

Combined Sewer System and the Long Term Control Plan Update Stakeholder Group – Meeting Notes

Meeting #2 – November 2, 2015



Meeting Attendees	
<i>CSS Stakeholder Group</i>	<i>City of Alexandria</i>
Skip Maginniss	Bill Skrabak
Rich Brune	Lalit Sharma
Lee Hernly	Erin Bevis-Carver
Stacy Langsdale	
Kate Mackenzie	<i>Greeley and Hansen LLC (engineering consultant)</i>
Elizabeth McCall	John McGettigan
Stephen Milone	Dustin Dvorak
Randy Randol	
Brett Rice	
Dixie Sommers	<i>Clyde Wilber LLC</i>
Jack Sullivan	Clyde Wilber
Tom Walker	
Chuck Weber (<i>absent</i>)	

The meeting convened at 7:00 pm with welcome comments by City staff members, Bill Skrabak and Lalit Sharma.

The Ad Hoc Combined Sewer System Plan Stakeholder Group (CSS Stakeholder Group) members began by reviewing and accepting the meeting notes from the Group meeting held October 7, 2015. The agenda for the meeting was introduced and Greeley and Hansen engineering consultant John McGettigan opened the meeting with a technical presentation. Highlights from the meeting are listed below:

- John McGettigan explained the nine Combined Sewer Overflow (CSO) Control Strategies that have been evaluated.
- John McGettigan discussed the technology involved in each strategy and presented the rankings and resulting shortlist approved for further evaluation by City Council.
- Lalit Sharma briefly presented the Collaborative Decision Making Process that would be utilized in discussions between members of the Group. The discussion questions, both related to Green Infrastructure, were also initially presented to group.
- Bill Skrabak presented an Overview of Green Infrastructure technologies and the potential strategies for applications in the City of Alexandria.
- Bill Skrabak discussed applications of Green Infrastructure currently utilized in the City.
- Clyde Wilber presented the Green Infrastructure Discussion Questions and facilitated the stakeholder discussion.
- Clyde Wilber also presented levels of green infrastructure implementation in other combined sewer communities across the country. There was also some discussion about how effective green infrastructure is in other places.
- Each stakeholder detailed their view of whether implementation of Green Infrastructure should be conducted as a citywide effort or strictly confined to the Combined Sewer System Area.
- Comments from the public were offered to express the concerns and opinion of community members that attended the meeting.

Meeting was adjourned at 9:30 pm.

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The following is a general summary of the questions and discussion from the CSS Stakeholder Group and the response provided by City staff and their consultants. This summary discusses the general concepts and not the individual questions verbatim.

How was Green Infrastructure evaluated in the Combined Sewer System and could Green Infrastructure be implemented on private property?

City-owned parcels and City right-of-way are the primary areas considered for implementation of Green Infrastructure projects. City-owned parcels, which make up 2% of the total CSS area, have been evaluated for green infrastructure upgrades. Upgrades to the City-owned parcels could include permeable pavements, bioswales, and rain gardens. City roads, sidewalks, alleyways, and parking lots (right-of-way properties) make up 33% of the CSS acreage. These right-of-way properties were have been evaluated for the application of permeable pavement, green alley-ways, bioretention facilities, or planter boxes.

Green Infrastructure projects have not been specifically been included in the Long Term Control Plan Update evaluation for privately owned properties due to the difficulty of imposing requirements on private property; however, the City continues to encourage and facilitate programs to involve private property owners in green infrastructure implementation; for instance the City has an existing rain barrel program where residents can install rain barrels on their property. General recommendations for private properties include downspout disconnects, rainfall harvesting and rain barrels, permeable paving, bioswales, and rain gardens.

Why is the evaluation and design of these CSO Control Strategies based on the rainfall of a typical year and how do they account for climate change?

The Environmental Protection Agency's Combined Sewer Overflow Control Policy states that "*permits will be issued to incorporate additional requirements...such as performance standards or the selected controls based on average design conditions.*" In order to design for "average" conditions in the combined sewer system, a typical year is selected to evaluate the effectiveness of CSO control strategies. For the City's Long Term Control Plan Update, rainfall data was analyzed for the last 40 years (1974-2013) and 1984 was found to best represent typical conditions.

A sensitivity analysis is underway to account for more recent and future weather conditions, where each control strategy will be considered using rainfall conditions for the years of 2004-2013. This time period was selected because the Hunting Creek Total Maximum Daily Load (TMDL) was developed using data from the years 2004 and 2005. The ten year period also contains many of the wettest rainfall years in the record. The modeling and design of infrastructure using rainfall data from the years 2004 through 2013 will help inform the City regarding the size. The results of the sensitivity analysis will be presented to the CSS Stakeholder Group as part of a future meeting.

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How do the control strategies hold up if new regulations require more stringent water quality standards?

The CSO Control Strategies shortlisted thus far, all meet the goal of only 4 overflows per year during the typical year. These overflows would be caused by rainfall events larger than 1.5 inches that occur 4 times per during the typical rainfall year of 1984. The suggested infrastructure will be designed in such a way that the size of the facilities can always be increased to allow a larger storage capacity.

Beyond the primary control strategies, sewer separation projects associated with the City of Alexandria's ongoing CSS Area Reduction Plan (2005) and Green Infrastructure implementation projects will continue in the City. Green infrastructure will also provide for the capture of nutrients (nitrogen, phosphorous, and sediments) that could help with the City's stormwater and Chesapeake Bay requirements. The water quality benefits of these projects could be utilized to address new regulations that may arise.

Why not size the infrastructure large enough to eliminate all CSOs for any type of rainfall?

The additional water quality benefits associated with larger infrastructure diminish as the sizing increases. Due to other pollutant inputs (not attributed to the CSOs), larger infrastructure is not likely to result in discernable benefit as measured by more swimmable days. The diminishing additional water quality benefits is the basis for EPA's CSO Control Policy's presumptive approach of 4-6 overflows per year. The infrastructure sizing and associated costs become extraordinarily large and prohibitive when the sizing is based on very large wet weather events to eliminate call CSOs. The sizing the City is considering is consistent with EPA's CSO Control Policy and other CSO communities, and potentially even greater.

How were projected costs for each CSO Control Strategy determined?

The strategies contain different types of combined sewer control technologies including green infrastructure, sewer separation, overflow disinfection, storage tanks, and storage tunnels. Based on the preliminary estimates developed thus far, the costs could range from \$100 million to \$200 million. These are preliminary cost estimates so the level of accuracy is assumed to be within -30% to +50%.

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Green Infrastructure Discussion:

The Stakeholders were asked for their comments on the following:

Given that the community and City Council generally support green infrastructure, should a green infrastructure strategy be developed specific to the Combined Sewer System? Or should the City continue to approach green infrastructure as a broader, citywide program? Consider the needs and interests of those you represent.

Green Infrastructure Discussion Responses

- Skip Maginniss: If the green infrastructure was only done in Old Town/ CSS area, it would be primarily a cost to the Old Town community. It would be additional cost to the efforts already spent that contribute to the Eco-City projects. It should be implemented citywide and not just CSS Area.
- Rich Brune: Green Infrastructure should be citywide.
- Kate Mackenzie: Do what it takes to meet the requirements first. We (residents of Porto Vecchio) are interested in green infrastructure, but do not favor having a lot of money spent for green infrastructure until regulatory requirements are met (by means of projects/ alternatives). We are also interested in what happened to the trees along Washington Street. Many of them died or were removed and we would like to know what happened and if/when they will be replaced.
- Randy Randol: The concern of the Old Town Civic Association is a financial concern. Focus should be on getting the regulatory requirements met first, then worry about green infrastructure.
- Thomas Walker: Green infrastructure should be the base that is driving all of this. Make green infrastructure more a part of the plan and to drive the plan forward. There is a need to solve the problem to have cleaner water so that the green infrastructure and CSO infrastructure plans are less competitive.
- Stacy Langsdale: Storing and treating is the immediate need and green infrastructure should be adopted as a long term plan. The City should provide incentives to the residents to implement green infrastructure on private property.
- Elizabeth McCall: Green infrastructure may not be as easy to build in Old Town as it may seem. You don't know what you're going to find underground until you start digging. Green infrastructure should not compromise the historic fabric of the City.
- Brett Rice: Store and treat should be first. Sizing could be adjusted so additional savings can be applied to the green infrastructure. There should also be incentives for residents to implement green infrastructure on their property.
- Lee Hernly: The Carlyle area is a very impervious area so the residents would like more green in this area. Green infrastructure should be citywide.
- Dixie Sommers: Green Infrastructure should be a citywide effort. Focus should be on meeting the requirements and stop dumping sewage into the Potomac River and development of a green infrastructure plan should be in parallel.

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- Stephen Milone: Green Infrastructure should be citywide, but should be done strategically to place green infrastructure in areas that most effectively work toward making the water meet regulatory requirements (and that may mean in Old Town). To mitigate possible historic impacts, the City should consider an alley survey and a street trees survey as part of the Long Term Control Plan Update. There should not just be green infrastructure where it is easiest and it is not as simple as just implementing BMPs from manuals. Increasing the tree canopy would be beneficial as well. There is benefit in a combination of incentivizing Green Infrastructure and in some instances of development projects to require Green Infrastructure installation.

There were also comments from the public who attended the meeting:

- Dino Drudi (resident): This plan seems to be a huge waste of money. The streams have been polluted for over 100 years and we are not going to suddenly clean it up by reducing the overflows. An interactive map of projects would be helpful for citizens and further public understanding.
- Dean Naujoks (Potomac Riverkeepers Network): Green infrastructure should be implemented citywide. There should be an effort to increase the water quality and to do more to increase the number of swimmable and fishable days. Combined sewer overflows should be eliminated completely.

The next CSS Stakeholder Group meeting will be **Thursday, January 7, 2016 from 7-9 pm** in the Sister Cities Conference Room 1101.