37	154	5.94	4.69	214	4.58	4.36	199	3.92	3.86	176
P-2	[P-2]	11,012	2.68	2.04	120	2.17	2.06	121	2.12	2.05	120	2.53	2.25	132	2.13	2.05	120	1.96	1.90	112
P-1	[P-1]+[PM-1]-[P-2] -[PA-2]-[PB-1]-[PD-1]-[PC-1]	13,417	5.37	2.88	139	3.44	3.09	149	3.25	3.10	149	4.29	3.52	170	3.31	3.15	152	2.64	2.49	120
RV-1	[RV-1]	12,490	4.00	2.18	113	2.18	2.01	104	2.33	2.07	107	3.32	2.35	121	2.52	2.19	114	1.98	1.78	92
RR-1	[RR-1]	7,224	6.39	3.35	300	4.12	3.61	323	3.33	2.94	263	5.13	3.63	325	4.44	3.83	343	4.20	3.04	272
EC-6	[EC-6]-[RR-1]	13,474	3.30	2.10	101	2.66	2.60	125	2.45	2.33	112	3.15	2.77	133	3.00	2.90	139	2.59	2.37	114
RD-1	[RD-1]-[EC-6]	58,246	22.63	9.84	109	9.96	8.17	91	10.11	7.99	89	19.12	9.92	110	13.24	9.69	108	11.51	7.71	86
APO-1 + APO-2	[APO-1]+[APO-2]	0	1.35	0.00	-	0.00	0.00	-	0.00	0.00	-	0.21	0.00	-	0.00	0.00	-	0.02	0.00	-
SW+SWB	[SW]+[SWB]	40,061	23.34	14.67	237	16.88	14.99	242	16.87	13.66	220	22.84	16.61	268	22.85	19.70	318	18.91	15.33	247
TPS+IPS[1]	Population Ratio of Meter District P-1	718	0.29	0.15	139	0.18	0.17	149	0.17	0.17	149	0.23	0.19	170	0.18	0.17	152	0.14	0.13	120

Notes:
1) ([TPS+IPS] Inc. Flow Rate) = (TPS-IPS Inc. Pop. / P-1 Inc. Pop.) x ([P-1] Inc. Flow Rate)

Table A-2 (Cont.)
Incremental Flow Rates by Meter District

Meter District	Incremental Meter District Formula	Year 2020 Incremental Residential Population	July 2024			August 2024			September 2024			October 2024			November 2024			December 2024		
			Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
			Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
TB-1	[TB-1]+[TSO]	25,046	4.03	3.43	88	3.30	2.48	64	2.46	2.35	61	2.54	2.27	59	2.77	2.45	63	4.21	2.82	73
PC-1	[PC-1]+[CPO] +[CHPO]-[TB-1]	26,293	4.02	3.59	88	4.02	3.29	81	3.42	3.35	82	3.30	3.11	76	3.31	3.14	77	4.04	3.34	82
DTW Pond 3 West	[DTW Pond 3 West]	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	1.35	1.19	-	0.78	0.82	-
PD-2	[PD-2] - [DTW Pond 3 West]	8,069	2.69	2.56	205	2.61	2.40	192	2.41	2.39	192	2.41	2.37	190	2.29	2.19	176	2.74	2.51	201
PD-1	[PD-1]-[PD-2]+[PDO]	13,083	1.54	1.35	67	1.49	1.25	62	1.34	1.31	65	1.29	1.24	61	1.16	1.14	57	1.64	1.34	66
PB-1	[PB-1]	8,254	1.73	1.48	116	1.66	1.42	111	1.46	1.43	112	1.46	1.36	107	1.44	1.37	107	1.92	1.50	117
PA-4	[PA-4]	11,873	1.91	1.81	98	1.71	1.63	89	1.55	1.54	84	1.50	1.47	80	1.52	1.49	81	1.60	1.53	83
PA-3	[PA-3]+[ER-2] -[PA-4]	14,420	3.82	3.61	162	3.68	3.53	158	3.28	3.29	148	3.33	3.29	147	3.25	3.16	142	3.73	3.44	154
PA-2	[PA-2]+[ER-1] -[PA-3]-[ER-2]	14,154	3.62	3.37	154	3.36	3.11	142	3.13	3.08	141	3.08	2.98	136	3.15	3.11	142	3.76	3.38	154
P-2	[P-2]	11,012	1.96	1.82	107	1.88	1.76	103	1.78	1.80	105	1.75	1.63	96	1.70	1.56	92	1.91	1.76	103
P-1	[P-1]+[PM-1]-[P-2] -[PA-2]-[PB-1]-[PD-1]-[PC-1]	13,417	2.59	2.34	112	2.44	2.12	102	2.11	2.08	100	2.09	2.00	96	2.23	2.11	102	2.73	2.28	110
RV-1	[RV-1]	12,490	2.40	1.77	92	2.23	1.70	88	1.90	1.81	94	1.85	1.71	88	1.92	1.76	91	2.47	1.86	96
RR-1	[RR-1]	7,224	3.93	2.92	261	3.92	2.61	233	2.82	2.77	248	2.55	2.21	197	2.50	2.21	198	3.32	2.29	205
EC-6	[EC-6]-[RR-1]	13,474	3.70	2.96	142	3.44	2.90	139	2.32	2.28	110	1.88	1.81	87	1.73	1.58	76	2.03	1.63	78
RD-1	[RD-1]-[EC-6]	58,246	13.59	8.62	96	12.81	7.24	80	7.07	6.42	71	7.12	5.26	58	7.28	5.79	64	11.97	6.70	74
APO-1 + APO-2	[APO-1]+[APO-2]	0	0.15	0.00	-	0.32	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.56	0.00	-
SW+SWB	[SW]+[SWB]	40,061	21.84	17.80	287	21.44	15.15	244	15.87	14.50	234	13.08	10.96	177	13.66	10.80	174	15.25	11.34	183
TPS+IPS[1]	Population Ratio of Meter District P-1	718	0.14	0.12	112	0.13	0.11	102	0.11	0.11	100	0.11	0.11	96	0.12	0.11	102	0.15	0.12	110

Notes:
1) ([TPS+IPS] Inc. Flow Rate) = (TPS-IPS Inc. Pop. / P-1 Inc. Pop.) x ([P-1] Inc. Flow Rate)

Table A-3
Monthly Flow Rates by Meter for 2024

System	Meter	Location	Year 2020 Cumulative Residential Population	Average Flow Rates (cfs)												
				January	February	March	April	May	June	July	August	September	October	November	December	Average Annual
Tunnel (Non-Controlled)	TB-1	Taylor Basin	25,046	7.57	5.60	4.72	7.79	5.22	4.28	4.03	3.30	2.46	2.54	2.77	4.20	4.53
	PC-1	Pelham Interceptor North of Goddard Road	51,339	13.28	10.60	9.05	13.43	9.60	8.05	7.95	7.19	5.88	5.83	6.08	8.02	8.74
	DTW Pond 3 West	Detroit Metro Airport	0	1.76	1.85	3.85	2.79	1.63	0.00	0.00	0.00	0.00	0.00	1.35	0.78	1.16
	PD-2	Goddard Interceptor West of Inkster Road	8,069	6.01	5.44	7.21	6.93	4.77	2.61	2.69	2.61	2.41	2.41	3.64	3.51	4.18
	PD-1	Goddard Interceptor West of Allen Road	21,152	8.77	7.44	8.59	9.62	7.60	4.33	4.24	4.10	3.75	3.70	4.80	5.15	6.00
	PB-1	Northline Interceptor West of Fordline Road	8,254	2.66	1.95	1.79	2.47	1.91	1.62	1.73	1.66	1.46	1.46	1.44	1.92	1.84
	PA-4	Eureka Interceptor near Hannan Road	11,873	2.49	2.67	2.07	2.55	2.07	1.74	1.91	1.71	1.55	1.50	1.52	1.60	1.94
	PA-3	Eureka Interceptor at Inkster Road	26,293	8.10	8.17	6.90	7.86	6.79	6.04	5.73	5.38	4.83	4.83	4.77	5.32	6.22
	PA-2	Eureka Interceptor at Allen Road	40,447	13.33	11.55	10.49	13.78	11.37	9.97	9.34	8.74	7.96	7.90	7.91	9.08	10.11
	PA-1	Eureka Interceptor West of Fordline Road	44,400	13.79	11.06	11.75	15.66	12.62	9.76	10.05	9.46	7.66	7.80	7.84	9.56	10.58
	P-2	Pennsylvania Interceptor East of Dix-Toledo Road	11,012	2.68	2.17	2.12	2.53	2.13	1.96	1.96	1.88	1.78	1.75	1.70	1.91	2.05
	P-1	Pennsylvania Interceptor East of Fort Street	145,621	45.29	37.16	35.30	46.11	35.93	28.56	27.80	26.01	22.95	22.74	24.17	28.81	31.70
	RV-1	Pennsylvania Interceptor West of Jefferson Avenue	12,490	4.00	2.18	2.33	3.32	2.52	1.98	2.40	2.23	1.90	1.85	1.92	2.47	2.43
Riverdrive (Controlled)	RR-1	River Rouge CSO Basin Outlet	7,224	6.39	4.12	3.33	5.13	4.44	4.20	3.93	3.92	2.82	2.55	2.50	3.32	3.89
	EC-6	Riverdrive Interceptor South of Southfield Road	20,698	9.69	6.78	5.78	8.28	7.44	6.79	7.63	7.36	5.15	4.43	4.23	5.35	6.58
	RD-1	Riverdrive Interceptor North of Northline Road	78,944	32.32	16.74	15.90	27.40	20.68	18.30	21.22	20.18	12.22	11.55	11.51	17.32	18.81
	SW	On Southgate-Wyandotte Connection	40,061	22.03	16.72	15.93	21.42	20.35	17.81	19.49	20.25	14.66	12.53	12.94	14.86	17.43
	SWB	Southgate-Wyandotte Basin	0	1.31	0.17	0.94	1.41	2.50	1.10	2.35	1.19	1.21	0.55	0.72	0.39	1.16
Tunnel Connection Meters	TSO	Connection to Tunnel at Pelham Basin	0	1.12	t	0.00	0.03	0.00	t	t	t	0.00	0.00	0.00	0.01	0.10
	APO-1	Allen Park Connection to Tunnel at Belmont and Rosedale Road	0	0.49	0.00	0.00	0.06	0.00	0.01	0.04	0.17	0.00	0.00	0.00	0.13	0.08
	APO-2	Allen Park Connection to Tunnel at Belmont and Quandt Road	0	0.86	0.00	0.00	0.15	0.00	0.01	0.11	0.16	0.00	0.00	0.00	0.43	0.15
	CHPO	Pelham Interceptor Connection to Tunnel North of Haskell Road	0	0.80	0.00	0.00	0.19	0.02	0.02	0.07	0.08	0.00	t	0.00	0.17	0.11
	CPO	Pelham Interceptor Connection to Tunnel South of R.R.	0	0.56	0.00	0.00	0.01	t	t	0.02	0.05	0.00	0.00	0.00	0.05	0.06
	PDO	Goddard Interceptor Connection to Tunnel at Allen Road	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ER-2	Eureka Relief Sewer Extention Connection to Tunnel at Inkster Road	0	0.19	0.01	0.00	0.01	0.00	0.00	t	t	0.00	0.00	0.00	t	0.02
	ER-1	Eureka Relief Sewer Connection to Tunnel at Allen Road	0	0.60	0.14	0.00	0.03	0.00	0.00	t	t	0.00	0.00	0.00	t	0.06
	PM-1	Pennsylvania Interceptor Connection to Tunnel at Fordline Road	0	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
DWTF	P-1+RD-1+RV-1+SW+SWB +Tunnel Connections	End of Interceptor System Meters	277,116	110.17	73.09	70.39	100.13	81.99	67.79	73.52	70.31	52.94	49.22	51.25	64.64	72.16
	(IPS + TPS)	DWTF Including Recycle	277,834	118.29	73.73	72.94	103.21	83.47	68.74	75.44	73.61	55.82	56.98	57.43	65.85	75.52
	(IPS + TPS - Recycle)	DWTF without Recycle	277,834	111.29	73.57	68.14	96.93	77.16	62.18	69.68	67.83	50.08	51.58	51.91	60.09	70.06
	Recycle	End of Interceptor System Meters	0	7.00	0.16	4.80	6.28	6.32	6.56	5.76	5.78	5.74	5.40	5.52	5.76	5.46

Notes:
1. (t) Trace amount of flow. Flow was measured but is less than the reporting precision of 0.01 cfs

Table A-4
Average Flow Rates by Meter

System	Meter	Year 2020 Cumulative Residential Population	January 2024			February 2024			March 2024			April 2024			May 2024			June 2024		
			Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
			Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
Tunnel (Non-Controlled)	TB-1	25,046	7.57	4.08	105	5.60	4.56	118	4.72	4.20	108	7.79	5.40	139	5.22	4.48	116	4.28	3.82	98
	PC-1	51,339	13.28	8.09	102	10.60	8.97	113	9.05	8.26	104	13.43	10.24	129	9.60	8.38	105	8.05	7.29	92
	DTW Pond 3 West	0	1.76	1.94	-	1.85	1.94	-	3.85	3.84	-	2.79	2.41	-	1.63	1.80	-	0.00	0.00	-
	PD-2	8,069	6.01	4.87	390	5.44	5.26	421	7.21	7.08	567	6.93	5.96	477	4.77	4.90	392	2.61	2.52	202
	PD-1	21,152	8.77	6.54	200	7.44	6.97	213	8.59	8.35	255	9.62	8.37	256	7.60	7.74	236	4.33	4.17	127
	PB-1	8,254	2.66	1.67	130	1.95	1.75	137	1.79	1.65	129	2.47	1.90	149	1.91	1.76	138	1.62	1.47	115
	PA-4	11,873	2.49	1.86	101	2.67	2.47	134	2.07	2.02	110	2.55	2.25	123	2.07	2.03	111	1.74	1.72	94
	PA-3	26,293	8.10	6.31	155	8.17	7.63	187	6.90	6.83	168	7.86	7.23	178	6.79	6.71	165	6.04	5.89	145
	PA-2	40,447	13.33	9.99	160	11.55	10.73	171	10.49	10.20	163	13.78	11.92	190	11.37	11.06	177	9.97	9.75	156
	PA-1	44,400	13.79	10.97	160	11.06	10.35	151	11.75	11.37	166	15.66	14.16	206	12.62	12.26	179	9.76	9.01	131
	P-2	11,012	2.68	2.04	120	2.17	2.06	121	2.12	2.05	120	2.53	2.25	132	2.13	2.05	120	1.96	1.90	112
	P-1[1]	145,621	45.29	31.21	139	37.16	33.58	149	35.30	33.60	149	46.11	38.20	170	35.93	34.14	152	28.56	27.08	120
	RV-1	12,490	4.00	2.18	113	2.18	2.01	104	2.33	2.07	107	3.32	2.35	121	2.52	2.19	114	1.98	1.78	92
Riverdrive (Controlled)	RR-1	7,224	6.39	3.35	300	4.12	3.61	323	3.33	2.94	263	5.13	3.63	325	4.44	3.83	343	4.20	3.04	272
	EC-6	20,698	9.69	5.45	170	6.78	6.21	194	5.78	5.27	165	8.28	6.40	200	7.44	6.73	210	6.79	5.41	169
	RD-1	78,944	32.32	15.29	125	16.74	14.38	118	15.90	13.26	109	27.40	16.32	134	20.68	16.42	134	18.30	13.12	107
	SW (with sludge depth)	40,061	22.03	14.45	233	16.72	14.97	241	15.93	13.27	214	21.42	16.61	268	20.35	17.50	282	17.81	15.15	244
	SWB	0	1.31	0.22	-	0.17	0.02	-	0.94	0.39	-	1.41	0.00	-	2.50	2.21	-	1.10	0.17	-
Tunnel Connection Meters	TSO	0	1.12	0.00	-	0.00	0.00	-	0.00	0.00	-	0.03	0.00	-	0.00	0.00	-	0.00	0.00	-
	APO-1	0	0.49	0.00	-	0.00	0.00	-	0.00	0.00	-	0.06	0.00	-	0.00	0.00	-	0.01	0.00	-
	APO-2	0	0.86	0.00	-	0.00	0.00	-	0.00	0.00	-	0.15	0.00	-	0.00	0.00	-	0.01	0.00	-
	CHPO	0	0.80	0.00	-	0.00	0.00	-	0.00	0.00	-	0.19	0.00	-	0.02	0.00	-	0.02	0.00	-
	CPO	0	0.56	0.00	-	0.00	0.00	-	0.00	0.00	-	0.01	0.00	-	0.00	0.00	-	0.00	0.00	-
	PDO	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	ER-2	0	0.19	0.00	-	0.01	0.00	-	0.00	0.00	-	0.01	0.00	-	0.00	0.00	-	0.00	0.00	-
	ER-1	0	0.60	0.00	-	0.14	0.00	-	0.00	0.00	-	0.03	0.00	-	0.00	0.00	-	0.00	0.00	-
	PM-1	0	0.78	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	Total	0	5.22	0.00	-	0.14	0.00	-	0.00	0.00	-	0.46	0.00	-	0.02	0.00	-	0.04	0.00	-
DWTF	P-1+RV-1+RD-1+SW+SWB +Tunnel Connections	277,116	110.17	63.35	148	73.09	64.96	151	70.39	62.59	146	100.13	73.48	171	81.99	72.46	169	67.79	57.31	134
	DWTF Including Recycle (IPS + TPS)	277,834	118.29	68.26	159	73.73	65.01	151	72.94	65.38	152	103.21	73.50	171	83.47	73.07	170	68.74	58.50	136
	DWTF without Recycle (IPS + TPS - Recycle)	277,834	111.29	61.29	143	73.57	65.00	151	68.14	61.28	143	96.93	68.28	159	77.16	67.19	156	62.18	52.54	122
	Recycle	0	7.00	6.96	-	0.16	0.01	-	4.80	4.11	-	6.28	5.21	-	6.32	5.88	-	6.56	5.96	-

Notes:
1) [P-1] = [P-2] + [PA-2] + [PB-1] + [PC-1] + [PD-1] + (P-1 Inc. Pop. / (P-2 Cum. Pop. + PA-2 Cum. Pop. + PB-1 Cum. Pop. + PC-1 Cum. Pop. + PD-1 Cum. Pop.))
x ([P-2] + [PA-2] + [PB-1] + [PC-1] + [PD-1] + [TSO] + [CPO] + [CHPO] + [PDO] + [APO-1] + [APO-2] + [ER-1])

Table A-4 (Cont.)
Average Flow Rates by Meter

System	Meter	Year 2020 Cumulative Residential Population	July 2024			August 2024			September 2024			October 2024			November 2024			December 2024		
			Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather		Total	Dry Weather	
			Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)	Average Daily Flow Rate (cfs)	Average Daily Flow Rate (cfs)	Average Per Capita Flow Rate (gpcd)
Tunnel (Non-Controlled)	TB-1	25,046	4.03	3.43	88	3.30	2.48	64	2.46	2.35	61	2.54	2.27	59	2.77	2.45	63	4.20	2.82	73
	PC-1	51,339	7.95	7.01	88	7.19	5.77	73	5.88	5.70	72	5.83	5.38	68	6.08	5.58	70	8.02	6.15	77
	DTW Pond 3 West	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	1.35	1.19	-	0.78	0.82	-
	PD-2	8,069	2.69	2.56	205	2.61	2.40	192	2.41	2.39	192	2.41	2.37	190	3.64	3.38	271	3.51	3.33	267
	PD-1	21,152	4.24	3.91	119	4.10	3.65	112	3.75	3.70	113	3.70	3.61	110	4.80	4.52	138	5.15	4.68	143
	PB-1	8,254	1.73	1.48	116	1.66	1.42	111	1.46	1.43	112	1.46	1.36	107	1.44	1.37	107	1.92	1.50	117
	PA-4	11,873	1.91	1.81	98	1.71	1.63	89	1.55	1.54	84	1.50	1.47	80	1.52	1.49	81	1.60	1.53	83
	PA-3	26,293	5.73	5.42	133	5.38	5.15	127	4.83	4.83	119	4.83	4.76	117	4.77	4.66	114	5.32	4.96	122
	PA-2	40,447	9.34	8.79	140	8.74	8.26	132	7.96	7.91	126	7.90	7.74	124	7.91	7.77	124	9.08	8.34	133
	PA-1	44,400	10.05	8.78	128	9.46	8.23	120	7.66	7.53	110	7.80	7.30	106	7.84	7.37	107	9.56	8.34	121
	P-2	11,012	1.96	1.82	107	1.88	1.76	103	1.78	1.80	105	1.75	1.63	96	1.70	1.56	92	1.91	1.76	103
	P-1[1]	145,621	27.80	25.35	112	26.01	22.98	102	22.95	22.62	100	22.74	21.72	96	24.17	22.92	102	28.81	24.71	110
	RV-1	12,490	2.40	1.77	92	2.23	1.70	88	1.90	1.81	94	1.85	1.71	88	1.92	1.76	91	2.47	1.86	96
Riverdrive (Controlled)	RR-1	7,224	3.93	2.92	261	3.92	2.61	233	2.82	2.77	248	2.55	2.21	197	2.50	2.21	198	3.32	2.29	205
	EC-6	20,698	7.63	5.88	184	7.36	5.51	172	5.15	5.05	158	4.43	4.02	125	4.23	3.79	118	5.35	3.92	122
	RD-1	78,944	21.22	14.50	119	20.18	12.75	104	12.22	11.48	94	11.55	9.28	76	11.51	9.58	78	17.32	10.62	87
	SW (with sludge depth)	40,061	19.49	16.22	262	20.25	14.57	235	14.66	13.57	219	12.53	10.74	173	12.94	10.41	168	14.86	11.28	182
	SWB	0	2.35	1.57	-	1.19	0.58	-	1.21	0.94	-	0.55	0.22	-	0.72	0.39	-	0.39	0.06	-
Tunnel Connection Meters	TSO	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.01	0.00	-
	APO-1	0	0.04	0.00	-	0.17	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.13	0.00	-
	APO-2	0	0.11	0.00	-	0.16	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.43	0.00	-
	CHPO	0	0.07	0.00	-	0.08	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.17	0.00	-
	CPO	0	0.02	0.00	-	0.05	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.05	0.00	-
	PDO	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	ER-2	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	ER-1	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	PM-1	0	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-
	Total	0	0.26	0.00	-	0.45	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.79	0.00	-
DWTF	P-1+RV-1+RD-1+SW+SWB +Tunnel Connections	277,116	73.52	59.42	139	70.31	52.58	123	52.94	50.41	118	49.22	43.67	102	51.25	45.05	105	64.64	48.53	113
	DWTF Including Recycle (IPS + TPS)	277,834	75.44	60.71	141	73.61	53.13	124	55.82	52.66	122	56.98	51.56	120	57.43	50.65	118	65.85	48.38	113
	DWTF without Recycle (IPS + TPS - Recycle)	277,834	69.68	55.49	129	67.83	48.08	112	50.08	46.86	109	51.58	46.33	108	51.91	45.24	105	60.09	42.95	100
	Recycle	0	5.76	5.21	-	5.78	5.05	-	5.74	5.80	-	5.40	5.22	-	5.52	5.41	-	5.76	5.43	-

Notes:
1) [P-1] = [P-2] + [PA-2] + [PB-1] + [PC-1] + [PD-1] + (P-1 Inc. Pop. / (P-2 Cum. Pop. + PA-2 Cum. Pop. + PB-1 Cum. Pop. + PC-1 Cum. Pop. + PD-1 Cum. Pop.))
x ([P-2] + [PA-2] + [PB-1] + [PC-1] + [PD-1] + [TSO] + [CPO] + [CHPO] + [PDO] + [APO-1] + [APO-2] + [ER-1])

Appendix B

Precipitation Data for Significant/Major Storm Events

Table B-1
Rainfall Event Summary Table for Significant Storm Event 1

Start Date: 1/9/2024
Stop Date: 1/13/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.12	0.22	0.33	0.63	0.73	0.73	0.80	0.82	1.25
R02	0.20	0.35	0.48	0.78	0.81	0.81	0.87	0.88	1.55
R10	0.20	0.36	0.53	0.89	0.93	0.93	0.99	0.99	1.82
DTW	0.26	0.37	0.46	0.70	0.74	0.76	0.81	0.82	1.53
R09	0.14	0.25	0.36	0.68	0.74	0.74	0.81	0.83	1.53
R04	0.23	0.45	0.62	1.03	1.13	1.15	1.28	1.38	2.20
R08	0.16	0.28	0.36	0.55	0.74	0.75	0.79	0.80	1.53
R15	0.16	0.31	0.40	0.56	0.84	0.88	0.88	0.96	1.71
R17	0.16	0.32	0.47	0.80	0.86	0.86	0.94	0.96	1.76
R06	0.24	0.43	0.60	1.05	1.14	1.14	1.23	1.27	2.21
R16	0.22	0.37	0.52	0.87	0.97	0.97	1.07	1.09	1.96
Minimum (in):	0.12	0.22	0.33	0.55	0.73	0.73	0.79	0.80	1.25
Average (in):	0.19	0.34	0.47	0.78	0.88	0.88	0.95	0.98	1.73
Maximum (in):	0.26	0.45	0.62	1.05	1.14	1.15	1.28	1.38	2.21
								Standard Deviation (in):	0.30
								Coefficient of Variation:	17%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-2
Rainfall Event Summary Table for Significant Storm Event 2

Start Date: 1/22/2024
Stop Date: 1/30/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.25	0.40	0.62	0.90	1.01	1.05	1.30	1.47	2.31
R02	0.31	0.52	0.72	1.01	1.08	1.10	1.35	1.50	2.23
R10	0.28	0.48	0.72	1.05	1.17	1.20	1.51	1.69	2.68
DTW	0.22	0.43	0.61	0.91	1.07	1.07	1.31	1.51	2.33
R09	0.30	0.50	0.71	1.02	1.15	1.16	1.45	1.65	2.46
R04	0.37	0.68	0.90	1.31	1.44	1.46	1.80	2.05	2.94
R08	0.32	0.58	0.79	1.09	1.24	1.25	1.55	1.74	2.51
R15	0.37	0.60	0.88	1.23	1.39	1.40	1.75	2.50	3.18
R17	0.30	0.55	0.77	1.10	1.21	1.23	1.54	1.76	2.56
R06	0.29	0.55	0.79	1.21	1.30	1.33	1.66	1.91	2.71
R16	0.27	0.50	0.71	1.07	1.25	1.27	1.62	1.83	2.67
Minimum (in):	0.22	0.40	0.61	0.90	1.01	1.05	1.30	1.47	2.23
Average (in):	0.30	0.53	0.75	1.08	1.21	1.23	1.53	1.78	2.60
Maximum (in):	0.37	0.68	0.90	1.31	1.44	1.46	1.80	2.50	3.18
								Standard Deviation (in):	0.28
								Coefficient of Variation:	11%

X.XX*	Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

-	Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-3
Rainfall Event Summary Table for Significant Storm Event 3

Start Date: 4/10/2024
Stop Date: 4/12/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.22	0.30	0.39	0.59	0.94	1.59	1.76	1.76	1.76
R02	0.17	0.26	0.39	0.50	0.90	1.33	1.43	1.43	1.43
R10	0.16	0.26	0.36	0.44	0.86	1.34	1.50	1.50	1.50
DTW	0.16	0.26	0.31	0.40	0.75	1.17	1.34	1.34	1.34
R09	0.21	0.29	0.34	0.48	0.80	1.28	1.47	1.47	1.46
R04	0.35	0.48	0.54	0.64	1.05	1.70	1.97	1.97	1.97
R08	0.23	0.33	0.37	0.44	0.75	1.25	1.51	1.51	1.51
R15	0.15	0.25	0.30	0.45	0.80	1.20	1.40	1.40	1.40
R17	0.30	0.39	0.45	0.48	0.74	1.28	1.47	1.47	1.47
R06	0.28	0.43	0.46	0.58	0.90	1.42	1.57	1.57	1.57
R16	0.30	0.48	0.53	0.54	0.75	1.34	1.57	1.57	1.57
Minimum (in):	0.15	0.25	0.30	0.40	0.74	1.17	1.34	1.34	1.34
Average (in):	0.23	0.34	0.40	0.50	0.84	1.35	1.54	1.54	1.54
Maximum (in):	0.35	0.48	0.54	0.64	1.05	1.70	1.97	1.97	1.97

Standard Deviation (in):	0.18
Coefficient of Variation:	12%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-4
Rainfall Event Summary Table for Significant Storm Event 4

Start Date: 4/27/2024
Stop Date: 4/30/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.16	0.28	0.30	0.40	0.45	0.46	0.77	0.86	0.86
R02	0.24	0.34	0.39	0.55	0.58	0.58	1.01	1.15	1.15
R10	0.22	0.33	0.36	0.50	0.58	0.58	0.99	1.14	1.14
DTW	0.19	0.30	0.39	0.56	0.61	0.61	0.88	1.13	1.13
R09	0.35	0.43	0.43	0.51	0.53	0.53	1.03	1.27	1.27
R04	0.22	0.30	0.33	0.58	0.66	0.66	1.12	1.33	1.33
R08	0.25	0.32	0.32	0.45	0.47	0.47	0.89	1.14	1.14
R15	0.18	0.29	0.32	0.43	0.44	0.44	0.73	0.88	0.88
R17	0.28	0.33	0.34	0.50	0.53	0.53	0.98	1.14	1.14
R06	0.46	0.48	0.51	0.66	0.66	0.66	1.26	1.46	1.47
R16	0.31	0.36	0.38	0.60	0.65	0.65	1.13	1.29	1.29
Minimum (in):	0.16	0.28	0.30	0.40	0.44	0.44	0.73	0.86	0.86
Average (in):	0.26	0.34	0.37	0.52	0.56	0.56	0.98	1.16	1.16
Maximum (in):	0.46	0.48	0.51	0.66	0.66	0.66	1.26	1.46	1.47
								Standard Deviation (in):	0.18
								Coefficient of Variation:	15%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

\- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-5
Rainfall Event Summary Table for Significant Storm Event 5

Start Date: 5/25/2024
Stop Date: 5/29/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.85	1.06	1.06	1.06	1.42	1.44	1.46	1.62	1.67
R02	0.84	1.00	1.00	1.00	1.24	1.24	1.47	1.49	1.58
R10	0.41	0.55	0.55	0.55	0.99	1.00	1.01	1.06	1.11
DTW	0.48	0.71	0.73	0.73	1.07	1.10	1.10	1.19	1.28
R09	0.51	0.68	0.68	0.68	1.02	1.13	1.13	1.44	1.57
R04	0.54	0.68	0.68	0.68	1.00	1.00	1.00	1.46	1.60
R08	0.58	0.58	0.58	0.64	0.91	0.92	1.22	1.56	1.69
R15	0.39	0.55	0.56	0.57	1.06	1.09	1.10	1.34	1.45
R17	0.34	0.43	0.43	0.43	0.67	0.67	0.68	1.01	1.15
R06	0.60	0.61	0.61	0.61	0.62	0.62	0.62	1.13	1.13
R16	0.34	0.46	0.47	0.47	0.64	0.65	0.73	0.91	1.11
Minimum (in):	0.34	0.43	0.43	0.43	0.62	0.62	0.62	0.91	1.11
Average (in):	0.53	0.66	0.67	0.67	0.97	0.99	1.05	1.29	1.39
Maximum (in):	0.85	1.06	1.06	1.06	1.42	1.44	1.47	1.62	1.69
								Standard Deviation (in):	0.24
								Coefficient of Variation:	17%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-6
Rainfall Event Summary Table for Significant Storm Event 6

Start Date: 6/29/2024
Stop Date: 6/29/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.44	0.55	0.55	0.95	1.01	1.05	1.05	1.05	1.05
R02	0.38	0.59	0.61	0.94	1.06	1.10	1.10	1.10	1.10
R10	0.54	0.65	0.65	1.02	1.09	1.10	1.10	1.10	1.10
DTW	0.54	0.63	0.69	0.91	1.02	1.02	1.02	1.02	1.02
R09	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
R04	0.39	0.42	0.46	0.78	0.93	0.97	0.97	0.97	0.96
R08	0.49	0.57	0.64	1.19	1.28	1.30	1.30	1.30	1.29
R15	0.44	0.69	0.72	0.99	1.08	1.12	1.12	1.12	1.12
R17	0.38	0.48	0.52	0.93	1.02	1.06	1.06	1.06	1.06
R06	0.37	0.41	0.45	0.82	0.94	0.96	0.96	0.96	0.96
R16	0.49	0.55	0.55	1.08	1.17	1.18	1.18	1.18	1.18
Minimum (in):	0.37	0.41	0.45	0.78	0.93	0.96	0.96	0.96	0.96
Average (in):	0.45	0.54	0.57	0.96	1.06	1.08	1.08	1.08	1.08
Maximum (in):	0.54	0.65	0.69	1.19	1.28	1.30	1.30	1.30	1.29

Standard Deviation (in):	0.36
Coefficient of Variation:	33%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	-	-	-	-	-	-	-	-	-
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

\- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-7
Rainfall Event Summary Table for Significant Storm Event 7

Start Date: 7/9/2024
Stop Date: 7/10/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.53	0.80	0.94	1.18	1.81	2.13	2.13	2.15	2.13
R02	0.46	0.72	0.85	1.13	1.22	1.43	1.43	1.45	1.43
R10	0.52	0.87	1.01	1.27	1.40	1.76	1.76	1.77	1.75
DTW	0.34	0.59	0.77	1.05	1.10	1.31	1.31	1.32	1.31
R09	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
R04	0.64	0.94	1.34	1.63	2.74	3.19	3.20	3.20	3.19
R08	0.41	0.79	1.05	1.27	1.64	1.94	1.94	1.95	1.94
R15	0.42	0.79	1.01	1.26	1.67	1.92	1.92	1.94	1.92
R17	0.77	1.06	1.30	1.50	2.64	3.04	3.05	3.05	3.04
R06	0.86	1.05	1.50	1.72	2.77	3.13	3.13	3.13	3.13
R16	0.92	1.22	1.59	2.10	3.12	3.51	3.51	3.51	3.50
Minimum (in):	0.34	0.59	0.77	1.05	1.10	1.31	1.31	1.32	1.31
Average (in):	0.59	0.88	1.14	1.41	2.01	2.34	2.34	2.35	2.33
Maximum (in):	0.92	1.22	1.59	2.10	3.12	3.51	3.51	3.51	3.50

Standard Deviation (in):	0.80
Coefficient of Variation:	34%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	1	1	< 1	< 1	1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	-	-	-	-	-	-	-	-	-
R04	< 1	< 1	1	1	8	9	5	3	9
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	6	7	4	3	7
R06	< 1	< 1	2	2	8	8	4	3	8
R16	< 1	1	2	4	14	15	7	5	15
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	1	1	4	4	3	2	4
Maximum:	< 1	1	2	4	14	15	7	5	15

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-8
Rainfall Event Summary Table for Significant Storm Event 8

Start Date: 8/5/2024
Stop Date: 8/6/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.50	0.88	0.94	1.12	1.23	1.23	1.29	1.29	1.29
R02	0.57	0.90	1.00	1.21	1.81	1.81	1.89	1.89	1.86
R10	0.59	0.96	1.02	1.18	1.34	1.34	1.45	1.45	1.45
DTW	0.39	0.73	0.89	1.04	1.14	1.14	1.24	1.24	1.24
R09	0.58	0.79	0.84	0.97	1.18	1.18	1.32	1.32	1.32
R04	0.67	0.85	0.92	1.06	1.38	1.44	1.49	1.49	1.49
R08	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
R15	0.78	1.11	1.17	1.28	1.40	1.40	1.46	1.46	1.46
R17	0.66	0.97	1.02	1.14	1.49	1.49	1.56	1.56	1.56
R06	0.82	1.02	1.08	1.21	1.47	1.47	1.53	1.53	1.53
R16	0.81	1.07	1.14	1.24	1.44	1.45	1.52	1.52	1.51
Minimum (in):	0.39	0.73	0.84	0.97	1.14	1.14	1.24	1.24	1.24
Average (in):	0.64	0.93	1.00	1.15	1.39	1.40	1.48	1.48	1.47
Maximum (in):	0.82	1.11	1.17	1.28	1.81	1.81	1.89	1.89	1.86
								Standard Deviation (in):	0.17
								Coefficient of Variation:	12%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	-	-	-	-	-	-	-	-	-
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	1

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-9
Rainfall Event Summary Table for Significant Storm Event 9

Start Date: 8/25/2024
Stop Date: 8/28/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.65	1.05	1.25	1.25	1.45	1.48	1.58	1.58	1.58
R02	0.37	0.70	0.74	0.74	0.96	1.05	1.24	1.24	1.23
R10	0.59	0.63	0.65	0.65	1.29	1.41	1.95	1.95	2.24
DTW	0.72	0.79	0.92	0.94	1.37	1.66	2.26	2.26	2.60
R09	0.54	0.54	0.59	0.60	1.06	1.19	1.62	1.63	1.87
R04	0.76	0.76	0.78	0.78	1.11	1.57	1.89	1.89	2.09
R08	0.91	0.97	1.08	1.08	1.47	1.57	1.94	1.95	2.10
R15	0.89	0.94	1.11	1.12	1.28	1.47	1.69	1.69	1.83
R17	0.55	0.68	0.72	0.72	1.08	1.11	1.27	1.28	1.39
R06	0.59	0.94	0.94	0.94	1.40	1.54	1.84	1.84	1.94
R16	1.14	1.19	1.34	1.34	1.82	1.87	2.30	2.30	2.38
Minimum (in):	0.37	0.54	0.59	0.60	0.96	1.05	1.24	1.24	1.23
Average (in):	0.70	0.84	0.92	0.92	1.30	1.45	1.78	1.78	1.93
Maximum (in):	1.14	1.19	1.34	1.34	1.82	1.87	2.30	2.30	2.60
								Standard Deviation (in):	0.41
								Coefficient of Variation:	21%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	2	1	1	< 1	1	< 1	< 1	< 1	2
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	2	1	1	< 1	1	< 1	< 1	< 1	2

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-10
Rainfall Event Summary Table for Significant Storm Event 10

Start Date: 10/12/2024
Stop Date: 10/14/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.39	0.58	0.71	0.94	1.08	1.14	1.46	1.46	1.45
R02	0.30	0.55	0.67	0.93	1.08	1.18	1.51	1.51	1.51
R10	0.34	0.55	0.70	0.96	1.06	1.11	1.45	1.45	1.44
DTW	0.33	0.50	0.61	0.88	0.95	0.99	1.30	1.30	1.30
R09	0.32	0.49	0.63	0.88	1.01	1.09	1.37	1.37	1.37
R04	0.35	0.62	0.78	1.06	1.28	1.41	1.74	1.74	1.73
R08	0.28	0.44	0.59	0.84	0.95	1.05	1.30	1.30	1.30
R15	0.30	0.42	0.50	0.76	0.82	0.89	1.13	1.13	1.12
R17	0.32	0.54	0.70	1.05	1.18	1.26	1.54	1.54	1.54
R06	0.35	0.60	0.75	1.11	1.27	1.37	1.62	1.62	1.62
R16	0.33	0.49	0.60	0.88	1.01	1.10	1.33	1.33	1.33
Minimum (in):	0.28	0.42	0.50	0.76	0.82	0.89	1.13	1.13	1.12
Average (in):	0.33	0.53	0.66	0.94	1.06	1.14	1.43	1.43	1.43
Maximum (in):	0.39	0.62	0.78	1.11	1.28	1.41	1.74	1.74	1.73

Standard Deviation (in):	0.17
Coefficient of Variation:	12%

X.XX* Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

- Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Table B-11
Rainfall Event Summary Table for Significant Storm Event 11

Start Date: 12/29/2024
Stop Date: 12/31/2024

Gauge ID	Peak Rainfall (in)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Event Total
R18	0.16	0.25	0.32	0.60	1.00	1.41	1.43	1.47	1.47
R02	0.14	0.25	0.35	0.59	0.96	1.41	1.42	1.45	1.45
R10	0.15	0.28	0.36	0.69	1.15	1.64	1.65	1.69	1.69
DTW	0.21	0.29	0.32	0.57	1.01	1.64	1.65	1.73	1.73
R09	0.18	0.26	0.32	0.53	0.99	1.52	1.53	1.56	1.56
R04	0.23	0.33	0.47	0.82	1.37	1.98	1.99	2.17	2.17
R08	0.22	0.29	0.37	0.65	1.18	1.76	1.77	1.90	1.90
R15	0.23	0.31	0.35	0.62	1.18	1.79	1.80	1.91	1.91
R17	0.21	0.31	0.39	0.71	1.26	1.72	1.72	1.86	1.85
R06	0.23	0.33	0.41	0.70	1.16	1.66	1.66	1.79	1.79
R16	0.20	0.30	0.37	0.62	1.10	1.66	1.66	1.81	1.81
Minimum (in):	0.14	0.25	0.32	0.53	0.96	1.41	1.42	1.45	1.45
Average (in):	0.20	0.29	0.37	0.65	1.12	1.65	1.66	1.76	1.76
Maximum (in):	0.23	0.33	0.47	0.82	1.37	1.98	1.99	2.17	2.17

Standard Deviation (in):	0.21
Coefficient of Variation:	12%

X.XX*	Missing or suspect data (not used).

Gauge ID	Recurrence Interval (years)								
	1-Hour	2-Hour	3-Hour	6-Hour	12-Hour	24-Hour	2-Day	3-Day	Maximum
R18	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R02	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DTW	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R09	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R04	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R08	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R17	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
R16	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Minimum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Average:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum:	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

-	Missing or suspect data (not used).

Notes:

1) Return periods determined from point precipitation frequency (PF) estimates from NOAA Atlas 14, Volume 8, Version 2 published in 2013. NOAA Atlas 14 is the current reference document for return frequency.
2) Return periods calculated by linear interpolation between the published whole number month or year frequencies.

Appendix C

Meter Data Summaries

Figure C-1
Data Flags for 2024

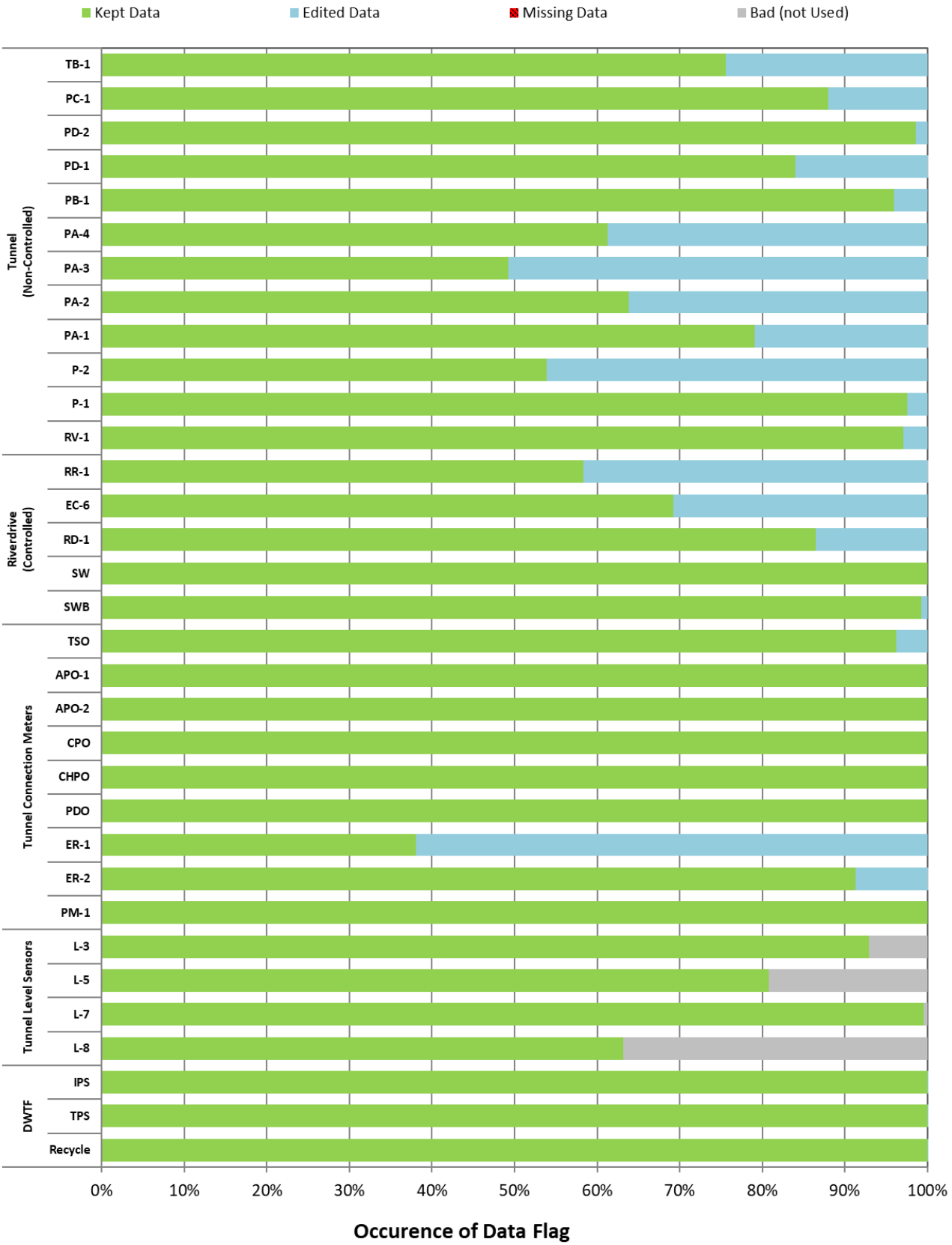
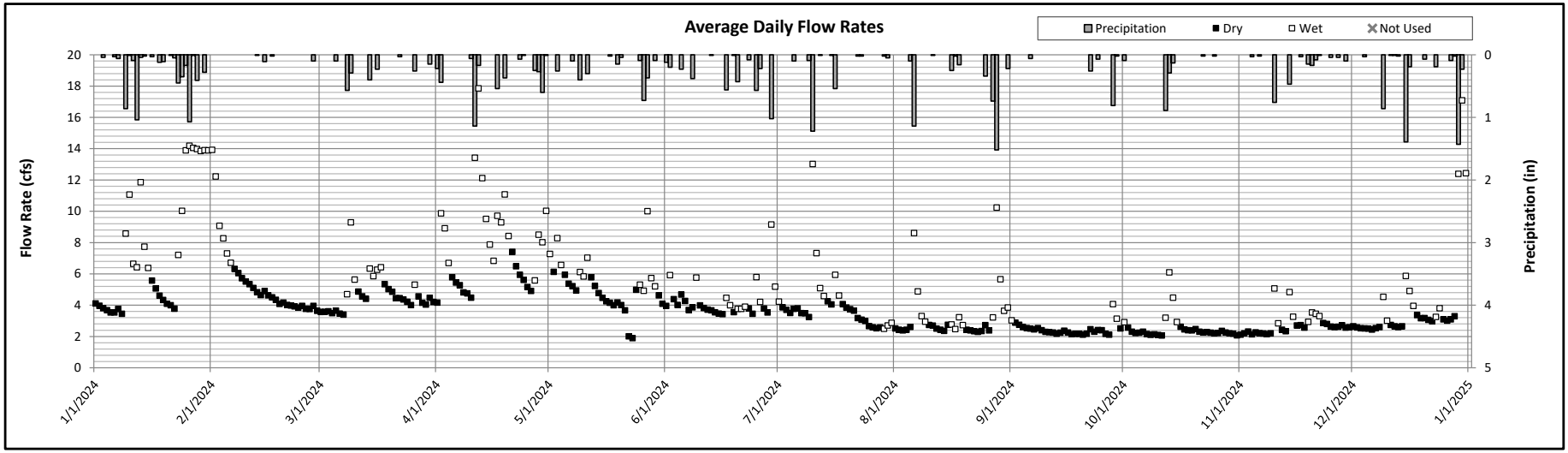
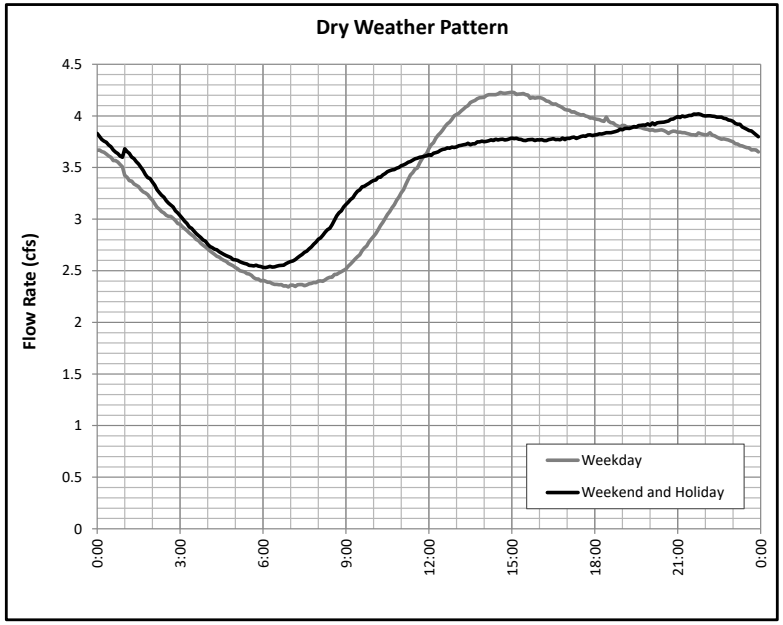


Figure C-2
Meter Report

Meter: TB-1 **Location: Taylor Basin** **Period: 1/1/2024 through 12/31/2024**

Type: Magmeter **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	7.6	151.8	4.1	81.8	15	16
Feb-24	5.6	104.9	4.6	85.5	23	6
Mar-24	4.7	94.6	4.2	84.2	23	8
Apr-24	7.8	151.1	5.4	104.7	13	17
May-24	5.2	104.6	4.5	89.8	20	11
Jun-24	4.3	83.0	3.8	74.0	19	11
Jul-24	4.0	80.6	3.4	68.6	21	10
Aug-24	3.3	66.0	2.5	49.7	18	13
Sep-24	2.5	47.7	2.4	45.6	27	3
Oct-24	2.5	50.8	2.3	45.5	26	5
Nov-24	2.8	53.6	2.4	47.4	22	8
Dec-24	4.2	84.2	2.8	56.4	21	10

Statistics for Major Wet Weather Events

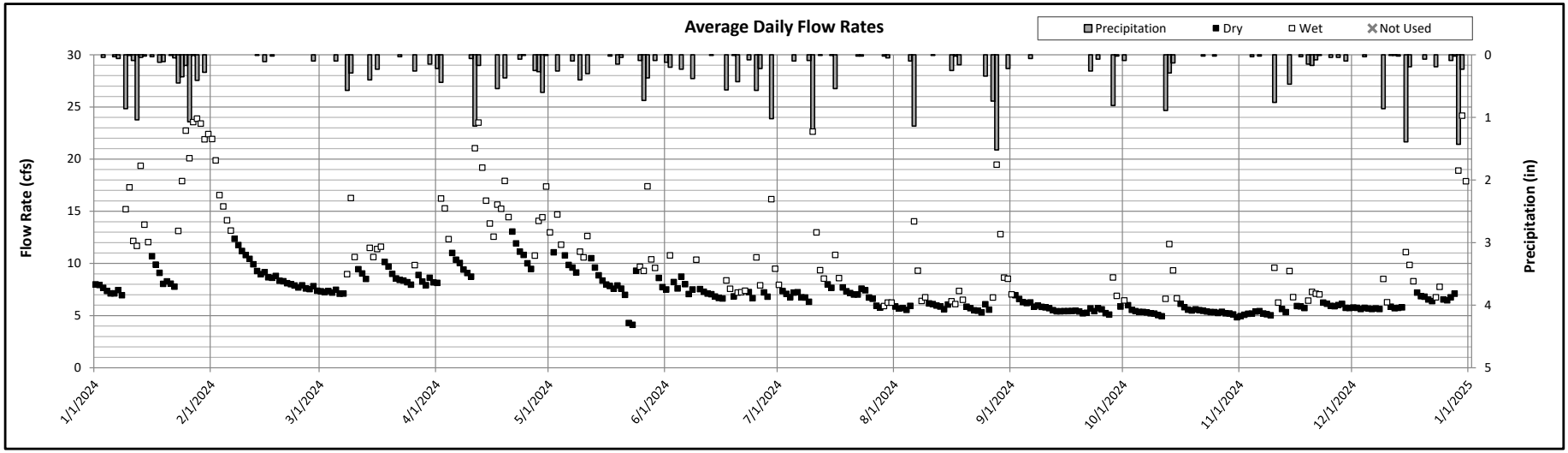
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	14.6	1/27/24 4:15	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

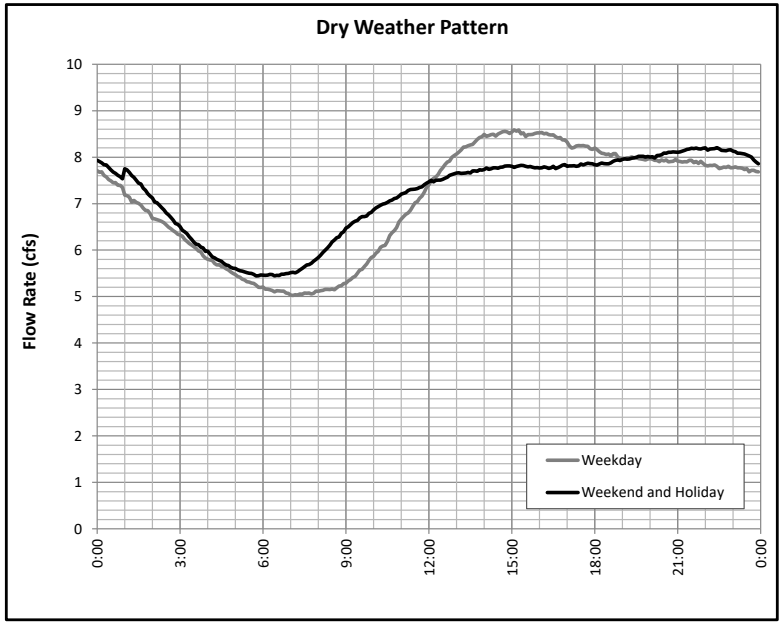
Figure C-3

Meter Report

Meter: PC-1 | **Location: Pelham Interceptor North of Goddard Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

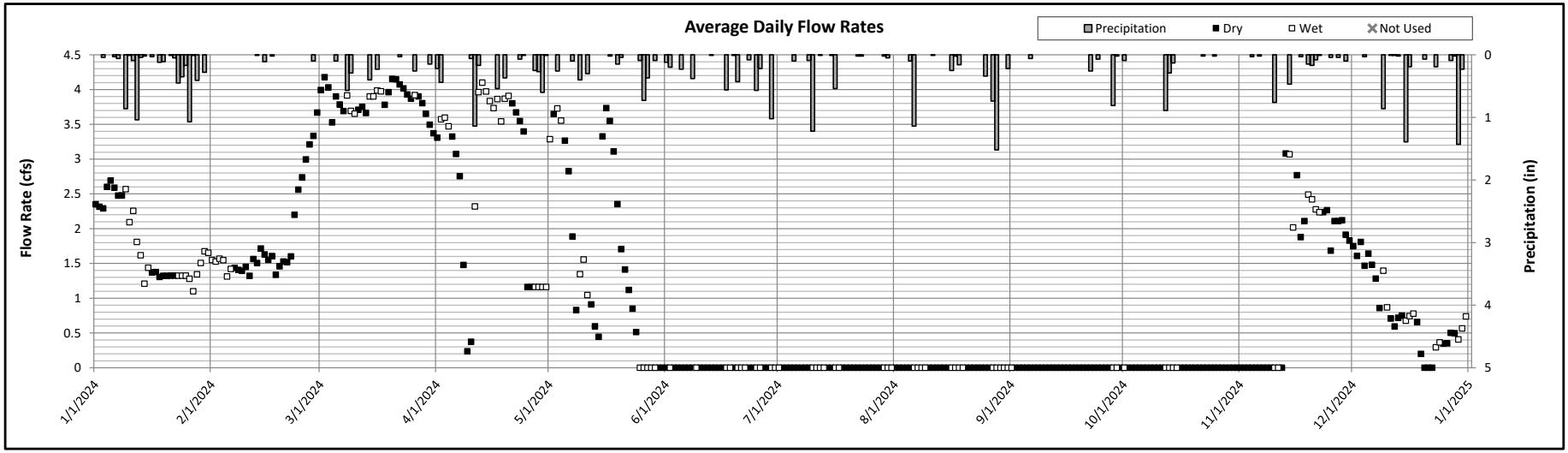
Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	13.3	266.0	8.1	162.1	15	16
Feb-24	10.6	198.7	9.0	168.2	23	6
Mar-24	9.1	181.4	8.3	165.4	23	8
Apr-24	13.4	260.4	10.2	198.5	13	17
May-24	9.6	192.3	8.4	167.8	20	11
Jun-24	8.0	156.0	7.3	141.3	19	11
Jul-24	8.0	159.3	7.0	140.5	21	10
Aug-24	7.2	144.1	5.8	115.7	18	13
Sep-24	5.9	114.1	5.7	110.5	27	3
Oct-24	5.8	116.8	5.4	107.7	26	5
Nov-24	6.1	117.9	5.6	108.2	22	8
Dec-24	8.0	160.7	6.2	123.3	21	10

Statistics for Major Wet Weather Events

Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	26.1	1/28/24 16:10	≥4.7	1/26/2024 2:55-11:50
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-4
Meter Report

Meter: Pond 3W to DSDS **Location: Detroit Metro Airport** **Period: 1/1/2024 through 12/31/2024**
Type: Magmeter **System Meter Type: WCAA**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	1.8	35.3	1.9	38.9	15	16
Feb-24	1.8	34.7	1.9	36.4	23	6
Mar-24	3.8	77.1	3.8	77.0	23	8
Apr-24	2.8	54.1	2.4	46.6	13	17
May-24	1.6	32.7	1.8	36.1	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.0	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	1.4	26.2	1.2	23.0	22	8
Dec-24	0.8	15.5	0.8	16.4	21	10

Statistics for Major Wet Weather Events

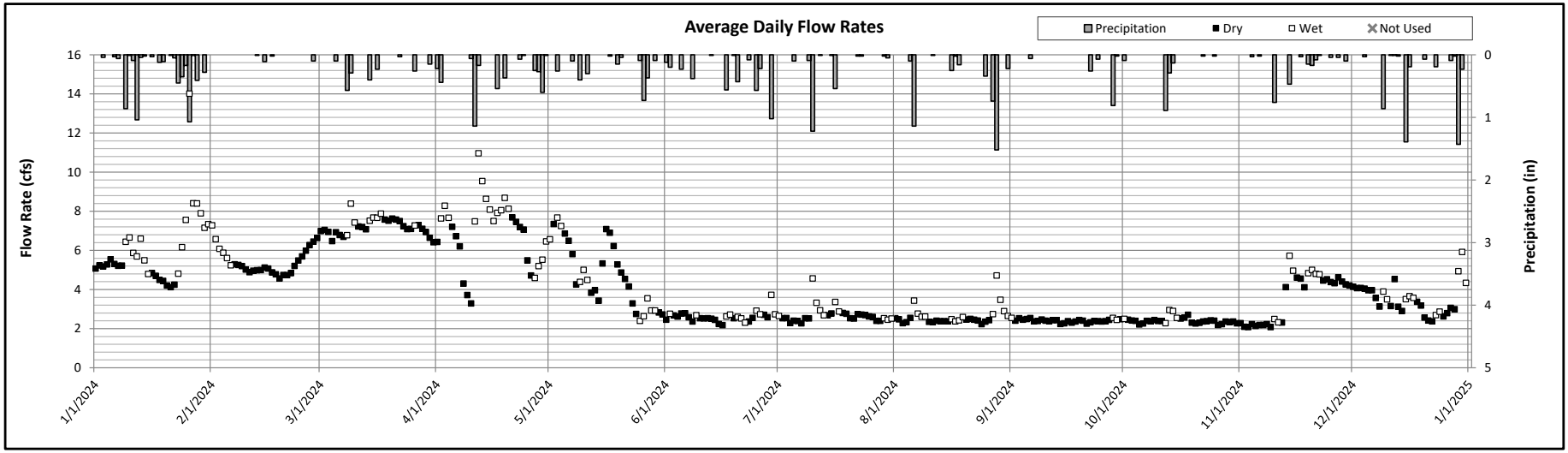
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

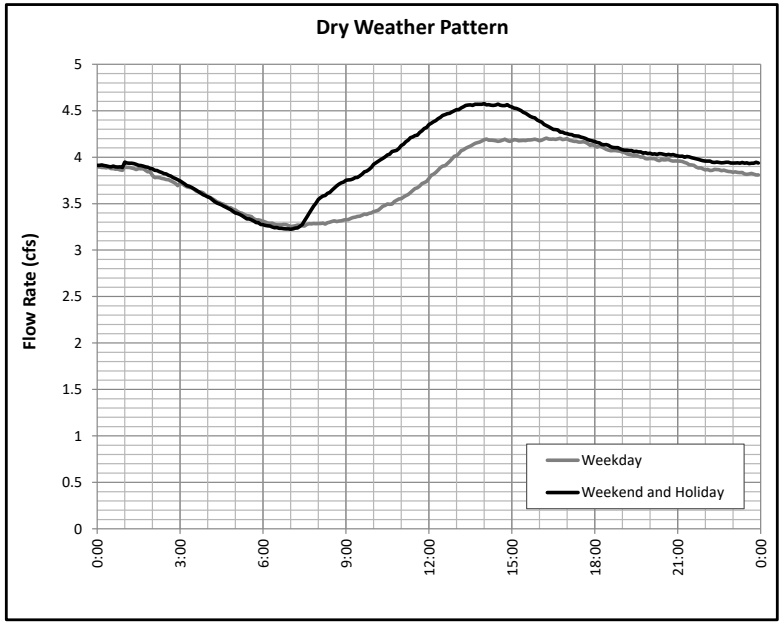
Figure C-5

Meter Report

Meter: PD-2 | **Location: Goddard Interceptor West of Inkster Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	6.0	120.4	4.9	97.6	15	16
Feb-24	5.4	101.9	5.3	98.6	23	6
Mar-24	7.2	144.4	7.1	141.9	23	8
Apr-24	6.9	134.3	6.0	115.5	13	17
May-24	4.8	95.5	4.9	98.1	20	11
Jun-24	2.6	50.5	2.5	48.9	19	11
Jul-24	2.7	54.0	2.6	51.2	21	10
Aug-24	2.6	52.3	2.4	48.1	18	13
Sep-24	2.4	46.7	2.4	46.4	27	3
Oct-24	2.4	48.4	2.4	47.5	26	5
Nov-24	3.6	70.6	3.4	65.5	22	8
Dec-24	3.5	70.3	3.3	66.8	21	10

Statistics for Major Wet Weather Events

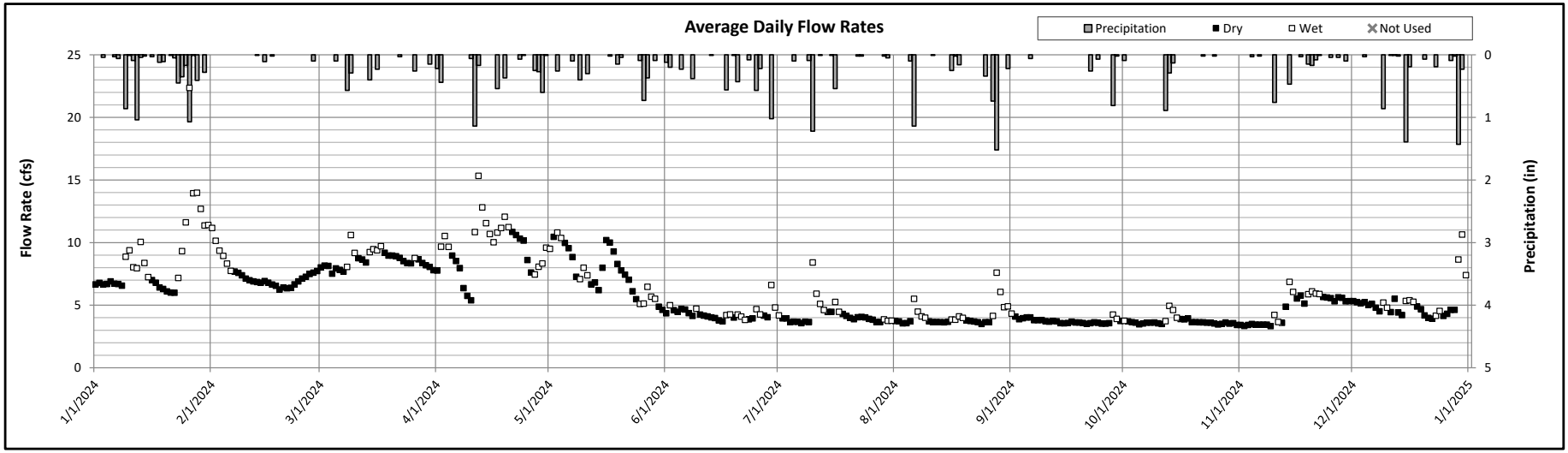
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	19.7	1/26/24 6:20	4.4	1/26/24 9:25
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

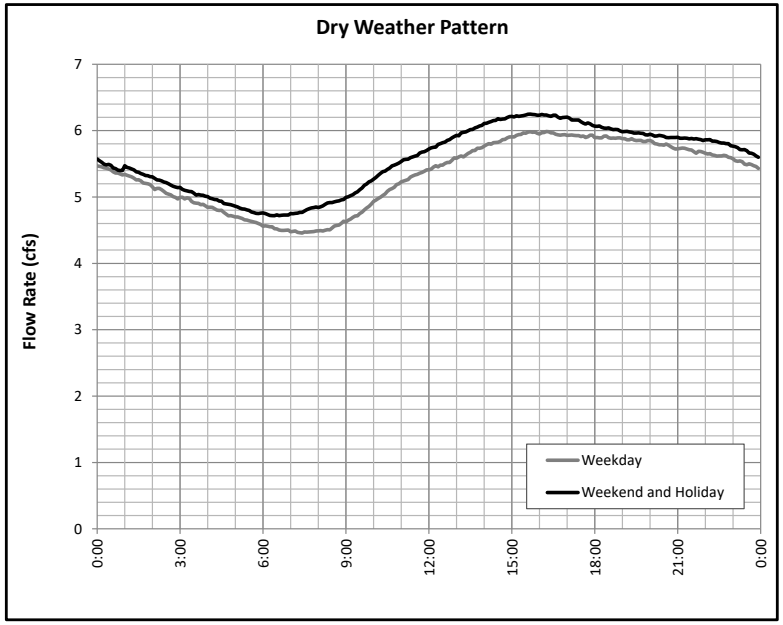
Figure C-6

Meter Report

Meter: PD-1 | **Location: Goddard Interceptor West of Allen Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	8.8	175.7	6.5	131.1	15	16
Feb-24	7.4	139.5	7.0	130.6	23	6
Mar-24	8.6	172.2	8.3	167.3	23	8
Apr-24	9.6	186.5	8.4	162.3	13	17
May-24	7.6	152.4	7.7	155.1	20	11
Jun-24	4.3	83.9	4.2	80.8	19	11
Jul-24	4.2	84.9	3.9	78.3	21	10
Aug-24	4.1	82.1	3.7	73.2	18	13
Sep-24	3.7	72.6	3.7	71.8	27	3
Oct-24	3.7	74.2	3.6	72.3	26	5
Nov-24	4.8	93.1	4.5	87.7	22	8
Dec-24	5.1	103.1	4.7	93.7	21	10

Statistics for Major Wet Weather Events

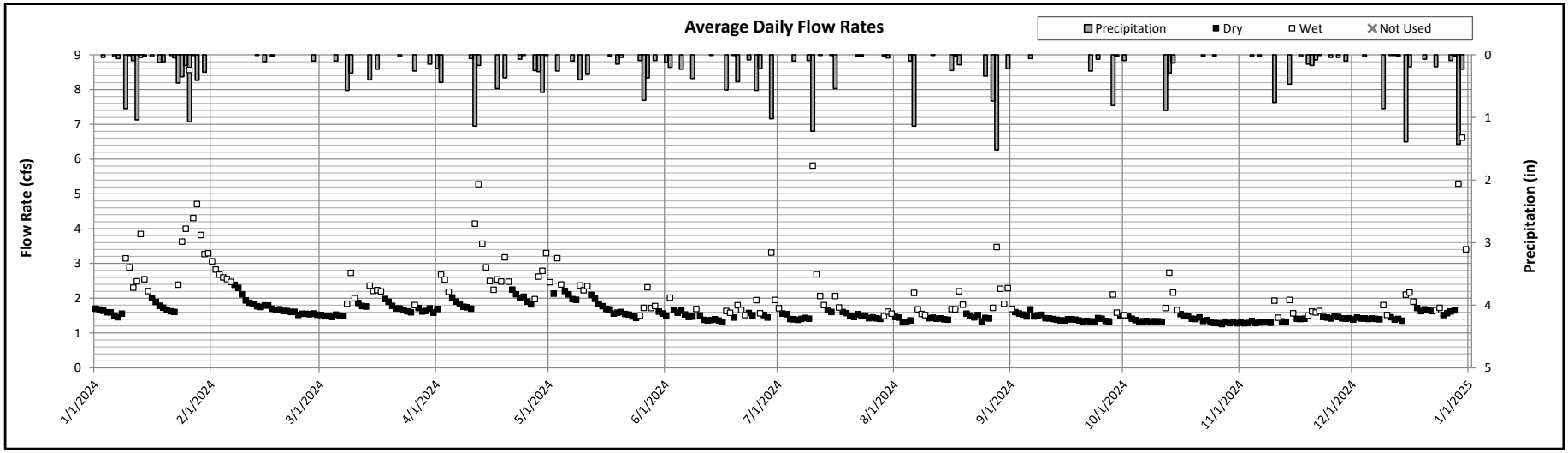
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	30.3	1/26/24 7:00	2.7	1/26/24 5:25
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

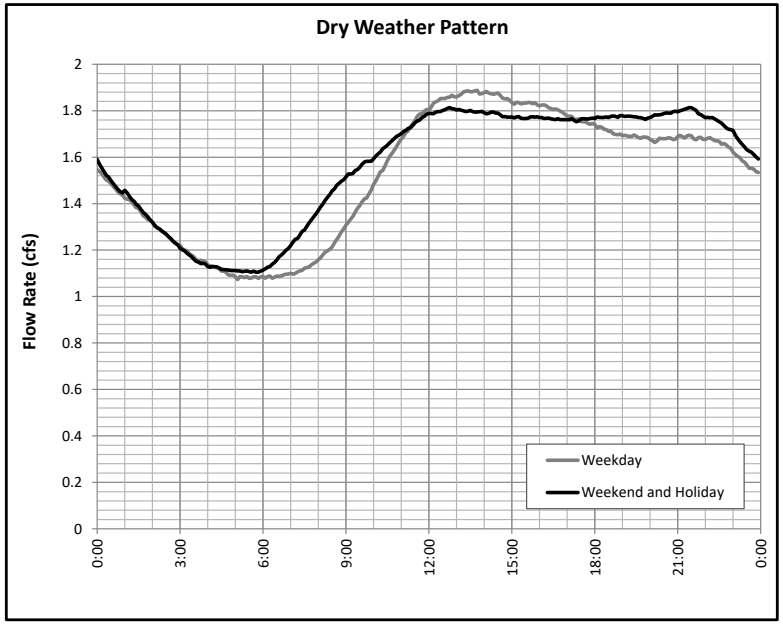
Figure C-7

Meter Report

Meter: PB-1 | **Location: Northline Interceptor West of Fordline Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	2.7	53.2	1.7	33.4	15	16
Feb-24	1.9	36.5	1.8	32.8	23	6
Mar-24	1.8	35.8	1.7	33.1	23	8
Apr-24	2.5	47.9	1.9	36.9	13	17
May-24	1.9	38.3	1.8	35.4	20	11
Jun-24	1.6	31.4	1.5	28.6	19	11
Jul-24	1.7	34.7	1.5	29.7	21	10
Aug-24	1.7	33.2	1.4	28.4	18	13
Sep-24	1.5	28.4	1.4	27.7	27	3
Oct-24	1.5	29.2	1.4	27.3	26	5
Nov-24	1.4	28.0	1.4	26.5	22	8
Dec-24	1.9	38.6	1.5	30.1	21	10

Statistics for Major Wet Weather Events

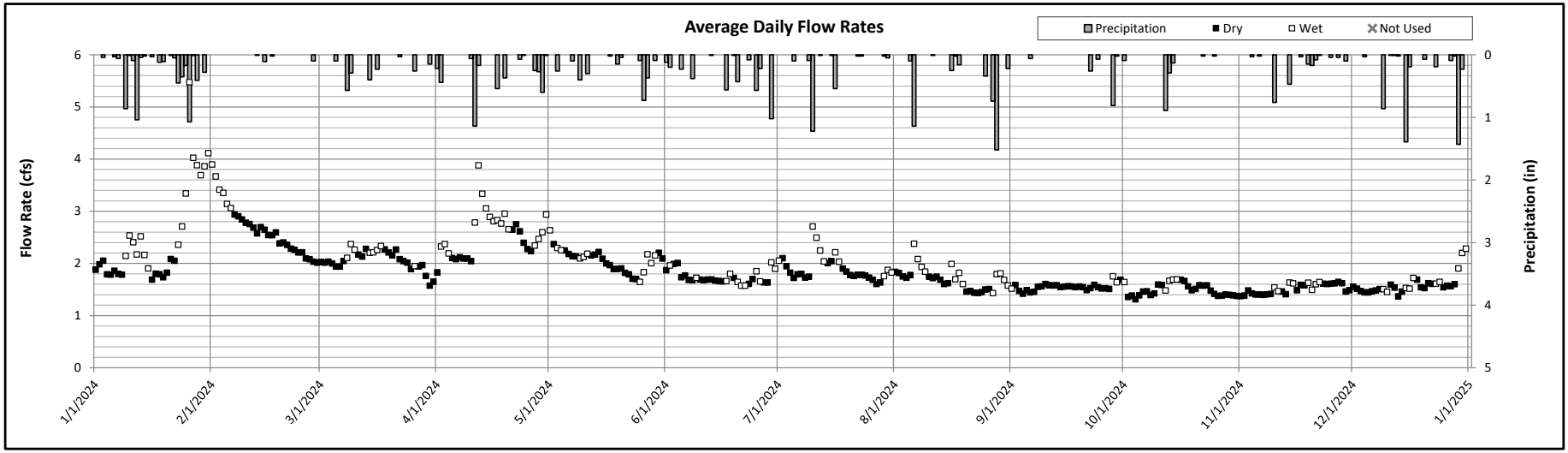
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	15.9	1/26/24 4:15	2.1	1/26/24 4:50
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

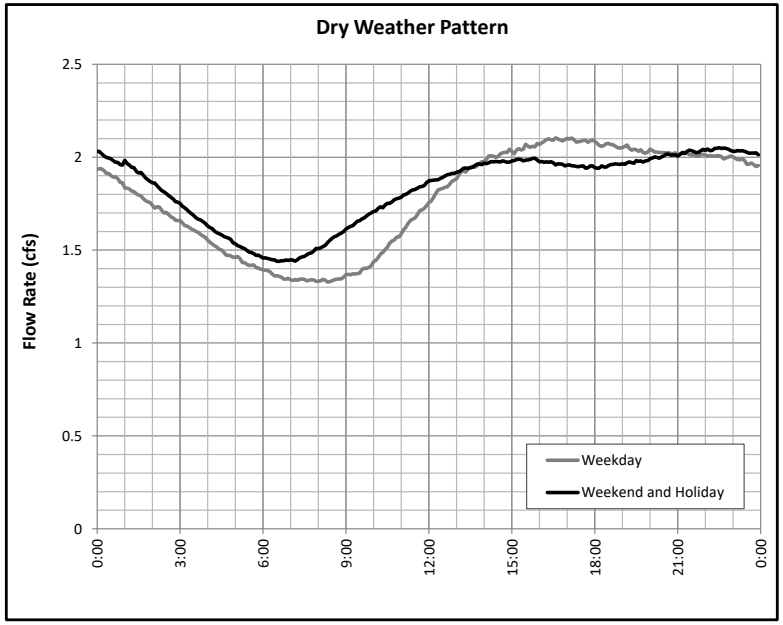
Figure C-8

Meter Report

Meter: PA-4 | **Location: Eureka Interceptor near Hannan Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	2.5	49.9	1.9	37.3	15	16
Feb-24	2.7	50.0	2.5	46.3	23	6
Mar-24	2.1	41.4	2.0	40.4	23	8
Apr-24	2.5	49.4	2.3	43.7	13	17
May-24	2.1	41.4	2.0	40.7	20	11
Jun-24	1.7	33.7	1.7	33.4	19	11
Jul-24	1.9	38.3	1.8	36.2	21	10
Aug-24	1.7	34.2	1.6	32.6	18	13
Sep-24	1.5	30.0	1.5	29.8	27	3
Oct-24	1.5	30.0	1.5	29.4	26	5
Nov-24	1.5	29.4	1.5	29.0	22	8
Dec-24	1.6	32.0	1.5	30.6	21	10

Statistics for Major Wet Weather Events

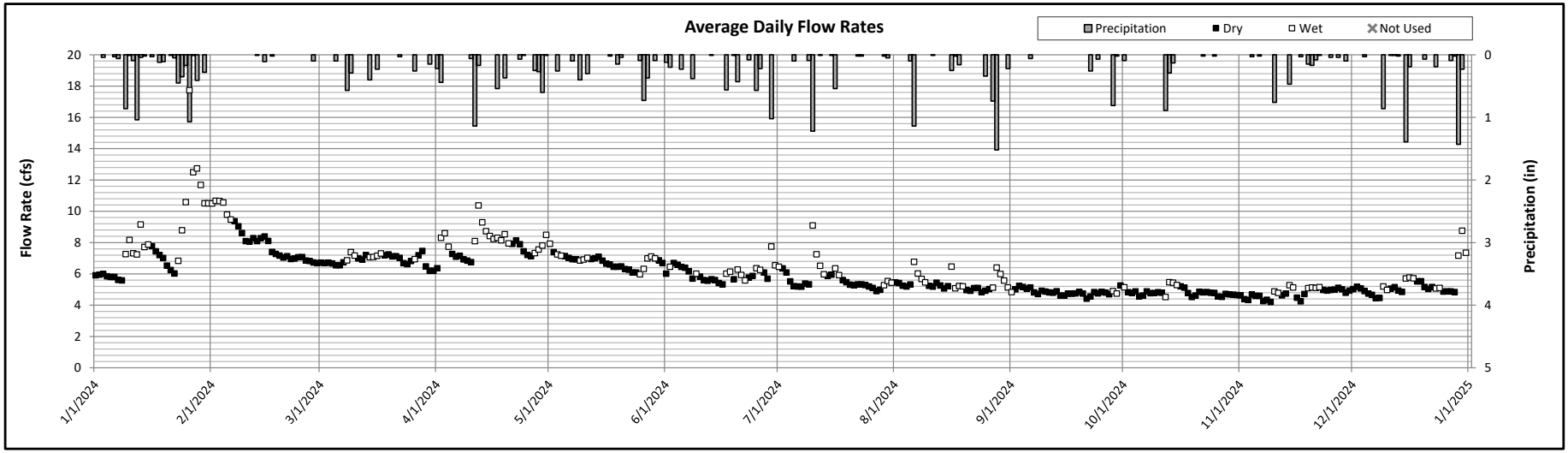
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	6.2	1/26/24 2:45	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

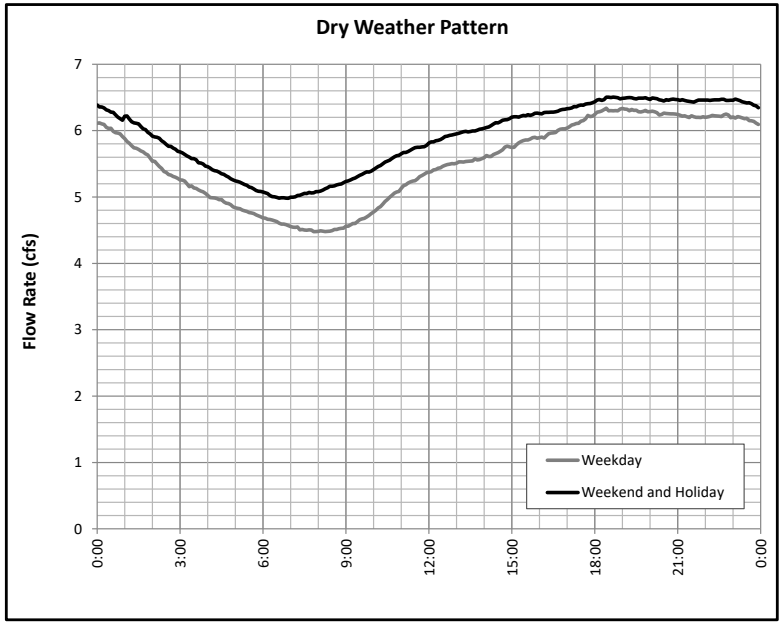
Figure C-9

Meter Report

Meter: PA-3 | **Location: Eureka Interceptor at Inkster Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	8.1	162.4	6.3	126.5	15	16
Feb-24	8.2	153.2	7.6	142.9	23	6
Mar-24	6.9	138.3	6.8	136.8	23	8
Apr-24	7.9	152.4	7.2	140.3	13	17
May-24	6.8	136.1	6.7	134.4	20	11
Jun-24	6.0	117.1	5.9	114.3	19	11
Jul-24	5.7	114.8	5.4	108.6	21	10
Aug-24	5.4	107.8	5.2	103.3	18	13
Sep-24	4.8	93.7	4.8	93.7	27	3
Oct-24	4.8	96.7	4.8	95.4	26	5
Nov-24	4.8	92.4	4.7	90.3	22	8
Dec-24	5.3	106.7	5.0	99.5	21	10

Statistics for Major Wet Weather Events

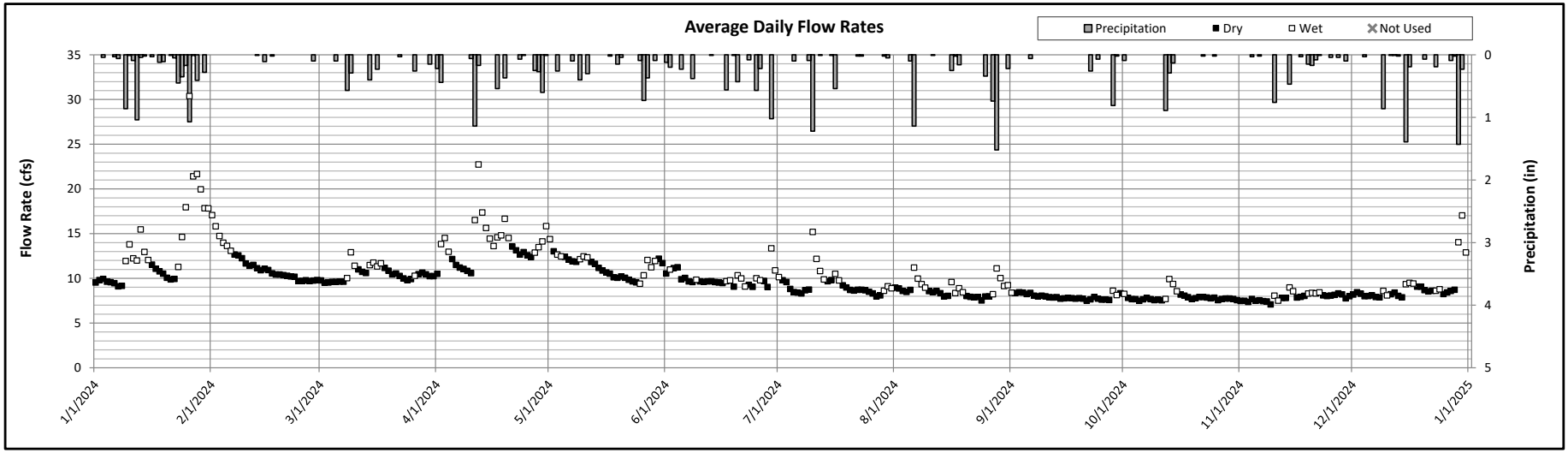
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	20.7	1/26/24 3:15	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

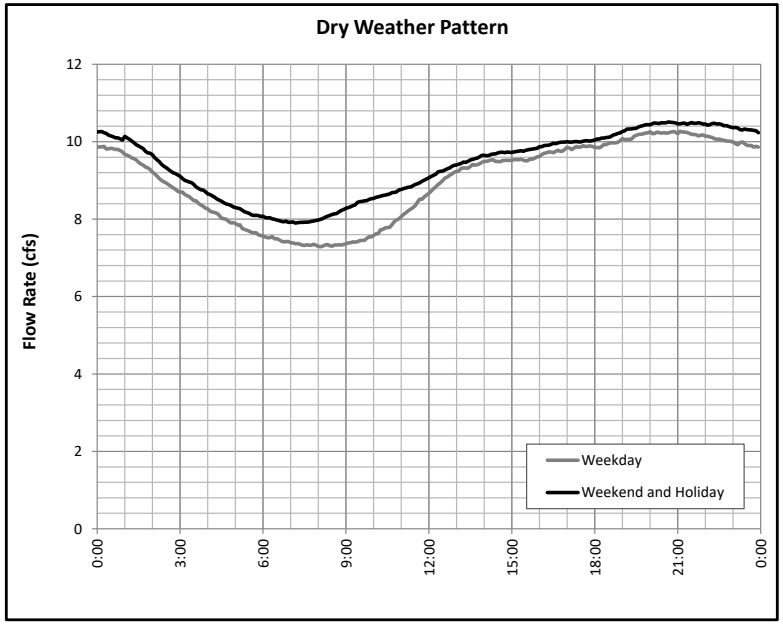
Figure C-10

Meter Report

Meter: PA-2 | **Location: Eureka Interceptor at Allen Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	13.3	267.0	10.0	200.2	15	16
Feb-24	11.6	216.6	10.7	201.1	23	6
Mar-24	10.5	210.2	10.2	204.3	23	8
Apr-24	13.8	267.1	11.9	231.1	13	17
May-24	11.4	227.9	11.1	221.6	20	11
Jun-24	10.0	193.2	9.8	189.1	19	11
Jul-24	9.3	187.2	8.8	176.1	21	10
Aug-24	8.7	175.2	8.3	165.5	18	13
Sep-24	8.0	154.3	7.9	153.4	27	3
Oct-24	7.9	158.3	7.7	155.0	26	5
Nov-24	7.9	153.4	7.8	150.7	22	8
Dec-24	9.1	181.9	8.3	167.2	21	10

Statistics for Major Wet Weather Events

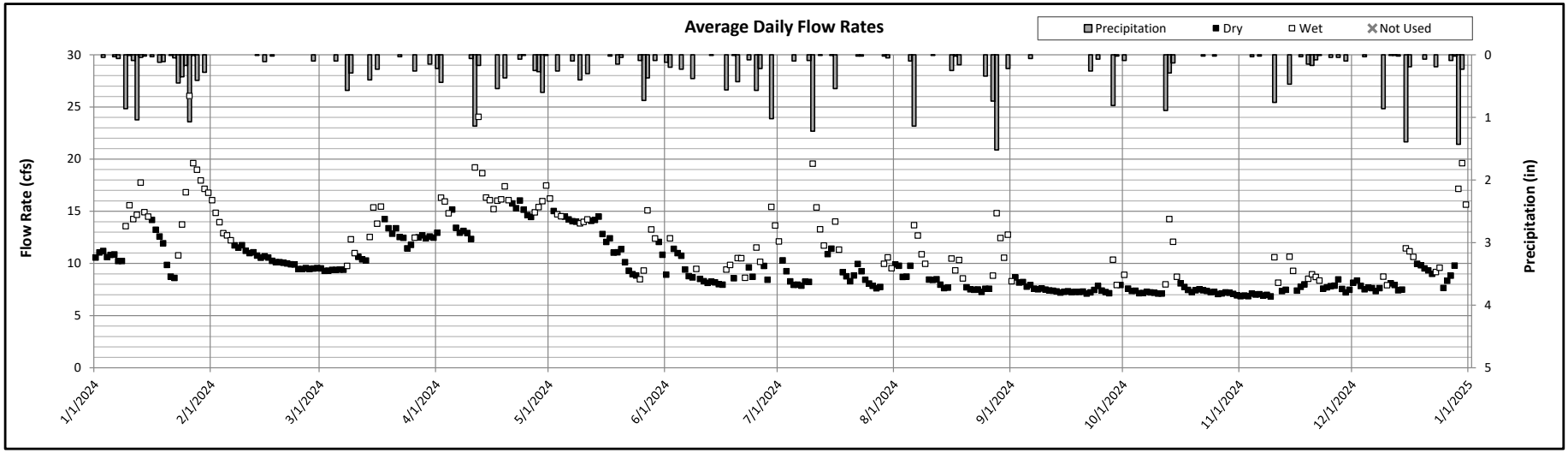
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	35.7	1/26/24 3:50	4.1	1/26/24 4:55
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

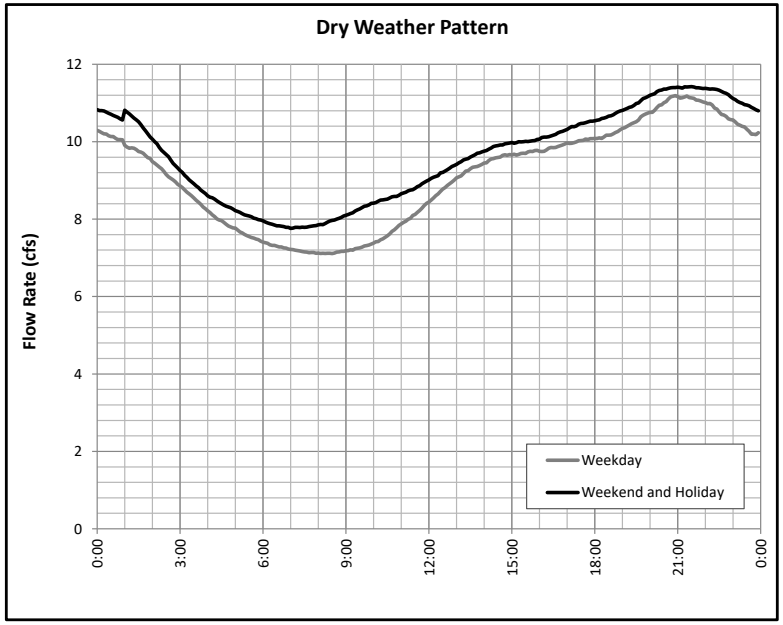
Figure C-11

Meter Report

Meter: PA-1 | **Location: Eureka Interceptor West of Fordline Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	13.8	276.3	11.0	219.9	15	16
Feb-24	11.1	207.3	10.4	194.0	23	6
Mar-24	11.7	235.4	11.4	227.9	23	8
Apr-24	15.7	303.7	14.2	274.5	13	17
May-24	12.6	252.9	12.3	245.7	20	11
Jun-24	9.8	189.2	9.0	174.7	19	11
Jul-24	10.1	201.4	8.8	175.8	21	10
Aug-24	9.5	189.5	8.2	164.8	18	13
Sep-24	7.7	148.5	7.5	145.9	27	3
Oct-24	7.8	156.3	7.3	146.3	26	5
Nov-24	7.8	152.1	7.4	142.9	22	8
Dec-24	9.6	191.4	8.3	167.2	21	10

Statistics for Major Wet Weather Events

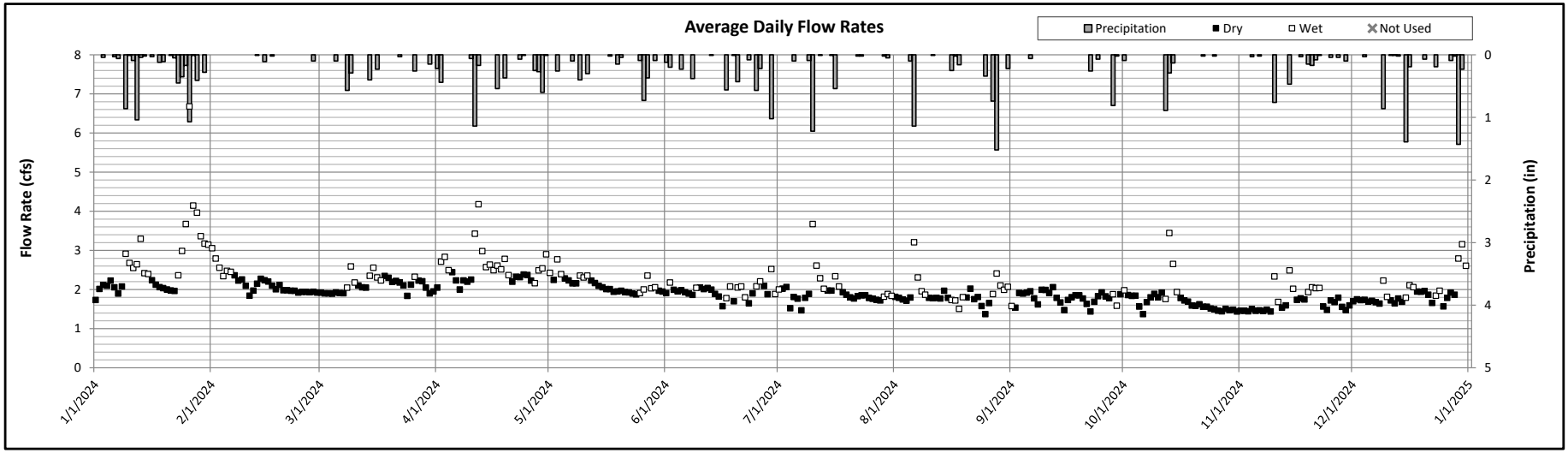
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	29.3	1/26/24 2:45	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

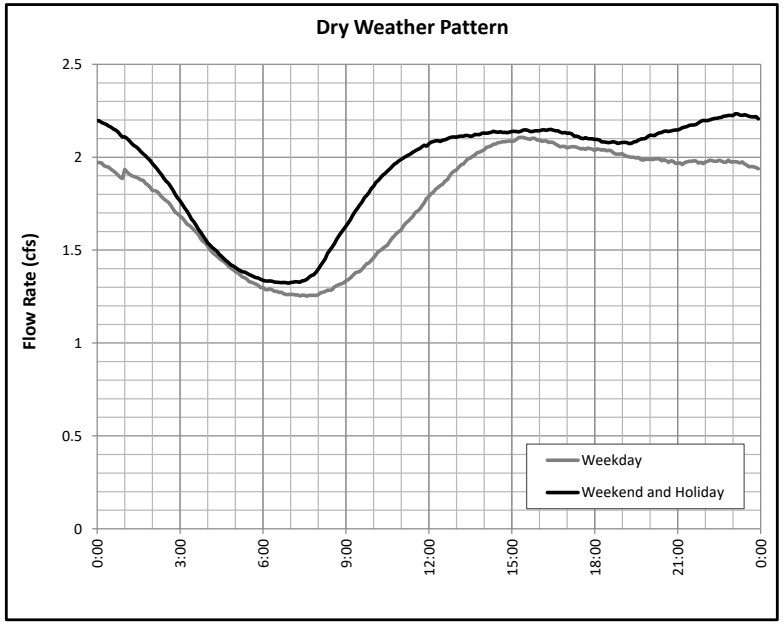
Figure C-12

Meter Report

Meter: P-2 | **Location: Pennsylvania Interceptor East of Dix-Toledo Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	2.7	53.6	2.0	40.9	15	16
Feb-24	2.2	40.7	2.1	38.5	23	6
Mar-24	2.1	42.5	2.1	41.1	23	8
Apr-24	2.5	49.0	2.2	43.6	13	17
May-24	2.1	42.6	2.1	41.1	20	11
Jun-24	2.0	38.0	1.9	36.8	19	11
Jul-24	2.0	39.2	1.8	36.4	21	10
Aug-24	1.9	37.6	1.8	35.3	18	13
Sep-24	1.8	34.6	1.8	34.8	27	3
Oct-24	1.7	35.0	1.6	32.7	26	5
Nov-24	1.7	32.9	1.6	30.3	22	8
Dec-24	1.9	38.3	1.8	35.2	21	10

Statistics for Major Wet Weather Events

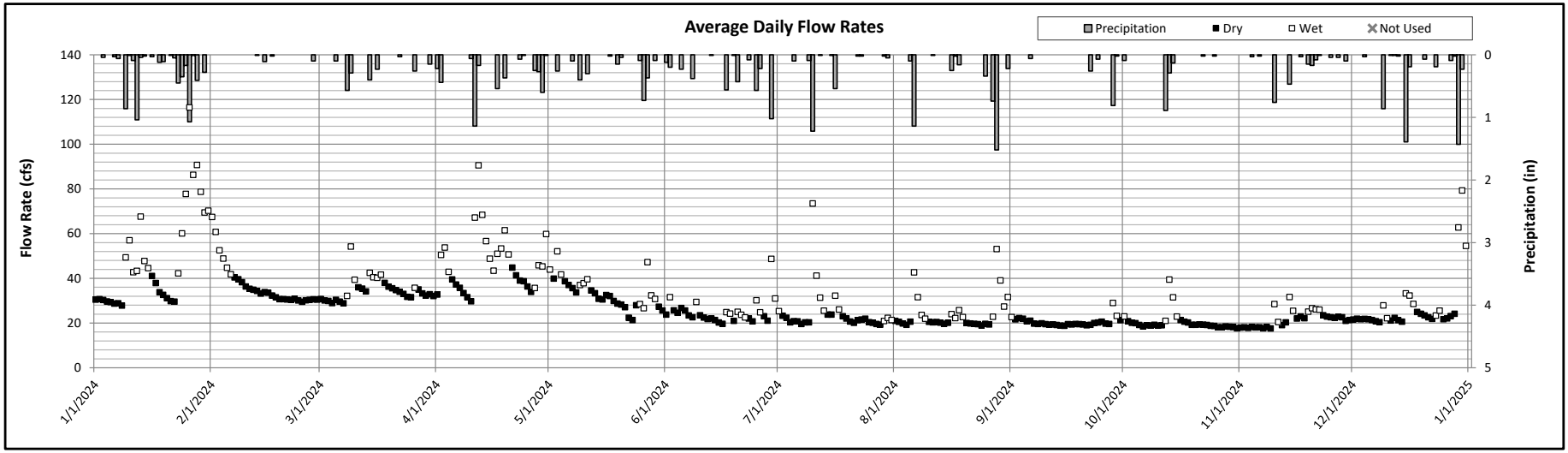
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	10.1	1/26/24 5:15	1.9	1/26/24 5:40
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

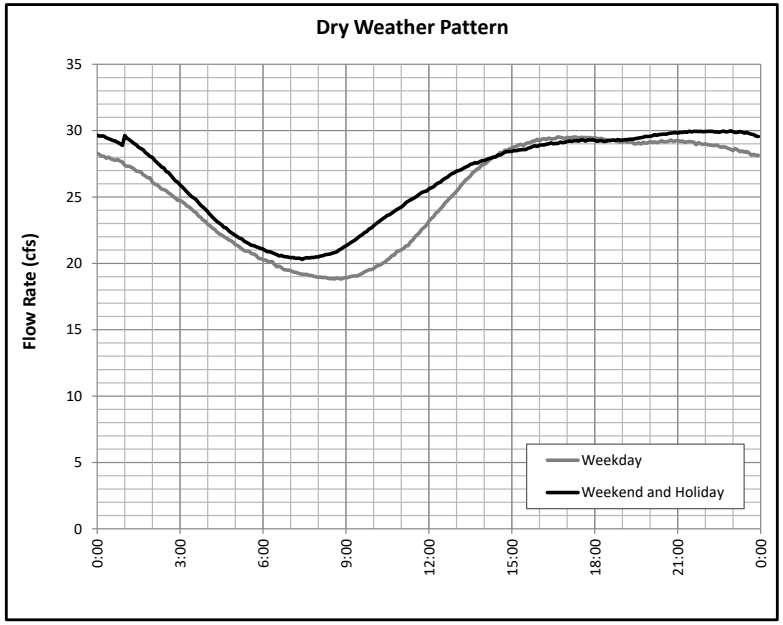
Figure C-13

Meter Report

Meter: P-1 | **Location: Pennsylvania Interceptor East of Fort Street** | **Period: 1/1/2024 through 12/31/2024**

Type: Accusonic 7510 | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	48.9	979.3	31.4	629.4	15	16
Feb-24	37.0	693.7	32.9	617.1	23	6
Mar-24	34.8	698.1	32.8	656.9	23	8
Apr-24	46.6	904.0	36.5	706.7	13	17
May-24	33.4	668.5	30.8	618.0	20	11
Jun-24	24.9	482.5	22.7	439.6	19	11
Jul-24	24.7	494.1	21.2	424.4	21	10
Aug-24	24.1	482.9	19.9	399.6	18	13
Sep-24	20.4	396.0	19.9	386.4	27	3
Oct-24	20.5	410.8	19.1	383.7	26	5
Nov-24	21.9	424.3	20.3	393.8	22	8
Dec-24	27.5	551.7	22.1	442.9	21	10

Statistics for Major Wet Weather Events

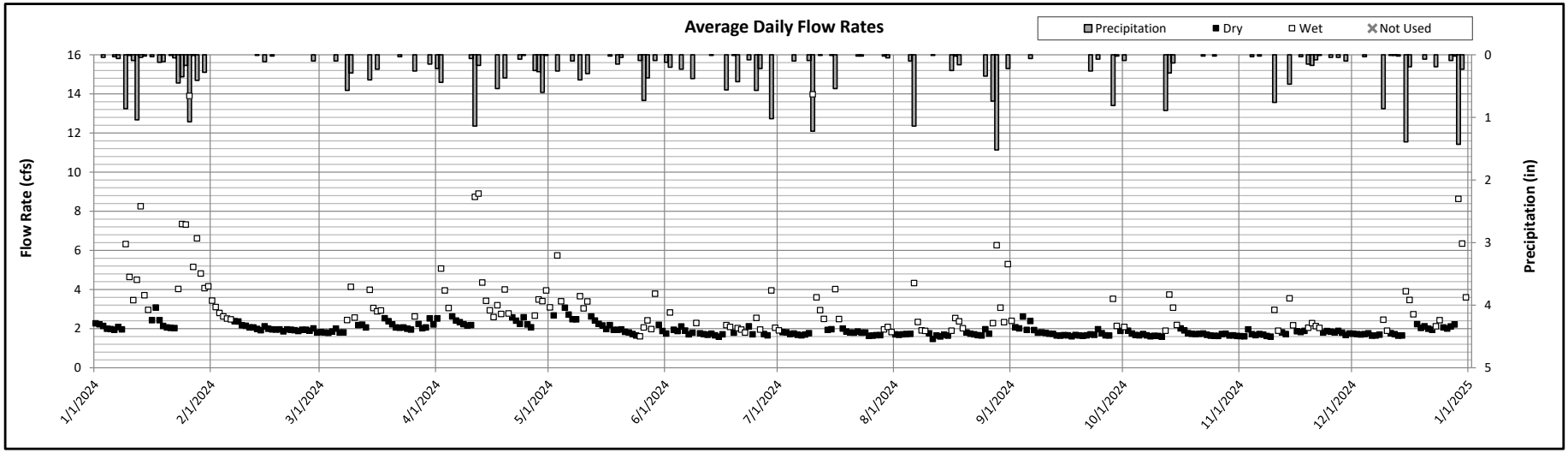
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	142.8	1/26/24 3:55	15.5	1/26/24 5:35
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

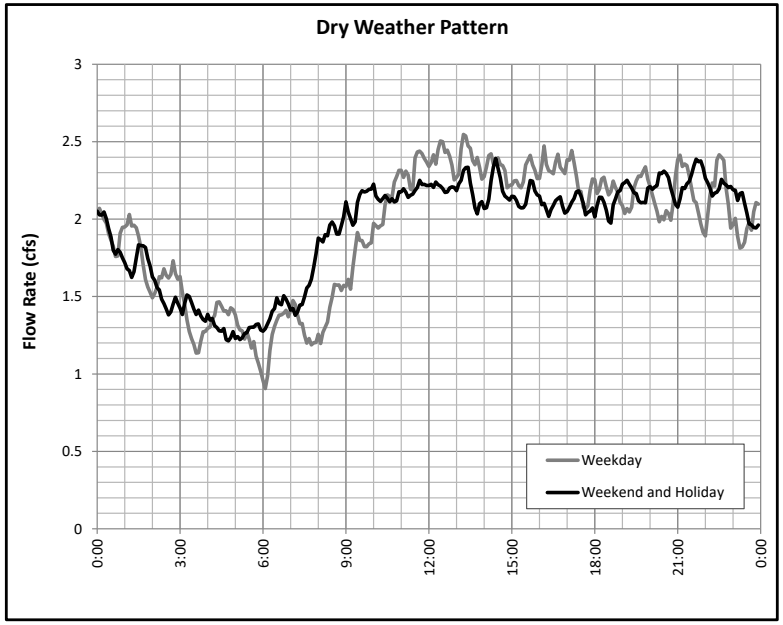
Figure C-14

Meter Report

Meter: RV-1 | **Location: Pennsylvania Interceptor West of Jefferson Avenue** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	4.0	80.1	2.2	43.8	15	16
Feb-24	2.2	40.8	2.0	37.6	23	6
Mar-24	2.3	46.6	2.1	41.4	23	8
Apr-24	3.3	64.5	2.3	45.5	13	17
May-24	2.5	50.4	2.2	44.0	20	11
Jun-24	2.0	38.5	1.8	34.6	19	11
Jul-24	2.4	48.2	1.8	35.5	21	10
Aug-24	2.2	44.7	1.7	34.1	18	13
Sep-24	1.9	36.8	1.8	35.1	27	3
Oct-24	1.8	37.1	1.7	34.2	26	5
Nov-24	1.9	37.3	1.8	34.1	22	8
Dec-24	2.5	49.5	1.9	37.3	21	10

Statistics for Major Wet Weather Events

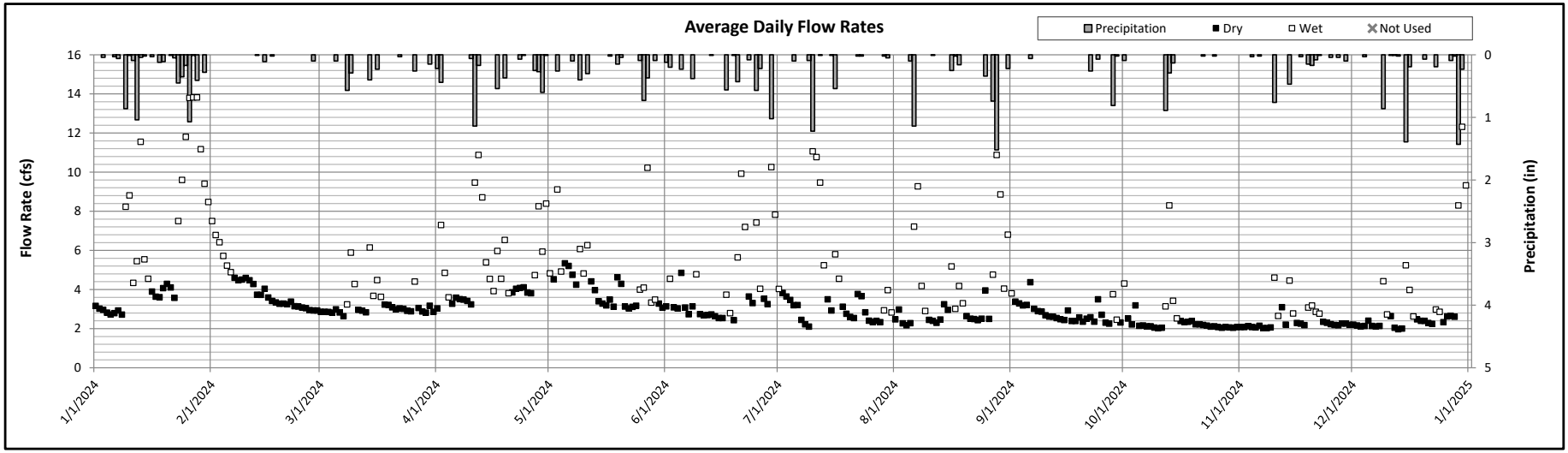
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	27.7	1/26/24 3:55	11.9	1/26/24 5:05
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

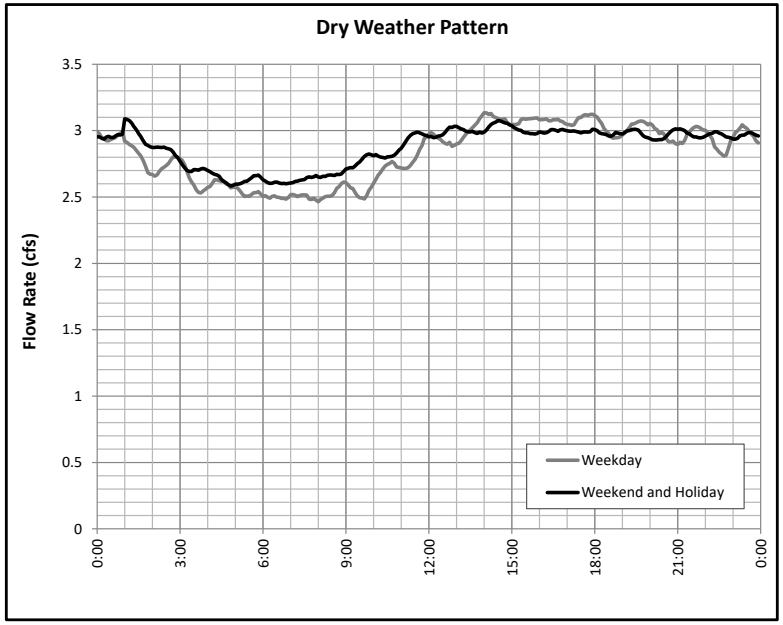
Figure C-15

Meter Report

Meter: RR-1 | **Location: 17th Street near Visger Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	6.4	128.0	3.3	67.1	15	16
Feb-24	4.1	77.3	3.6	67.7	23	6
Mar-24	3.3	66.8	2.9	58.9	23	8
Apr-24	5.1	99.5	3.6	70.4	13	17
May-24	4.4	89.0	3.8	76.7	20	11
Jun-24	4.2	81.3	3.0	58.9	19	11
Jul-24	3.9	78.8	2.9	58.4	21	10
Aug-24	3.9	78.5	2.6	52.3	18	13
Sep-24	2.8	54.8	2.8	53.6	27	3
Oct-24	2.5	51.1	2.2	44.2	26	5
Nov-24	2.5	48.4	2.2	42.8	22	8
Dec-24	3.3	66.4	2.3	45.8	21	10

Statistics for Major Wet Weather Events

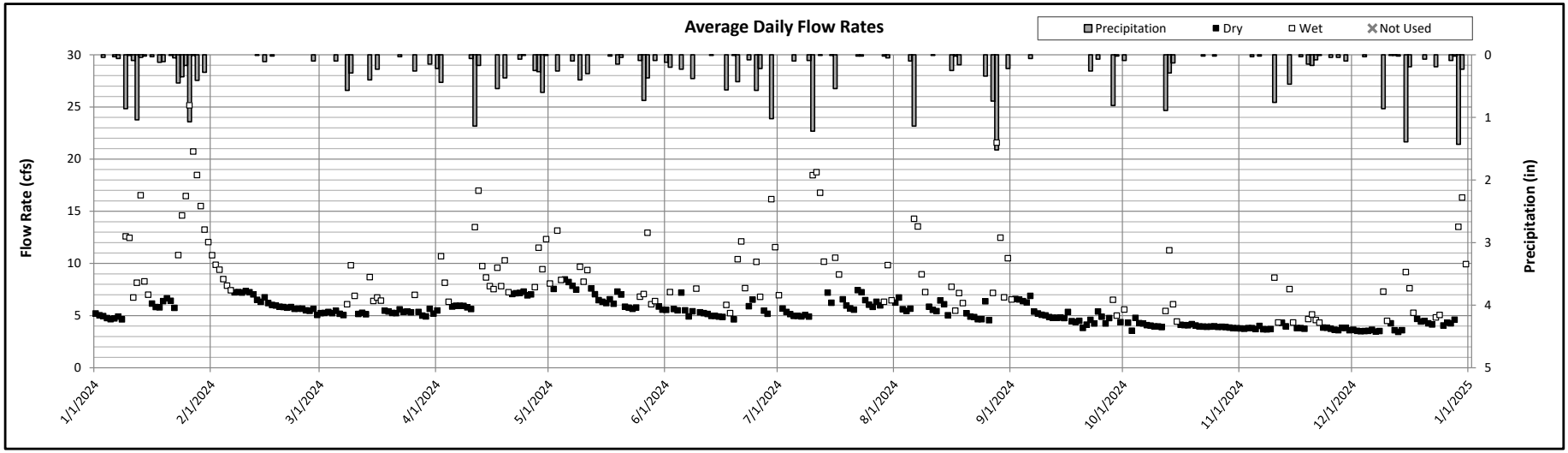
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	13.8	1/24/24 16:00	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

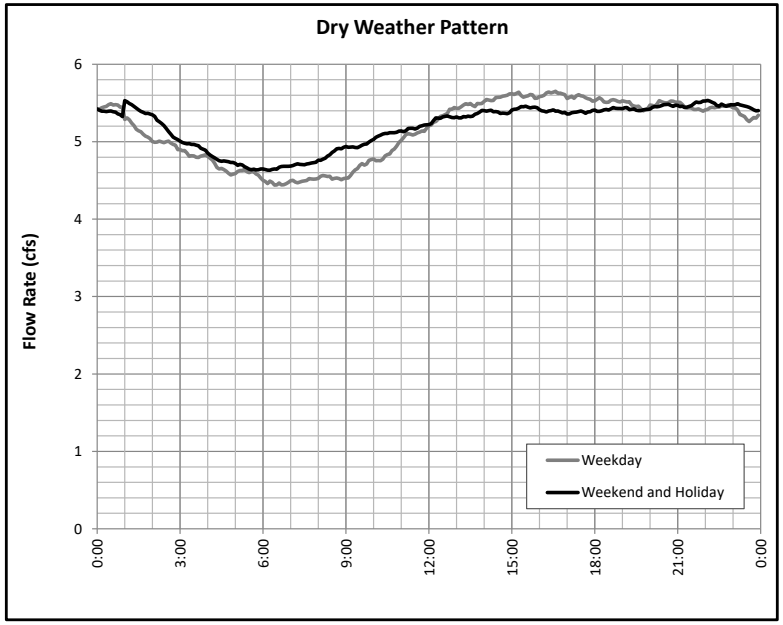
Figure C-16

Meter Report

Meter: EC-6 | **Location: Riverdrive Interceptor South of Southfield Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	9.7	194.2	5.5	109.2	15	16
Feb-24	6.8	127.1	6.2	116.4	23	6
Mar-24	5.8	115.9	5.3	105.7	23	8
Apr-24	8.3	160.5	6.4	124.1	13	17
May-24	7.4	149.1	6.7	134.8	20	11
Jun-24	6.8	131.6	5.4	104.9	19	11
Jul-24	7.6	152.9	5.9	117.8	21	10
Aug-24	7.4	147.5	5.5	110.4	18	13
Sep-24	5.1	99.8	5.1	97.9	27	3
Oct-24	4.4	88.7	4.0	80.5	26	5
Nov-24	4.2	82.0	3.8	73.4	22	8
Dec-24	5.3	107.2	3.9	78.6	21	10

Statistics for Major Wet Weather Events

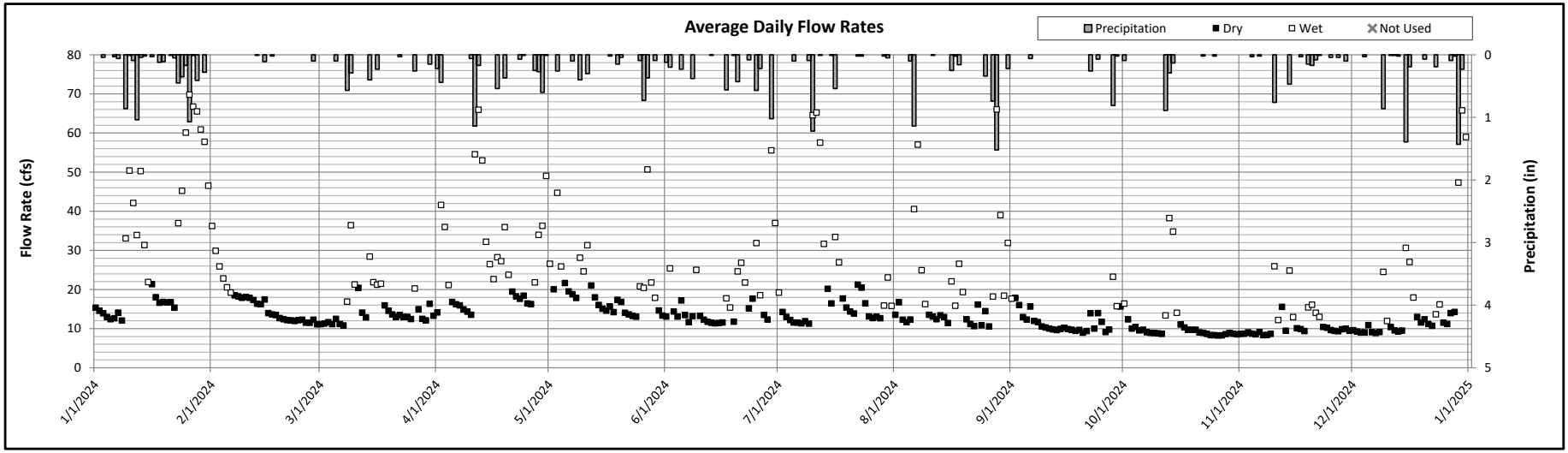
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	29.7	1/26/24 15:55	16.4	1/26/24 5:15
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

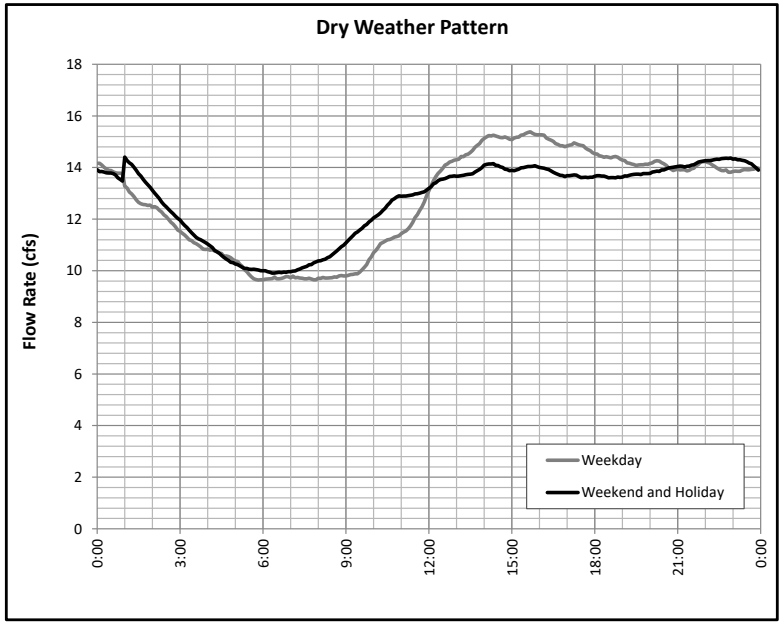
Figure C-17

Meter Report

Meter: RD-1 | **Location: Riverdrive Interceptor North of Northline Road** | **Period: 1/1/2024 through 12/31/2024**

Type: Accusonic 7510 | **System Meter Type: Interceptor Flow Meter**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	32.3	647.5	15.3	306.4	15	16
Feb-24	16.7	313.7	14.4	269.6	23	6
Mar-24	15.9	318.5	13.3	265.8	23	8
Apr-24	27.4	531.2	16.3	316.5	13	17
May-24	20.7	414.4	16.4	328.9	20	11
Jun-24	18.3	354.8	13.1	254.5	19	11
Jul-24	21.2	425.1	14.5	290.5	21	10
Aug-24	20.2	404.2	12.7	255.4	18	13
Sep-24	12.2	236.9	11.5	222.5	27	3
Oct-24	11.5	231.4	9.3	185.9	26	5
Nov-24	11.5	223.1	9.6	185.7	22	8
Dec-24	17.3	347.1	10.6	212.9	21	10

Statistics for Major Wet Weather Events

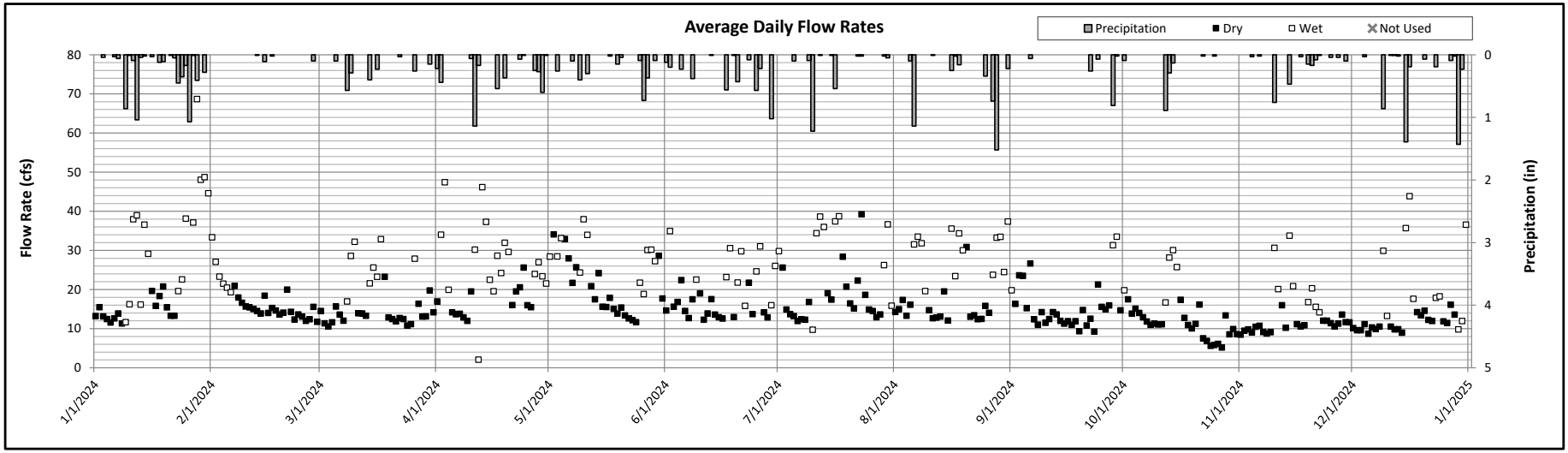
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	70.8	1/26/24 5:05	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

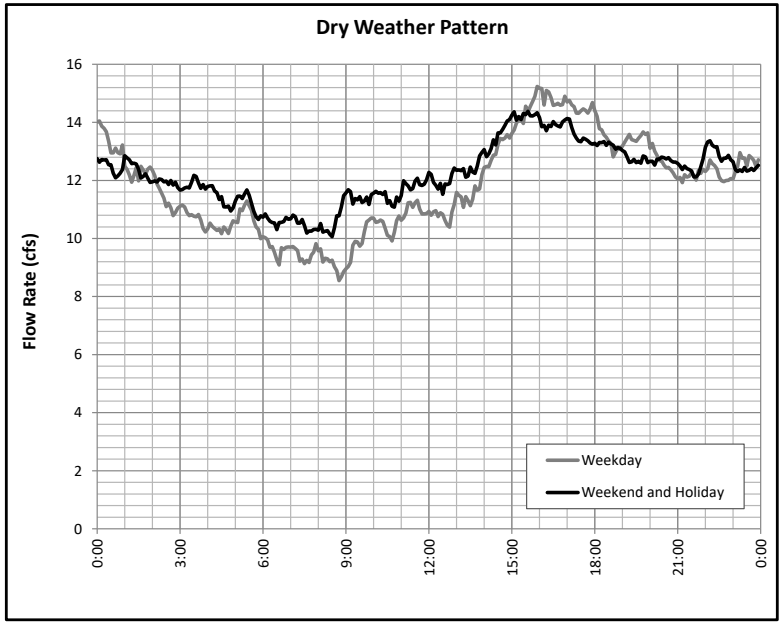
Figure C-18

Meter Report

Meter: [SW] + [SWB] **Location: Southgate / Wyandotte** **Period: 1/1/2024 through 12/31/2024**

Type: Accusonic 7510 (SW) & Magmeter (SWB) **System Meter Type: Total for SWDDD**





Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	23.3	467.7	14.7	293.8	15	16
Feb-24	16.9	316.5	15.0	280.9	23	6
Mar-24	16.9	338.0	13.7	273.6	23	8
Apr-24	22.8	442.8	16.6	322.1	13	17
May-24	22.8	457.8	19.7	394.8	20	11
Jun-24	18.9	366.6	15.3	297.2	19	11
Jul-24	21.8	437.5	17.8	356.6	21	10
Aug-24	21.4	429.6	15.2	303.5	18	13
Sep-24	15.9	307.8	14.5	281.2	27	3
Oct-24	13.1	262.1	11.0	219.7	26	5
Nov-24	13.7	264.8	10.8	209.4	22	8
Dec-24	15.2	305.5	11.3	227.2	21	10

Statistics for Major Wet Weather Events

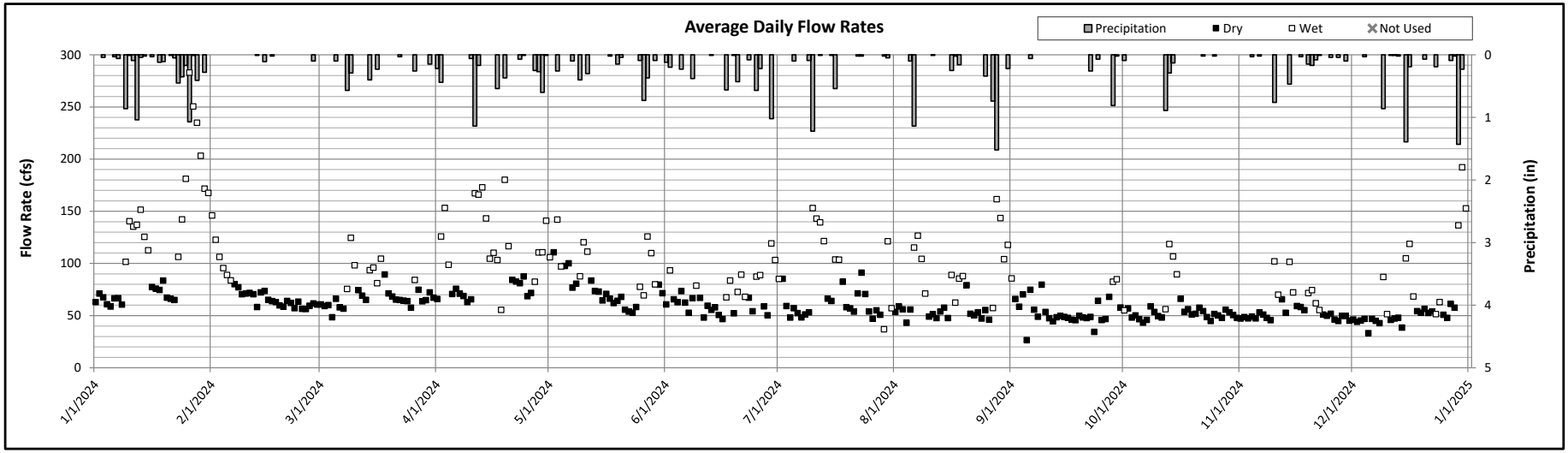
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	116.6	1/28/24 12:00	16.1	1/26/24 5:15
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-19

Meter Report

Meter: [IPS] + [TPS] | **Location: Main Influent Pump Station and Tunnel Pump Station** | **Period: 1/1/2024 through 12/31/2024**

Type: Magmeters | **System Meter Type: DWTF**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	118.3	2370.0	68.3	1367.6	15	16
Feb-24	73.7	1381.8	65.0	1218.5	23	6
Mar-24	72.9	1461.3	65.4	1310.0	23	8
Apr-24	103.2	2001.2	73.5	1425.0	13	17
May-24	83.5	1672.4	73.1	1464.1	20	11
Jun-24	68.7	1332.8	58.5	1134.2	19	11
Jul-24	75.4	1511.4	60.7	1216.3	21	10
Aug-24	73.6	1474.7	53.1	1064.5	18	13
Sep-24	55.8	1082.3	52.7	1021.0	27	3
Oct-24	57.0	1141.6	51.6	1032.9	26	5
Nov-24	57.4	1113.5	50.6	982.0	22	8
Dec-24	65.9	1319.3	48.4	969.3	21	10

Statistics for Major Wet Weather Events

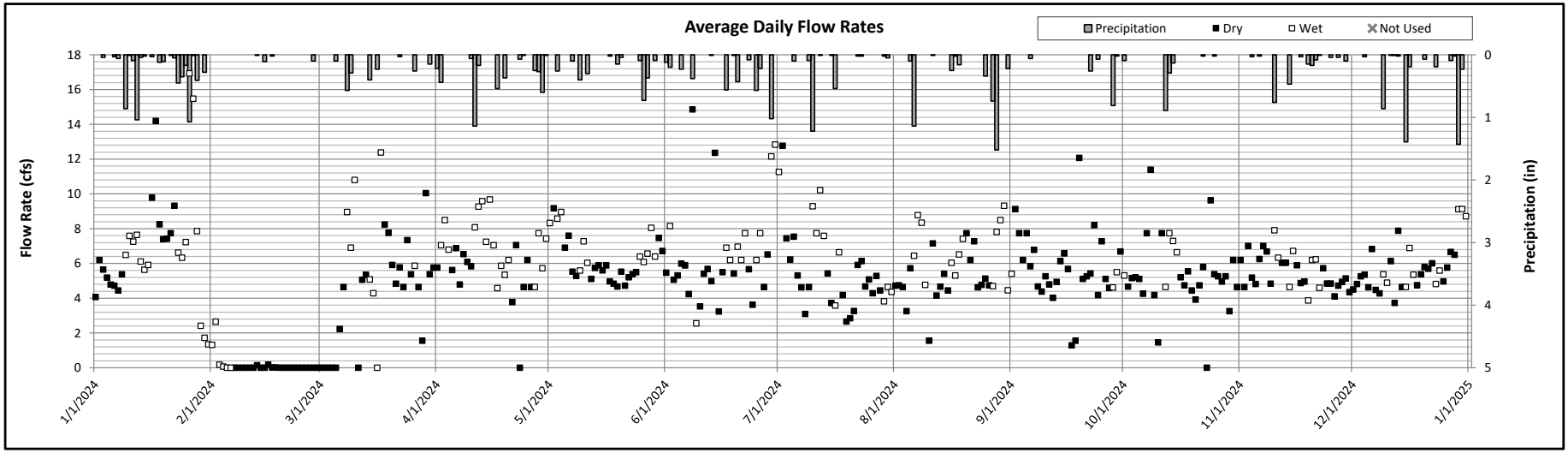
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	323.6	1/26/24 7:40	24.8	1/26/24 5:20
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-20

Meter Report

Meter: DWTF Recycle | **Location: Main Influent Pump Station** | **Period: 1/1/2024 through 12/31/2024**

Type: HydroRanger 200 | **System Meter Type: Parshall Flume**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	7.0	140.2	7.0	139.5	15	16
Feb-24	0.2	2.9	0.0	0.3	23	6
Mar-24	4.8	96.1	4.1	82.3	23	8
Apr-24	6.3	121.8	5.2	101.1	13	17
May-24	6.3	126.6	5.9	117.9	20	11
Jun-24	6.6	127.3	6.0	115.6	19	11
Jul-24	5.8	115.4	5.2	104.5	21	10
Aug-24	5.8	115.8	5.0	101.1	18	13
Sep-24	5.7	111.2	5.8	112.4	27	3
Oct-24	5.4	108.2	5.2	104.6	26	5
Nov-24	5.5	107.0	5.4	104.9	22	8
Dec-24	5.8	115.3	5.4	108.7	21	10

Statistics for Major Wet Weather Events

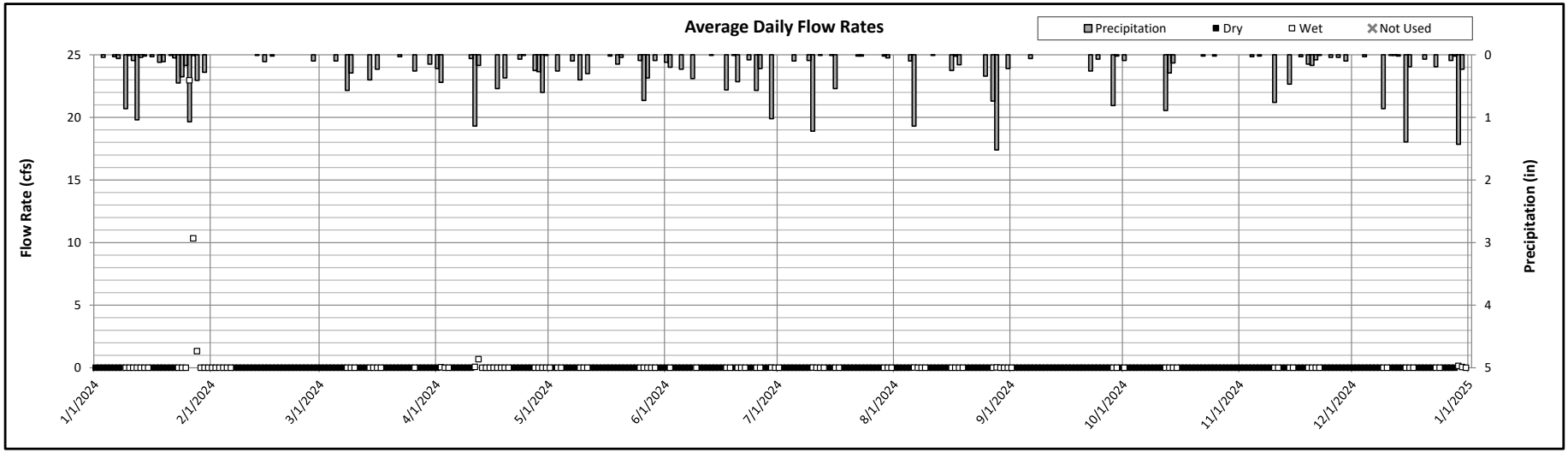
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-21

Meter Report

Meter: TSO | **Location: At Pelham Basin** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Tunnel System Flow Meter**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	1.1	22.4	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.5	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.0	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.0	0.1	0.0	0.0	21	10

Statistics for Major Wet Weather Events

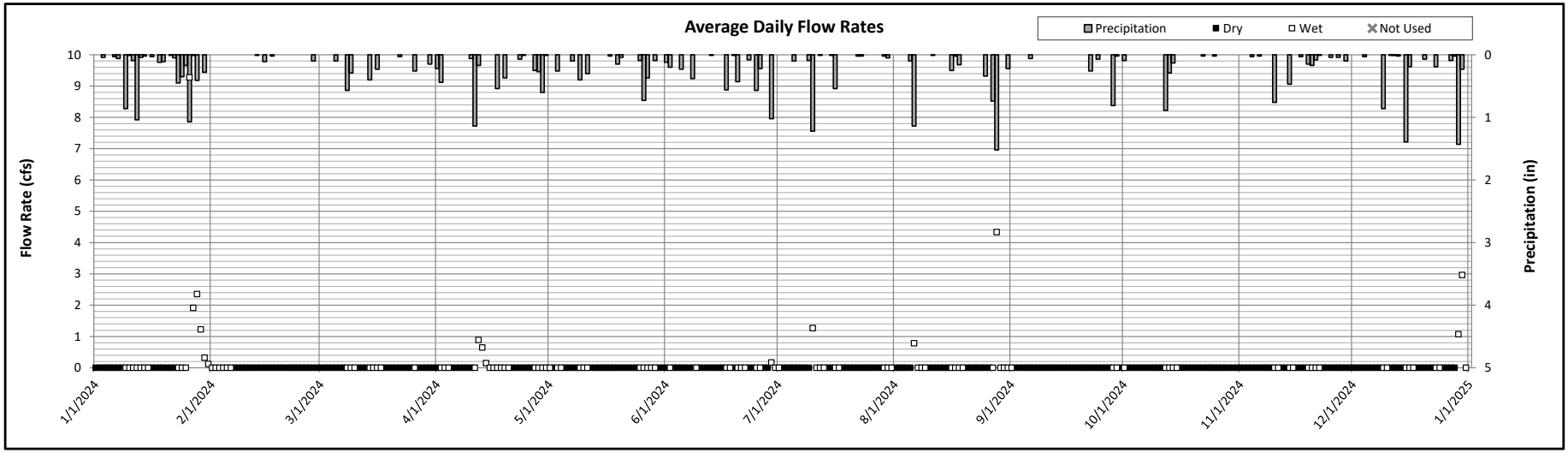
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	44.0	1/26/24 8:35	2.8	1/26/24 9:10
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-22

Meter Report

Meter: APO-1 | **Location: Belmont and Rosedale** | **Period: 1/1/2024 through 12/31/2024**

Type: Siemems Hydroranger | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.5	9.8	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.1	1.1	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.1	0.0	0.0	19	11
Jul-24	0.0	0.8	0.0	0.0	21	10
Aug-24	0.2	3.3	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.1	2.6	0.0	0.0	21	10

Statistics for Major Wet Weather Events

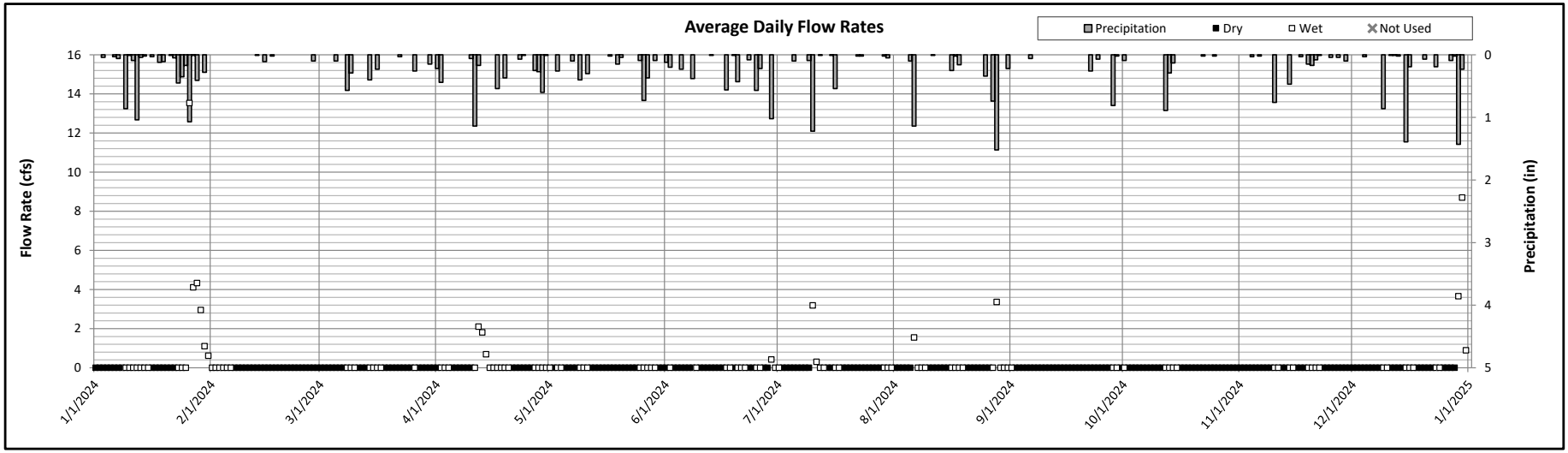
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	58.0	1/26/24 5:10	10.3	1/26/24 4:25
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-23

Meter Report

Meter: APO-2 | **Location: Belmont and Quandt** | **Period: 1/1/2024 through 12/31/2024**

Type: Milltronics Downlooker | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.9	17.2	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.2	3.0	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.3	0.0	0.0	19	11
Jul-24	0.1	2.3	0.0	0.0	21	10
Aug-24	0.2	3.2	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.4	8.6	0.0	0.0	21	10

Statistics for Major Wet Weather Events

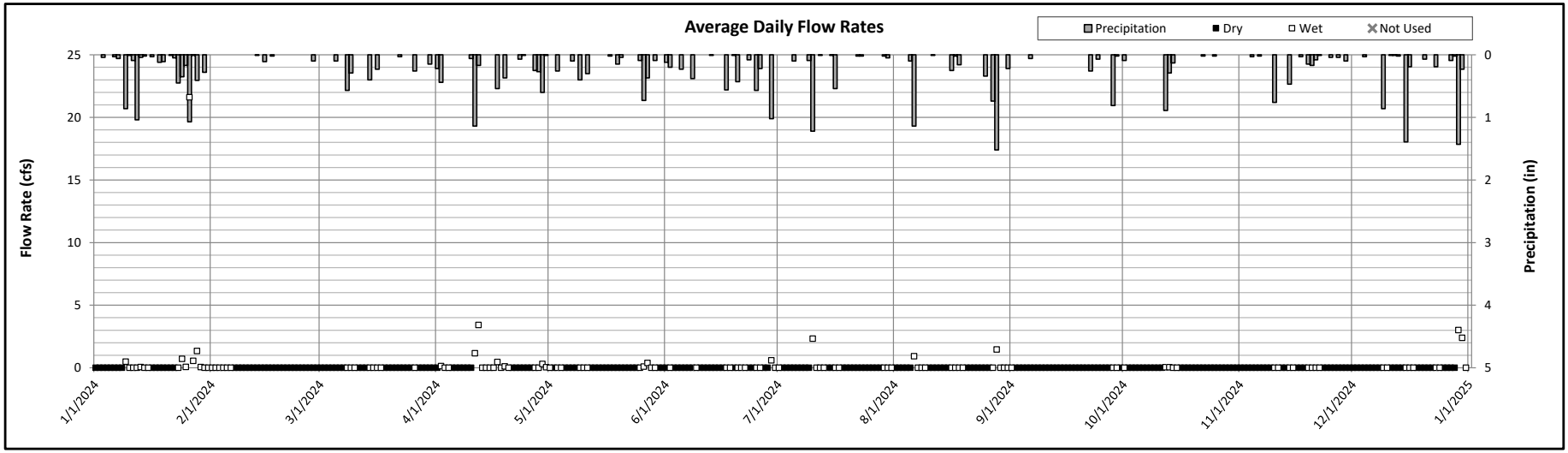
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	47.1	1/26/24 4:20	4.9	1/26/24 2:35
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-24

Meter Report

Meter: CHPO | **Location: Pelham Road North of Haskell** | **Period: 1/1/2024 through 12/31/2024**

Type: Milltronics Downlooker | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.8	16.1	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.2	3.6	0.0	0.0	13	17
May-24	0.0	0.3	0.0	0.0	20	11
Jun-24	0.0	0.4	0.0	0.0	19	11
Jul-24	0.1	1.5	0.0	0.0	21	10
Aug-24	0.1	1.5	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.2	3.5	0.0	0.0	21	10

Statistics for Major Wet Weather Events

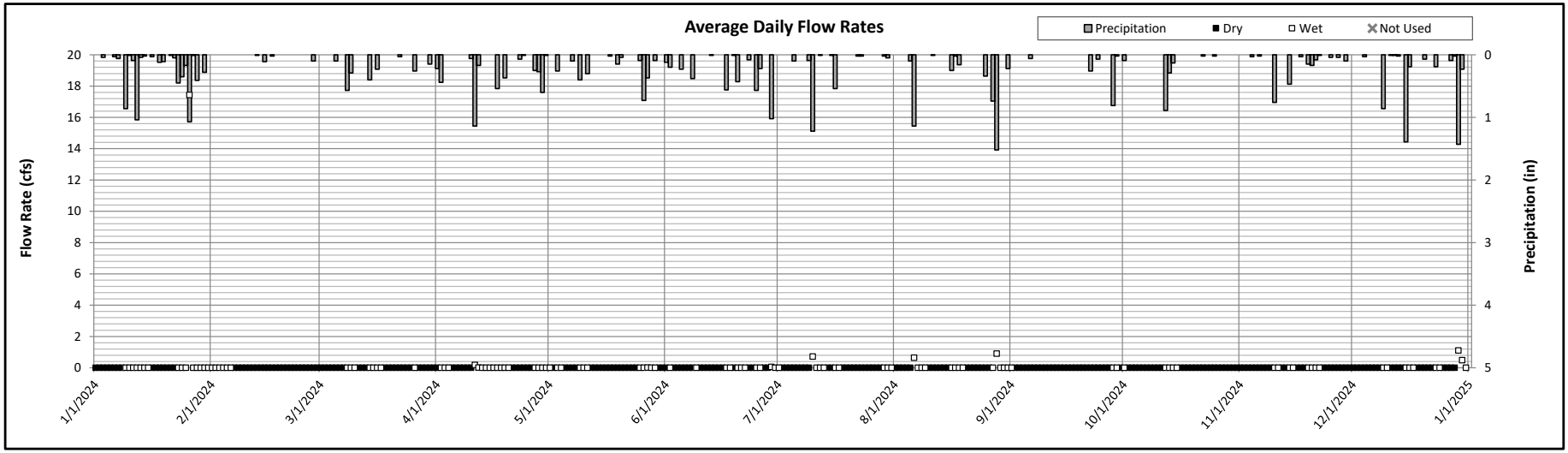
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	139.3	1/26/24 5:10	9.3	1/26/24 5:35
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-25

Meter Report

Meter: CPO | **Location: Pelham Road South of R.R.** | **Period: 1/1/2024 through 12/31/2024**

Type: Milltronics Downlooker | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.6	11.3	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.1	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.5	0.0	0.0	21	10
Aug-24	0.0	1.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.1	1.0	0.0	0.0	21	10

Statistics for Major Wet Weather Events

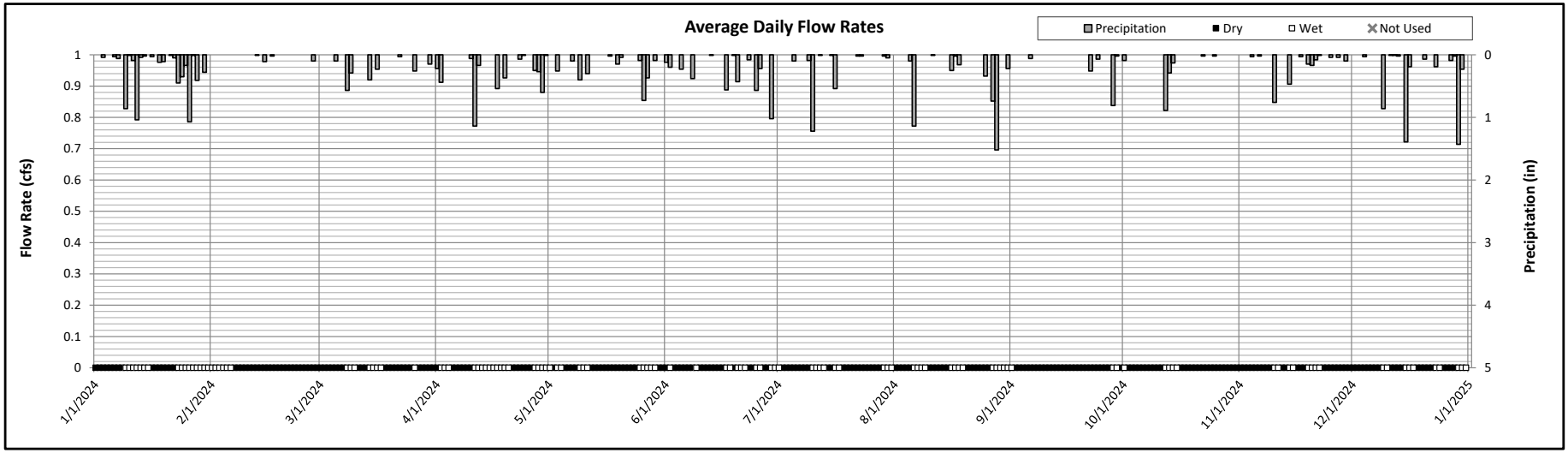
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	134.2	1/26/24 5:10	9.6	1/26/24 5:35
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-26

Meter Report

Meter: PDO | **Location: Allen Road and Goddard** | **Period: 1/1/2024 through 12/31/2024**

Type: Milltronics Downlooker | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.0	0.0	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.0	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.0	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.0	0.0	0.0	0.0	21	10

Statistics for Major Wet Weather Events

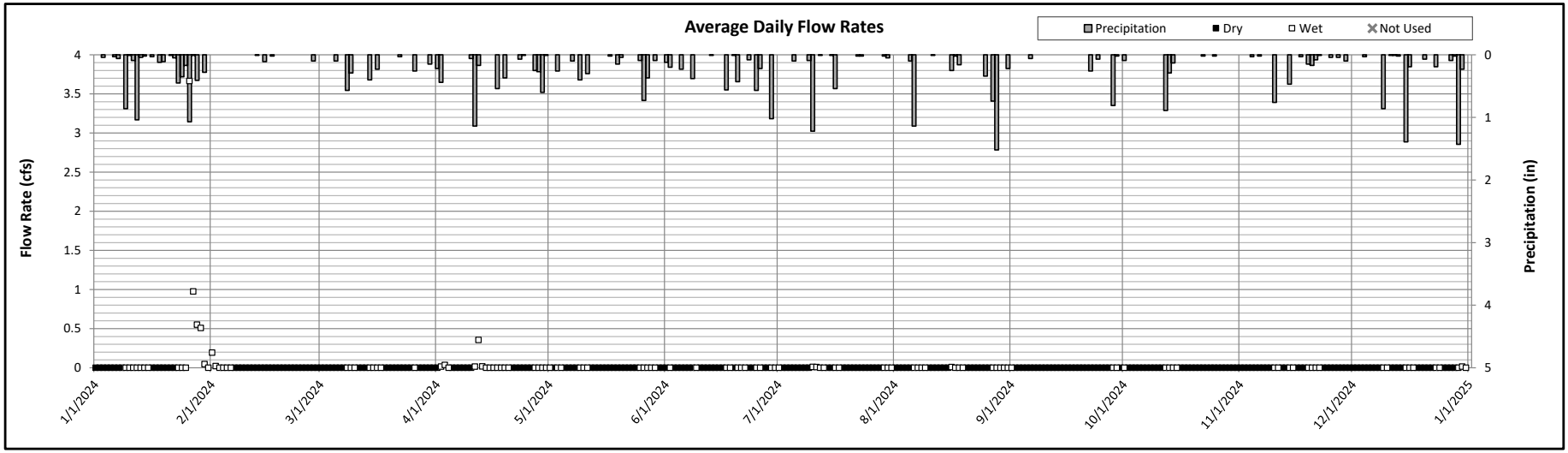
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	0.0	1/24/24 0:00	2.3	1/26/24 6:35
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-27

Meter Report

Meter: ER-2 | **Location: Eureka Road and Inkster** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Tunnel System Flow Meter**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.2	3.7	0.0	0.0	15	16
Feb-24	0.0	0.1	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.3	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.0	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.0	0.0	0.0	0.0	21	10

Statistics for Major Wet Weather Events

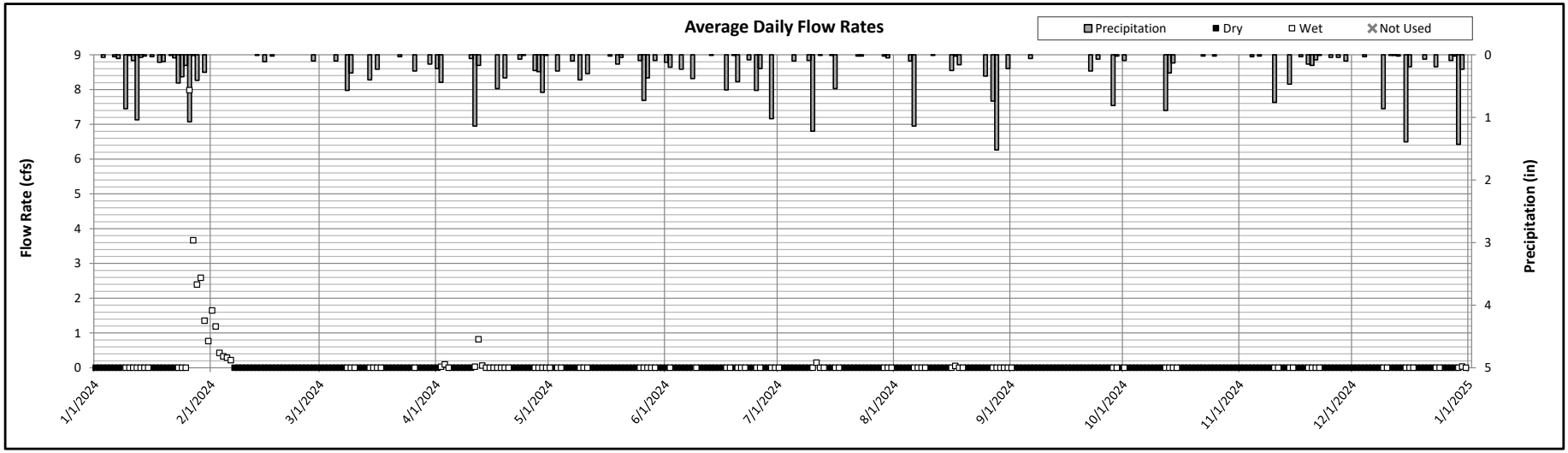
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	6.5	1/26/24 4:50	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-28

Meter Report

Meter: ER-1 | **Location: Allen Road and Eureka Road** | **Period: 1/1/2024 through 12/31/2024**

Type: ADS Triton+ | **System Meter Type: Tunnel System Flow Meter**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.6	12.1	0.0	0.0	15	16
Feb-24	0.1	2.6	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.7	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.1	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.0	0.0	0.0	0.0	21	10

Statistics for Major Wet Weather Events

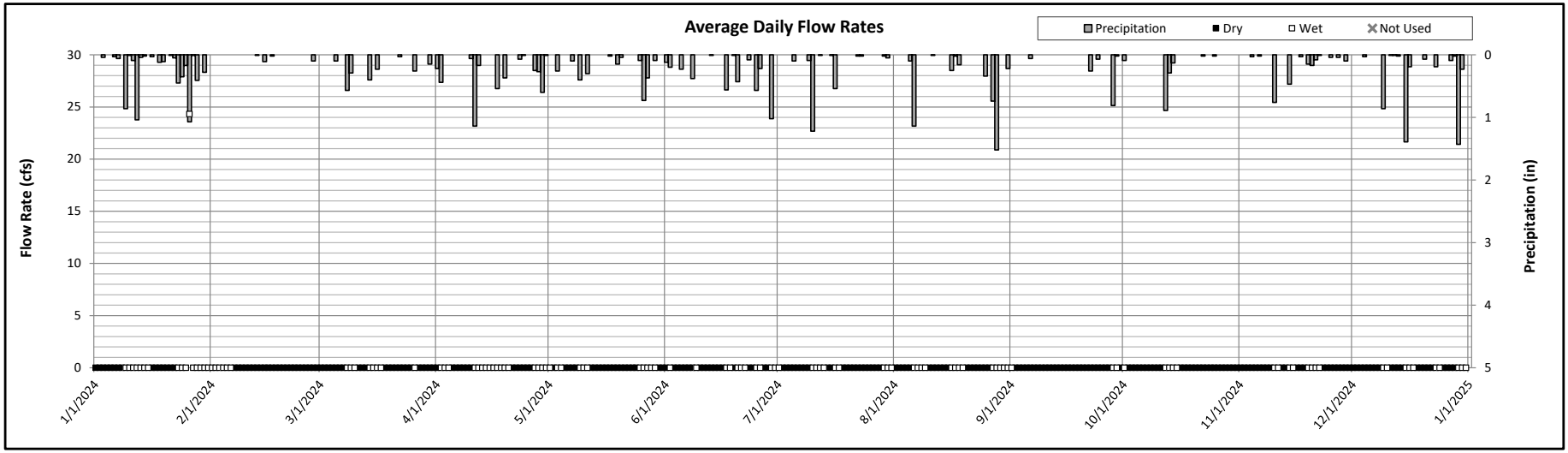
Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	14.0	1/26/24 6:05	6.9	1/26/24 5:50
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Figure C-29

Meter Report

Meter: PM-1 | **Location: Pennsylvania Ave. at Fordline** | **Period: 1/1/2024 through 12/31/2024**

Type: Milltronics Downlooker | **System Meter Type: Tunnel Diversion Chamber Level Sensor**



Dry weather pattern not applicable to this meter

Monthly Statistics

Month	All Days		Dry Days			
	Avg. (cfs)	Vol. (MG)	Avg. (cfs)	Vol. (MG)	# Dry Days	# Wet Days
Jan-24	0.8	15.7	0.0	0.0	15	16
Feb-24	0.0	0.0	0.0	0.0	23	6
Mar-24	0.0	0.0	0.0	0.0	23	8
Apr-24	0.0	0.0	0.0	0.0	13	17
May-24	0.0	0.0	0.0	0.0	20	11
Jun-24	0.0	0.0	0.0	0.0	19	11
Jul-24	0.0	0.0	0.0	0.0	21	10
Aug-24	0.0	0.0	0.0	0.0	18	13
Sep-24	0.0	0.0	0.0	0.0	27	3
Oct-24	0.0	0.0	0.0	0.0	26	5
Nov-24	0.0	0.0	0.0	0.0	22	8
Dec-24	0.0	0.0	0.0	0.0	21	10

Statistics for Major Wet Weather Events

Event No.	Rainfall (in)	Start Date	End Date	Flow Rate		Depth	
				Max. Hour (cfs)	Date/Time	Max. (ft)	Date/Time
A	2.6	1/22/2024	1/30/2024	191.2	1/26/24 5:15	13.5	1/26/24 5:20
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Appendix D

Major Storm Event Wet Weather Summary Figures

Figure D-1
Downriver Wastewater Treatment Facility
Major Storm Event A - January 22-30, 2024

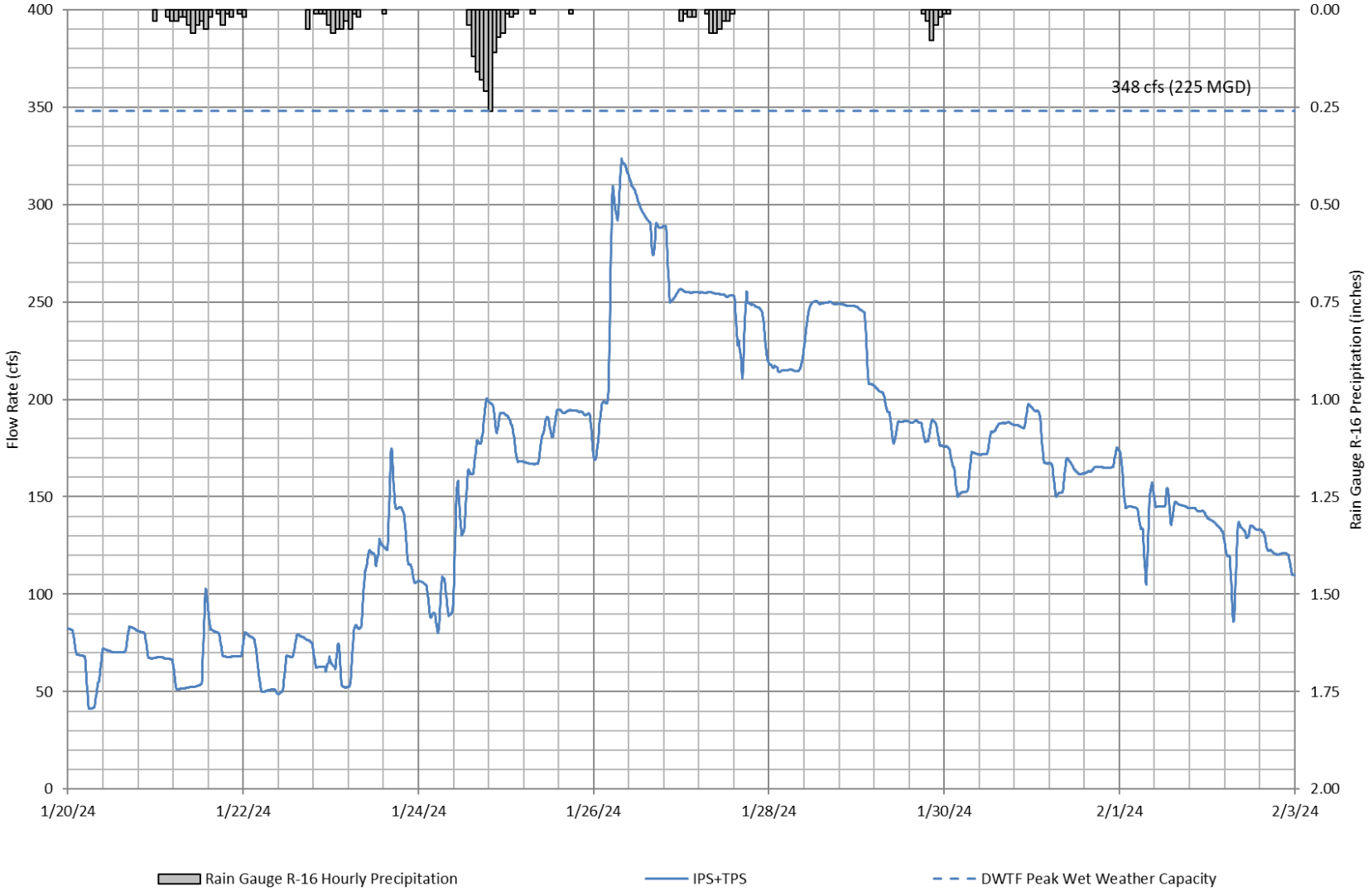


Figure D-2
Riverdrive Interceptor
Major Storm Event A - January 22-30, 2024

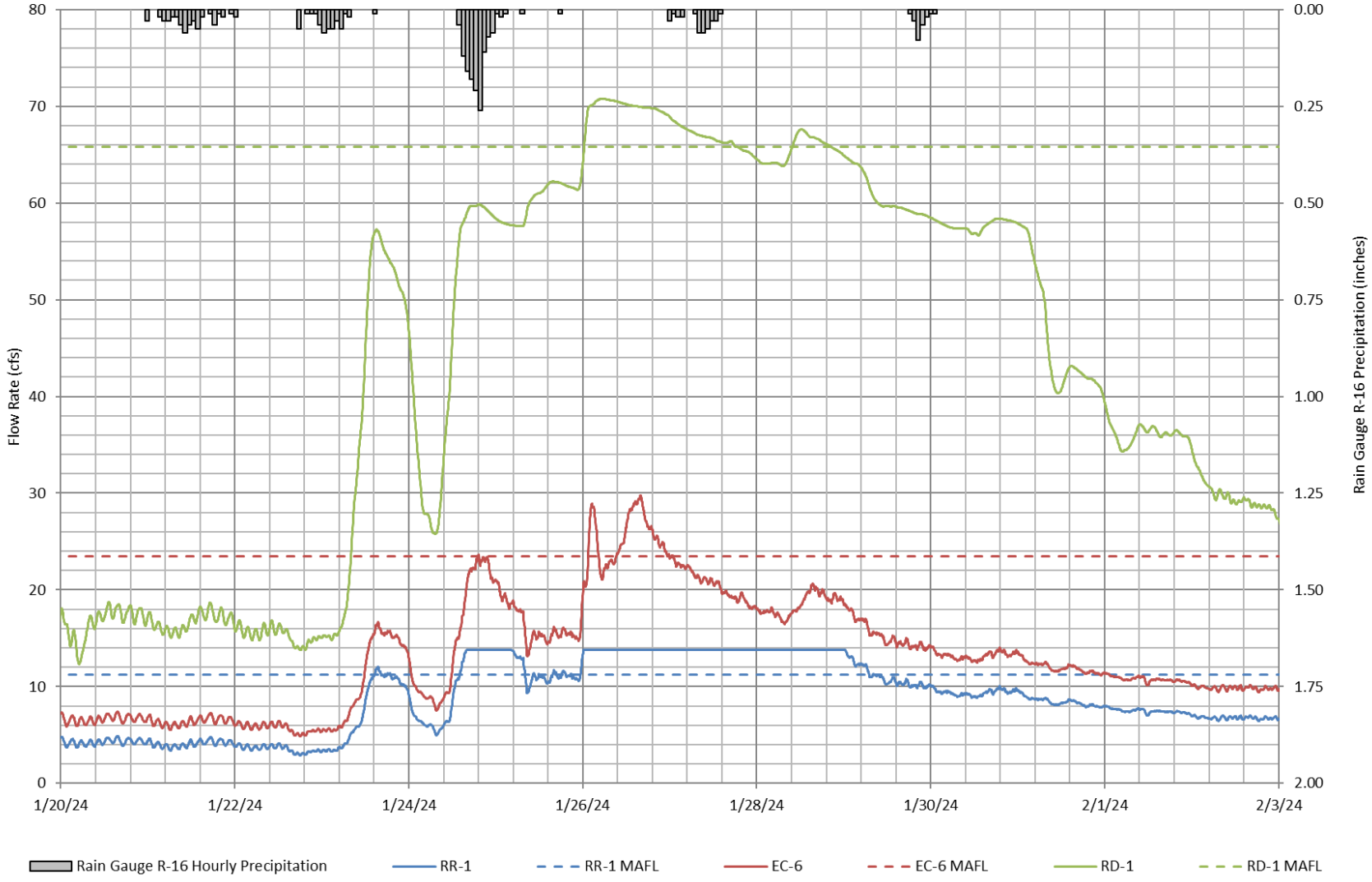


Figure D-3
Riverdrive Interceptor
Major Storm Event A - January 22-30, 2024

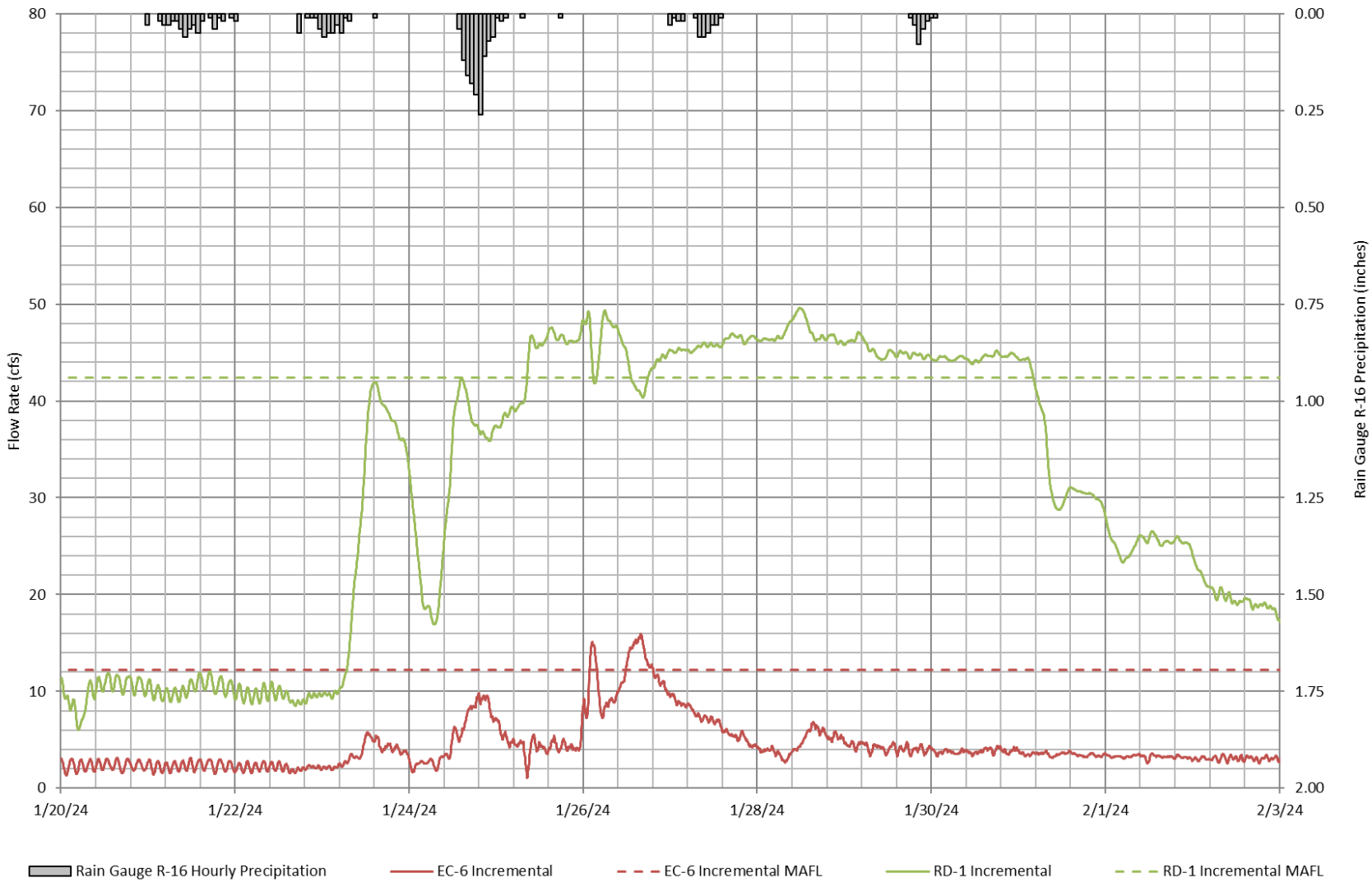
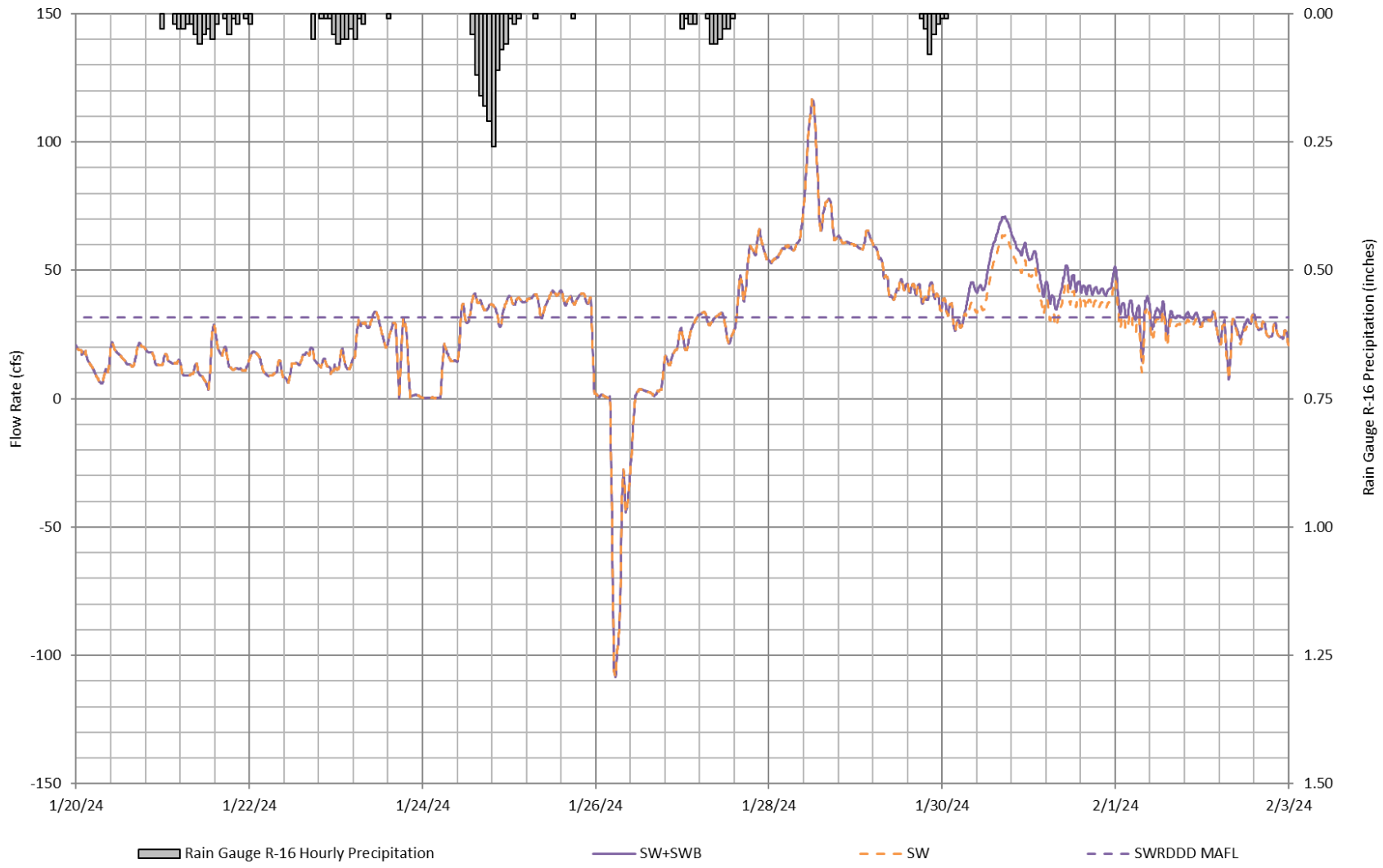


Figure D-4
SWRDDD Connection
Major Storm Event A - January 22-30, 2024



Appendix E

Sediment at Meter SW

Methodology for Estimating Sediment Depth at Meter SW using Flow Meter Velocity Paths

Meter SW has four levels of crossed path velocity sensors, for a total of eight velocity sensors. As the sediment depth at Meter SW increases, the lower velocity paths become buried in sediment or blinded by sediment suspended in the flow, and the sensors record zero velocity. The estimated sediment depth at Meter SW is based on which velocity sensors are recording zero velocity. Table E-1 lists the estimated sediment depths at Meter SW based on the sensors recording zero velocity.

When all submerged velocity sensors are active, the estimated sediment depth is 1.33 feet. This depth is based on the average sludge depth from previous sludge profiles measurements and is estimated to be a minimum sludge depth at this location. If velocity paths are submerged but recording a value of zero for velocity, it is assumed that the velocity path is buried in sediment and the path heights are used to estimate sediment depth. For example:

- When one of the lowest velocity path sensors (velocity paths 1 or 2) are submerged and records zero velocity, it is estimated that the sludge depth is at the lowest velocity path height of 1.83 feet.
- When both lowest velocity path sensors (velocity paths 1 or 2) are submerged and records zero velocity, it is estimated that the sludge depth is halfway between lowest velocity path height (1.83 feet) and second lowest velocity path height (2.50 feet).

Sediment depths are estimated for each 5-minute meter recording interval. Typically, the increased flow rates and velocities during a storm event will reduce the sludge depth at Meter SW, uncovering the buried velocity paths, which results in a lower estimated sludge depth and higher flow rate.

On September 18, 2019, Meter SW was reprogrammed to account for 16-inches of sediment. There is a long-term record of sediment profiles at this location which support an assumed stable depth of sediment of 16-inches. This programming change greatly improved the real-time flow rate readings for Meter SW. This is important because Meter SW is used to control a gate which throttles the SWRDDD flow rate to its contract capacity of 20.5 MGD.

At the end of each calendar month, the flow rate for Meter SW is recalculated using the estimated sediment depths. The recalculated flow rate is the best estimate of Meter SW flow rates.

Table E-1

Estimated Sediment Depths at Meter SW Based on Velocity Sensor Data

Velocity Path Height (ft)	Velocity Sensor	Sensors Recording Zero Velocity								
1.83	1	-	1 or 2	1 & 2	1 & 2	1 & 2	1 & 2	1 & 2	1 & 2	1 & 2
	2									
2.50	3	-	-	-	3 or 4	3 & 4	3 & 4	3 & 4	3 & 4	3 & 4
	4									
3.17	5	-	-	-	-	-	5 or 6	5 & 6	5 & 6	5 & 6
	6									
5.25	7	-	-	-	-	-	-	-	7 or 8	7 & 8
	8									
Estimated Sediment Depth (ft)		1.33	1.83	2.17	2.50	2.84	3.17	4.21	5.25	5.88

Sediment Profile Measurements

Sediment profiles at the Meter SW location have been taken since 2013. These profiles measure the sediment depth every 6 inches across the pipe cross section. Table E-2 lists the sediment profile measurements. The equivalent sediment level from invert is also listed for each measurement. This value represents the depth of sediment from the pipe invert if the sediment was perfectly flat (horizontal). Figure E-1 shows the pipe cross section at Meter SW with the sediment profiles from 2013 to date.

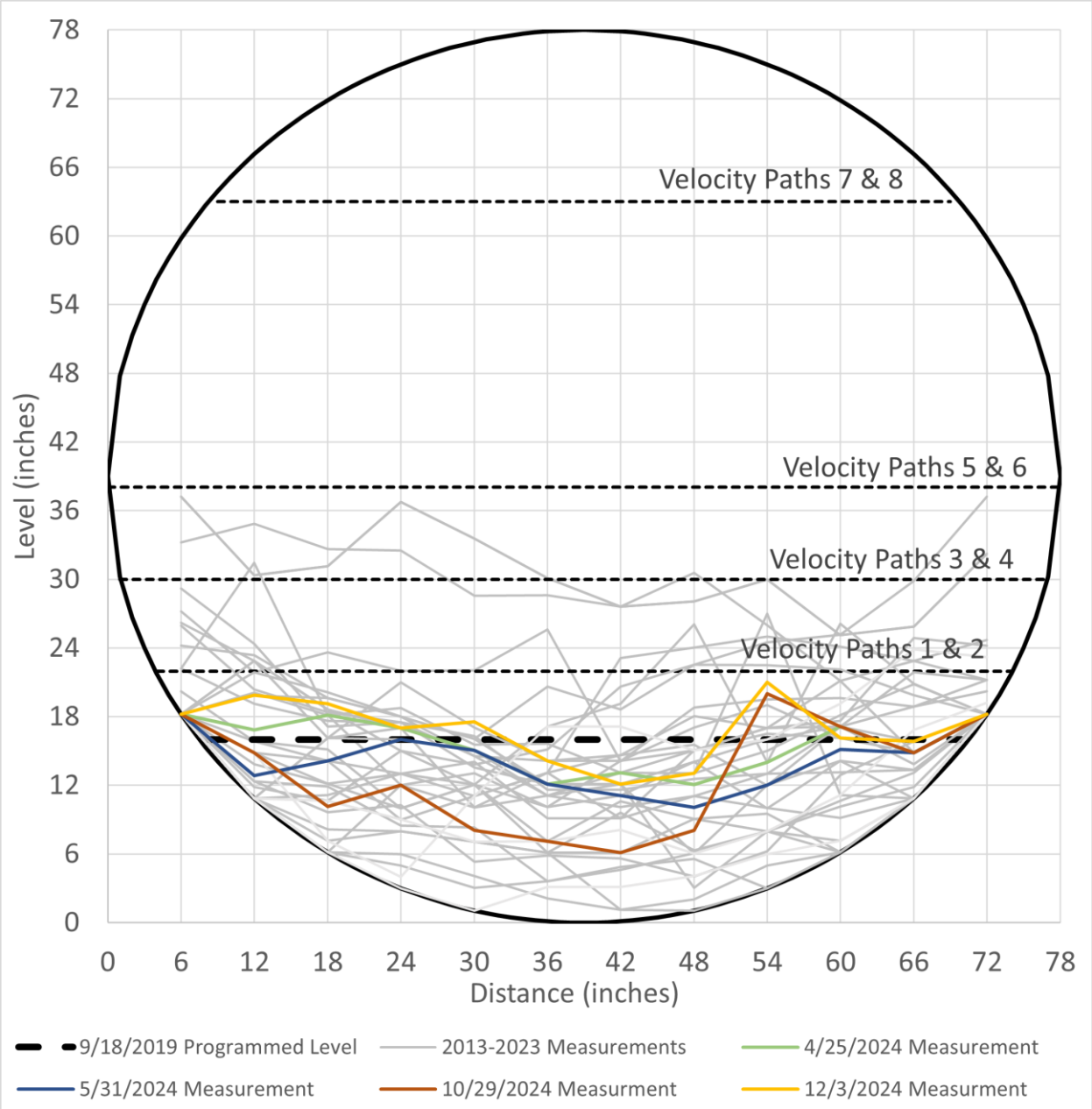
The variability in the sediment profile measurements highlight the dynamic nature of sediment accretion/reduction at this location. The historical average sediment depth at Meter SW is about 16-inches.

Since Veolia took over operations of the Downriver Wastewater Treatment Facility (DWTF), the Interceptor Pump Station (IPS) wet well has been pumped down more frequently. The frequent wet well drawdowns are assumed to have helped mobilize and clear the sediment from this location.

Table E-2
Meter SW Sediment Profile Measurements

Date	Equivalent Sediment Level from Invert		Distance from Pipe Wall (inches)											
			6	12	18	24	30	36	42	48	54	60	66	72
	(inches)	(feet)	Sediment Level from Invert (inches)											
12/19/2013	21.3	1.8	27.2	21.9	23.6	22.0	22.1	25.6	14.1	18.8	19.5	19.6	18.9	21.2
5/9/2014	30.6	2.5	37.2	30.4	31.1	36.8	33.6	30.1	27.6	28.1	30.0	25.1	25.9	32.2
7/25/2014	30.6	2.5	37.2	30.4	31.1	36.8	33.6	30.1	27.6	28.1	30.0	25.1	25.9	32.2
9/24/2014	17.8	1.5	22.2	31.5	18.1	18.8	15.6	15.6	13.1	15.1	16.5	16.1	14.9	18.2
2/27/2015	28.6	2.4	33.2	34.9	32.6	32.5	28.6	28.6	27.6	30.6	26.0	21.1	22.9	24.7
5/27/2015	15.8	1.3	22.2	19.1	17.6	17.5	13.6	12.1	12.1	13.1	27.0	11.1	10.9	18.2
8/26/2015	17.0	1.4	24.2	23.4	19.6	18.0	14.6	14.1	14.6	15.6	12.0	17.1	15.9	18.2
11/20/2015	15.6	1.3	26.0	20.4	18.4	17.5	16.3	11.6	11.6	12.6	13.0	13.1	13.4	18.2
11/18/2016	10.7	0.9	18.2	14.9	14.1	13.0	12.1	6.1	9.6	6.3	8.0	10.6	13.1	18.2
12/21/2016	14.7	1.2	29.2	24.4	17.1	17.5	14.6	11.1	10.1	11.1	10.0	9.1	10.9	18.2
5/24/2017	14.0	1.2	18.2	13.9	12.1	10.0	12.1	10.1	14.1	17.1	19.0	16.1	14.9	18.2
8/23/2017	17.5	1.5	18.2	15.9	15.1	10.0	12.1	17.1	19.1	26.1	14.0	26.1	20.9	18.2
2/13/2018	13.7	1.1	18.2	20.1	18.1	12.0	13.1	10.1	11.1	14.1	10.0	14.1	13.4	18.2
2/28/2020	6.6	0.6	18.2	12.4	11.9	8.5	8.3	3.6	4.9	5.6	3.0	6.1	10.9	18.2
6/12/2020	17.9	1.5	18.2	22.9	18.6	17.0	10.1	13.1	14.6	18.1	17.0	17.6	24.9	24.2
9/21/2020	8.3	0.7	18.2	12.4	9.6	10.3	5.3	5.9	5.6	4.1	6.3	12.9	15.9	18.2
12/21/2020	18.5	1.5	20.2	15.9	14.1	9.0	11.1	13.1	23.1	24.1	25.0	24.1	22.9	21.2
2/12/2021	19.1	1.6	18.2	22.9	18.6	15.0	13.8	15.1	20.6	22.6	22.5	22.1	19.9	18.2
4/27/2021	22.8	1.9	18.2	21.9	20.1	18.0	16.1	20.6	18.6	22.6	24.5	25.1	29.9	37.2
5/21/2021	5.8	0.5	18.2	10.9	6.1	5.0	3.1	3.6	4.6	6.1	8.0	10.1	11.9	18.2
6/24/2021	7.2	0.6	18.2	10.9	7.1	8.0	7.1	6.1	6.1	9.1	8.0	6.1	10.9	18.2
8/5/2021	14.3	1.2	18.2	14.9	12.1	13.0	14.1	9.1	9.1	15.1	17.0	17.1	18.9	20.2
9/30/2021	5.2	0.4	18.2	10.9	8.1	8.0	7.1	6.1	1.1	2.1	5.0	6.1	10.9	18.2
1/14/2022	10.1	0.8	18.2	11.9	10.6	15.0	12.1	7.1	10.6	9.1	9.5	6.1	10.9	18.2
2/16/2022	13.2	1.1	26.2	22.9	16.1	17.0	15.1	11.1	12.1	3.1	8.0	7.1	10.9	18.2
3/10/2022	2.8	0.2	18.2	10.9	6.1	6.0	4.1	2.1	1.1	1.1	3.0	6.1	10.9	18.2
5/24/2022	14.1	1.2	18.2	19.9	19.6	18.0	16.1	12.1	12.1	6.1	12.0	14.1	10.9	18.2
6/23/2022	14.4	1.2	18.2	10.9	16.1	16.0	15.1	12.1	12.1	14.1	16.0	17.1	13.9	18.2
7/14/2022	16.1	1.3	18.2	10.9	16.1	21.0	17.1	14.1	14.1	15.1	17.0	21.1	14.9	18.2
10/19/2022	13.5	1.1	18.2	10.9	11.1	13.0	11.1	13.1	9.1	11.1	13.0	17.1	21.9	21.2
11/22/2022	13.1	1.1	18.2	10.9	6.1	12.0	10.1	11.1	13.1	13.1	15.0	18.1	20.9	18.2
3/30/2023	9.3	0.8	18.2	10.9	10.6	9.0	7.1	7.1	8.1	6.1	8.0	11.1	16.9	19.2
7/18/2023	3.5	0.3	18.2	10.9	6.1	3.0	1.1	3.1	3.1	4.1	6.0	7.1	10.9	18.2
10/4/2023	15.1	1.3	18.2	14.9	7.1	4.0	11.1	17.1	17.1	15.1	16.0	19.1	23.9	23.2
4/25/2024	15.1	1.3	18.2	16.9	18.1	17.0	15.1	12.1	13.1	12.1	14.0	17.1	14.9	18.2
5/31/2024	13.4	1.1	18.2	12.9	14.1	16.0	15.1	12.1	11.1	10.1	12.0	15.1	14.9	18.2
10/29/2024	11.8	1.0	18.2	14.9	10.1	12.0	8.1	7.1	6.1	8.1	20.0	17.1	14.9	18.2
12/3/2024	16.6	1.4	18.2	19.9	19.1	17.0	17.6	14.1	12.1	13.1	21.0	16.1	15.9	18.2
Assumed	16.0	1.3	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Legend	Equivalent sediment level less than meter programmed							Equivalent sediment level greater than meter						

Figure E-1
Sediment Profiles at Meter SW from 2013 through 2024 Q4



Appendix F

Dye-Dilution Test Adjustment Factors

Table F-1
Dye-Dilution Test Summary for 2024

Meter	Date	Adjustment Factor	Site Adjustment Factor
EC-6	2/18/2014	0.70	0.75
	11/18/2021	0.79	
	11/15/2024	0.76	
P-1	1/3/2024	1.00	1.00
P-2	9/18/2017	0.89	0.85
	7/20/2022	0.76	
	9/6/2024	0.92	
PA-1	7/23/2013	0.93	0.93
PA-2	9/18/2017	0.94	1.01
	1/24/2020	1.02	
	1/4/2024	1.08	
PA-3	1/29/2020	0.96	0.99
	3/27/2024	1.04	
PA-4	4/4/2018	0.90	0.94
	7/20/2022	0.96	
	11/21/2024	0.96	
PB-1	1/23/2020	1.14	1.12
	1/19/2024	1.10	
PC-1	9/27/2022	0.84	0.84
PD-1	8/18/2015	0.76	0.79
	7/31/2018	0.76	
	11/8/2023	0.79	
	12/27/2024	0.87	
PD-2	1/30/2020	0.99	0.95
	7/15/2022	0.97	
	10/30/2024	0.89	
RD-1	4/6/2018	1.02	1.04
	2/6/2023	1.04	
	6/3/2024	1.06	
RR-1	2/19/2014	0.97	1.06
	1/28/2020	1.16	
	7/15/2022	1.07	
	2/14/2024	1.06	

Table F-1
Dye-Dilution Test Summary for 2024 (Cont.)

Meter	Date	Adjustment Factor	Site Adjustment Factor
RV-1	12/11/2019	1.00	0.99
	8/17/2022	0.97	
SW	1/27/2020	1.10 (with sediment accounted for)	1.14
	12/20/2022	1.14 (with sediment accounted for)	
	6/28/2024	1.18 (with sediment accounted for)	
TB-1	11/10/2014	1.05	0.99
	1/28/2020	0.97	
	12/19/2022	0.93	
	10/9/2024	1.03	