



**Ad Hoc Combined Sewer System Plan Stakeholder Group  
(CSS Stakeholder Group)**

1101 Sister Cities, 301 King Street City Hall  
Alexandria, VA 22314

**Thursday, March 3, 2016**

**7:00 PM – 9:00 PM**

Agenda

- 1) Welcome and Call to Order
  - a) Acceptance of Meeting #4 Summary 7:00 – 7:05
  
- 2) CSO-001
  - a) Technical Presentation 7:05 – 8:00
  - b) Stakeholder Group Discussion 8:00 – 8:25
  - c) Public Comment 8:25 – 8:30
  
- 3) Wrap up and Adjournment 8:30
  - a) Next Meeting April 7, 2016 from 7 pm – 9 pm in the City Council Workroom, 2<sup>nd</sup> floor



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**Discussion Questions**

City staff's strategy for CSO-001 is a Two-Phased Approach:

- CSO-001 Phase I: Continue sewer separation and implement green infrastructure in the Pendleton sewershed to reduce overflows at CSO-001 over time.
- CSO-001 Phase II: Reassess the level of control following substantial completion of other CSO projects (002/003/004), performance of CSO-001 Phase I, and future regulatory requirements.

Do you agree with this strategy? Do you have additional input or concerns? Are there any other considerations the City should address moving forward with CSO-001?

City of Alexandria, Virginia

## Long Term Control Plan Update

CSS Stakeholder Group  
Meeting #5  
March 3, 2016

Department of Transportation and Environmental  
Services



ECO-CITY  ALEXANDRIA

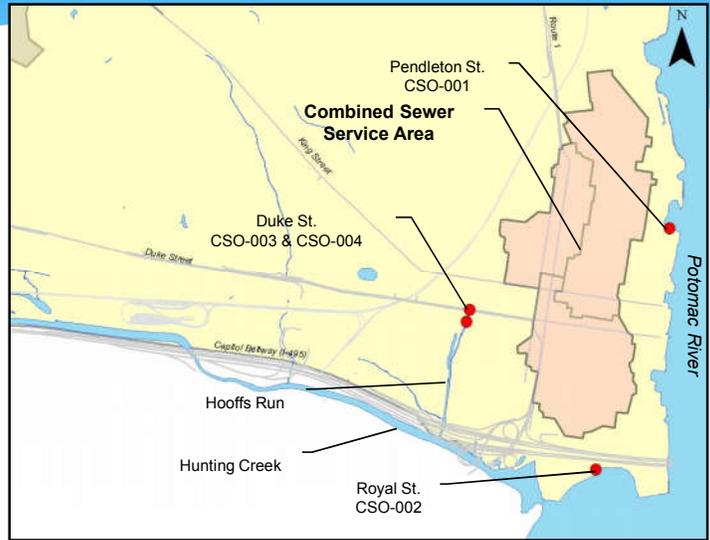
City of Alexandria, Virginia

## PRESENTATION OUTLINE

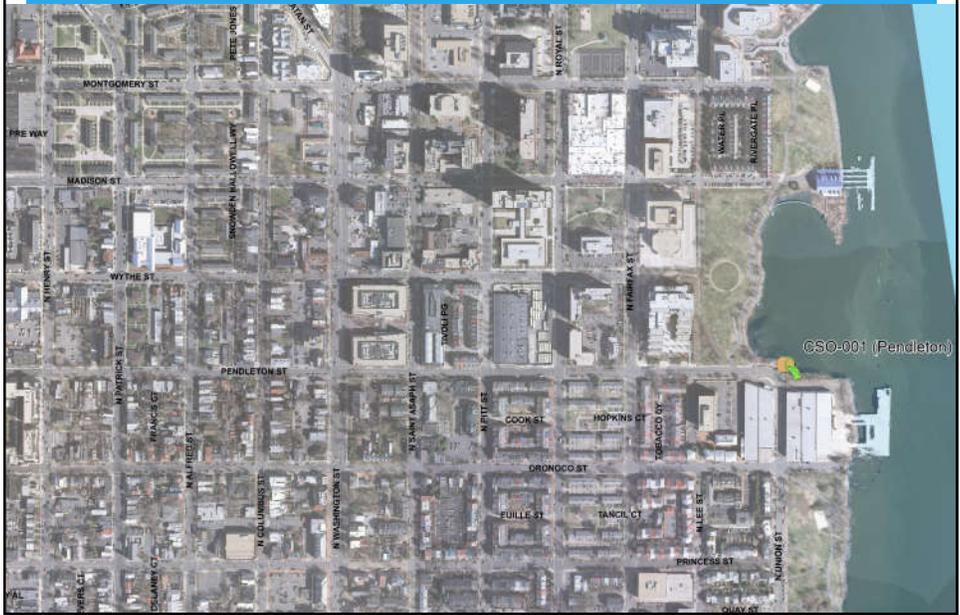
- CSO-001 Background
- CSO-001 Strategy
- April Meeting Agenda



# CSS Area



# CSO-001 Orientation



# CSO-001 Background

- \* Discharges to Oronoco Bay
- \* Subject to EPA's Nine Minimum Controls (NMCs) under the City's existing Long Term Control Plan (1999)
- \* Not part of the Hunting Creek TMDL; therefore, does not have any new regulatory drivers for additional controls
- \* Redevelopment Requirements
  - Sewer Separation (Area Reduction Plan)
  - Stormwater Controls

# Nine Minimum Controls



Conduct Proper O&M Programs



Maximize flow to the POTW



Maximize use of the collection system for storage



Control solid and floatable material



Develop & Implement a pollution prevention program



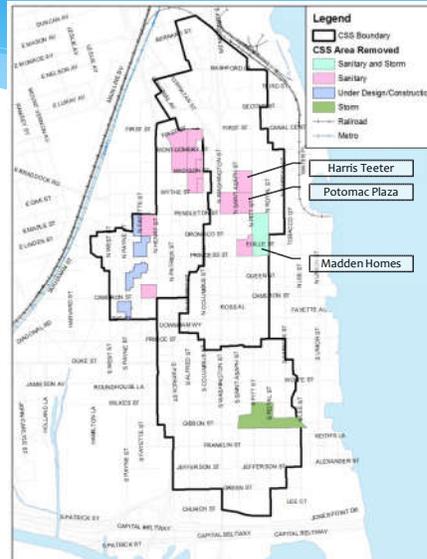
Prohibit CSOs during Dry Weather



Public Notification

## Area Reduction Plan

- \* Formalized program and policies requiring sewer separation as condition of redevelopment
  - If separation infeasible, then contribute funds to City-led projects
- \* Recently completed sewer separation projects
  - James Bland
  - Harris Teeter
- \* City-led separation projects
  - Payne and Fayette Sewer Separation Project
    - Under construction
    - ~90 sanitary laterals to be separated



## Combined Sewer Technologies

- \* **Store and treat:** build CSO storage and send to wastewater treatment facility after CSO event for high level of treatment
  - Storage tanks (aboveground or underground)
  - Deep tunnels
- \* **Sewer separation:** build new sewers to separate all storm and sanitary sewers in Old Town
- \* **Green infrastructure:** Reduce stormwater runoff
- \* **Disinfection:** kill the bacteria in the overflow

# Proposed Conceptual Plan for CSO-001

## \* CSO-001 Phase I

- **Continue Current LTCP**
  - Continue the Nine Minimum Controls
- **Continue Separation**
  - Continue targeted separation within the Pendleton sewershed, included as part of redevelopment
- **Continue Stormwater Controls with Redevelopment**
- **Continue Green Infrastructure**
  - Implement green infrastructure within the Pendleton sewershed, where cost effective

## \* CSO-001 Phase II

- Reassess based on CSO-001 Phase I and CSO-002/003/004 Projects
- Implement a plan consistent with future regulatory requirements

# Old Town North Small Area Plan

### FUTURE POTENTIAL SITES

1. NRG-PRGS
2. Crowne Plaza Hotel
3. Foreign Car Service
4. Metro Stage
5. 801 N. Fairfax/209 Madison

### REQUESTS FOR PROPOSALS

6. WMATA Bus Barn
7. ARHA Properties

### PENDING APPLICATIONS

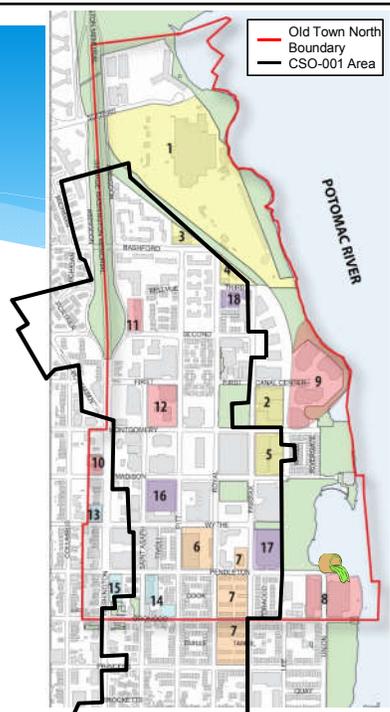
8. Robinson Terminal North
9. Canal Center - Public Improvements/Flood proofing
10. 800 - 802 N. Washington (Towne Motel)
11. Old Colony Inn
12. ABC/Giant

### APPROVED & UNDER CONSTRUCTION

13. 700 N. Washington
14. Health Department
15. Cotton Factory (The Mill)

### RECENTLY CONSTRUCTED

16. Harris Teeter/ The Kingsley
17. The Oronoco
18. Printers Row



## Old Town North Eco-District Strategy

- \* **Overall:** Incorporate specific goals in the Environmental Action Plan regarding transportation, open space, tree canopy, energy and climate change, etc.
- \* **Water Quality:** Assess present and future infrastructure (stormwater, CSO) requirements for this small area plan and apply Green Infrastructure where feasible and cost effective
- \* Diversity and Mixed Use
- \* Energy and Green Building
- \* Carbon Footprint Reduction

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## CSO-001 Phase II (Preliminary Concept)



## CSO-001 Phase II

- \* Considerations for CSO-001 Phase II Implementation
  - CSO 002/003/004 Projects
  - Green Infrastructure
  - Targeted Separation
  - Future regulatory requirements (TMDLs)
  - Rainfall and other climate factors
  
- \* Use adaptive management to address
  - Reassess level of control following substantial completion of CSO-002/003/004 controls and CSO-001 Phase I implementation

## Presumption Approach (without CSO-001 Phase I controls)

| Storage Volume     | Number of Overflows per year <sup>1</sup> | Conceptual Cost (\$M) |
|--------------------|---|-----------------------|
| Current Conditions | 43  | -                     |
| 3.0 – 5.0 MG       | 3-5                                       | \$50 - \$130          |

**Notes:**

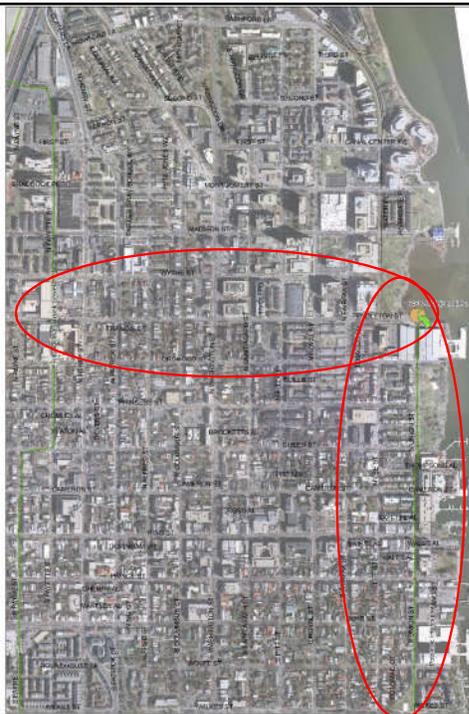
1. Average based on the 2004-2013 climate period.

NPW = Net Present Worth  
 MG = Million Gallons  
 \$M = cost in millions

## CSO-001 Phase II Store and Treat Considerations

- \* Synergy with Waterfront Redevelopment Plan
- \* Synergy with North Old Town Small Area Plan
- \* Impacts to Oronoco Bay Park
- \* Impacts to Oronoco Bay
- \* Impacts to waterfront access
- \* Potential permitting issues
- \* Construction disruption
- \* Long term O&M access

## Potential Tunnel Areas



## Potential Tank Areas



## CSO-001 Tanks



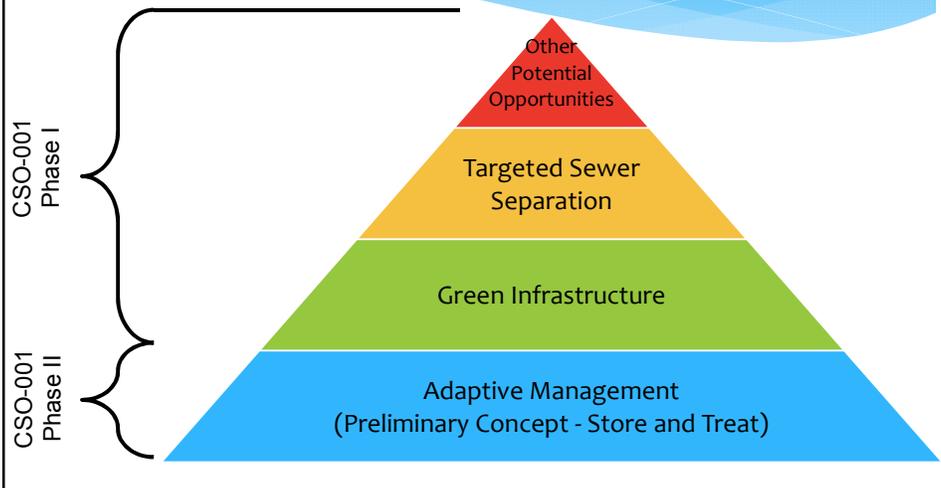
## CSO-001 Tanks



## CSO-002 Tanks



## Proposed Conceptual Plan for CSO-001



## Question for Stakeholder Group

City staff's strategy for CSO-001 is a Two-Phased Approach:

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- \* CSO-001 Phase II: Reassess the level of control following substantial completion of other CSO projects (002/003/004), performance of CSO-001 Phase I, and future regulatory requirements.

Do you agree with this strategy? Do you have additional input or concerns? Are there any other considerations the City should address moving forward with CSO-001?

City of Alexandria, Virginia

# CSS Stakeholder Group April Meeting



## April 7, 2016 Working Agenda

- \* Draft Long Term Control Plan Update
  - Store and Treat
  - Sizing
  - Siting
- \* Implementation
  - Cost
  - Schedule
  - **Rate Impacts**

# Sanitary Sewer Enterprise Fund

- \* What is an Enterprise Fund?
  - Capital and operating expenses are funded entirely by the sewer user fees and connections fees.
  - Approximately 75% of the City's sewer revenue comes from user fees with 25% coming from connection fees.
- \* What is funded by Enterprise Fund?
  - Capital sanitary sewer and combined sewer improvement projects
  - Operating expenses (personnel and non-personnel)
- \* What is NOT funded by the Enterprise Fund?
  - Improvements related to development projects
  - AlexRenew projects
  - Stormwater projects

# Monthly Sewer Bill

| Items                                       | Value                           |
|---|---------------------------------|
| AlexRenew Monthly Base Charge - Residential | \$8.38                          |
| AlexRenew Monthly Base Charge – Commercial  | Varies based on connection size |
| AlexRenew Wastewater Treatment Charge       | \$6.77/1,000 gallons            |
| City of Alexandria Sewer Maintenance Charge | \$1.25/1,000 gallons            |

Based on usage of 5,000 gallons per month, sewer bill is \$48.48