



# Sewer Shares Sampling Work Plan

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# Objectives

- Improve strength of flow estimates for FY 2021-2023 shares
- Improve customer confidence in results

# Background

- 💧 Sewer Shares Project Team formed in 2016
- 💧 Water Quality Sampling Program: BOD, TSS, P and FOG
- 💧 Results incorporated in FY-2018 sewer shares
- 💧 Developed suggestions for further refinement

# Recommended Plan

- 💧 Exploration of approach used by other similar agencies
- 💧 Additional data to support flow component approach
- 💧 More GLWA (*local*) data and less reliance on national published data
- 💧 Consistent time period for sampling
- 💧 Add Grit as an additional parameter

# Approach

- 💧 Research approach used by other major metropolitan areas
- 💧 Obtain data within the GLWA service area
- 💧 Define relative strength of flow for each flow component:
  - Sanitary
  - Dry weather I/I
  - Wet weather I/I
    - a) Combined: Surface Runoff
    - b) Separate: Groundwater

# Approach cont'd

- 💧 Determine the relative magnitude of contribution from representative sewer districts
- 💧 Consistent time period: late spring
  - Minimize climatological variations
  - Minimize deposition and resuspension

# Sampling Locations

Category	Sampling Location
Large Combined Sanitary	Dearborn Prospect
	GWK
	Hubbell-Southfield
Large Separate Sanitary	EFSDS
	OMID
	RVSDS
Smaller Separate Sanitary	Allen Park
	Centerline
	Melvindale



# Sampling Locations



Figure 1  
Proposed Sampling Locations  
GLWA Sewer Shares  
Sampling Work Plan





# Location Strategy

## 💧 Sanitary

- Possibly Village of Franklin (low I/I pressure system)
- Areas with very low DWII based on past studies
- WWTPs outside GLWA that serve newer areas with very low DWII

## 💧 DWII

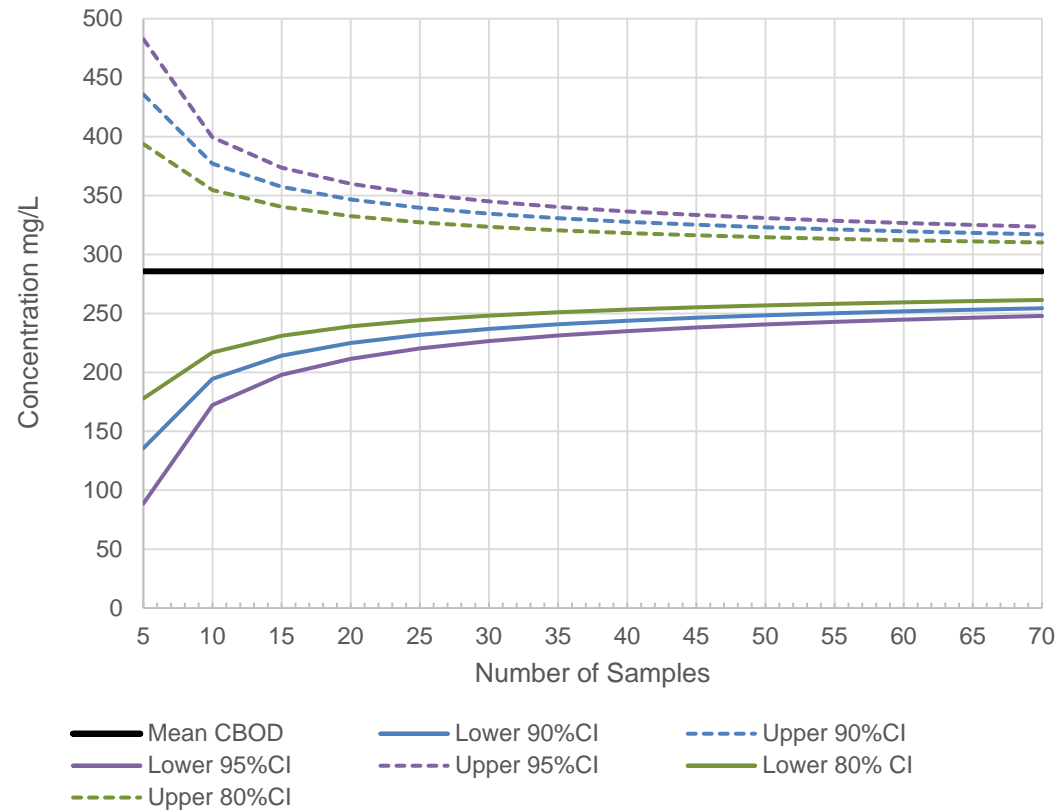
- Manholes: gushers and runners
- Footing drains
- Sewers in abandoned areas
- Storm sewers in dry weather

## 💧 Wet weather I/I

- Storm sewers with soils similar to Detroit and Dearborn
- Detention basin influent

# Confidence In Results

The more samples collected the tighter the confidence interval.



# Next Steps

- Obtain customer feedback and suggestions
- Detailed technical review meeting with Wastewater Analytics Task Force on October 6th
- Present final Workplan to the GLWA Board in October



**GLWA**

*Great Lakes Water Authority*

# Questions and Comments