

Newport Combined Sewer Overflow (CSO) Stakeholder Workgroup: Meeting #7a

ATTENDEES: See Attachment 1

DATE & PLACE: August 14, 2012; City Hall, Council Chambers

Welcome & Introductions

Julia Forgue introduced City staff as well as the CH2M HILL consultant team members.

Overview of Agenda

Julia Forgue provided an overview of the agenda and asked if there were any questions before moving forward. The objective for this meeting is to collect comments from stakeholders on how each control technology meets the City's objectives so that a draft System Master Plan (SMP) can be prepared. A summary of the agenda follows:

1. Introductions & Comments on Previous Meeting
2. Review Regulatory Framework
3. Overview of the Agenda (Continuation of Meeting #7)
4. Key Meeting Topics
 - a. SMP Control Technologies – Preliminary Screening
 - b. Comments & Input for Draft SMP
5. Next meeting information

Comments on Previous Meeting

Each stakeholder was asked to provide comments and feedback on their primary concerns before moving forward with the System Master Plan development. The comments provided were:

- Subtract dry weather pollutant load at WPCP from the loading figures presented at meeting #7
- Share data on larger storm events than the data presented at meeting #7
- Provide information about CSO reduction per scenario
- What does designation as combined system by EPA mean for the City & development of the SMP
- What overflows can be approved per CD?
- Have the CSO program goals changed?
- Lacking information to decide how to attack the problem
- Explain building blocks and effectiveness, and how scenarios were developed.
- What can we do for money left under affordability?
- Provide a matrix of reduction vs. cost
- Where are we in terms of storm event \$/activity?
- The SMP should incorporate storm water pollutant issues

- Get storm water in SMP – Water quality impact/beach closures/SSOs
- Baseline projects – system maintenance and operations need to be included and factored into spending
- Don't agree with the change in focus – “cleaner” CSO's vs. CSO reduction
- The city is responsible for reducing CSO's, but doesn't have to spend large amounts of money if it won't achieve the target
- Build flexibility into the program to allow for reassessments and changes of direction
- Establish better ways to track benefits/different types of storm events
- For costs get the biggest bang for the buck. What is the minimum to spend and be in compliance? What are threshold numbers and the criteria?
- What is the Cost/Sewer Bill/yr for each scenario?
- Will the scenario achieve regulatory compliance?
- In the SMP, make no commitments for more than 8-10 years
- Show that the existing system is optimized before new construction is initiated
- What have other CSO communities done to achieve success regarding performance of technologies?
- Where does storm water go with I/I reduction?
- Bring sea level rise with regards to life expectancy of scenario options in the planning
- Provide a summary of scenarios – cost, strategy of scenario combination, and likelihood to eliminate CSOs

Review of Regulatory Framework

Peter von Zweck provided a review of the regulatory framework that outlines the CSO planning requirements and strategies. The presentation included the key documents, the decision framework from the consent decree and the steps to achieve compliance per the consent decree.

Questions & Answers:

Q: Does elimination of CSOs mean zero overflows regardless of the size of the storm?

A: Yes. The regulatory agencies do not approve any size storms to allow for overflows. The RIDEM representation did state that while the regulatory agencies can not approve any overflows regardless of the size of the storm, that they do take into consideration the size of the storm before issuing and violations or penalties as it is understood that communities can only design systems to handle limited size events.

Key Meeting Topics

SMP Control Technologies – Evaluation of Scenarios

Peter von Zweck presented a summary on the evaluation of scenarios which included:

- Reviewing the CSO Program Goals,
- The strategy to achieve the goals of the CSO Program, and
- A summary of the alternatives that have been evaluated for the SMP.

Members of the stakeholder workgroup provided the following comments:

- In the strategy to achieve the goals of the program, strategy #6 – identify a program & and implementation schedule that is affordable to Newport customer, is really the critical item that matters the most
- The workgroup members would like to see the SMP incorporate a 20-year program that is funded on a 5-year schedule, with check-points every 5 years to review progress and revise the path forward.
- The stakeholders would like to work together to build an SMP scenario at the next meeting. It was agreed that CH2M HILL would prepare brief summaries of each of the scenarios evaluated to date to be sent out for stakeholder review prior to the next meeting.

Next Meeting

The next meeting was set for September 6, 2012 at 3:00 pm at City Hall, Council Chambers.

Attachment 1

CSO Stakeholder Workgroup Meeting #7

Attendees

MEETING DATE:	Thursday August 9, 2012 @ 3:00 PM <i>TUESDAY 8/14/12</i>	
LOCATION:	City Hall Council Chambers - Newport, RI <i>14 Aug 12</i>	
Name	Affiliation	In Attendance
Workgroup Members		
Justin McLaughlin	City Council	<i>[Signature]</i>
Ray Smedberg	Ad Hoc Committee	<i>[Signature]</i>
David McLaughlin (Alternate)	Ad Hoc Committee	<i>[Signature]</i>
John McCain	ALN	<i>[Signature]</i>
Roger Wells (Alternate)	ALN	<i>[Signature]</i>
Tina Dolen	Aquidneck Island Planning Commission	
Chris Witt (Alternate)	Aquidneck Island Planning Commission	
Charles Wright	Beach Commission	
Kathleen Shinnars (Alternate)	Beach Commission	<i>KBS</i>
Bill Riccio	Dept. Public Services	
Eric Earls (Alternate)	Dept. Public Services	
Paige Bronk	Dept. Planning	
Bill Hanley (Alternate)	Dept. Planning	
Tim Mills	Harbor Master	
Mary E. Dever-Putnam	EPA	<i>[Signature]</i>
James Carlson	NSN	<i>[Signature]</i>
William Monaco (Alternate)	NSN	
Jody Sullivan	Newport County Chamber	
Ed Lopes (Alternate)	Newport County Chamber	
Evan Smith	NCCVB	
Cathy Morrison (Alternate)	NCCVB	
Shawn Brown	Middletown	
Tom O'Loughlin (Alternate)	Middletown	<i>[Signature]</i>
<i>Eric Beck</i>	RIDEM	<i>[Signature]</i>
Angelo Liberti (Alternate)	RIDEM	<i>[Signature]</i>
Jim Brunnhoeffler	RWU	<i>[Signature]</i>
B. Gokhan Celik (Alternate)	RWU	

MEETING DATE:	Thursday August 9, 2012 @ 3:00 PM	
LOCATION:	City Hall Council Chambers - Newport, RI	
Name	Affiliation	In Attendance
John Torgan	Save the Bay	DRP DRP
Wendy Waller (Alternate)	Save the Bay	
Tom Cornell	Resident	T C TC
Stuart K. Mills, Jr.	Resident	
Roger Slocum	Resident	R Slocum
Ted Wrobel	Resident	HWB
Other Attendees		
Julia Fogue	City of Newport	✓ ✓
Ken Mason	City of Newport	KM ✓
Mike Domenica	CH2M HILL	✓
Peter von Zweck	CH2M HILL	✓
Becky Weig	CH2M HILL	✓
Jim Lauzon	United Water	JL ✓
Jim		

DAVID PRESCOTT

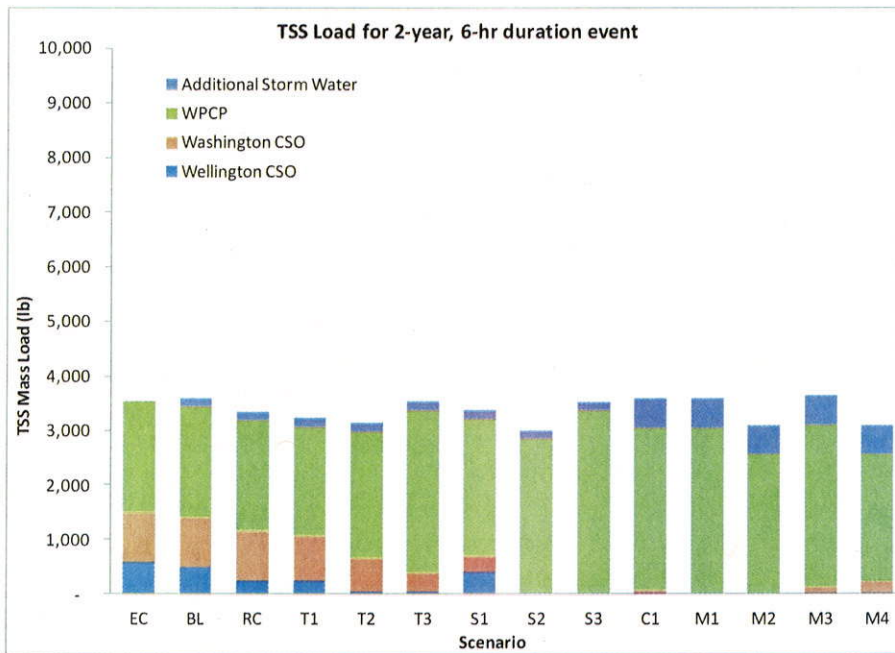
Newport CSO Stakeholder Workgroup

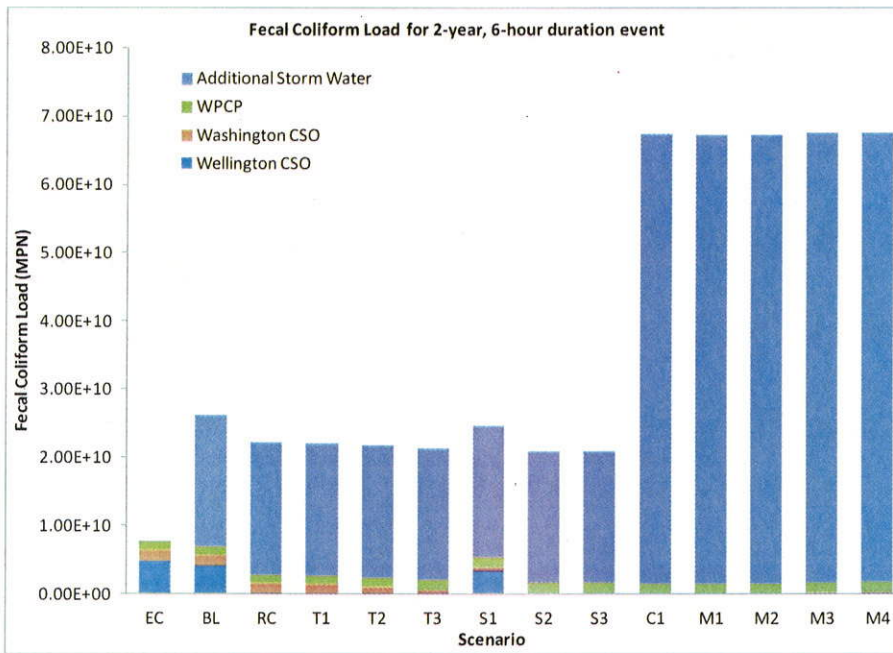
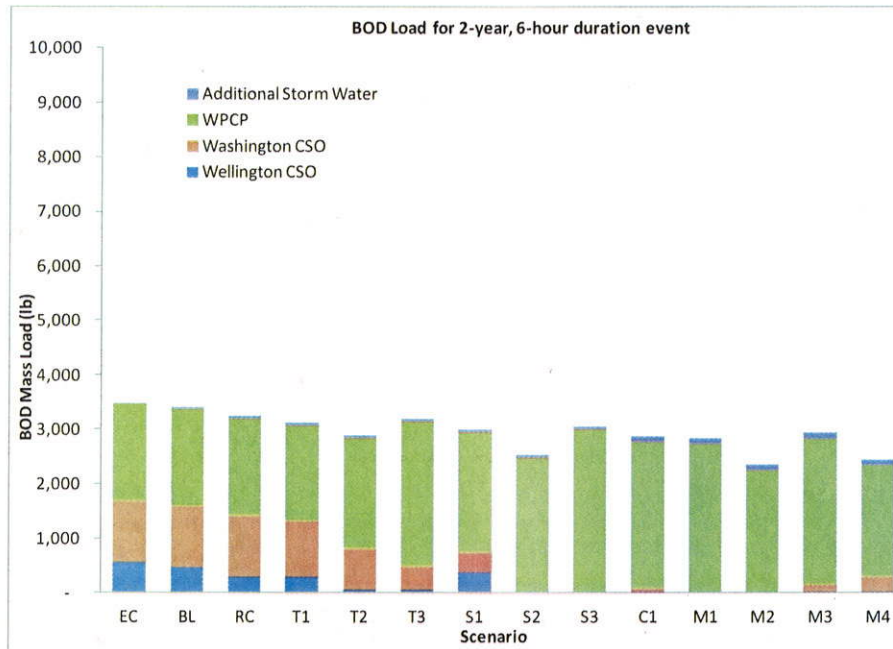
Comments from the August 14th Meeting with Responses

The requests, comments and questions collected during the August 14th Stakeholder Workgroup are summarized below. A response has been provided for each of the 27 items. Each response is based on the best available source of information and engineering evaluations completed to-date. In cases where a complete response is not provided – or is subject to an engineering evaluation not yet completed – a note on the expected resolution is noted.

Request #1: Subtract dry weather loads at the WPCP from the pollutant graphics.

Response: Updated graphs are provided below.





Request #2: Please share data on each scenario’s performance for reducing discharge volumes for larger storm events.

Response: A summary of discharge volumes at the two CSO treatment facilities for “larger” storm events is provided below. This same information is provided in the fact sheets for each scenario.

Scenario	2-year		5-year		10-year	
	Wellington	Washington	Wellington	Washington	Wellington	Washington
EC	1.29	4.30	1.83	6.50	2.72	7.81
BL	1.09	4.30	1.78	5.39	2.67	7.12
PC ¹	1.09	4.30	1.78	5.39	2.67	7.12
T1	1.09	3.94	1.78	5.30	2.68	6.89
T2	0.20	2.90	0.59	5.04	1.27	6.74
T3	0.20	1.65	0.58	2.44	1.29	3.76
S1	0.89	1.38	1.29	3.16	2.05	3.73
S2	0.00	0.00	0.38	0.00	0.78	0.28
S3	0.00	0.00	0.35	0.00	0.79	0.94
C1	0.00	0.36	0.00	1.15	0.49	2.76
M1	0.00	0.00	0.00	0.04	0.47	1.64
M2	0.00	0.00	0.00	0.82	0.25	3.21
M3	0.00	0.63	0.00	1.13	0.48	1.18
M4	0.00	1.14	0.00	3.41	0.49	4.28

¹ Revised scenario name from RC to Permit Compliance (PC) to better reflect its objective.

Request #3: Please provide information on CSO event reduction for each scenario.

Response: The approach to system planning includes evaluation of the system’s performance for average annual conditions before and after controls are implemented. This will be addressed in two steps. A “screening level” assessment of overflow frequencies is provided below. These estimates are based on a review and an extrapolation of model results for design events – compared with storms for an “average year”. After a control scenario is selected for the SMP, the citywide hydraulic model will be used to calculate the number, volume, duration and peak discharge rates for comparison with the project’s baseline.

Scenario	Estimated Annual Number of Discharge Events ¹	
	Wellington	Washington
EC	12	20
BL	12	20
PC	12	20
T1	12	18
T2	5	11
T3	5	6
S1	11	5
S2	3	1
S3	3	1
C1	1	3
M1	1	1
M2	1	3
M3	1	4
M4	1	5

¹ Estimated from model runs completed to-date.

Request #4: Provide information on Newport’s designation as combined system.

Response: The majority of Newport’s collection system was originally designed to transport both sanitary and storm water runoff. Although the City has been active toward constructing a separate drainage system, recent field work has confirmed that a large number of wet weather connections remain throughout the city. This information was summarized in 2 reports submitted to the EPA in 2011. One report was prepared for the Wellington Service Area and the other was for the Washington Service Area. Based on a review of these reports, the EPA acknowledged that portions of the collection system remain combined. EPA’s finding expands the framework of regulatory requirements for this project to include the National CSO Policy and also limits the extent of Newport’s obligations to “affordable” limits. A copy of the EPA’s letter on this topic was distributed at the August 14th Stakeholder’s Meeting.

Request #5: What overflows can be approved per Consent Decree?

Response: The Consent Decree describes the process for evaluating CSO controls but does not describe the extent to which overflows must be controlled. The EPA’s CSO Policy provides more specific guidance on acceptable levels of control. This includes a “demonstrative” and a “presumptive” approach. In situations when elimination is determined to be infeasible or unaffordable, most programs choose to follow the presumptive approach. An excerpt from the policy describing control requirements is provided below:

The USEPA's CSO Control Policy, contained in 40 CFR Part 122, defines its "Presumption" Approach as a program that meets any of the following:

- i. No more than an average of four overflow events per year, provided that the permitting authority may allow up to two additional overflow events per year. For the purpose of this criterion, an overflow event is one or more overflows from a CSS as the result of a precipitation event that does not receive the minimum treatment specified below; or
- ii. The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis; or

Request #6: Have the CSO program goals changed?

Response: The programs goals have not changed. Although the framework of regulatory requirements has expanded as a result of the recently completed field investigations and engineering studies, the program continues to follow the planning process described in the Consent Decree. The summary statement used for the program is provided below:

Continue to identify & implement the most cost-effective solution for reducing the number of CSOs to a level protective of Newport Harbor and acceptable to the community and regulatory agencies.

Request #7: The Stakeholders are lacking information to decide how to attack problem.

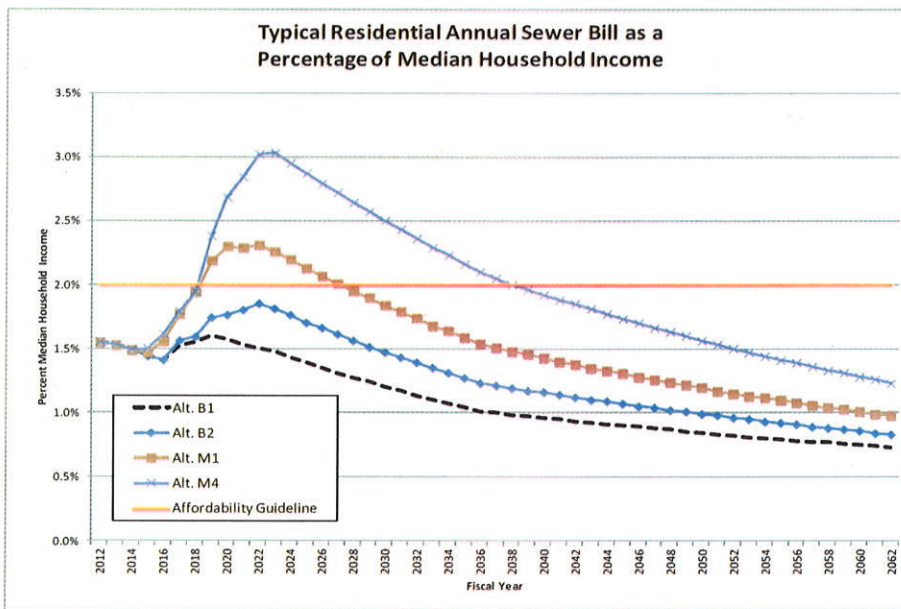
Response: Fact sheets summarizing the components, costs, system benefits, and discharge characteristics have been provided since the August 14th meeting.

Request #8: Explain building blocks and effectiveness, and how scenarios were developed.

Response: The fact sheets include an explanation of the objectives of each scenario and logic used to select its component projects.

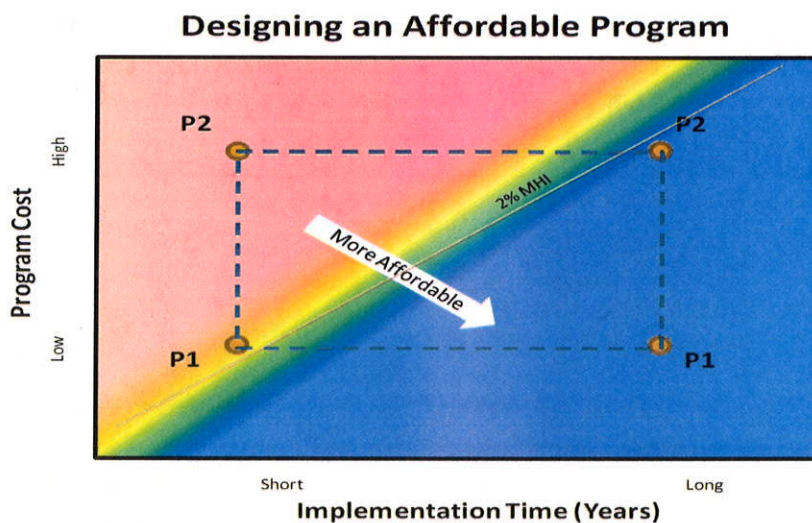
Request #9: What can we do for money left under affordability?

Response: The concept of identifying a program that is affordable is complex. It is influenced by current obligations, identification of controls that meet program objectives, and planning implementation to maintain rates within the City's limits of affordability. The following data were presented During the August 9th Stakeholders Workgroup meeting.



These data demonstrate the potential impacts of 4 scenarios relative to Median Household Income. The scenarios bracket the range of alternatives studied to-date from least expensive – to most expensive. The analysis is also based on the assumption that all of the controls will be implemented by 2018 (the date referenced in the Consent Decree). The graphic shows that implementation of the more expensive scenarios at the schedule referenced in the Consent Decree may cause rates to significantly exceed the 2% of MHI index typically used to limit “affordability”.

Designing an affordable program is a key strategy of the program. As illustrated in the following graphic, the affordability of low and high cost programs can vary significantly when implementation periods are considered.



Request #10: Please provide a matrix of CSO reduction vs. cost.

Response: Fact sheets summarizing the components, costs, system benefits, discharge characteristics and cost per CSO reduction have been provided since the August 14th meeting.

Request #11: Where are we in terms of storm event \$/activity?

Response: Fact sheets summarizing the components, costs, system benefits, discharge characteristics and potential impacts have been provided since the August 14th meeting.

Request #12: The program should address storm water pollutant issues.

Response: Although storm water pollution may contribute to impairments to the harbor and beaches, the focus of the current program is to identify controls appropriate for its two CSO treatment facilities. The City is keeping stormwater in mind while developing the controls for the CSO program because stormwater requirements are covered from the same rates as CSO controls and will impact the affordability determinations.

Request #13: Please address impacts of storm water related to water quality and impacts to beach closures and CSOs.

Response: Data on water quality in the harbor were presented at Stakeholder Workgroup Meeting #4 in September 2011. Based on the data discussed at that meeting it was suggested that reducing CSO events in the harbor is not likely to have any impact on the frequency of beach closures.

Request #14: Baseline projects – system maintenance and operations need to be included and factored into spending.

Response: Costs associated with the City's operations and maintenance agreement – and costs associated with projects in its current CIP have been incorporated into the affordability analysis.

Request #15: Has there been a change in focus from CSO reduction to “cleaner” CSO's?

Response: The goals of the program remain as described in response #6. As described in Item #65 of the Consent Decree this includes an evaluation of a broad range of “additional measures” including I/I reduction, storage and high-rate treatment.

Request #16: Is the City responsible for reducing CSO's if it won't achieve the elimination or WQ targets?

Response: It is expected by the regulatory agencies that even if the City can't achieve the target of elimination, that efforts will be made to work towards that ultimate goal within the confines of affordability.

Request #17: Please include flexibility in the program – allowing for reassessments.

Response: Phasing and reassessment of CSO control measures is a standard practice. The benefits of phasing Newport's investments in CSO controls will be addressed in the SMP.

Request #18: Establish better ways to track benefits/different types of storm events.

Response: The best way to evaluate the potential benefits of CSO control technologies or combination scenarios is through the use of the calibrated hydraulic model. As shown in the fact sheets summarizing the components, costs, system benefits, discharge characteristics and potential impacts that have been provided since the August 14th meeting the potential benefits for larger-sized storm events has been evaluated and presented for consideration.

Request #19: Costs – biggest bang for the buck – what is the minimum to spend and be in compliance? What are threshold numbers and the criteria?

Response: Fact sheets summarizing the components, costs, system benefits, and discharge characteristics have been provided since the August 14th meeting.

Request #20: What is the \$/Sewer Bill/yr for each scenario?

Response: Information on rates for scenarios ranging from the least to the most expensive is provided in response #9. This data is presented with reference to MHI. The potential impact on an average annual utility bill is dependent on both the program costs and the implementation schedule for the recommended scenario.

Request #21: Will these scenarios get the City to “regulatory compliance”?

Response: As shown in the fact sheets, these scenarios will bring the City closer to CSO elimination, but do not guarantee that after implementation and evaluation of progress that the City will not need to make additional efforts towards elimination of CSOs. Much like the City’s efforts in the 1970s and 1980s to separate sewers and build CSO treatment facilities were big steps towards compliance, over time they are being required to do more.

Request #22: The program should not make a commitment for more than 8 to 10 years.

Response: Based on evaluations completed to-date it appears likely that it will require more than 8-years to implement improvements that achieve a high level of control – while maintaining rates below recommended limits for affordability. Correspondingly, phasing and reassessment of CSO control measures will be addressed in the SMP.

Request #23: Show that existing system is optimized before new construction.

Response: Optimization of the system was been considered during the preliminary engineering and evaluation phase of the program. Prior to evaluating CSO controls the City completed assessments of the condition and operating protocols for its wastewater collection and treatment systems. The key documentation for these assessments includes the following:

- *Inventory and CMOM Self Assessment (August 2010)*
- *Evaluation of WACSOTF, WSCOTF and NASC (August 2010)*
- *CMOM Corrective Action Plan (October 2010)*
- *WPCP Flow Optimization Study (March 2011)*

Request #24 What have other CSO communities done to achieve success regarding performance of technologies?

Response: The process for evaluating CSO control options and the results in other communities vary significantly. The EPA's guidance document for developing long-term control plans (US EPA, September 1995) provides both guidance and examples of the planning process. This document also credits the City of Newport in Section 3.3.1.3 for "creative thinking".

3.3.1.3 Creative Thinking

The initial identification of alternatives should involve some degree of brainstorming and free thinking. CSO control can be a challenging problem, where lack of available sites, potential impacts on sensitive receptors, and stringent water quality goals are common issues. The CSO Control Policy encourages *"Permittees and permitting authorities...to consider innovative and alternative approaches and technologies that achieve the objectives of this policy and the CWA"* (L.F). Some of the more successful urban CSO projects have incorporated original ideas for multiple use facilities and for mitigating impacts on neighboring areas. For example:

- **Rochester, NY**—A tunnel system was designed to cross the Genesee River by way of a conduit suspended across the Genesee Gorge. Crossing the gorge above rather than below the river surface eliminated the need for downstream pumping to the POTW and also allowed the construction of a pedestrian walkway along the suspended conduit, providing access between parks located on either side of the gorge.
- **Newport, RI**—Below-grade, covered storage/sedimentation tanks located on a commercial block were designed to allow parking on the roof slab. Architectural features of the facility were designed to blend in with historic homes in an adjacent neighborhood.

Many communities that have followed EPA's guidance have developed and obtained approvals for control plans founded on the same technologies that have been discussed at recent stakeholder meetings for Newport. Few (if any) have been successful in completely eliminating overflows on a community wide basis. Examples of recent plans in New England include:

- *Providence, Rhode Island – Phase 1 includes construction of a deep tunnel system to reduce overflows for a portion of its system to a long-term average of 4 per year. Currently engaged in the design/construction of conveyance controls as a part of Phase 2.*
- *Bangor, Maine – Developed and implemented a plan in the 1990s that included combinations of conveyance, high-rate treatment and storage following the presumptive approach. The program was selected by EPA as the Outstanding CSO Program in 1996. The City is currently working with EPA on an update to its plan designed to achieve higher levels of control.*
- *City of Boston, Massachusetts - Developed a LTCP using control technologies specific to receiving water uses. Included use of high-rate treatment facilities on the Charles River.*

Request #25: Where does storm water go with I/I reduction?

Response: Storm water disconnected from the wastewater collection system may be redirected to the ground or directly to the storm drainage system. In the case of roof leaders it is expected that a portion of them may be removed through "cut and splash" modifications. The specific extent of this approach would be determined by property owners as the modifications are implemented. It is also expected that some roof leader disconnections may require on-property drainage improvements that would indirectly route those flows through pipes or overland to the storm drainage system. For catch basins currently connected to the wastewater collection system, most modifications are expected to be performed by construction of new drains and/or laterals required to connect them to the storm drainage system.

Additional detail on the implementation strategies required to meet the program's goals for I/I reduction are to be included in a Sewer System Evaluation Report submitted separately from the SMP. In accordance with the Consent Decree, this report is scheduled to be prepared after the SMP is approved by the appropriate regulatory agencies.

Request #26: Please describe how sea level rise (related to climate change) may affect the life expectancy of scenario options.

Response: All discharges from Newport's wastewater collection and treatment systems are pumped into the harbor. This includes discharges from both of the CSO treatment facilities and the WPCP. The potential effect of sea level rise on the performance of these pumped discharges is considerably less than should be expected for systems that drain by gravity. However due to the close proximity of the CSO treatment facilities to the harbor, measures required to protect them from rising sea levels should be evaluated as a part of the design process.

Request #27: Please provide a summary of the scenarios and their costs.

Response: Fact sheets summarizing the components, costs, system benefits, and discharge characteristics have been provided since the August 14th meeting.