

Combined Sewer System and the Long Term Control Plan Update

Summary of Questions, Comments, and Responses

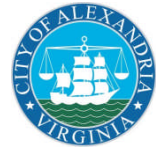
Phase 2 Meeting – June 18, 2015



The City of Alexandria hosted a Public Meeting on June 18, 2015 from 7:00 pm to 9:00 pm to discuss the City's Combined Sewer System, present potential Combined Sewer Overflow (CSO) Control Strategies, present the City's evaluation criteria, and solicit feedback from the community. Below is a summary of the questions, comments and responses from the public meeting.

Question/Comment	City Response
Rainfall and CSOs	
How much rain does it take to cause an overflow?	Currently, an overflow occurs during most rainfall events; however, it depends on the frequency between rain events. Less than 0.25" of rainfall can cause an overflow, particularly if has been a rainy period.
Waterfront Redevelopment	
What impact will the Waterfront redevelopment have on combined sewer overflows? What kind of system does that have?	The Waterfront redevelopment will be connecting to the separate sewer system and will have negligible impact on the combined sewer overflows.
City's CSO Permit and the Hunting Creek TMDL	
Why are there different required reductions at different combined sewer outfalls? Was tidal variation considered in the water quality modeling?	The Virginia Department of Environment Quality Hunting Creek TMDL established that the larger waterbody of Hunting Creek has the ability to assimilate more bacteria without exceeding water quality standards than the smaller upstream Hooffs Run; therefore, less reduction is required at CSO-002 which discharges to Hunting Creek than is required at CSOs 003 and 004 which discharge to Hoofs Run. Tidal variation was considered as part of the water quality modeling.
Going back to the first permit in 1995, has water quality in Hunting Creek and Hooffs Run improved over the years?	Alexandria has worked to improve water quality throughout the City. Although no hard data is available, the City has completed several sewer separation projects under the City's Combined Sewer Area Reduction Plan, which results in small incremental improvements associated with combined sewer overflows. There many other factors and sources of pollution that impact water quality overall.
Why is Oronoco Bay (CSO-001) not included as part of this plan?	Oronoco Bay is not required as part of the Hunting Creek TMDL, which is driving the current update to the Long Term Control Plan required by the Virginia Department of Environmental Quality. However, the City will be developing a plan for CSO-001 that addresses water quality impacts separate from the Long Term Control Plan Update.

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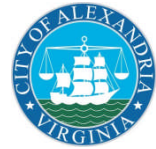
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Would it be possible to obtain a federal waiver because Old Town is a historic district?	Most combined sewer systems in the U.S. are located in old, historic cities, many with historic areas (Georgetown for example). All of these other cities have had to comply with federal and state requirements, so it is expected that Alexandria will be no different.
Recent CSO Projects	
What was constructed [this last year] at the intersection of King St. and West St?	The CSO-003 combined sewer diversion structure was reconstructed to improve the hydraulics of the system, increase combined sewer capture, and to correct some maintenance issues.
Evaluation of Potential CSO Strategies	
What do the scores mean?	A lower score means a strategy is less favorable while a higher score means a strategy is more favorable. The minimum score a strategy can receive is 0, and the maximum score is 5.
Is maintenance a long-term cost?	Maintenance is considered as part of the overall lifecycle cost for each strategy.
Is there an aesthetic component to the evaluation criteria?	The evaluation criteria included a category titled “Impact to Community”. This category includes impacts due to construction and maintenance as well as aesthetic impacts once a facility is constructed.
[On slide 37, labeled Complete Sewer Separation] does each colored area represent a year's worth of construction work?	The slide gives a visual indication of how much of the combined sewer area would have to be separated each year (on average) to achieve complete separation by 2035, which represents the deadline established by the Virginia Department of Environmental Quality. Each of the colored blocks represents about 19 acres, and each block could take multiple years to complete. As a result, there would likely be overlap: one area would be starting while another was being completed.
Have you received any feedback from the independent review panel?	We have received feedback from the review panel. Their comments have been summarized and are currently being reviewed by the panel for sign off by each panel member before the comments are finalized and published.
Are you going to listen to the neighbors if we say we don't want the above ground storage tank?	We understand that some strategies may raise concerns for the community and this is why we are asking for feedback. The City is committed to making the best decision for the community's public health and overall wellbeing.

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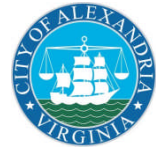
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Funding	
If the federal government (USEPA) requires improvements to the combined sewer system, is it possible for the City to get federal grants?	Recently, the federal government has not been providing grants for CSO work required by permits, consent orders, and consent decrees. The City will monitor opportunities for grants.
Where is the money coming from?	Slide 57 of the presentation has a list of potential sources of funding.
Potential CSO Strategies and Implementation	
Would the storage tank be above ground? Will aesthetics be considered as part of the final recommendation?	It could be either above ground or below ground, however, at this stage it is anticipated that any potential tank would be located below ground. Aesthetics will be considered.
If you construct a tunnel, will the City be tearing up Old Town?	Construction impacts will be limited to the immediate area near dropshafts. These dropshafts are required to get equipment and materials down to construct the tunnel as well as to remove excavated material. The dropshaft construction may require closing off one to three streets for several months, but it will not require construction on multiple streets throughout Old Town.
Where will you be putting the Royal Street (CSO-002) tank? If you can't park it under the Wilson Bridge, what's the potential location?	The general area for a potential tank was shown at the meeting. However, an exact location has not been chosen. Over the course of the next year various sites around CSO-002 both north and south of the Wilson Bridge will be investigated for feasibility. If the storage tank strategy is selected, some potential locations would require coordination with other agencies (VDOT, Jones Point Park).
How would you transport all the materials for construction? The neighbors won't like that on small streets like Royal Street. Could materials be transported by barge?	Understood. That's one of the challenges to be evaluated. Transporting materials by barge might be an option; we'll evaluate that.

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<p>One strategy being considered includes a storage tank in the Royal Street area, but it doesn't specify above ground or below ground. People will assume you mean above ground. An above ground tank should be taken off the table now for aesthetic reasons.</p>	<p>We have a regulatory requirement to study and evaluate all options. However, based on the feedback we are receiving, it is anticipated that any potential tank would be below ground.</p>
<p>We recommend that aesthetics be included as evaluation criteria in the next phase.</p>	<p>Agreed, aesthetic impacts will be considered.</p>
<p>How long will the construction take?</p>	<p>Based on other municipalities that have constructed similarly sized infrastructure, it could potentially take at least 1-3 years for each combined sewer outfall.</p>
<p>The Royal Street area has already been subject to construction impacts associated with the Woodrow Wilson Bridge and is a planned haul route for the waterfront development plans.</p>	<p>Noted.</p>
<p>With a storage tank, would the CSO flows go to the storage tanks and then flow back to the treatment plant?</p>	<p>Yes, in a wet weather event, the combined flow would flow to the storage tank first. An overflow would only happen if that tank filled completely and then an overflow at CSO-002 would begin. This could happen in the three or four largest wet weather events each year. The flow that was captured in the tank would be held and then pumped back to the sewer system, where it would flow to the AlexRenew plant for a high level of treatment.</p>
<p>When must all this be done?</p>	<p>Our permit requires completion by 2035. We're considering how these projects could relate to other projects, including some by other stakeholder such as Alexandria Renew Enterprises.</p>

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<p>All of the primary control strategies are end of pipe solutions. What are some more natural ways of addressing the issue of the combined sewer system? As more development continues and population increases, the technology that is suggested is further removing the natural infiltration process of water into the ground, what are more natural alternatives that you have explored?</p>	<p>The City anticipates utilizing Green Infrastructure as an integrated complimentary CSO control technology.</p> <p>Green Infrastructure cannot be implemented solely as a primary method of treatment for stormwater in Alexandria because the available soil does not have the ability absorb the amount of stormwater needed to meet the TMDL. The clay soils under Old Town prevent the easy absorption of rainfall needed to make green infrastructure able to address the entire problem. Space to build various green infrastructure is also limited due to the urban environment of Old Town.</p>
<p>Other Comments and Questions</p>	
<p>A number of residents in Old Town do not pick up after their pets. How does the City educate the community?</p>	<p>The City does outreach at its Earth Day events and hands out pet waste bags and provides information on its website and through the cable access station. The City also has a storm drains marking program as well. Overall though, agree that it's a challenge.</p>