GLWA Wastewater Collection System Discharge Summary

Majid Khan

Director of Wastewater Operations

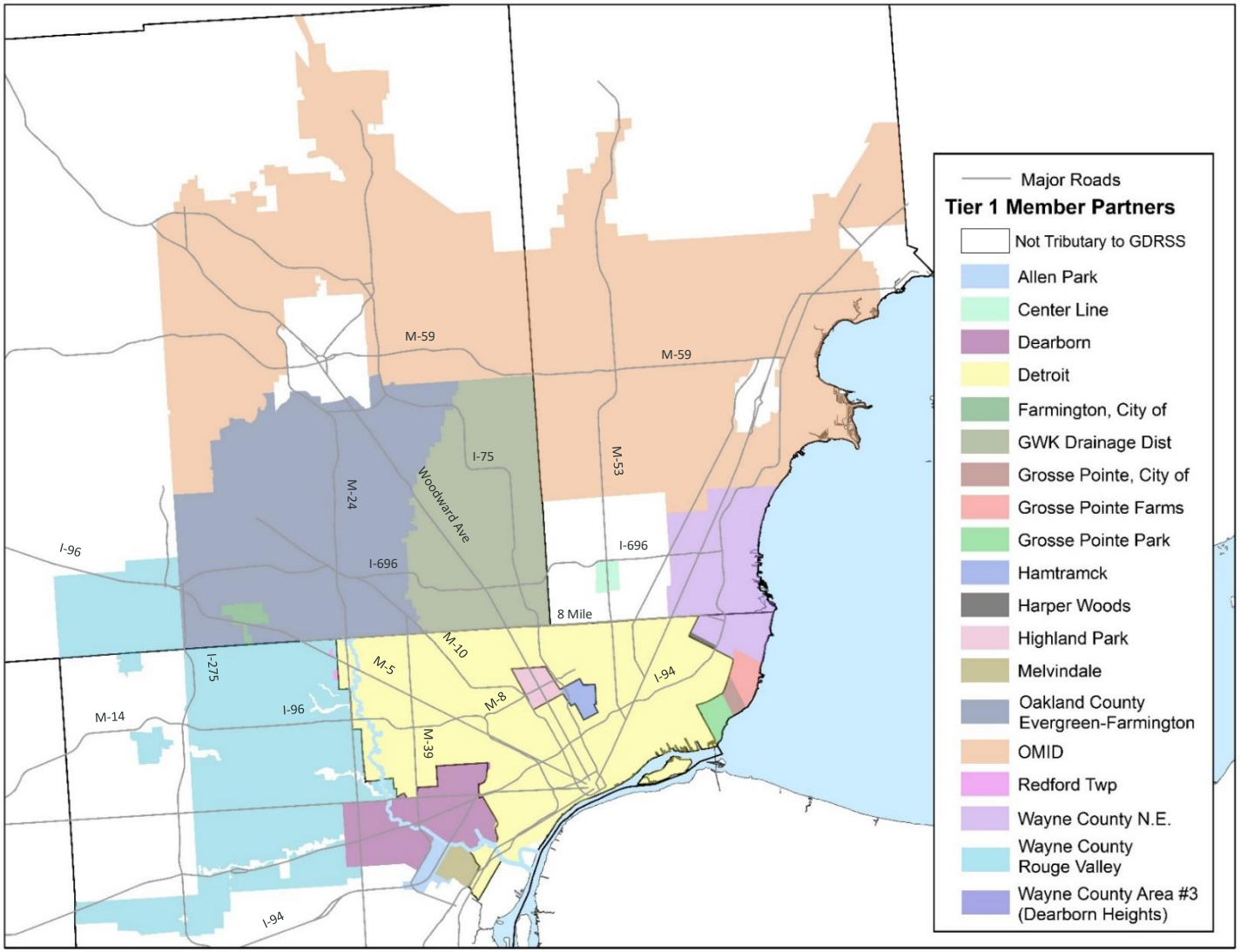
GLWA

Great Lakes Water Authority

Main Topics

1. Collection System Overview
2. Collection System Performance
3. Collection System Untreated Overflows
4. Collection System Outfalls NPDES Permit Classification

GLWA Service Area and Tier 1 Member Partners



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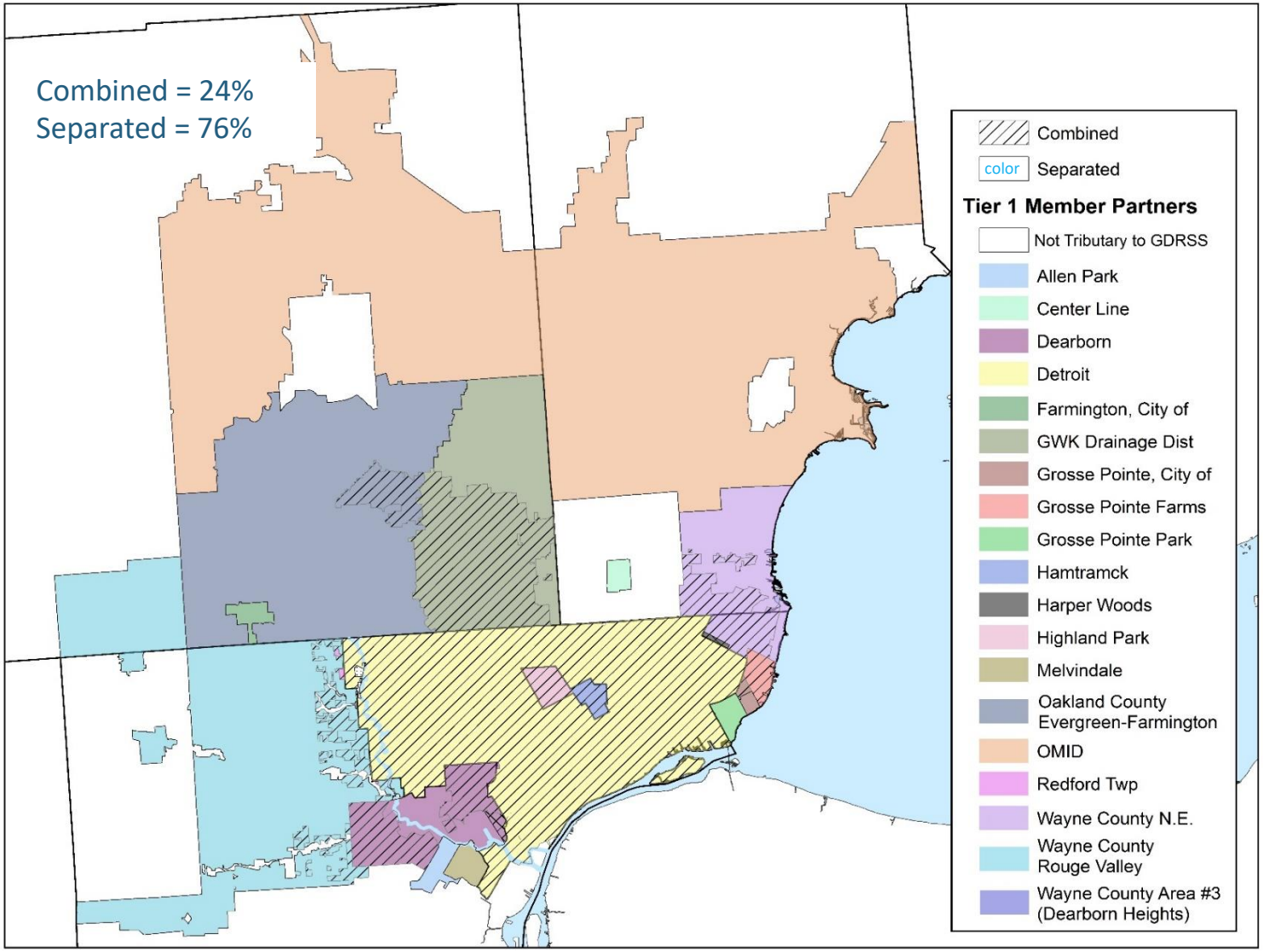
Tier 1 Member Partners Collection System Type



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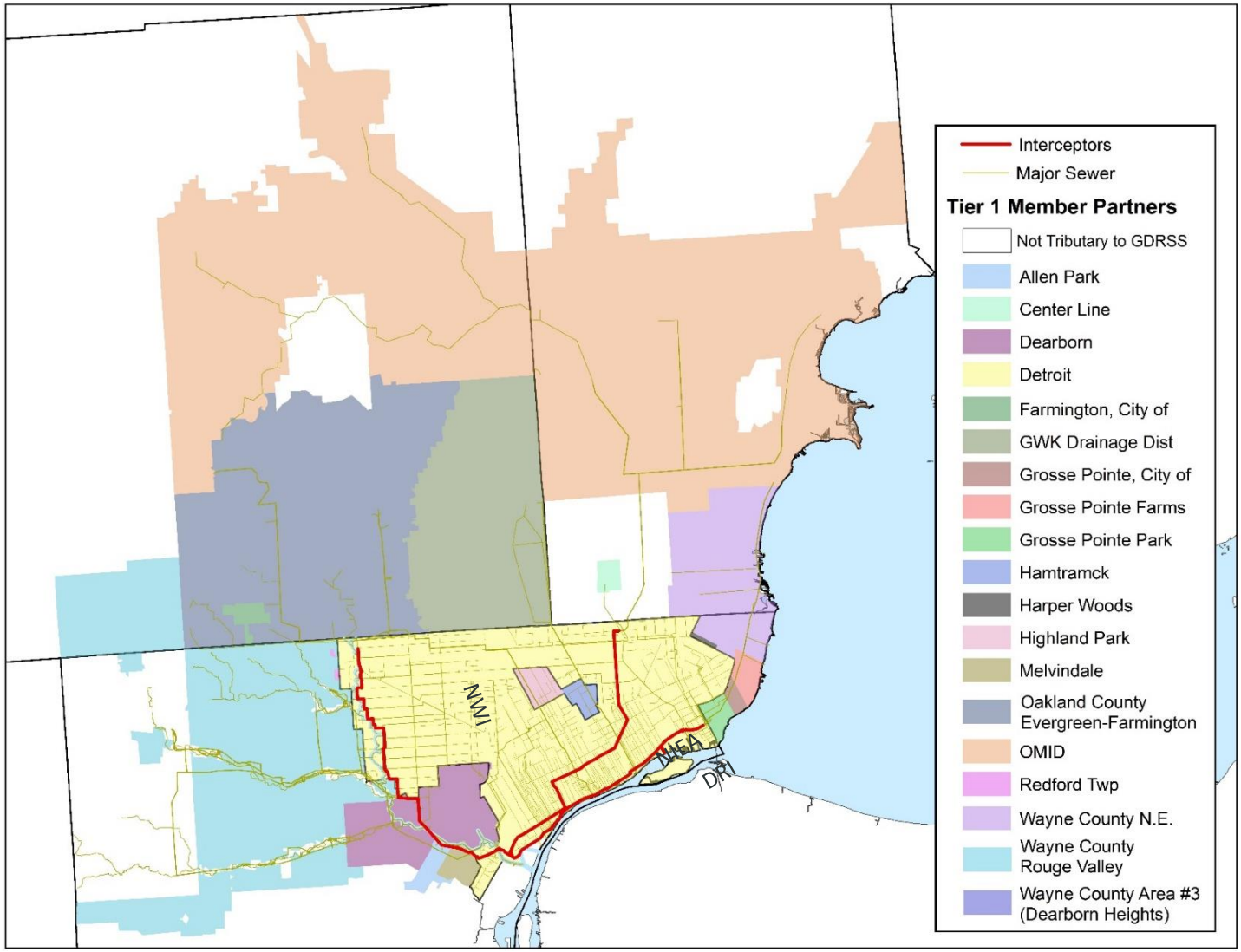
GLWA Interceptors



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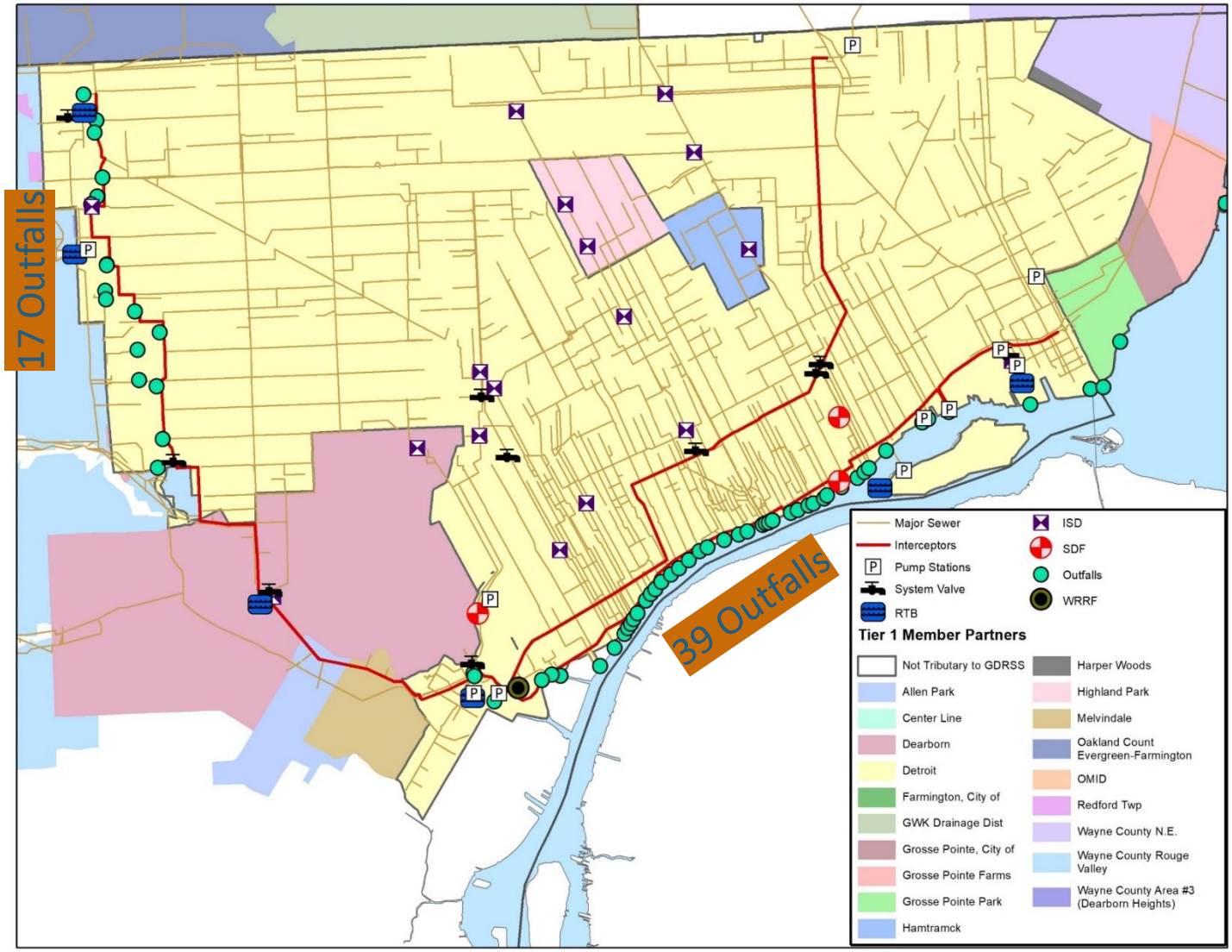
GLWA Wet Weather Facilities



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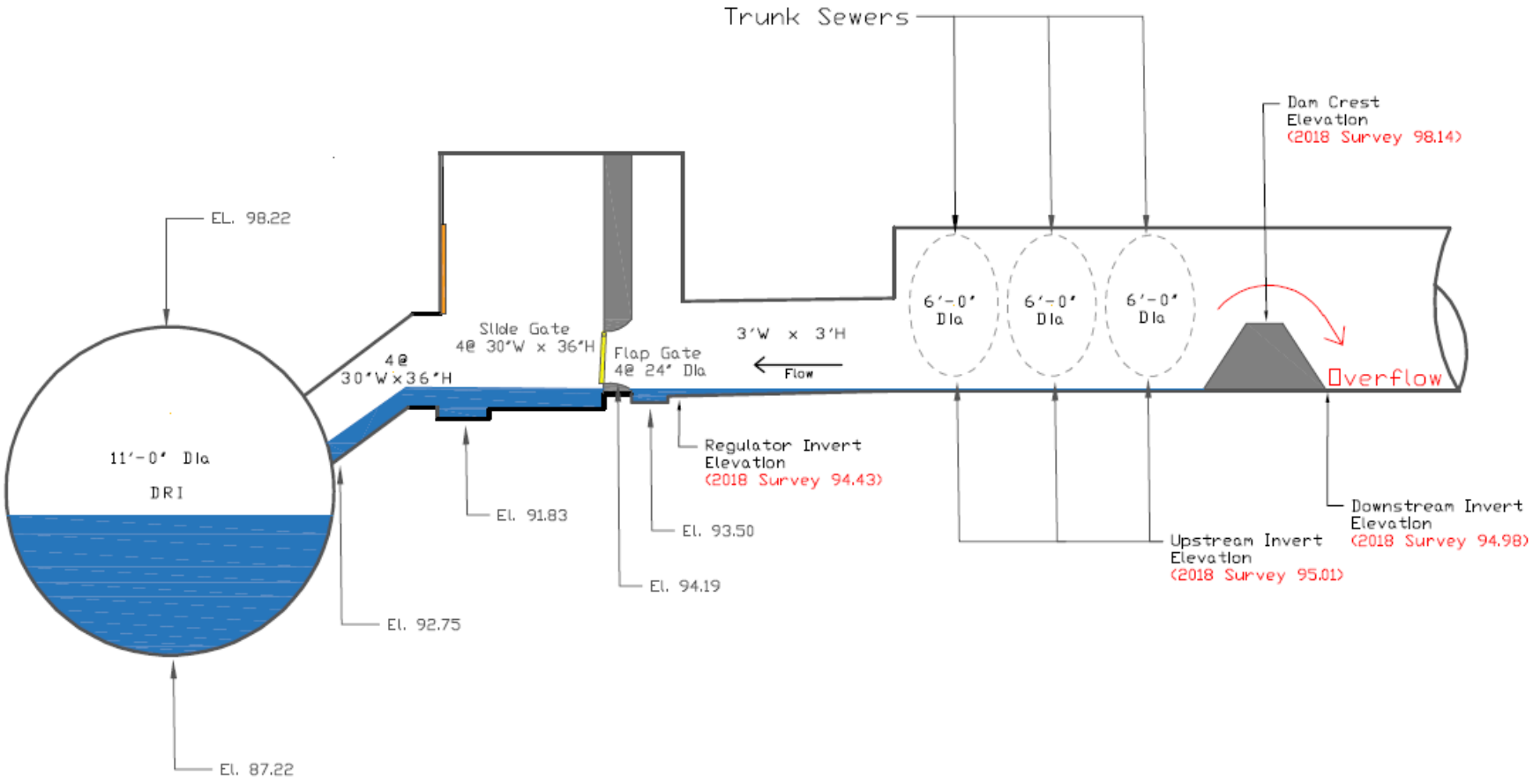
B005 Schematic



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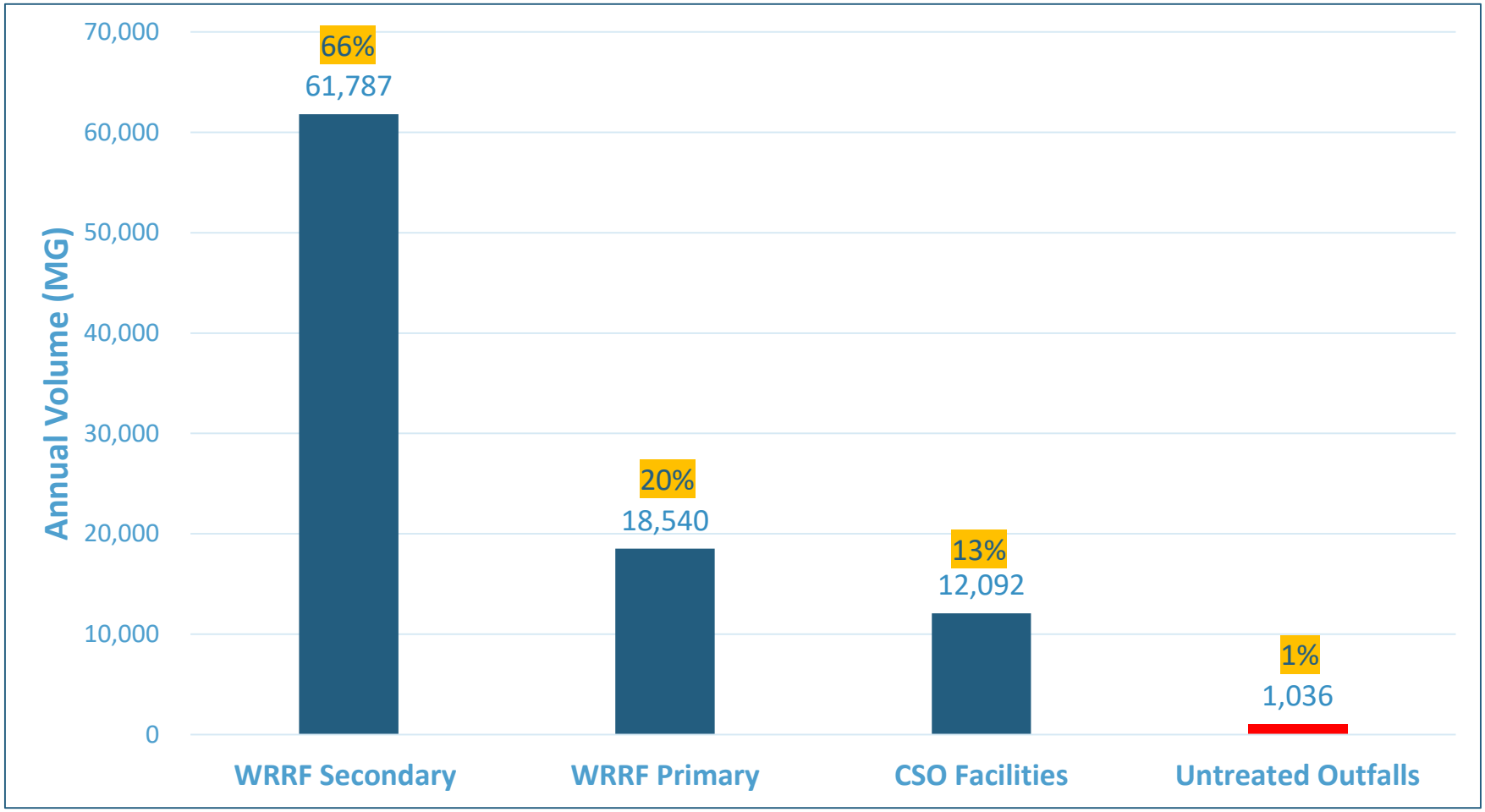
System Wet Weather Volumes for FY 2017-2018



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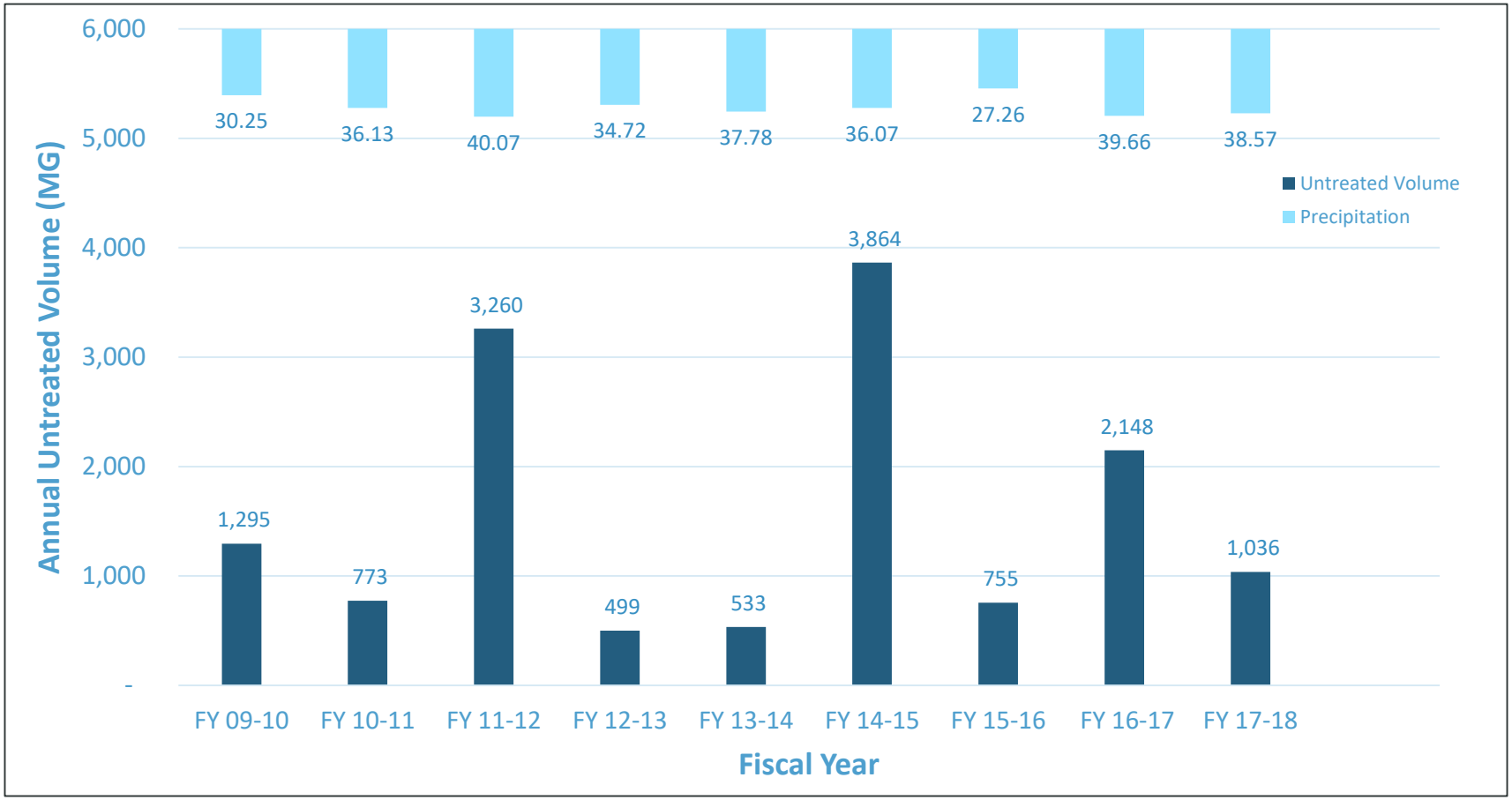
Untreated Discharge Volume for FY 10 through FY 18



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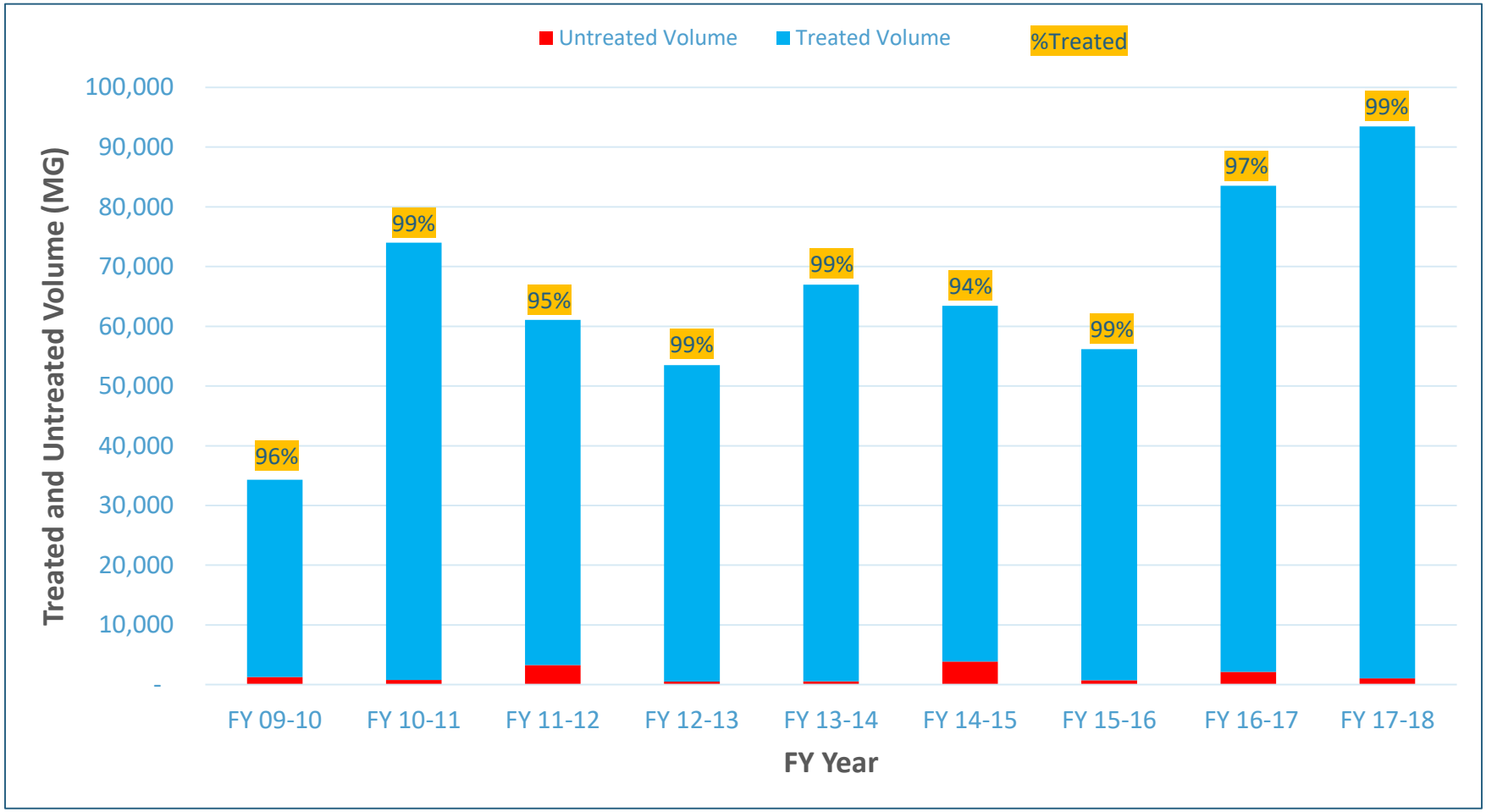
Treated and Untreated Discharge Volume for FY 10 through FY 18



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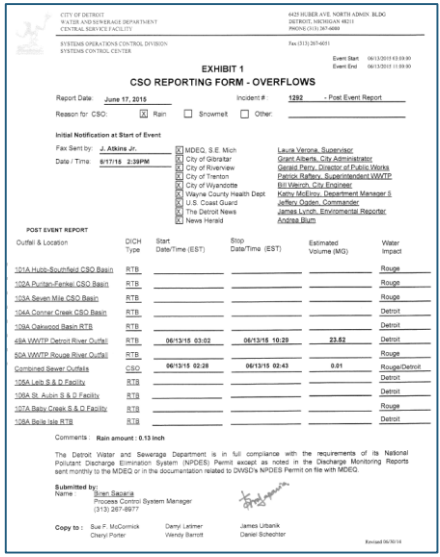
GLWA CSO Event Reporting

- Date of Overflow Event
- Event Number
- Start & End of Overflow from each Treated and Untreated Outfall
- Estimated Volume of Overflow from each Treated and Untreated Outfall
- Regulatory Notification Requirements:
  - Initial Notifications: within 4 hours of becoming aware of CSO discharge
  - Supplemental Notification: within 7 days of becoming aware that the CSO discharge has ended



CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
CENTRAL SERVICE FACILITY

6425 HUBER AVE. NORTH ADMIN. BLDG
DETROIT, MICHIGAN 48211
PHONE (313) 267-6000

SYSTEMS OPERATIONS CONTROL DIVISION
SYSTEMS CONTROL CENTER

Fax (313) 267-6031

Event Start 06/13/2015 03:00:00
Event End 06/13/2015 11:00:00

EXHIBIT 1

CSO REPORTING FORM - OVERFLOWS

Report Date: June 17, 2015 Incident # 1292 - Post Event Report

Reason for CSO: [X] Rain [ ] Snowmelt [ ] Other:

Initial Notification at Start of Event

Fax Sent by: J. Atkins Jr.
Date / Time 6/17/15 2:39PM

[X] MDEQ, S.E. Mich	Laura Verona, Supervisor
[X] City of Gibraltar	Grant Alberts, City Administrator
[X] City of Riverview	Gerald Perry, Director of Public Works
[X] City of Trenton	Patrick Rafferty, Superintendent WWTP
[X] City of Wyandotte	Bill Wilcroh, City Engineer
[X] Wayne County Health Dept	Kathy McElroy, Department Manager II
[X] U.S. Coast Guard	Jeffery Ogden, Commander
[X] The Detroit News	James Lynch, Environmental Reporter
[X] News Herald	Andrea Blum

POST EVENT REPORT

Outfall & Location	DICH Type	Start Date/Time (EST)	Stop Date/Time (EST)	Estimated Volume (MG)	Water Impact
101A Hubb-Southfield CSO Basin	RTB				Rouge
102A Puritan-Fenkel CSO Basin	RTB				Rouge
103A Seven Mile CSO Basin	RTB				Rouge
104A Conner Creek CSO Basin	RTB				Detroit
109A Oakwood Basin RTB	RTB				Detroit
49A WWTP Detroit River Outfall	RTB	06/13/15 03:02	06/13/15 10:29	23.82	Detroit
50A WWTP Rouge River Outfall	RTB				Rouge
Combined Sewer Outfalls	CSO	06/13/15 02:28	06/13/15 02:43	0.01	Rouge/Detroit
105A Lieb S & D Facility	RTB				Detroit
106A St. Aubin S & D Facility	RTB				Detroit
107A Baby Creek S & D Facility	RTB				Rouge
108A Belle Isle RTB	RTB				Detroit

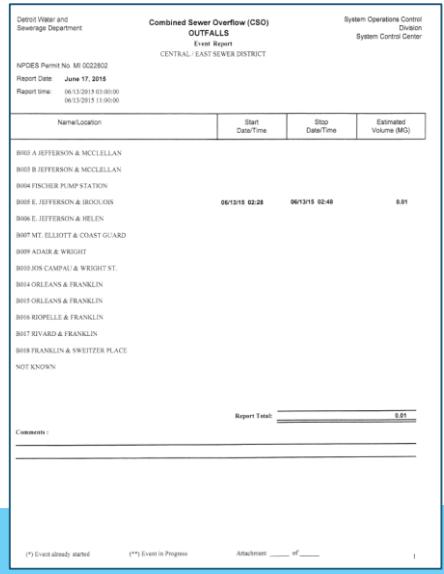
Comments : Rain amount : 0.13 inch

The Detroit Water and Sewerage Department is in full compliance with the requirements of its National Pollutant Discharge Elimination System (NPDES) Permit except as noted in the Discharge Monitoring Reports sent monthly to the MDEQ or in the documentation related to DWSD's NPDES Permit on file with MDEQ.

Submitted by:
Name: Brian Baginski
Process Control System Manager
(313) 267-8877

Copy to : Sue F. McCormick, Cheryl Porter, Darryl Latimer, Wendy Barrott, James Urbanik, Daniel Schechter

Revised 06/30/14



Detroit Water and Sewerage Department

Combined Sewer Overflow (CSO) OUTFALLS
Event Report
CENTRAL / EAST SEWER DISTRICT

System Operations Control Division
System Control Center

NPDES Permit No. MI 0022802
Report Date: June 17, 2015
Report time: 06/13/2015 03:00:00
06/13/2015 11:00:00

Name/Location	Start Date/Time	Stop Date/Time	Estimated Volume (MG)
0003 A JEFFERSON & MCCLELLAN			
0003 B JEFFERSON & MCCLELLAN			
0004 FISCHER PUMP STATION			
0005 E. JEFFERSON & IROQUOIS	06/13/15 02:28	06/13/15 02:40	0.01
0006 E. JEFFERSON & HELEN			
0007 MT. ELLIOTT & COAST GUARD			
0009 ADAIR & WRIGHT			
0010 JOS CAMPAU & WRIGHT ST.			
0014 ORLEANS & FRANKLIN			
0015 ORLEANS & FRANKLIN			
0016 RIOPELLE & FRANKLIN			
0017 RIVARD & FRANKLIN			
0018 FRANKLIN & SWEITZER PLACE			
NOT KNOWN			

Report Total: 0.01

Comments :

(*) Event already started (**) Event in Progress Attachment: ____ of ____

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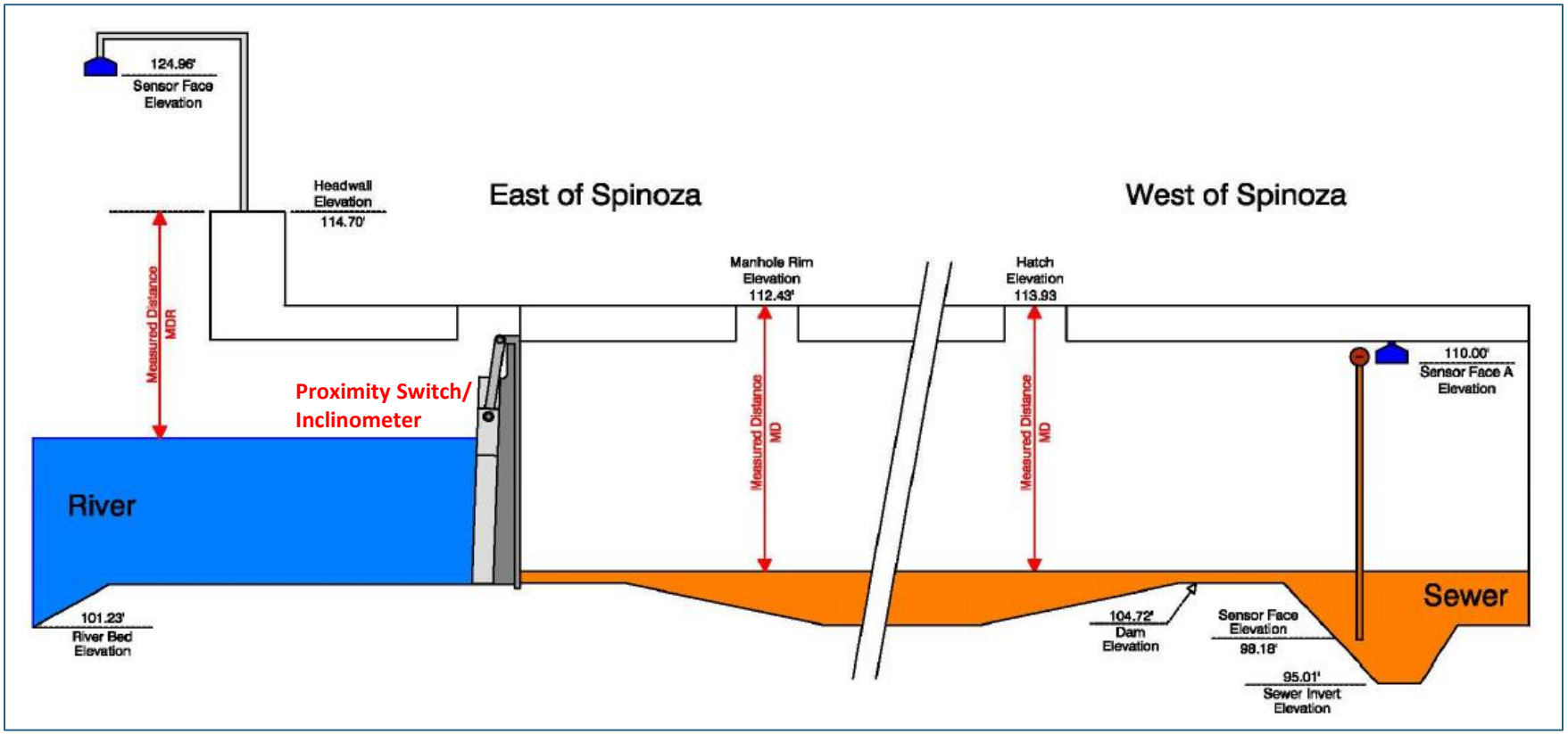
Overflow Monitoring Equipment/Methods



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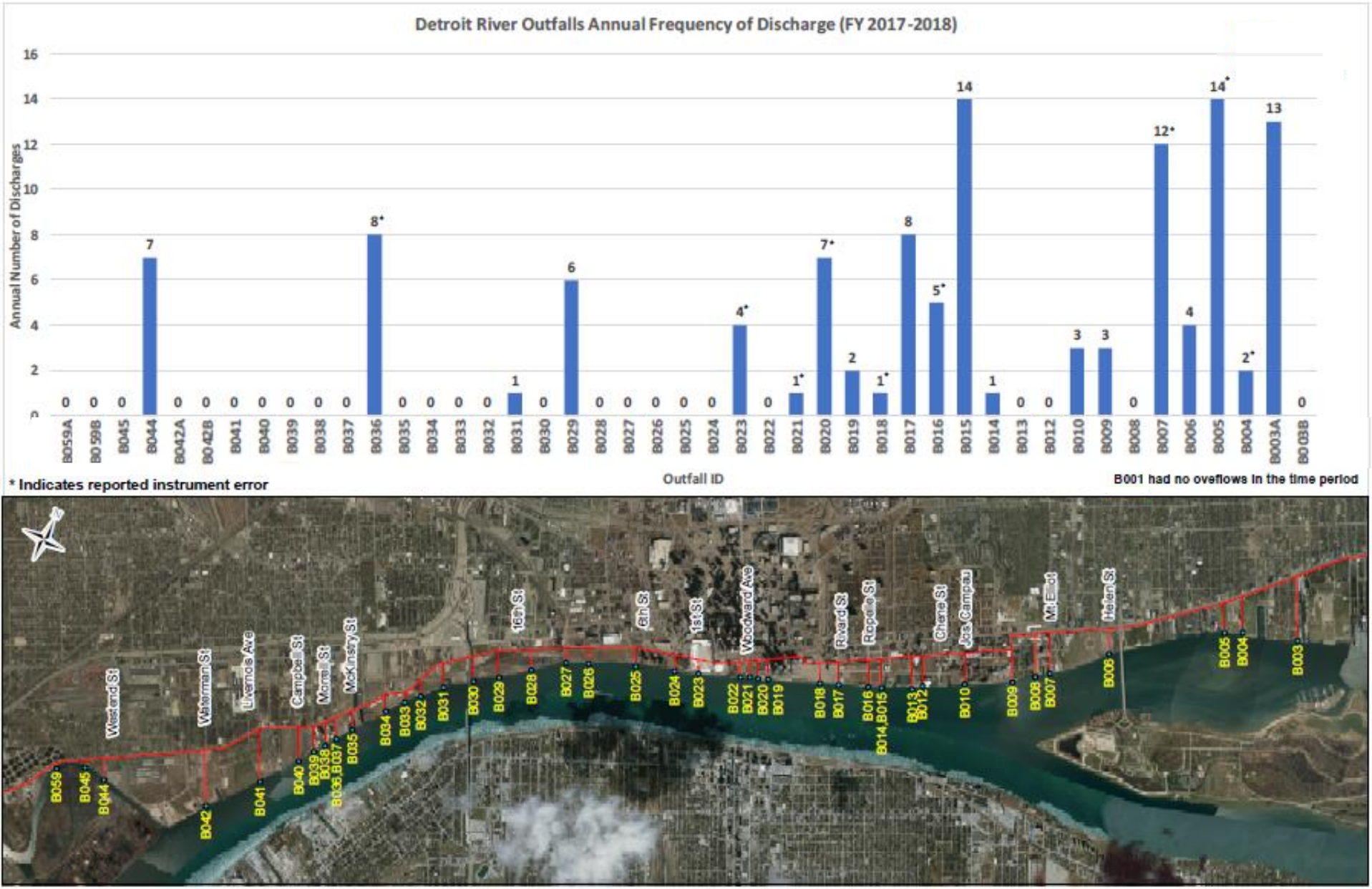
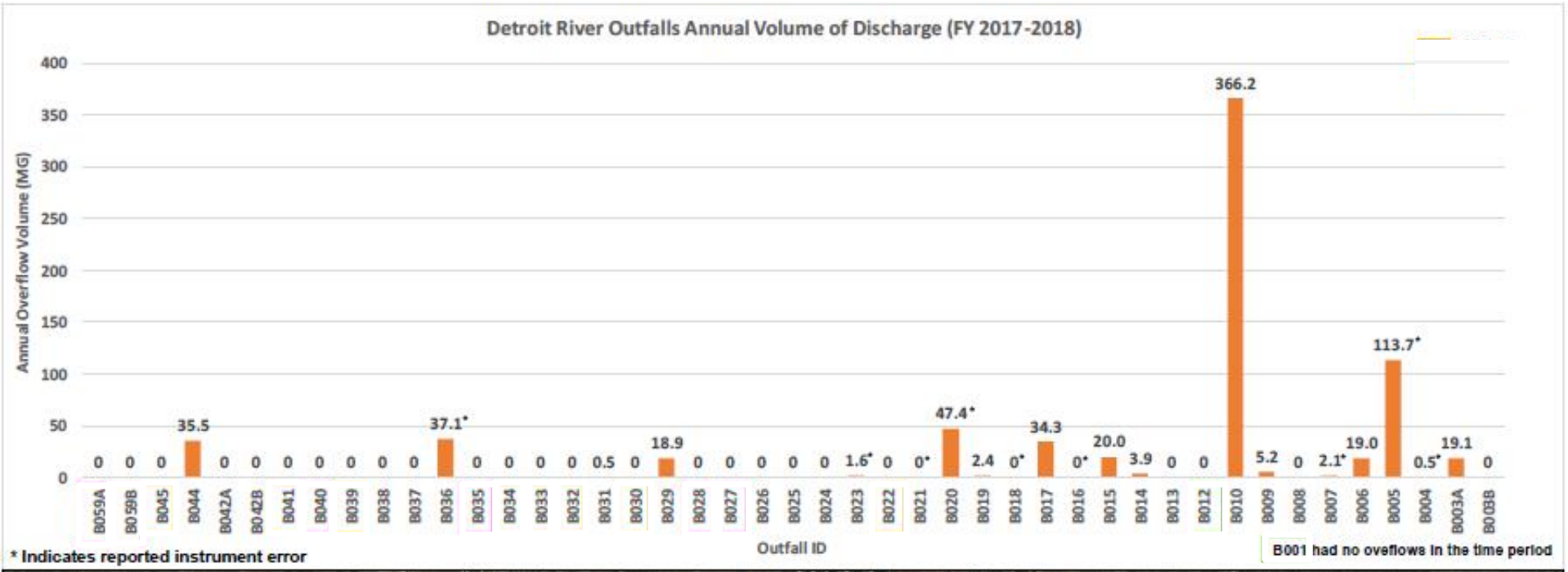
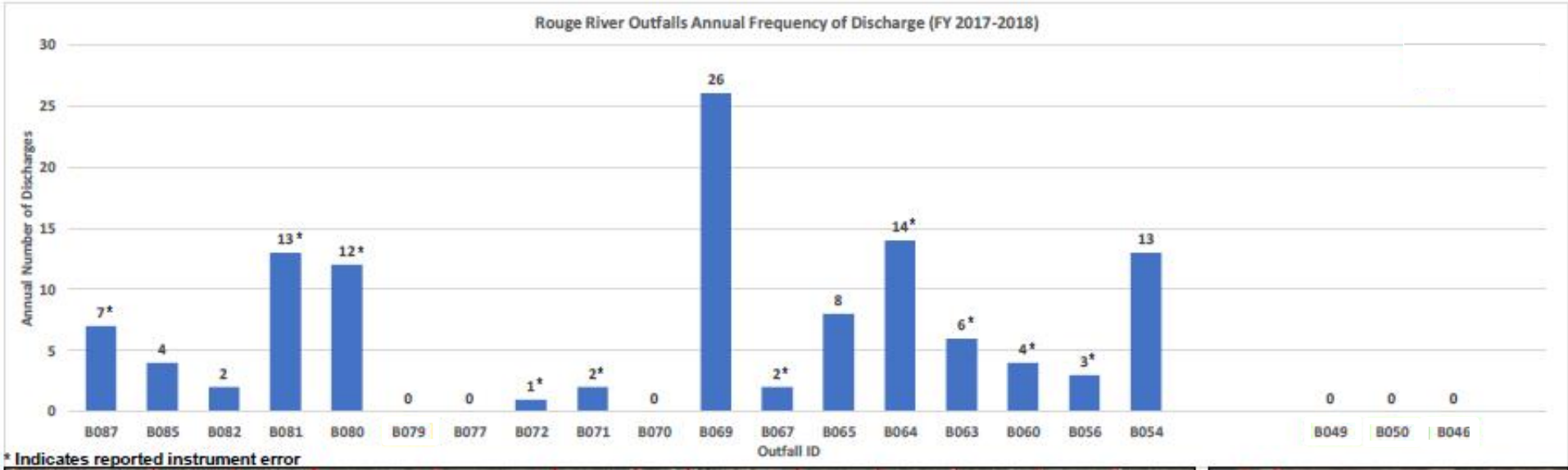
Reported Frequency of Discharge for Detroit River Outfalls (FY17-18)



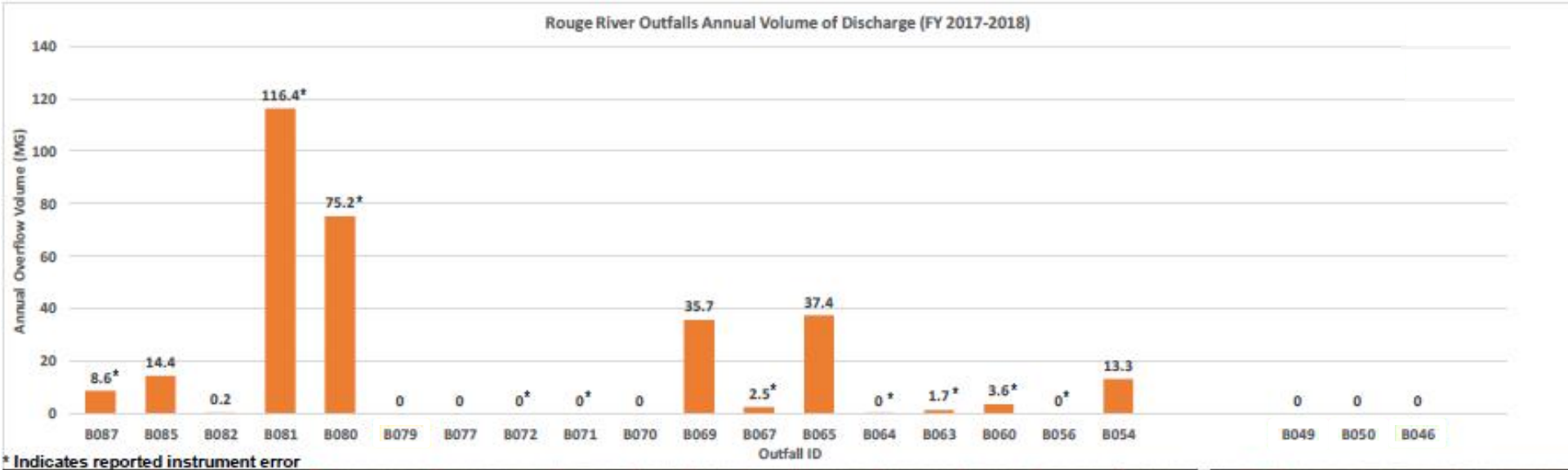
Reported Volume of Discharge for Detroit River Outfalls (FY17-18)



Reported Frequency of Discharge for Rouge River Outfalls (FY17-18)



Reported Volume of Discharge for Rouge River Outfalls (FY17-18)



* Indicates reported instrument error

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NPDES Permit Outfall Classification Definition

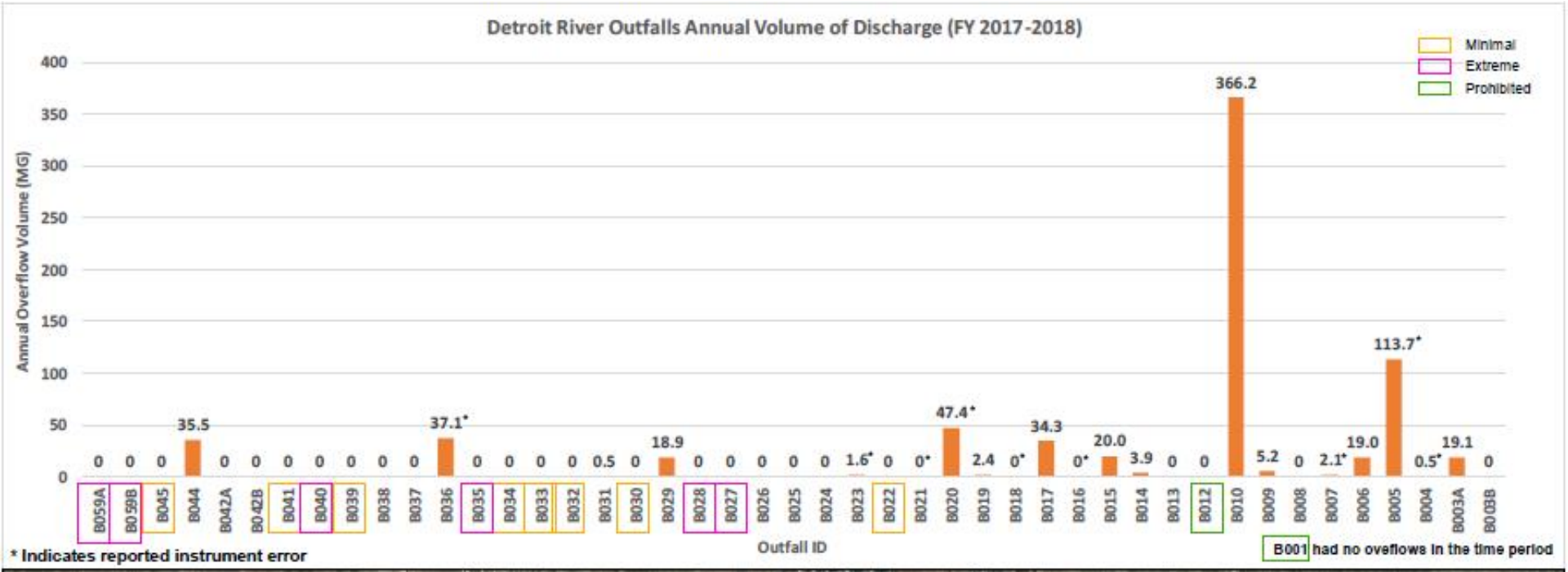
Minimal (Volume):

- Actual monitoring of a volume less than 0.3 MG of discharge over a 5-year period

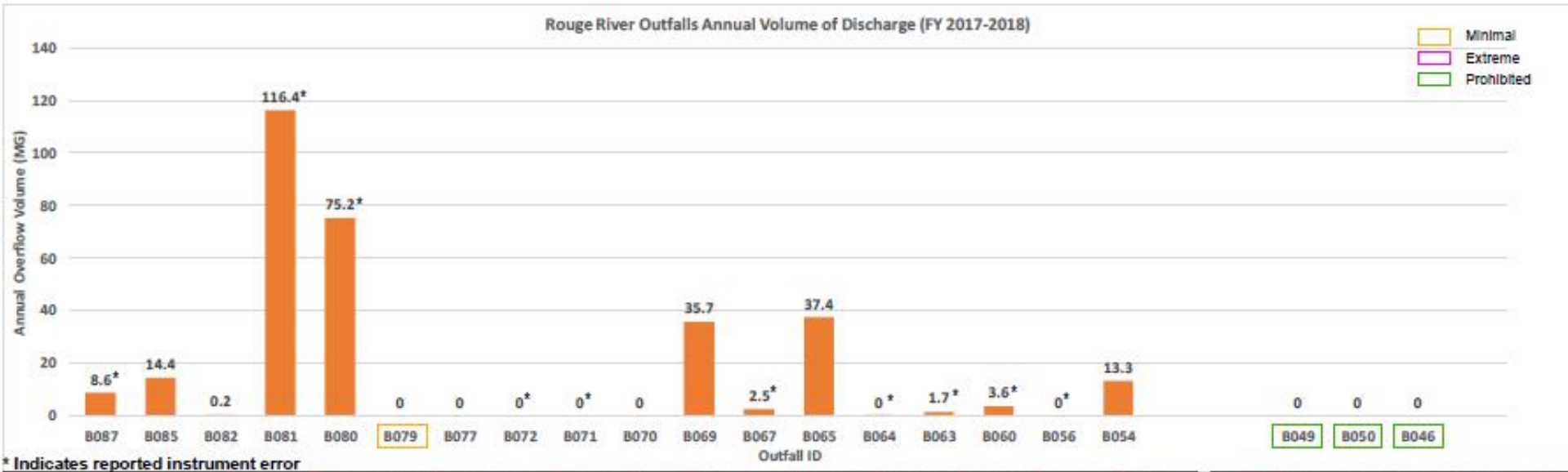
Extreme (Frequency):

- No more than one untreated discharge in 10 years during April 1 through October 31
- Modeled to not discharge at the 25-year, 24-hour event (growth period)
- Monitored to occur only at rainfalls greater than 4-inches in a 24-hour period

Detroit River Outfall Classifications



Rouge River Outfall Classifications



2018-19 Annual Consolidated Report

Table 6-6: Combined Sewer Flows - Capture and Treatment

a	b	c	d	e	f	g	h	i	j	k	l	m
		Treated WRRF Flow (MG)					Treated Control Facilities (MG)	Untreated CSO Outfalls (MG)				
Fiscal Year/CY	Total Rainfall	Total WRRF Influent Flow	Total Base Flow Treated at WRRF	Total Wet Weather Flow Treated at WRRF (c-d)	Wet Weather From Separated Areas Treated at WRRF (20% of e)	Wet Weather from Combined (80% of e)	Total Treated CSO Flow From CSO Control Facilities	Rouge River Outfalls	Detroit River Outfalls	Total Untreated CSO Flow (i+j)	Percent Capture and Treated % (g+h)/(g+h+K)	Attain EPA Presumptive Criteria? 85%
FY 09-10	30.25	225,817	194,947	30,870	6,174	24,696	2,166	167	1,128	1,295	95.40%	YES
FY 10-11	36.13	257,874	195,049	62,825	12,565	50,260	10,407	417	356	773	98.74%	YES
FY 11-12	40.07	259,885	207,343	52,542	10,508	42,034	5,256	361	2,899	3,260	93.55%	YES
FY 12-13	34.72	224,959	179,124	45,835	9,167	36,668	7,164	36	463	499	98.87%	YES
FY 13-14	37.78	238,952	185,197	53,755	10,751	43,004	12,665	201	332	533	99.05%	YES
FY 14-15	36.07	227,676	177,868	49,808	9,962	39,846	9,772	1,629	2,235	3,864	92.78%	YES
FY 15-16	27.26	213,897	164,162	49,735	9,947	39,788	5,693	513	242	755	98.37%	YES
FY 16-17	39.66	248,357	174,945	73,413	14,683	58,730	7,950	1,239	909	2,148	96.88%	YES
FY 17-18	38.57	240,197	159,870	80,327	16,065	64,262	12,092	309	727	1,036	98.66%	YES
CY 18 *	42.68	248,770	159,870	88,900	17,780	71,120	13,347	1,092	830	1,922	97.78%	YES
Total		2,386,384	1,798,375	588,010	117,602	470,408	86,512	5,964	10,121	16,085	97.19% (average)	YES

Notes: Two Wet Weather Events significantly shaped the performance of FY 2014-2015. The August 11-14 300-year storm and the PS-1 wet well flood during the November 23-25. Excluding the untreated discharge from those two events (3492 MG), the percent of CSO treated during this fiscal year would have been 99.2%. Similarly, the November 25, 2011 wet weather event during FY 2011-2012 comprised nearly 60% of the total untreated CSO discharge for the entire year. Excluding the untreated discharge form that event (1900 MG), the percent treated during that fiscal year would have been approximately 97.2%.

*Dry weather flow volume was assumed to be the same as FY 2017-2018 average daily dry weather flow rate.

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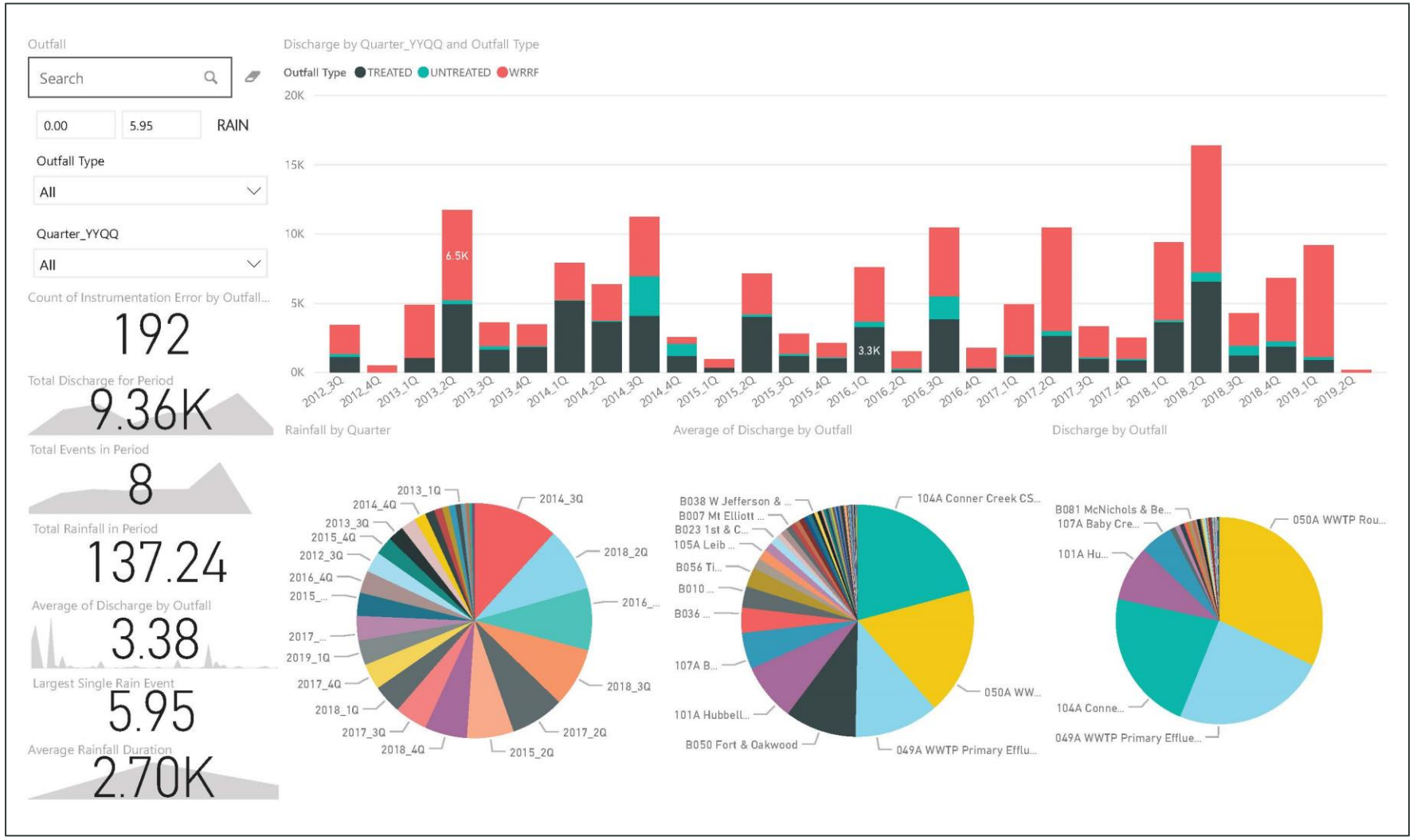
Power BI Example

Discharge Stats (3Q 2012 – 2Q 2019)**…**



Questions

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