

## **FINAL - Newport Combined Sewer Overflow (CSO) Stakeholder Workgroup: Meeting #6B**

ATTENDEES: See Attachment 1

DATE & PLACE: May 3, 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 review level of control and preliminary findings from the CSCA and to discuss potential SMP control technologies that are aligned to meeting the stakeholder's priorities. A summary of the agenda follows:

1. Overview of the CSO Program schedule
2. Approval of previous meeting's minutes
3. Follow-up on Parking Lot items
4. Key Meeting Topics
  - a. Results of Stakeholder Prioritization of Evaluation Criteria – Round 2
  - b. Collection System Capacity Assessment Findings – Larger Storms
  - c. Potential SMP Control Technologies
5. Next meeting information

### **Overview of CSO Program Schedule**

Becky Weig provided an overview of the CSO Program Mission Statement and CSO Program schedule.

### **Previous Meeting's Minutes**

The minutes of Meeting #6A were approved with the following edits under Next Meeting: the date and location were changed from March 8, 2012 at 3pm at the Newport Police Station Assembly Room to May 3, 2012 at 3pm at the City Hall Council Chambers.

### **Update on Parking Lot from Previous Meeting**

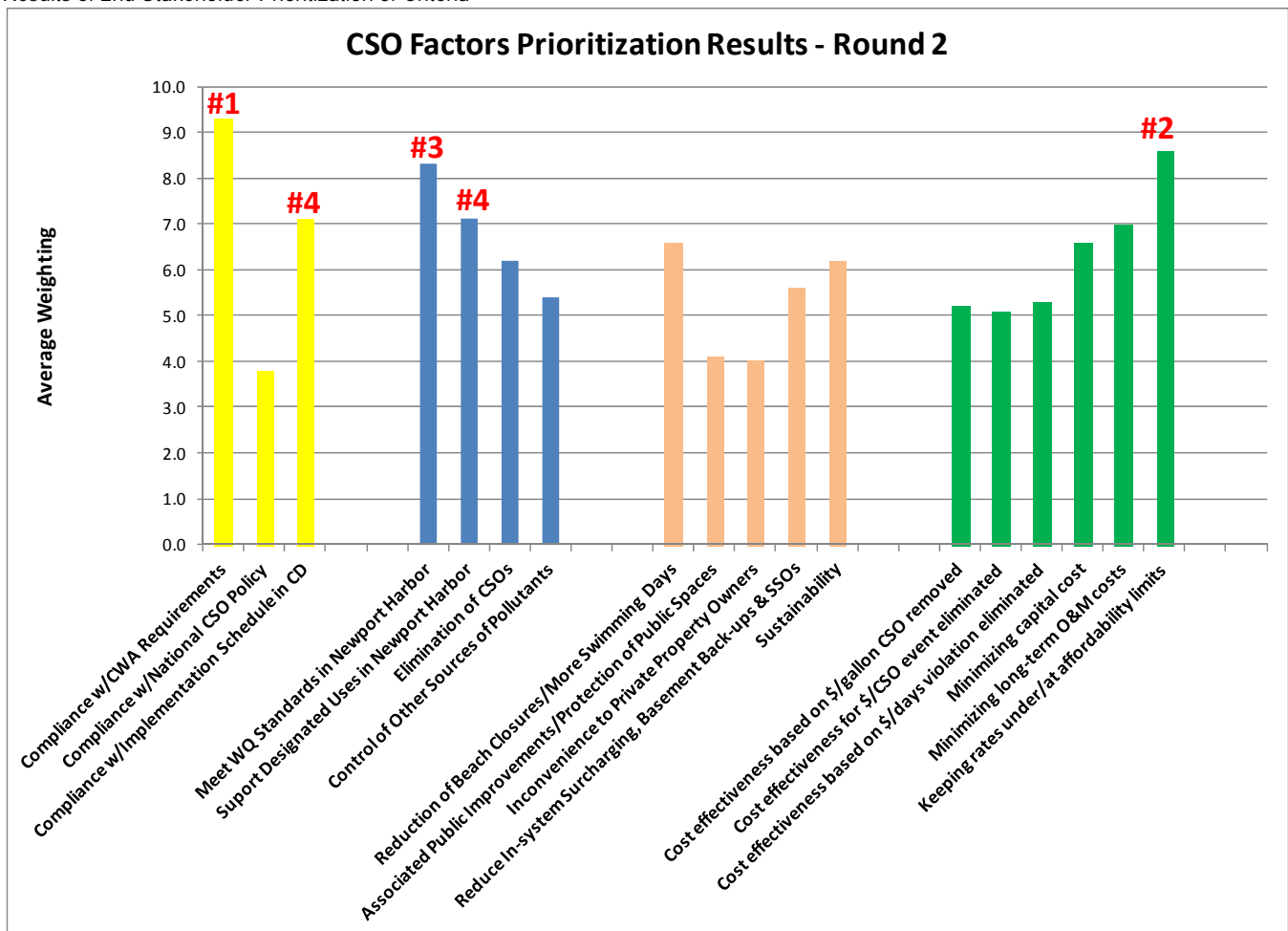
There were no Parking Lot items from the previous meeting.

## Results of Stakeholder Prioritization of Evaluation Criteria - Round 2

Becky Weig presented the results of the stakeholder prioritization exercise from the previous meeting. The full results are presented in Exhibit 1. In summary the 4 highest ranked categories from the first and second rounds were:

1 <sup>st</sup> Evaluation	2 <sup>nd</sup> Evaluation
1. Meeting CWA requirements	1. Meeting CWA requirements
2. Maintaining affordable rates	2. Maintaining affordable rates
3. Reducing beach closures	3. Meeting WQ standards
4. Meeting WQ standards	4. Compliance with implementation schedule Supporting designated uses in Newport Harbor

EXHIBIT 1  
Results of 2nd Stakeholder Prioritization of Criteria



## Key Meeting Topics

### System Behaviors & Control Technologies – Collection System Capacity Assessment

Peter von Zweck provided an introduction to Collection System Capacity Assessment (CSCA). Jen Reiners gave an overview of the hydraulic model used to analyze CSCA and SMP control technologies. Mike Urban is the modeling software used. The model simulates all flow contributed by the City of Newport, the Town of Middletown, and the Navy and Private Sewer Area. Prior to starting the CSCA, the model was recalibrated in 2011 to account for recent system improvements. Types of improvements to the system since the previous calibration (2010) were discussed.

Jen Reiners presented an overview of the results presented at the previous meeting as well as the results for a range of storms from 3-month to 10-year. The results showed that even for extremely high levels of infiltration/inflow (I/I) reduction that CSO elimination could not be achieved for the large storms. The results also did not include what happens during storms in series. Mike Domenica provided an overview of the differences between combined and separate sewer systems. RIDEM stated that the end goal is to eliminate overflows whether the system is combined or separated.

Key discussion issues were:

- As part of the overall solution discussion, what will happen with the additional stormwater should be included.
- It was suggested that the City could start providing incentives to disconnect private sources of I/I such as putting in PVC connections to the stormwater system that properties could connect to when disconnecting sources of I/I from the sanitary sewer system.

### Questions & Answers

Q: What is If?

A: Linear feet.

Q: How are catch basins removed from the sanitary sewer system?

A: The connection from the sanitary sewer system is removed and rerouted to the storm water system.

Q: What is the estimate for the completion of catch basin disconnection?

A: Question added to the parking lot to be addressed in Fall 2012 after project has been awarded.

Q: How much upsizing for eliminating bottlenecks was included?

A: There was only upsizing for a small percentage of the collection system.

Q: Has a level of control to determine elimination been defined?

A: No storm event can be defined as no overflows would be legal unless the system is designated as a combined system.

### SMP CSO Control Technologies

Becky Weig presented the benefits and drawbacks to different types of SMP CSO control technologies including:

- WPCP improvements

- Chemically Enhanced Primary Treatment (CEPT)
- Improvements to increase design flows
- Storage
  - Off-line tanks
  - In-line conduits
- New conveyance facilities
  - Pump stations
- Green technologies
- CSO treatment facilities
  - Component upgrades

Following the overview of technologies, the stakeholders were given the opportunity to look at maps of potential control alternatives and locations for each of the technologies and to add suggestions to the maps for consideration during SMP evaluation.

#### **Questions & Answers:**

Q: Why would a waiver of the 85% removal requirements for total suspended solids (TSS) in the NPDES permit be needed during wet weather to implement CEPT?

A: When the stormwater enters the combined sewer system, it dilutes the solids concentration making it impossible to meet the 85% removal, but solids concentrations are so low as to not be an impairment in the discharge. This was described in more detail at the meeting about the WPCP.

#### **Other Items**

At the end of the meeting one of the stakeholders, John McCain, presented an analysis of historical rainfall and CSO data. The handout is included as Attachment 2.

#### **Parking Lot**








- Information from RIDEM on impact of upstream water quality impacts to Newport Harbor were discussed including coinciding events.
- Provide preliminary information on catch basin disconnect engineering in Fall 2012.

#### **Next Meeting Information**

The next meeting was tentatively set for July 12, 2012 at 3pm at the Council Chambers. The topics of the next meeting are model results for the SMP control technologies and draft SMP recommendations.

# CSO Stakeholder Workgroup Meeting #6B

## Attendees

MEETING DATE:	Thursday May 3, 2012 @ 3:00 PM	
LOCATION:	City Hall Council Chambers - Newport, RI	
Name	Affiliation	In Attendance
<b>Workgroup Members</b>		
Justin McLaughlin	City Council	
Ray Smedberg	Ad Hoc Committee	
David McLaughlin (Alternate)	Ad Hoc Committee	
John McCain	ALN	
Roger Wells (Alternate)	ALN	
Tina Dolen	Aquidneck Island Planning Commission	
Chris Witt (Alternate)	Aquidneck Island Planning Commission	
Charles Wright	Beach Commission	
Kathleen Shinnors (Alternate)	Beach Commission	
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	
James Carlson	NSN	
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	
 Eric Beck	RIDEM	
Angelo Liberti (Alternate)	RIDEM	
Jim Brunnhoeffter	RWU	
B. Gokhan Celik (Alternate)	RWU	

MEETING DATE:	Thursday May 3, 2012 @ 3:00 PM	
LOCATION:	City Hall Council Chambers - Newport, RI	
<b>Name</b>	<b>Affiliation</b>	<b>In Attendance</b>
John Forgan <i>Tom Waller</i>	Save the Bay	✓
Wendy Waller (Alternate)	Save the Bay	
Tom Cornell	Resident	<i>de</i>
Stuart K. Mills, Jr.	Resident	<i>Stuart</i>
Roger Slocum	Resident	<i>R/S/au</i>
Ted Wrobel	Resident	✓ <i>HW</i>
<b>Other Attendees</b>		
Julia Forgue	City of Newport	✓
Ken Mason	City of Newport	
Mike Domenica	CH2M HILL	<i>x</i>
Peter von Zweck	CH2M HILL	<i>PvZ</i>
Becky Weig	CH2M HILL	<i>R/au</i>
Jim Lauzon	United Water	
<i>JENRIEVERS</i>	<i>CH2M HILL</i>	

## Attachment 2

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# NEWPORT HARBOR

## COMBINED SEWER OVERFLOW [CSO] REDUCTION PROGRAM

### THREE PERFORMANCE MEASUREMENTS:

1. CSO INCIDENCE BY RAIN EVENT <0.50”
2. CS FLOW PER INCH OF RAIN
3. CSO FLOW PER INCH OF RAIN

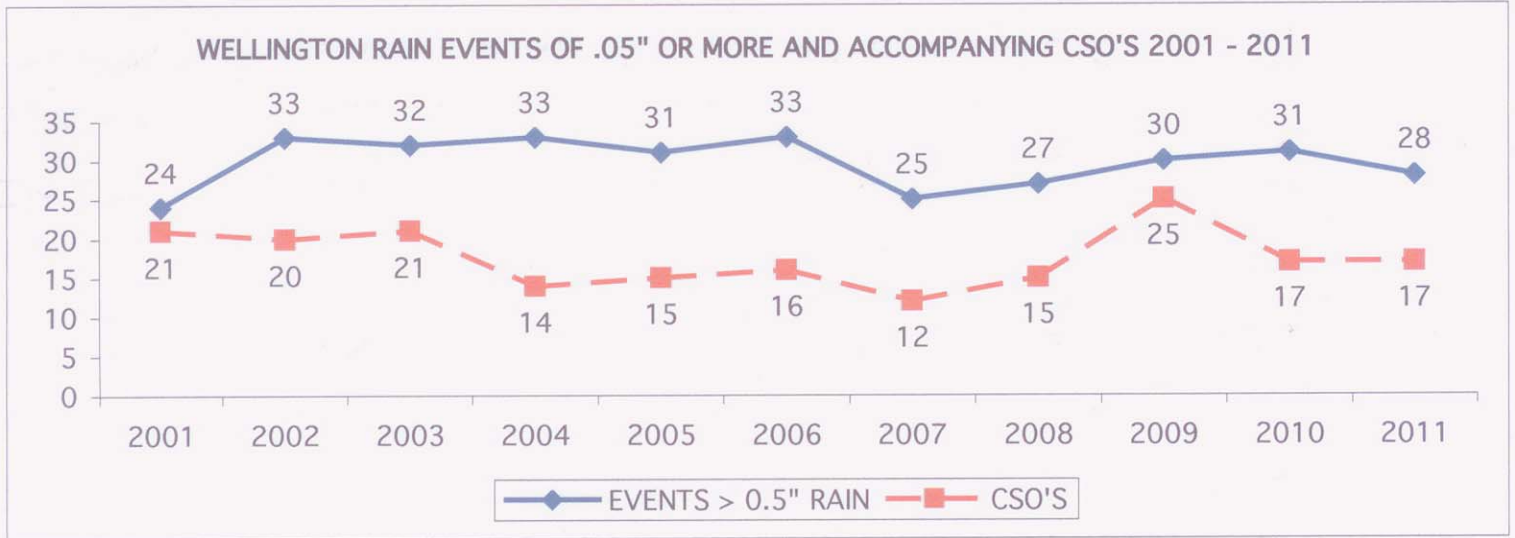
12 March 2012: REVISED TO USE WPCF  
RAINFALL COLLECTION [EXHIBITS 2 AND 3]  
EXCEPT WHERE NOTED [EXHIBIT 1]

3 MAY 2012  
JOHN MCCAIN  
75 AYRAULT STREET  
NEWPORT, RHODE ISLAND  
401-847-1353  
jhmcc@verizon.net



**WELLINGTON AVENUE**

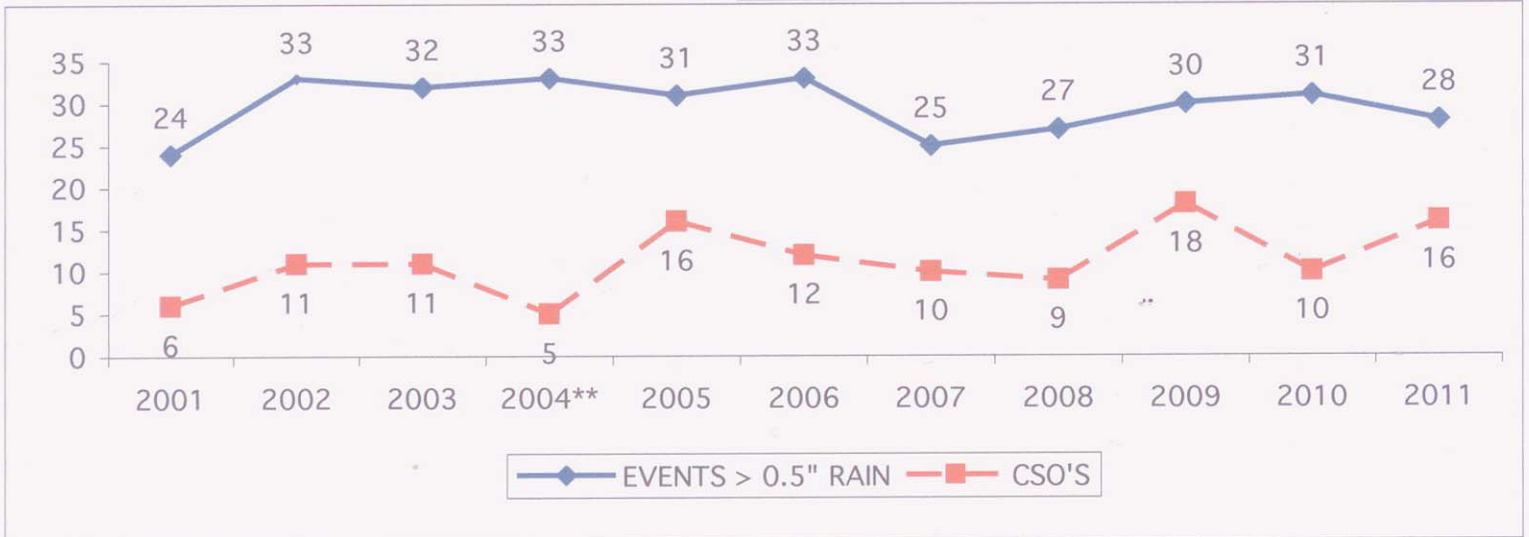
	2001	2002	2003	2004**	2005	2006	2007	2008	2009	2010	2011
EVENTS > 0.5" RAIN	24	33	32	33	31	33	25	27	30	31	28
CSO'S	21	20	21	14	15	16	12	15	25	17	17
% OF EVENTS	88%	61%	66%	42%	48%	48%	48%	56%	83%	55%	61%



\*\* 2003-04 NARRAGANSETT CONDUIT BACK ON LINE; WELLINGTON CSO IMPROVED

**WASHINGTON STREET**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EVENTS > 0.5" RAIN	24	33	32	33	31	33	25	27	30	31	28
CSO'S	6	11	11	5	16	12	10	9	18	10	16
% OF EVENTS	25%	33%	34%	15%	52%	36%	40%	33%	60%	32%	57%



Note: One CALENDAR year = a complete four season input

**WPCF [TOTAL]**

	<u>CS FLOW MGAL</u>	<u>RAIN INCHES</u>	<u>CS FLOW/INCH OF RAIN</u>	<u>INDEX vs. 2005 =100</u>
2005	3,872	55.61	69.63	100%
[2006*	3,614	58.61	61.66	89%
2007	2,978	41.89	71.09	102%
2008	3,391	53.77	63.06	91%
2009	4,139	61.92	66.84	96%
2010	3,206	53.50	59.93	86%
2011	3,806	57.65	66.02	95%

**NET NEWPORT**

	<u>CS FLOW MGAL</u>	<u>RAIN INCHES</u>	<u>CS FLOW/INCH OF RAIN</u>	<u>INDEX vs. 2005 =100</u>
2005	2,936	55.61	52.80	100%
[2006*	2,755	58.61	47.01	89%
2007	2,275	41.89	54.31	103%
2008	2,607	53.77	48.48	92%
2009	3,219	61.92	51.99	99%
2010	2,504	53.50	46.80	89%
2011	2,965	57.65	51.43	98%

**WAVE AVENUE**

	<u>CS FLOW MGAL</u>	<u>RAIN INCHES</u>	<u>CS FLOW/INCH OF RAIN</u>	<u>INDEX vs. 2005 =100</u>
2005	936	55.61	16.83	100
[2006*	859	58.61	14.66	87
2007	703	41.89	16.78	100
2008	784	53.77	14.58	87
2009	920	61.92	14.86	88
2010	702	56.50	12.42	74
2011	841	57.65	14.59	87

[\*Unverifiable Memorial Blvd pipeline and Eastons beach stream SSO's in 2006 not included]

**FINDING: 2011 CS FLOW PER INCH OF RAIN AT WPCF IS DOWN SLIGHTLY FROM 2005; NET NEWPORT IS VIRTUALLY UNCHANGED; WAVE AVE IS DOWN SIGNIFICANTLY.**

	<u>WELLINGTON</u> CSO GALLONS	CSO RAINFALL INCHES [WPCF]	CSO GALLONS/ INCH OF RAIN	INDEX vs. 2005 =100	
2005	24,152,689	25.31	954,274	100	
2006	26,551,419	31.88	832,855	87	
2007	13,295,853	20.11	661,156	69	
2008	14,675,220	27.36	536,375	56	
2009	16,192,382	37.66	429,962	45	
<b>2010*</b>	<b>31,041,449</b>	<b>33.02</b>	<b>940,080</b>	<b>99</b>	<b>1. AT WELLINGTON*: CSO FLOW PER INCH OF RAIN</b>
2011	8,096,801	31.53	256,797	27	DECREASED BY 73% IN 2011. vs. 2005, CONTINUING A TREND SINCE 2006.

\*MAR 29 - APR 4 =14,324,472 CSO GAL. [46% OF 2010 TOTAL]

	<u>WPCF [TOTAL]</u> CS FLOW MGAL	TOTAL RAIN INCHES [WPCF]	CSO GALLONS/ INCH OF RAIN	INDEX vs. 2005 =100	
2005	3,872	55.61	69.63	100%	
[2006**	3,614	58.61	61.66	89%	
2007	2,978	41.89	71.09	102%	
2008	3,391	53.77	63.06	91%	<b>2. AT WPCF: CS FLOW PER INCH OF RAIN</b>
2009	4,140	61.92	66.86	96%	DECREASED BY 5% IN 2011
2010	3,206	53.50	59.93	86%	vs. 2005, CONTINUING A TREND
2011	3,806	57.65	66.02	95%	SINCE 2008

\*\* Not included due to multiple SSO's at Wave, broken Memorial Blvd pipe line replacement

	<u>WELLINGTON</u> CSO EVENTS	AVERAGE CSO GAL PER EVENT	INDEX vs. 2005 =100	
2005	16	1,509,543	100	
2006	16	1,659,464	110	
2007	12	1,107,988	74	
2008	16	917,201	61	
2009	26	622,784	41	
2010	17	1,825,968	121	
2011	20	404,840	27	<b>3. ALSO AT WELLINGTON*: AVERAGE CSO FLOW PER EVENT DECREASED BY 73% IN 2011 VS. 2005 CONTINUING A TREND SINCE 2007</b>



	WASHINGTON CSO GALLONS	CSO RAINFALL INCHES [WPCF]	CSO GALLONS/ INCH OF RAIN	INDEX vs. 2005 =100	
2005	41,722,806	26.16	1,594,908	100	
2006	41,721,269	27.21	1,533,306	96	
2007	13,339,293	18.62	716,396	45	
2008	23,187,696	17.08	1,357,593	85	
2009	32,408,793	32.91	984,770	62	
<b>2010*</b>	<b>92,437,787</b>	<b>26.30</b>	<b>3,514,745</b>	<b>220</b>	<b>1. AT WASHINGTON*: CSO FLOW PER INCH OF RAIN</b>
2011	72,720,000	26.35	2,759,772	173	<b>INCREASED BY 173%. VS. 2005, INTERRUPTING A LOWER TREND FROM 2006-2009</b>

\*MAR 29 - APR 4 =64,429,952 GAL. [70% OF 2010 TOTAL]

	WPCF [TOTAL] CS FLOW MGAL	TOTAL RAIN INCHES	CSO GALLONS/ INCH OF RAIN	INDEX vs. 2005 =100	
2005	3,872	55.61	69.63	100%	
[2006**	3,614	58.61	61.66	89%	
2007	2,978	41.89	71.09	102%	
2008	3,391	53.77	63.06	91%	<b>2. AT WPCF: CS FLOW PER INCH OF RAIN</b>
2009	4,140	61.92	66.86	96%	<b>DECREASED BY 5% IN 2011</b>
2010	3,206	53.50	59.93	86%	<b>vs. 2005, CONTINUING A TREND</b>
2011	3,806	57.65	66.02	95%	<b>SINCE 2008</b>

\*\* Not included due to multiple SSO's at Wave, broken Memorial Blvd pipe line replacement

	WASHINGTON CSO EVENTS	AVERAGE CSO GAL PER EVENT	INDEX vs. 2005 =100	
2005	17	2,454,283	100	
[2006*	12	3,476,772	142	
2007	10	1,333,929	54	
2008	8	2,898,462	118	
2009	24	1,350,366	55	
2010	9	10,270,865	418	
2011	16	4,545,000	185	<b>3. ALSO AT WASHINGTON*: AVERAGE CSO FLOW PER EVENT INCREASED BY 185% in 2011 VS. 2005</b>