

## Georgetown Wet Weather Treatment Station

# (Control for Brandon and S. Michigan Combined Sewer Overflows)

Presented to Metropolitan Water Pollution Abatement Advisory Committee December 10, 2014



GEORGETOWN

DISTRICT

Michigan

CSC

**GSO** 

NDUSTRIAL DISTRICT KingCounty Protecting Our Waters Doing our part on rainy days

Agenda:

- Project Overview
- Status
  - Project site
  - Cost control measures

## Questions

APPROXIMATE SEARCH AREA FOR TREATMENT FACILITY

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# **Purpose of Project**

- "Control of Brandon and South Michigan Street CSO Outfalls in accordance with WAC 173-245-020(22)"
- WAC defines control as "no more than one event per year over a twenty year average" or treatment that is at least equal to primary treatment standards.
- Achieve all consent decree requirements



# **Consent Decree Requirements**

## **Project defined as:**

- CSO Treatment and Conveyance 66 MGD peak
- High rate clarification treatment

#### **Compliance Schedule:**

- Submission of Facilities Plan by December 31, 2015
- Completion of Bidding by December 31, 2017
- Construction Completion by December 31, 2022
- Achievement of Performance Standard by December 31, 2024 or two full wet seasons.



# **Characteristics of Treated Discharge**

- Long term averages
  - ~20 treated events/year
  - 1/year discharge from existing CSOs
  - ~65-70 MG/average year (95% of total)
- Intermittent and short duration
  - 50% less than 4 hours
  - 91% less than 12 hours

Untreated CSO Volume Reduction





# South Michigan

Brandon





![](_page_7_Picture_0.jpeg)

## **Project Elements (what is being proposed)**

- Influent conveyance
- Flow equalization
- Influent pump station
- Screening
- High rate clarification system
  - Ballasted Sedimentation
- Ultra-violet disinfection
- Ancillary facilities including, odor control, redundant electrical supplies, chemical storage, air handling
- Effluent conveyance
- Outfall structure

![](_page_8_Picture_0.jpeg)

# Schedule

	Consent Decree Milestone
Facility Plan	12/31/2015
Completion of Bidding	12/31/2017
Construction Completion	12/31/2022
Achievement of Performance Std.	12/31/2024

![](_page_8_Figure_4.jpeg)

![](_page_9_Picture_0.jpeg)

# **Project Status – Current Activities**

- Project team applied site selection criteria to guide the selection of the proposed facility site
- Analysis of flow and load data; water quality sampling and analysis
- Confirm regulatory standards and requirements with Department of Ecology
- Develop conceptual site layouts, hydraulic profile, operational strategies
- Form a community design advisory group

![](_page_10_Picture_0.jpeg)

# Project Status – Staff Recommended

# Site P13/OF 3A

- Environmental review to be completed on this recommendation
- Shortest conveyance
- Undeveloped
- On-site staging possible
- For sale/lease
- Allows for consolidated facilities
- Community support

#### King County Protecting Our Waters

![](_page_10_Figure_11.jpeg)

![](_page_11_Picture_0.jpeg)

# **Project Status – Cost Control Activities**

- As recommended by the King County Auditor's Office, WTD management, and Carollo Engineer's, the project team has/will implement several cost control strategies.
- Will or have reviewed several potentially cost saving technical alternatives including:
  - Minimize conveyance length Implemented
  - Review the use of submersible pumps
  - Use passive means to divert flow to GWWTS
    - Consolidated diversion facilities
  - Raise the HGL of the plant to avoid pumped discharge and minimize excavations – Implemented
  - Eliminate degritting facilities Implemented
  - Review how equipment is enclosed

![](_page_12_Picture_0.jpeg)

# **Questions?**

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