

Public Meeting JULY01

Community Meetings AUG 01

DC WASA PUBLIC HEARING OCT01

Citizen Forum - Sumner Meeting Notes NOV01

Final Stakeholder Advisory Panel Meeting JAN02

Long Term Control Plan Response to Comments



(NEWSPAPER NOTICE)
**NOTICE OF
PUBLIC INFORMATION MEETING**

for
District of Columbia Water and Sewer Authority
Combined Sewer Overflow Long Term Control Plan

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
First Floor Training Room
777 North Capitol Street, NE
Washington, DC 20002

TUESDAY, JULY 24, 2001
6:00 p.m. – 8:30 p.m.

The District of Columbia Water and Sewer Authority (WASA) operates the wastewater collection system for the District of Columbia and provides wastewater treatment for the District, as well as portions of Maryland and Virginia. Approximately, one third of the District (12,640± acres) is served by combined sewers while the remaining area is served by separate sewers. In a combined sewer system, the sewage from homes and businesses during dry weather conditions is conveyed to the District of Columbia's Wastewater Treatment Plant at Blue Plains where it is treated and discharged to the Potomac River. When the capacity of a combined sewer is exceeded during rain storms, the excess flow, which is a mixture of sewage and storm water runoff, is discharged as Combined Sewer Overflow (CSO) to the Anacostia and Potomac Rivers, Rock Creek and tributary waters.

The purpose of the LTCP is to develop a plan and schedule for controlling CSO discharges to area waterways. WASA has prepared a draft Long Term Control Plan (LTCP) to control CSOs and has submitted it to regulatory agencies and made it available to the public for comment. The draft LTCP recommends a \$1.05 billion construction program that will be implemented over approximately 20 years. This program may have a significant impact on water and sewer rates in the District of Columbia. In addition, the LTCP will require inclusion of additional provisions in the Water Quality Standards issued by the District of Columbia Department of Health. The purpose of this meeting is to explain the proposed LTCP and to obtain public comment. This is the fourth in a series of public meetings which will conclude with a Public Hearing to present the conclusions and recommendations of WASA's LTCP.

For more information or if you require special assistance to be able to participate in this meeting, please contact Dr. Mohsin Siddique at (202) 787-2634. Information about WASA's LTCP is available at WASA's web site at www.dewasa.com and at the following public libraries: Martin Luther King, Jr. at 901 G St. NW, Capitol View at 5001 Central Ave. SE, Mount Pleasant at 3160 16th St. NW, Northeast at 330 7th St. NE, Southeast at 403 7th St. SE, Shepherd Park at 7420 Georgia Ave. NW, Tenley-Friendship at 4450 Wisconsin Ave. NW, Washington Highlands at 115 Atlantic Street SE, and Woodridge at 18th and Rhode Island Avenue, NE.



PUBLIC SERVICE ANNOUNCEMENT
for
DC TV

"The District of Columbia Water and Sewer Authority invites the citizens of D.C. to attend a public meeting to discuss the \$1.05 billion Long Term Control Plan to clean up the Potomac River, Rock Creek, and the Anacostia waterways. The Authority is seeking public comment on the proposed plan. The meeting will be held on Tuesday, July 24, 2001 at 6:00 p.m. at the Metropolitan Washington Council of Governments, First Floor Training Room located at 777 North Capitol Street, NE Washington DC.

For more information about this meeting, please contact Dr. Mohsin Siddique at (202) 787-2634. "



PUBLIC SERVICE ANNOUNCEMENT for

Cable TV Bulletin Board

The following announcement is proposed as a public service announcement on the District of Columbia Public Access Television—DCTV and City Cable.

“The fourth public meeting to discuss the D.C. Water and Sewer Authority’s combined sewer system will be held on July 24, 2001 at 6:00 p.m. at the Metropolitan Washington Council of Governments, First Floor Training Room located at 777 North Capitol Street, NE. The Authority has developed a draft Long Term Control Plan to control combined sewer overflow discharges to area waterways. The Authority invites public comment on the proposed plan.

For more information, please contact Dr. Mohsin Siddique at (202) 787-2634.or e-mail at Mohsin_Siddique@dcwasa.com.”



CSO WEB SITE ANNOUNCEMENT

The following announcement is proposed as an on the DCWASA CSO Web page under the "UPDATES" heading:

"The fourth in a series of public meetings to discuss the District of Columbia Water and Sewer Authority's combined sewer system will be held on July 24, 2001 at 6:00 p.m. at the Metropolitan Washington Council of Governments, First Floor Training Room located at 777 North Capitol Street, NE. The Authority operates the wastewater collection system for the District of Columbia and provides wastewater treatment for the District, and portions of Maryland and Virginia. The Authority has developed a draft Long Term Control Plan to control combined sewer overflow discharges to area waterways. The Authority invites public comment on the proposed plan. All interested persons are encouraged to attend the meeting.

For more information, please contact Dr. Mohsin Siddique at (202) 787-2634.or e-mail at Mohsin_Siddique@dcwasa.com. "



(NEWSPAPER NOTICE)
**NOTICE OF
PUBLIC INFORMATION MEETING**

The District of Columbia Water and Sewer Authority (WASA) invites you to attend an upcoming public information meeting to discuss the \$1.05 billion Long Term Control Plan (LTCP) for Combined Sewer Overflows (CSO) for the District. The purpose of this meeting is to explain the proposed LTCP and to obtain public comment. We encourage your participation and look forward to discussing this initiative with you.

The meeting will cover:

- Explanation of the LTCP and how it will help reduce discharges from CSOs.
- Discussion of impact of LTCP on water and sewer rates in the District.
- The effects of the LTCP on the Potomac River, Rock Creek, and Anacostia River.
- Timeline for implementing the LTCP.

The meeting will be held Tuesday, July 24, 2001 at:

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

**First Floor Training Room
777 North Capitol Street, NE
Washington, DC 20002
6:00 p.m. – 8:30 p.m.
Light refreshments will be served.**

A copy of the LTCP can be viewed on WASA's website, www.dcwasa.com, and at the following public libraries: Martin Luther King, Jr. at 901 G St. NW; Capitol View at 5001 Central Ave. SE; Mount Pleasant at 3160 16th St. NW; Northeast at 330 7th St. NE; Southeast at 403 7th St. SE; Shepherd Park at 7420 Georgia Ave. NW; Tenley-Friendship at 4450 Wisconsin Ave. NW; Washington Highlands at 115 Atlantic Street SE; and Woodridge at 18th and Rhode Island Avenue, NE.

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PUBLIC SERVICE ANNOUNCEMENT for

National Public Radio

The following announcement is proposed as a public service announcement on National Public Radio (WAMU) during the week of July 16 through July 20, 2001.

"The District of Columbia Water and Sewer Authority invites the citizens of D.C. to attend a public meeting to discuss the \$1.05 billion Long Term Control Plan to clean up the Potomac River, Rock Creek, and the Anacostia waterways. The Authority is seeking public comment on the proposed plan. The meeting will be held on Tuesday, July 24, 2001 at 6:00 p.m. at the Metropolitan Washington Council of Governments, First Floor Training Room located at 777 North Capitol Street, NE Washington DC.

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ON WASA LETTERHEAD

Subject: Invitation to Public Information Meeting No. 4
District of Columbia Water and Sewer Authority
Combined Sewer Overflow (CSO) Long Term Control Plan

Dear Public Stakeholder:

The District of Columbia Water and Sewer Authority (WASA) has prepared a draft Long Term Control Plan (LTCP) to address Combined Sewer Overflows (CSOs) and has submitted it to regulatory agencies and made it available to the public for comment. The purpose of the LTCP is to develop a plan and schedule for controlling CSO discharges to area waterways to improve water quality. The recommended plan will result in a 92% reduction in CSO overflow volume and a reduction in the number of overflow events from 75 to 4 per average year on the Anacostia, 74 to 12 per average year on the Potomac and 30 to 4 per average year on Rock Creek. The recommended plan would involve a \$1.05 billion construction program over 20 years. Without Federal or other outside financial assistance, the program could have a significant impact on water and sewer rates in the District of Columbia. The upcoming meeting is the fourth in a series of meetings intended to explain the proposed plan and to provide an opportunity for public comment.

The fourth public meeting is scheduled as follows:

- Date and Time: Tuesday, July 24, 2001, 6:00 p.m. – 8:30 p.m.
- Place: Metropolitan Washington Council of Governments
777 North Capitol Street, NE
1st Floor Training Room
Washington, DC

We hope you will take advantage of this opportunity and we look forward to seeing you at the public meeting on July 24, 2001. If you would like additional information, or require special assistance to be able to participate in the meeting, please contact Dr. Mohsin Siddique, WASA's Program Manager, at (202) 787-2634.

Sincerely,

Jerry N. Johnson
General Manager

The District of Columbia
Water and Sewer Authority
Washington, D.C.

**Combined Sewer System Long Term Control Plan
Public Participation Program**

***List of Attendees
Public Meeting No. 4
July 24, 2001***

1. Christopher Ball
EPA
499 South Capitol Street
Washington, DC 20003
2. David J. Bardin
ANC 3F04
4701 Connecticut Avenue, NW, #501
Washington, DC 20008
3. David Baron
Earthjustice Legal Defense Fund
1625 Massachusetts Ave., NW, #702
Washington, DC 20036
4. Jerusalem Bekele
DC Department of Health
Environmental Health Administration
51 N Street, NE, 5th Floor
Washington, DC 20002
5. Ronald Bizzarri
Greeley and Hansen
8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772
6. Robert Boone
Anacostia Watershed Society
4302 Baltimore Avenue
Bladensburg, MD 20710
7. Jason Broehm
Sierra Club
2400 16th St., NW #216
Washington, DC 20009
8. Uwe Brandes
DC Office of Planning
801 North Capitol Street, NE
Washington, DC 20002
9. Jeff Bunecwart
CDG
9861 Broken land Parkway
Columbia, MD 21012
10. John F. Cassidy
Greeley and Hansen
8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772
11. Carl C. Cole
1431 S Street, SE
Washington, DC 20020
12. Terry Cummings
CBF
6 Herndon Ave.
Annapolis, MD 21797
13. Gentry Davis
NPS
1100 Ohio Drive
Washington, DC
14. Angela S. Essner
Greeley and Hansen
8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772
15. Andrew Fellows
Clean Water Action
4455 Connecticut Avenue, NW, A 300

- Washington, DC 20009
- 5000 Overlook Avenue, SW
Washington, DC 20032
16. Charles Glass
Howard University, Department of
Civil Engineering
2300 Sixth Street, NW
Washington, DC 20059
26. Charles Jones
137 S Street, NW
Washington, DC 20001
17. Gary Geck
Michael Baker Corp.
3601 Eisenhower Avenue #600
Alexandria, VA 22304
27. F. Edward Krueger
PEPCO
1900 Pennsylvania Avenue, NW
Washington, DC 20068
18. Edward (Ted) Graham
MWCOG
777 N. Capitol Street, NE
Washington, DC 20002
28. Scott Lapco
EPA
19. Damon Harzuem
Congresswoman Norton's Office
2136 Rayburn HOB
Washington, DC 20015
29. Libby Lawson
DC WASA
5000 Overlook Avenue, SW
Washington, DC 20032
20. Anwer Hasan
EA Engineering, Science, and Tech. Inc.
15 Loveton Circle
Sparks, MD 21152
30. Mary Letzkus
U.S. EPA
1650 Arch Street
Philadelphia, PA 19103-2029
21. Tom Horner
Water Management & AWRA
117 Clermont Avenue
Alexandria, VA 22314
31. Peter Loomis
Parsons ES
10521 Rosehaven Street
Fairfax, VA 22032
22. Phil Hwang
Greeley and Hansen
8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772
32. Charles Moore
CDM
2629 Bowling Green Drive
Vienna, VA 22180
23. Larry Jaworski
Greeley and Hansen
8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772
33. Eric Meyers
PRSF
2002 N. Lincoln Street
Arlington, VA 22204
24. Joan LeLacheur
ARBC/Wmata/AWTA
3101 Eisenhower Avenue
Alexandria VA 22314
34. Parisa Noronzi
25. Jerry Johnson
DC WASA
35. Jan Oliver
Alcosan
3300 Preble Avenue
Pittsburgh, PA 15233

- Laurel, MD 20707
36. Reginald Parrish
U.S. EPA
401 M Street, SW (4505F)
Washington, DC 20460
37. Nadia Perry-Lee
J-DOS Internationale, Inc.
7826 Eastern Avenue, NW, Suite 409
Washington, DC 20012
38. Vanessa Ruffin
SW Community
1224 Half Street, SW
Washington, DC 20024
39. Dave Schoenwolf
Haley & Aldrich
7921 Jones Branch Drive
McLean, VA 22102
40. Ray Schulte
Earth Tech
P.O. Box 010
Sparks, MD 21152
41. Chloe Seldman
Friends of the Earth (FOE)
1025 Vermont Avenue, 3rd Fl
Washington, DC 20005
42. Mohsin Siddique
DC WASA
5000 Overlook Avenue, SW
Washington, DC 20032
43. Frank Skidmore
Louis Berger Group
1819 H Street, NW, Suite 900
Washington, DC
44. Jim Smullen
Comp Dresseev & McKee
Ruritan Plaza I, Ruritan Center
Edison, NJ 08818
45. Roland Steiner
WSSC
14501 Sweitzer Lane, 8th Fl
46. Anthony Stevenson
ACS, Inc.
1227 Good Hope Road, SE
Washington, DC 20020
47. Nancy Stoner
Natural Resources Defense Council
1200 New York Avenue, NW
Washington, DC 20005
48. Martin Sultan
DC WASA
5000 Overlook Avenue, SW
Washington, DC 20032
49. Silas Swyola
Channel 16
50. Janice Vieira
J-Dos Internationale
7826 Eastern Avenue, NW, Suite 409
Washington, DC 20012
51. Elizabeth Webber
Potomac Boat Club
2320 Wisconsin Avenue, NW, #201
Washington, DC 20007
52. Cameron Wiegand
Montgomery County DEP
255 Rockville Pike
Rockville, MD 20850
53. Chris Weiss
Friends of the Earth (FOE)
1025 Vermont Avenue, 3rd Fl
Washington, DC 20005
54. Marchant Wentworth
Sierra Club
1411 Kennedy Street, NW
Washington, DC 20011
55. Damon Whitehead
Anacostia Riverkeeper
1st Street & Potomac Avenue, NW
Washington, DC 20003
56. J. Woodworth

NRDC
1200 New York Avenue, NW
Washington, DC 20005

57. Bill Yeaman
NPS
3545 Williamsburg Lane, NW
Washington, DC 20008

58. Larry Zimmerman
CDG
9861 Broken land Parkway
Columbia, MD 21012

THE DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

**Combined Sewer System Long Term Control Plan
Public Participation Program**

***Responsiveness Summary For
Public Meeting No. 4
July 24, 2001***

1. INTRODUCTION

The District of Columbia Water and Sewer Authority (WASA) is in the process of developing a Long Term Control Plan (LTCP) for its Combined Sewer System (CSS). As part of this effort, the second in a series of public meetings was held on Tuesday, July 24, 2001. The purpose of the meeting was to explain the LTCP, to give the public an opportunity comment, and to announce upcoming neighborhood meetings

2. GENERAL INFORMATION ON THE LTCP

WASA operates a wastewater collection system comprised of separate and combined sewers. Parts of the District are served by separate storm and sanitary sewers. In the combined sewer system (CSS), there is a single sewer to convey storm water and sanitary wastes. The area served by combined sewers comprises about 12,955 acres (about 33 percent) of the District.

During dry weather, sanitary wastes collected in the CSS are conveyed to the Authority's wastewater treatment plant at Blue Plains (BPWWTP or the Blue Plains WWTP). During periods of rainfall, the capacity of a combined sewer may be exceeded and the excess flow, which is a mixture of storm water and sanitary wastes, is discharged directly to the Anacostia River, Rock Creek or the Potomac River or tributary waters.

There are a total of 60 combined sewer overflow (CSO) outfalls listed in WASA's existing National Pollutant Discharge Elimination System (NPDES) Permit. The NPDES permit is issued and administered by the U.S. Environmental Protection Agency (EPA). In addition to other conditions, the permit requires preparation of a Long Term Control Plan (LTCP) for the CSS. The principal objective of the LTCP development process is to develop a plan and schedule to control Combined Sewer Overflow (CSO) discharges to area waterways.

**3. NOTIFICATION AND INFORMATION AVAILABLE FOR PUBLIC
MEETING NO. 4**

The following notifications and information were made available prior to the public meeting. Copies of the newspaper advertisements, script for the radio service announcement and the mailing list for notices are included in Appendix A.

- a. Newspaper: Public Meeting No. 4 was advertised by an official notice placed in the following newspapers:
 - The Washington Afro-American on July 7, 2001
 - The Washington Post on June 30, 2001 and July 6, 2001
 - The Common Denominator on July 2, 2001
 - El Tiempo Latino on July 6, 2001
 - The Northwest Current on July 4, 2001
- b. Radio: A public service announcement was broadcast on WAMU National Public Radio.
- c. Internet Websites: Notices of the public meetings were also placed on the following websites:
 - WASA' CSO Website
 - DC Watch Website
- d. Public Information Depository: An Information Document was prepared and placed on reserve at the following libraries:
 - Martin Luther King, Jr. Library at 901 G Street, NW.
 - Capitol View: 5001 Central Avenue, SE
 - Mount Pleasant: 31 16th Street, NW
 - Woodridge: 18th and Rhode Island Avenue, NE
 - Northeast: 330 7th Street, NE
 - Southeast: 403 7th Street, SE
 - Shepherd Park: 7420 Georgia Avenue, NW
 - Tenley-Friendship: 4450 Wisconsin Avenue, NW
 - Washington Highlands: 115 Atlantic Street, SE

The Information Document included the following documents:

- “EPA Combined Sewer Overflow (CSO) Control Policy”
- “District of Columbia Combined Sewer System Long Term Control Plan (Draft Program Plan)”

- “Study Memorandum LTCP-5-1: Monitoring Plan for Sewer Systems and Receiving Waters (Draft)”
- “NPDES Permit Application”
- “CSO Abatement Program Final Report 1983”
- Nine Minimum Controls Summary Report (Draft)
- Nine Minimum Controls Summary Action Plan (Draft)
- Study Memorandum LTCP-1-3: Existing CSO Controls and Programs (Final)
- Public Meeting Nos. 1 and 2 meeting summary
- Stakeholder Advisory Panel Meeting Summary – Meeting Nos. 1 through 8
- Draft Long Term Control Plan—June 2001

- d. Notice by Mail: Over 500 notices were mailed to citizens and representatives of businesses, interest groups, Federal Government, local government, regulatory agencies, neighboring jurisdictions, and interjurisdictional agencies.

4. MEETING PRESENTATION AND ATTENDANCE

Mr. Lawrence Jaworski of Greeley and Hansen began the meeting with introductory statements and an outline of the presentation. He then gave a brief background explaining the nature of CSOs and the work on the Long Term Control Plan that had been completed to date. This was followed by a presentation on the types of the CSO alternatives considered, final alternatives for CSO’s on each of the three receiving waters (Anacostia River, Rock Creek, and Potomac River), receiving water impacts, and financial capability assessment. Mr. Jaworski concluded the presentation with a look ahead to upcoming milestones in the LTCP development process.

A total of fifty-eight (58) people, including the presenters noted above, attended the public meeting. The attendance list and the presentation handout are attached in Appendix B.

5. QUESTIONS AND COMMENTS RAISED BY THE PUBLIC

Question No. 1: Is there a report summarizing the NMC program?

Response: Yes, there is a Nine Minimum Controls Action Plan as well as a Summary Report.

Question No. 2: How did you pick 4 overflows allowed per average year for the Anacostia River?

Response: A marginal cost/benefit analysis was performed to evaluate projected water quality benefits versus the required costs. Four overflows per year was the point

at which costs started to become prohibitively high for relatively little marginal water quality benefit.

Question No. 3: Did study consider population growth in District and suburbs?

Response: Yes, the study took into account population growth both in the District and surrounding suburbs as well.

Question No. 4: What percent of CSOs come from outside jurisdictions?

Response: The outside jurisdictions do not contribute combined sewage itself, but rather sanitary flow that adds to the combined sewage that is generated within the District. The IMA stipulates that 212 mgd of the annual average flow of 370 mgd at Blue Plains be reserved for outside jurisdictions.

Question No. 5: Mr. David Barron asked how much CSO overflow reduction would occur if sources outside the District were shut off, and also requested calculations supporting this number.

Response: About 20% (**JFC: Need to know how we came up with this number**)

Question No. 6: What is the “first flush” phenomenon?

Response: The “first flush” occurs when built-up pollution in pipes and streets comes out all of a sudden at the start of the storm.

Question No. 7: Can we ask jurisdictions outside of the District to help pay for the CSO program?

Response: That is a possibility, however it is a heavily political issue.

Question No. 8: How will you formally make LID-R recommendations?

Response: First, we will encourage the building code advisory committee to consider incorporating LID-R into District building codes. Also, we can incorporate it into the Municipal Separate Storm Sewer System (MS4) permitting process. Finally, WASA can build LID-R at its own facilities. Note that it would take a long time for LID-R to have a noticeable impact on water quality. In addition, it would be difficult to enforce LID-R for cases other than re-development or new development.

Question No. 9: Are there any other plans to separate?

Response: The relatively large Luzon Valley drainage area, comprising about 477 acres, is largely separate but still has a handful of sanitary connections that are scheduled to be separated.

Question No. 10: Did you look at partial separation?

Response: Sewer separation was considered as a preliminary alternative but was ruled out due to potential disruption of traffic, the need to perform work on private property, and technical difficulty. More importantly computer model results showed that separation does not provide the degree of water quality benefit as other alternatives.

Question No. 11: Explain how the tunnel system would work.

Response: During rain events, interceptors would convey combined sewage to the large diameter tunnels. After the storm event had passed, a pump station would lift the stored sewage out of the tunnels and into existing sewers which would convey the sewage to Blue Plains. The tunnels would need to be dewatered over a course of one to two days.

Question No. 10: Chicago has had a problem with excess water in its tunnel system. Have you consider O and M costs and intrusion of water into the tunnel?

Response: Operations and maintenance costs have been included in the projected capital costs of the LTCP. The tunnel will be designed with the proper materials to minimize groundwater intrusion. We have interviewed other municipalities with tunnels, most notably Milwaukee, and they have reported that they have been able to control groundwater intrusion.

Question No. 11: Have you considered in-system storage?

Response: An alternative that used several inflatable dams to achieve in-system storage was considered.

Question No. 12: Have you considered geology and groundwater problems for tunnel construction?

Response: We have talked to Metro about problems that they have faced in their tunnels during both construction and operation. In addition, we have hired a tunnel consultant to perform some preliminary feasibility studies for us. The tunneling through soft soil will be a challenge as it will require measures to control the groundwater.

Comment No. 13: Does upstream bacteria have an effect on water quality downstream?

Response: Upstream bacteria loads comprise a significant portion of the bacterial load in District receiving waters, and this was considered in the modeling.

Comment No. 14: How would you get trash out of the tunnel?

Response: The tunnels would have enough slope such that the stored wastewater could scour any trash and flush it out of the tunnel. In addition, large moving bar screens would lift any remaining trash out of the tunnels.

Comment No. 15: Have you considered RTC (real time control)?

Response: Real time control was considered as an alternative using inflatable dams to hold back combined sewage. However, our modeling indicates that there would be little benefit from more dams as the existing dams are already in the most strategic locations.

Comment No. 16: Did you look at replacing the Swirl Facility with a high rate treatment facility?

Response: This alternative was considered. However, the facilities required to handle the extremely high flow rates coming out of the Northeast Boundary drainage area would require an enormous amount of space. In addition, it would be difficult to staff such a large facility that would operate only intermittently, and not on a

continuous basis. Therefore, this alternative was ruled out.

Comment No. 17: Does this plan allow you to eliminate some CSOs?

Response: The separation of the few remaining sanitary connections to the storm sewers in Luzon Valley would eliminate CSO 059. In addition, it is hydraulically feasible to consolidate a few CSO's on the Potomac (**JFC – we need to look at this together, also would the cost justify the water quality benefits?**)

Comment No. 18: What is the schedule for addressing the Anacostia River as opposed to the other two receiving waters?

Response: The Anacostia would receive priority in terms of scheduling, as its water quality is the most impaired.

Comment No. 19: Have you taken into account the failure rate of combined sewers?

Response: It will be addressed in the next project, EPMC-IIIa.

Comment No. 20: Is there any coordination with AWTa, effect of TMDL?

Response: (**What is AWTa? How have we included TMDL?**).

Comment No. 21: The proposed LTCP implementation time is too long, and is not consistent with other CSO plans.

Response: The absolute minimum time to implement the proposed control plan would be 12 – 13 years, and that assumes that all the funds required were immediately available.

Comment No. 22: How much sanitary wastewater that goes to Blue Plains comes from outside the District?

Response: Approximately half.

Comment No. 23: Have you considered asking MD for money?

Response: (**already addressed in previous comment**)

Comment No. 24: Does sewage from Maryland and Virginia mix with combined sewage generated within the District?

Response: In some cases, sewage from outside the District arrives at Blue Plains in a dedicated pipe, but in other cases, it can mix with District sewage.

Comment No. 25: What impact will extra CSO flow have on BPWWTP?

Response: The tunnels would be dewatered at a rate such that the increase in flow to Blue Plains will not be sharp or dramatic.

Comment No. 26: Is any additional capacity over 1076 mgd planned for BPWWTP?

Response: No more additional capacity is planned.

Comment No. 25: David Barron--Do you have calculations on 20% reduction, get me a copy

Response: (**Addressed in previous comment**)

Comment No. 26: Barron—look at disconnecting separate sanitary sewer from CSS?

Response: (**Addressed in previous comment**)

Comment No. 27: Will tunnels be located in vacant areas?

Response: Most of them would be under National Park Service land. The details of

disposing of excavated soil and tunneling under bridges and other existing structures will be determined during the design phase.

Comment No. 28: What are the results of the sonar inspections of the Anacostia siphons?

Response: The three siphons that originate from Main Pump Station are structurally sound, with no defects. One of the siphons did have some silt accumulation, that can be flushed out with higher flow rates. In addition, the East Side Force Main was also sonar inspected, and its condition was also good.

Comment No. 29: Does Piney Branch need a pump station?

Response: If the Piney Branch short tunnel as described in the LTCP were built, a pump station would be needed to lift sewage from the tunnel to the nearest gravity interceptor.

6. MORE INFORMATION/CORRECTIONS

If there are any corrections to this document or if further information is needed, please contact the following:

Dr. Mohsin Siddique
Program Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, S.W.
Washington, D.C. 20032
Tel: (202) 787-2634
e-mail: Mohsin_Siddique@dcwasa.com

Tabular Summary of Public Meeting No. 4 Comments

Public Meeting No.	No. of Attendees ¹	Presentation Topics	Public Concerns/Comments
4	47 (11)	<ul style="list-style-type: none"> • Presentation of recommended control plan • Predicted water quality benefits • Cost, financial impacts, and schedule for implementation • Wet weather provisions for water quality standards 	<ul style="list-style-type: none"> • The amount of sewage from outside jurisdictions that comes to Blue Plains, and its contribution to the CSO problem. • The means by which LID-R would be implemented. • Consideration of alternatives such as separation, real time control, in-system storage, and high rate treatment facilities. • Concerns regarding the tunnel option, including tunnel operation, tunnel location, groundwater intrusion, construction difficulties, and debris removal. • Proposed LTCP implementation time is too long.



DC Water and Sewer Authority to Discuss \$1.05 Billion District-Wide Draft Long Term Control Plan for Combined Sewer Overflows

Who: The District of Columbia Water and Sewer Authority (WASA) is holding a series of public information meetings and a public hearing to discuss the draft Long Term Control Plan (LTCP) for the city's combined sewer system. The proposed **\$1.05 billion LTCP** is designed to reduce Combined Sewer Overflows (CSO) that discharge to Rock Creek, Potomac and Anacostia Rivers. While all three of the District of Columbia receiving waterways will benefit, it will most significantly benefit the Anacostia River.

Why: The objective of the meetings is to explain the draft LTCP and obtain feedback from District residents. Residents will learn the benefits of the draft LTCP for area waterways and the impact of the plan on their water and sewer rates. **We encourage your participation.**

Locations: The meetings will be held at the following locations. Each meeting begins at 6 p.m.

Wed., August 1, 2001 at Kellogg Conference Center at Gallaudet University, 800 Florida Avenue, NE

Tues., August 7, 2001 at Mount Pleasant Library, 3160 16th Street, NW

Thurs., August 9, 2001 at Southeast Library, 403 7th Street, SE

Tues., August 14, 2001 at Anacostia Branch Library, 1800 Good Hope Road, SE

Wed., August 15, 2001 at Shepherd Park Library, 7420 Georgia Avenue, NW

Wed., August 22, 2001 at Georgetown Library, 3260 R Street, NW

Thurs., August 23, 2001 at Washington Highlands Library, 115 Atlantic Street, SW

Tues., August 28, 2001 at Tenley-Friendship Library, 4450 Wisconsin Avenue, NW

Wed., August 29, 2001 at Capitol View Library, 5001 Central Avenue, SE

The public hearing will be held at 6 p.m. on Tues., September 11, 2001 at the Martin Luther King, Jr. Library located at 901 G Street, NW.

A copy of the LTCP can be obtained at www.dcwasa.com and at the following public libraries:

Martin Luther King Jr. – 901 G Street, NW
Capitol View – 5001 Central Avenue, SE
Mount Pleasant – 3160 16th Street, NW
Northeast – 330 7th Street, NE
Southeast – 403 7th Street, SE

Shepherd Park – 7420 Georgia Avenue, NW
Tenley-Friendship – 4450 Wisconsin Avenue, NW
Washington Highlands – 115 Atlantic Street, SE
Woodridge – 18th and Rhode Island Avenue, NE

For more information, contact Dr. Mohsin Siddique at 202-787-2634 or via email: mohsin_siddique@dcwasa.com.

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**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
COMBINED SEWER SYSTEM
LONG TERM CONTROL PLAN**

Neighborhood/Ward Meeting Summary

<i>Date</i>	<i>Time</i>	<i>Ward</i>	<i>Location</i>
Wed., August 1, 2001	6 p.m.	5	Kellogg Conference Center at Gallaudet University 800 Florida Ave, NE
Tues., August 7, 2001	6 p.m.	1	Mt. Pleasant Library 3160 16 th Street, NW
Thurs., August 9, 2001	6 p.m.	6	Southeast Library 403 7 th Street, SE
Tues., August 14, 2001	6 p.m.	6	Anacostia Branch Library 1800 Good Hope Road, SE
Wed., August 15, 2001	6 p.m.	4	Shepard Park Library 7420 Georgia Avenue, NW
Wed., August 22, 2001	6 p.m.	2	Georgetown Library 3260 R Street NW
Thurs., August 23, 2001	6 p.m.	8	Washington Highlands Library 115 Atlantic Street SW
Tues., August 28, 2001	6 p.m.	3	Tenley-Friendship Library 4450 Wisconsin Ave, NW
Wed., August 29, 2001	6 p.m.	7	Capitol View Library 5001 Central Ave, SE

PUBLIC HEARING

<i>Date</i>	<i>Time</i>	<i>Location</i>
Tues., September 11, 2001	6 p.m.	Martin Luther King Library 901 G Street, NW



District of Columbia Water and Sewer Authority

Serving the Public • Protecting the Environment

Public Questionnaire – August 2001

WASA is interested in what **you** think about the draft LTCP. Please complete the questionnaire below and hand it in at the end of the meeting or mail it to WASA at the address on the back.

1. What level of CSO control would you support? Check the appropriate box.

		# of CSO Overflows/ Average Year	# of Days/yr CSOs Contribute to High Bacteria Levels	Projected Future Sewer Bill for Typical Residence	
<input type="checkbox"/>	No Additional CSO Control	Anacostia	75 times/yr	\$357/yr or \$30/month	
		Potomac	74 times/yr		
		Rock Creek	30 times/yr		
<input type="checkbox"/>	Less Control than the Recommended Plan	Anacostia	49	\$585/yr or \$49/month	
		Potomac	16		
		Rock Creek	11		
<input type="checkbox"/>	Recommended Plan	Anacostia	15	\$603/yr or \$50/month	
		Potomac	16		
		Rock Creek	3		
<input type="checkbox"/>	More Control than the Recommended Plan	Anacostia	No overflows most years	No impact most years	\$845/yr or \$70/month
		Potomac			
		Rock Creek			
<input type="checkbox"/>	No CSOs Ever (Complete Separation)	Anacostia	No overflows ever	No impact due to CSOs, but worse water quality due to increased storm water	\$1,279/yr or \$107/month
		Potomac			
		Rock Creek			
<input type="checkbox"/>	Other	Please explain:			



District of Columbia Water and Sewer Authority

Serving the Public • Protecting the Environment

2. In order to fully comply with the current D.C. water quality standards, WASA would need to completely separate the combined sewer system. Would you support adding provisions to the D.C. water quality standards to allow overflows from the combined sewer system once wet weather events exceeded a certain threshold?

_____ Yes _____ No

Comments:

3. Do you have any comments on the Recommended Plan?

Comments:

4. (Optional) Please tell us about yourself.

Name:

Address:

Tel. No.

Please hand in this form at the end of the meeting or mail it to WASA at the following address:

*Dr. Mohsin Siddique
CSO Control Program Manager
5000 Overlook Avenue, SW
Washington D.C. 20032*

Thank you for participating.

Summary of Neighborhood Meetings

Wednesday, August 1, 2001

**Kellogg Conference Center at Gallaudet University
Ward 5**

Attendance

9

Questions

- Flooding is a problem at West Virginia and Mount Olivette. When will this be fixed?
- Metro caused shifty soil when they built the tunnels. What will you do to prevent that?
- Have you considered giving senior citizens discounts on water/sewer bills?
- Why will the plan take so long to implement?
- Are you familiar with the Atlanta plan? It took only seven years to implement.

Tuesday, August 7, 2001
Mt. Pleasant Library
Ward 1

Attendance

12

Questions [remove spacing to be consistent with bullets in first set]

- Clarify what you mean by "fishable." Will people be able to swim or fish in these rivers once the plan is complete?
- Benefits are confusing. People perceive this plan as lowering water quality standards; why is this plan so great?
- Why so long to implement when other cities have done it much quicker?
- Have you accounted for climate conditions, future changes?
- Why not ask for the whole pie; why not fix the problem entirely?
- What can I do as a citizen? How to take action?
- Does the rate increase affect all ratepayers or just those affected by CSOs?
- Why are the tunnels so deep? Does geology require this?
- Why worry about the rest of the watershed?
- Why can't MD and VA contribute to payment if they are a part of the problem?
- What is the "low hanging fruit," i.e. Potomac Pumping Station?
- Are the tunnels concrete-lined? Is lining needed?
- Is there any entity in the District that does not pay a water/sewer bill?
- Does it cost as much to treat storm water as it does to treat sewage?
- What is the likelihood of Federal assistance coming through?
- What do the costs you show not include?
- Can you speak to the Rock Creek benefits?
- Why can't you pick zero? We don't agree with the cost/benefit.
- What would be additional cost of going from 4 to 0 events/year?
- Comparison of D.C. to other cities with similar problems - i.e., Boston, Chicago and Atlanta.
- Illustration of environmental groups proposal versus WASA proposal.

Thursday, August 9, 2001
Southeast Library
Ward 6

Attendance

8

Questions

- How often does WASA have to bypass Blue Plains?
- David Culp suggested adding human health implications and environmental impacts to the slide "Achieving Appropriate Balance."
- The plan seems to be reasonable, but couldn't WASA be more aggressive with separation in the Rock Creek area and Anacostia?
- Has WASA considered capturing storm water and reusing on parks and golf courses?
- Does the Clean Water Act allow for dumping of any raw sewage?
- You have said you are asking for lower water quality standards; what are the current standards and what are you proposing?
- The theoretical design storms need to be explained further for non-engineers.
- What is the range of error for the model?
- Have you considered fluctuation in population?
- What is the range of options?
- Would full separation be perfect solution? Could you also capture storm water for treatment?
- How are you working with MD and VA?
- Does EPA support your approach?
- What are the parts per million of fecal coliforms now and what do you expect with implementation of your plan?
- Chris Weiss also stated that the evaluation is confusing and misleading. He asked for ranking of priorities such as reduced dumping, lower rates.

Tuesday, August 14, 2001
Anacostia Branch Library
Ward 6

Attendance

22

Questions

- Wasn't work just done in the Ivy City/Trinidad area, 3-4 years ago?
- Where do the three rivers discharge to, the Chesapeake Bay?
- What do you mean by "abandon" the North East Boundary Swirl facility? Will we demolish it?
- Explain why separation is worse.
- Where do the tunnel contents go?
- Do most cities have a department that deals with storm water separately?
- How will low-impact redevelopment approach to entire city impact overflow of water onto streets?
- Who is responsible for storm drainage in the city?
- What do Virginia and Maryland pay for their collection—what impact do they really have? Do they send wastewater to Blue Plains?
- What do Maryland water and sewer rates look like compared to DC rates?
- Will Blue Plains be expanded? Is the spending at Blue Plains for capacity?
- Will this plan address clogging in separate storm sewers?
- Who is responsible for storm sewers?
- Are there areas other than Luzon Valley that could be separated?
- Will the plan have an effect on the quality of our drinking water?
- What is the benefit to public health?
- Is population growth accounted for in the modeling?
- Is replacement of infrastructure any part of this plan?
- Is there any danger of contamination of the aquifers?
- Could we use incentives/water conservation? Shouldn't education be part of the fix?
- Why spend all this money and not see a big benefit at the end? Especially Rock Creek—there is little benefit?
- Does the \$1.05 billion include replacement/repairs of infrastructures?

Wednesday, August 15, 2001
Shepherd Park Library
Ward 4

Attendance

13

Questions

- Why can't a tunnel be placed in the Anacostia instead of along Florida Avenue? Would it be cheaper?
- The flow of Rock Creek is reduced; will this plan affect that flow?
- Is there a link between this project, Dale Carlin and Michigan Avenue improvements?
- Will it affect people downstream for drinking water?
- Can you speak to the potential of drinking water and sewer lines crossing?
- Why can't this plan reduce 100% of the outflows?
- Could you tell me about the methodology of the recommendation?
- If the Federal government were ready to cover the whole cost, would we go to zero CSOs?
- Is the recommendation based on what funding is available?
- When do you envision the design effort once the LTCP is submitted? Is it related to funding?
- Would you do design on Rock Creek and Potomac tunnels at the beginning while Anacostia tunnel is being built?
- Why is DC looking at CSOs 20 years after so many other cities have?
- Has WASA determined a fallback plan?
- How much of the \$170 in the Potomac is the tunnel/pump station?
- Are the rain statistics accurate for the entire city or just the area of measurement?
- Is there modeling data for no tunnels on the Potomac and just low-impact development?
- What is the impact of snowfall and icing on the plan?
- What types of technology are available for looking at cities 15 years ahead of time?
- What kind of technologies have other cities implemented?
- Could we just have low-impact development instead of tunneling?

Wednesday, August 22, 2001
Georgetown Library
Ward 2

Attendance

18

Questions

- Will we stop getting our basements flooded?
- Can we address the flooding issue at Dupont Circle?
- Rates of all utilities are increasing fast. Can we get help from the Capitol Board or Federal Government?
- What are you going to do for low-impact development?
- How do you identify the area affected by the tunnels?
- Have any sewers been added under the Tiber Creek with the Convention systems as part of the construction?
- Is this adding to the amount of groundwater in the system?
- Dupont Circle—what is the developer's responsibility for increasing sewer lines and additional flow?
- Why do current water quality standards need to be adjusted when your data shows separation is a bad idea?
- Does this mean that I won't see construction during 20 years in my neighborhood?
- Do the DC Water quality standards not recognize that there are fecal coliforms in storm water?
- How much healthier will the community be? What is the public health benefit?
- Were there power outages at any of the pumping stations during the storm?
- Is this a failure on MD's part on water quality?
- Are there other cities that have similar tunnel plans?
- Would low-flow toilets help solve the sewage overflow issue?
- Does the plan address growth in DC?
- How do you handle moving huge amounts of dirt out of Georgetown?
- What routes will the trucks take?
- Did you look at scenarios for retrofit?
- Can we get to 0?
- Can you explain the odor on Capital Crescent trail?

Thursday, August 23, 2001
Washington Highlands Library
Ward 8

Attendance

4

Questions

- How do we get the money?
- Has the highlight document changed since the plan was released in June?
- Can you speak to the specifics of LID?
- If we ask Feds, can we ask DC to make changes to codes to incorporate LID?
- UDC is looking at restructuring their campus and I am pushing this; can't we push schools (who are doing a major construction project over the next 5 years) to do the same?

Tuesday, August 28, 2001
Tenley-Friendship Library
Ward 3

Attendance

5

Questions

- How far up the Potomac does the tunnel go? Above Georgetown University?
- Is this based on financing in bonds or cash basis?
- What will be the inconvenience to the public? Will it be similar to Pepco?
- Will there be interruption of sewer service to my house?
- How will this plan impact flooding in the Georgetown/K Street area?
- Will the tunnels in Georgetown connect to this area?
- All of this water goes to Blue Plains? Is the capacity at Blue Plains adequate?
- What percentage of treatment does Blue Plains provide?
- You have not considered Bs or Ps? Have you considered these?
- What are other cities with CSOs doing?
- How do the costs in other cities with CSOs compare to what WASA is considering?
- What is the history of BOD content in Potomac?
- What are the best management practices?
- How are you going to control the anaerobics in the tunnel?
- Sewer on Wyndham Street is collapsing; what plans do you have to look at existing system while spending \$1 billion?
- Does Blue Plains have secondary treatment?
- You discuss financial implications for residential rates; what about commercial?
- Could the plan address separation in the Rhode Island/Florida/New York Avenue areas?
- What's to say the holding tanks won't spring a leak and cause major erosions?
- The Army Corps of Engineers built this system and they have money and time; can they fix it?
- Could people go into the tunnels to inspect without drowning?
- What about flood plains as a way of dealing with flood drainage with drainage systems in other places?
- Are you actively pursuing coordination with surrounding jurisdictions?
- How will the \$3 million in the 2 WASA facilities be spent?
- How will you incorporate LID in the District?
- There is some water from potable water systems that leaks out every day and some of it gets into sewers. What are you doing about this?
- How far down the road is the rate issue?
- Is there anything in the plan that addresses leaking?
- Can you build more sewers?
- Is it 1-2" that triggers a CSO discharge?
- Would the holding tanks as proposed have held the recent storm?

Wednesday, August 29, 2001
Capitol View Library
Ward 7

Attendance

11

Questions

- Where are the two abandoned overflows?
- Can you explain the one on the East side of the river?
- Some of the sewers to this pipe hooked to Maryland?
- Where would you put the racks to capture debris from the streets? Debris would go into storm system and to treatment?
- Why does LID have to take 30 years or more?
- What about storm water taxes like in Germany?
- How much effort have you put into LID as an answer?
- Why the gap in work in Rock Creek and Potomac?
- Does this mean no money will be spent during this time?
- You said if LID took off you would redo size of tunnels? What is impact of LID in \$3 million at beginning of the plan?
- What's the amount of change in flooding that would be reduced?
- You modeled 10-15% of rooftops and showed a 15% improvement—that's significant don't you think?
- I would suggest that if this is offered as an option LID should as well in an empowering way.
- You're contradicting yourselves—you say 1/10–1/2" of rainfall can trigger a CSO?
- You said earlier that the tunnels wouldn't handle storm of 2 weeks ago?
- Maybe FOE could conduct a survey to see how many people are willing to put into practice what they believe? (Philosophically environmental)
- Perhaps the only way to increase LID impact is to make incentives for doing it?
- No real tunneling on the Potomac until year 15?
- Good ways to focus on where and how LID can work (i.e. Foggy Bottom) is to focus our energy on not fighting the engineers and working with them.
- WASA is a regional body; are there ratepayers outside DC?
- Would there be a way to get additional money to involve Maryland and Virginia in this plan?
- What does it mean when you say you abandon the swirl facility?
- Is there any way to predict which of the four overflows per year would take place on the Anacostia? Where would they take place?
- Have you looked at those 4 places to do additional things to prevent—such as trash traps?
- Are you looking at the end of the system, sewers and future technologies, so we are not looking at flushing?

G R E E L E Y A N D H A N S E N L L C

8905 Presidential Parkway, Suite 230
Upper Marlboro, MD 20772-2653

www.greeley-hansen.com

MEMORANDUM

DATE: February 11, 2002

TO: Mohsin Siddique

FROM: John Cassidy

SUBJECT: District of Columbia Water and Sewer Authority
Combined Sewer System Long Term Control Plan
Community Forum at Sumner School - November 7, 2001

On November 7, 2001, a community forum to review WASA's Draft Long Term Control Plan (LTCP) for the combined sewer system was held at the Sumner School. The forum was sponsored by the D.C. Federation of Civic Associations, the D.C. Citizens Association, and the Consumer Utility Board.

At the forum, Michael Marcotte, Chief Engineer and Deputy General Manager for WASA, made a presentation on the Draft LTCP. Next, five invited panel members made brief oral statements. The audience then made comments and directed questions to selected panel members. The following is a summary of the meeting:

1. Presentation by WASA
Michael Marcotte, Chief Engineer and Deputy General Manager for WASA, made a presentation on the Draft LTCP. The presentation described the draft LTCP along with its cost, schedule, water quality benefits and anticipated rate impacts. A copy of the presentation is attached.
2. Oral Comments of David Baron, Earth Justice Legal Defense Fund (Panel Member)
 - a. The LTCP should provide a higher degree of control than recommended in the Draft LTCP. The projected CSO overflow volumes after implementation of the plan are too high. No specific recommendation was made.
 - b. Infiltration and inflow could be a significant problem and removing this from the system could have substantial CSO control benefits. WASA should consider making this part of the LTCP.
 - c. Maryland and Virginia should pay a share of the LTCP since they contribute flows to the system. Large industrial and commercial buildings with high amounts of impervious area generate a large amount of runoff. These facilities should pay a large percentage of the cost rather than burdening residential customers.
 - d. Wet weather standards should not be incorporated in the water quality standards to accommodate the LTCP. The water quality standards should not be changed.

TO: Mossin Siddique
FROM: John Cassidy

February 11, 2002
Page 2

3. Oral Comments of James Woodworth, National Resources Defense Council (Panel Member)
 - a. The costs used by WASA include a 30% construction contingency factor and a 40% capital cost factor. The costs for the LTCP could thus be significantly less. Mr. Woodworth acknowledged that this method for estimating cost is typical in the industry for this level of planning.
 - b. There is some overlap between the Draft LTCP and WASA's Capital Improvement Program. Some costs for the Capital Improvement Program are included in the LTCP. This means the LTCP is actually somewhat less expensive.
 - c. The LTCP should include more Low Impact Development (LID). In addition, LID can be implemented less expensively than the estimates included in the Draft LTCP.
 - d. WASA's storm water fees are extremely low when compared to other municipalities such as Boulder Colorado (\$4/month), Cincinnati, Ohio (\$26/yr) and Austin, Texas (\$4/month). WASA should charge more for storm water and then implement storm water controls to improve water quality.
4. Oral Comments of Robin Chanay, The River Network (Panel Member)
 - a. Milwaukee has CSO tunnels, and they do not work effectively. The Draft LTCP relies on tunnels and there is no guarantee that they will be effective.
 - b. WASA's cost of separation is too high. Separation can be completed for much less than is estimated in the Draft LTCP. In addition separation is not that disruptive and has many other benefits.
 - c. In many areas, the existing infrastructure is in poor condition and needs to be replaced. WASA should fix the existing system and separate at the same time to save money.
5. Oral Comments of Damon Whitehead, Anacostia Riverkeeper (Panel Member)
 - a. CSO overflows are a health issue and a quality of life issue. WASA should develop a plan that eliminates overflows.
 - b. The water quality standards should not be changed since they are health-based. If the D.C. water quality standards are changed, this will discourage Maryland and Virginia from cleaning up pollution in their waterways that ultimately flow into the District.
 - c. In addition to Northeast Boundary, there are other areas in the District that flood and these will not be addressed by the LTCP. WASA should address these remaining areas.
6. T.J. Murphy, Metropolitan Washington Council of Governments (Panel Member)
 - a. The Metropolitan Washington Council of Governments (COG) assisted WASA in developing the LTCP by calibrating and running the Anacostia receiving water model.
 - b. COG is also involved in other watershed planning and assistance efforts in the region.

TO: Mossin Siddique
FROM: John Cassidy

February 11, 2002
Page 3

7. Audience Comments

- a. The costs presented in the LTCP are costs in current dollars (year 2001). One commenter indicated that WASA should consider demonstrating how costs will increase over time due to inflation.
- b. Several commenters expressed support for federal funding of the LTCP. One commenter indicated that WASA should plan for how the LTCP would be funded if no Federal Funding is received.
- c. A commenter indicated that WASA should consider the positive benefits of waterfront development in conjunction with implementation of the Long Term Control Plan
- d. One commenter was concerned that if the water quality standards in the District are not changed, the only viable alternative is separation. This has exceedingly high costs and negative water quality impacts.
- e. Several commenters indicated that WASA should consider near-term relief for flooding at various locations in the District. Some commenters expressed concern that implementation of the LTCP was a long time to wait for relief.
- f. One commenter indicated that WASA should consider using McMillan Reservoir as a storage facility for CSO control
- g. A commenter expressed a concern over the cost and difficulty associated with maintenance of the proposed tunnels.
- h. A commenter indicated that WASA should consider a more holistic and watershed approach to CSO planning and should include features such as downspout disconnection and tree planting.



NOTICE OF PUBLIC HEARING

The District of Columbia Water and Sewer Authority (WASA) invites you to attend a public hearing regarding the proposed **\$1.05 billion Draft Long Term Control Plan (LTCP)** for Combined Sewer Overflows (CSOs) for the District. The Draft LTCP is intended to reduce CSOs that discharge to the Anacostia River, Potomac River and Rock Creek. Details of the hearing are as follows:

Date and Time: September 11, 2001, 6:00-8:30 pm

Location: Martin Luther King, Jr. Memorial Library, 901 G Street, NW, Washington D.C. (**Auditorium A-5**)

Purpose: The purpose of the hearing is to obtain public comment on the Draft Long Term Control Plan.

Conduct of Hearing Public comments will be accepted in the form of written and oral testimony at the hearing. Those who wish to testify must submit their names in writing 7 days before the hearing date to:

Dr. Mohsin Siddique, Project Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, SW
Washington D.C. 20032
Email address: Mohsin_Siddique@dcwasa.com
Telephone number: (202) 787-2634

Testimony will be heard in the order that written requests to testify are received. Those who have not submitted written requests to testify may sign up at the hearing to give oral testimony. Testimony will be received if time permits and in the order in which testifiers sign up. Oral testimony from individuals will be limited to 5 minutes and organizations will be limited to ten (10) minutes. Testimony should be limited to the subject matter. Written testimony of any size can be submitted at the hearing and within 30 days after the date of the hearing.

The comment period will close 30 days after the public hearing. After that, public comments will be taken into consideration and WASA will prepare a Final LTCP. WASA encourages your participation.

In preparation for the public hearing, WASA is holding a series of **public information meetings** to explain the LTCP and to obtain feedback from District residents. Residents will learn the benefits of the Draft LTCP for area waterways and the impact of the plan on their water and sewer rates. We encourage your participation.

The meetings will be held at the following locations. Each meeting begins at 6:00 p.m.

- **Wed., August 1, 2001 at Kellogg Conference Center at Gallaudet University, 800 Florida Ave., NE**
- **Tues., August 7, 2001 at Mount Pleasant Library, 3160 16th St., NW**
- **Thurs., August 9, 2001 at Southeast Library, 403 7th St., SE**
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- **Tues., August 28, 2001 at Tenley-Friendship Library, 4450 Wisconsin Ave., NW**
- **Wed., August 29, 2001 at Capitol View Library, 5001 Central Ave., SE**

A copy of the Draft LTCP can be obtained at www.dcwasa.com and can be reviewed at the following public libraries:

Martin Luther King Jr. at Washingtoniana Room – 901 G St., NW
Capitol View – 5001 Central Ave., SE
Tenley-Friendship – 4450 Wisconsin Ave., NW
Mount Pleasant – 3160 16th St., NW

Shepherd Park – 7420 Georgia Ave., NW
Woodridge – 18th and Rhode Island Ave., NE
Southeast – 403 7th St., SE
Northeast – 330 7th St., NE
Washington Highlands – 115 Atlantic St., SE



District of Columbia Water and Sewer Authority

NOTICE OF PUBLIC HEARING

Combined Sewer System Draft Long Term Control Plan

**MARTIN LUTHER KING, JR. MEMORIAL LIBRARY
901 G Street, NW, Washington D.C.
(Auditorium A-5)**

**TUESDAY, September 11, 2001
6:00 p.m. – 8:30 p.m.**

PURPOSE: The purpose of the hearing is to obtain public comment on the Draft Combined Sewer System Long Term Control Plan.

BACKGROUND

The District of Columbia Water and Sewer Authority (WASA) operates the wastewater collection system for the District of Columbia and provides wastewater treatment for the District, as well as portions of Maryland and Virginia. Approximately, one third of the District (12,955 \pm acres) is served by combined sewers while the remaining area is served by separate sewers. In a combined sewer system, the sewage from homes and businesses during dry weather conditions is conveyed to the District of Columbia's Advanced Wastewater Treatment Plant at Blue Plains where it is treated and discharged into the Potomac River. When the capacity of a combined sewer is exceeded during rain storms, the excess flow, which is a mixture of sewage and storm water runoff, is discharged as Combined Sewer Overflow (CSO) to the Anacostia and Potomac Rivers, Rock Creek and tributary waters.

The Authority's National Pollutant Discharge Elimination System (NPDES) permit requires that the Authority prepare a Long Term Control Plan (LTCP) to reduce the impact of CSO's on receiving waters. A draft LTCP has been prepared in furtherance of NPDES permit requirements. A wide range of CSO control technologies was considered in the development of the draft LTCP including the following: Source Controls; Inflow Controls; Sewer System Optimization; Sewer Separation, Storage Technologies, Treatment Technologies and Receiving Water Improvement. Each technology and various combinations of technologies were evaluated to determine impacts on CSO volume. Various combinations of CSO control options have been assembled into control strategies for each receiving water.

Implementation of the following approaches for control of CSOs is recommended:

A. System Wide

1. Integrate Low Impact Development Retrofit (LID-R) as part of the final LTCP to be implemented by WASA with regard to its facilities as well as strongly advocate the integration of LID-R in private and other governmental facilities, and by the owners, developers and operators of facilities in DC.

B. Anacostia River

1. Rehabilitate existing pumping stations.
2. Construct a storage tunnel from Poplar Point to the Northeast Boundary Outfall.
3. Construct a storage/ conveyance tunnel parallel to the Northeast Boundary Sewer.
4. Construct a Ft. Stanton Interceptor.

C. Rock Creek

1. Separate the Luzon Valley CSO (CSO 059).
2. Construct a storage tunnel for the Piney Branch CSO (CSO 049).
3. Conduct monitoring at CSO 031, 033, 036, 037, 047 and 057 to confirm predicted overflows and perform regulator improvements or construct a connection to the Potomac Storage Tunnel if necessary.

D. Potomac River

1. Rehabilitate the Potomac Pumping Station.
2. Construct a Potomac Storage Tunnel.

The draft LTCP contains a full description of these and other options and corresponding impacts.

The purpose of the Long Term Control Plan (LTCP) is to develop a plan and schedule for controlling CSO discharges to area waterways. WASA has prepared a draft Long Term Control Plan (LTCP) to control CSOs and has submitted it to regulatory agencies and made it available to the public for comment. The draft LTCP recommends a \$1.05 billion construction program, to control CSO, which will be implemented over approximately 20 years. Under this plan, there will be a 92% reduction of CSO volume overall, and the number of CSO events will be reduced from the current 30-75 a year to 4-12 a year. This



program may have a significant impact on water and sewer rates in the District of Columbia. **Federal and DC laws require CSO Control. CSO control will improve the water quality, but will not make the waters of the District fishable or swimmable, without controlling other sources of pollution.** In addition, the LTCP will require inclusion of additional provisions in the Water Quality Standards issued by the District of Columbia Department of Health. This is needed to allow significantly reduced CSOs, which will have a minimum impact on the water quality. These remaining CSOs cannot be eliminated without severe financial impact on the District of Columbia ratepayers and major disruption of downtown DC over a very long period of time.

The purpose of the hearing is to provide the public with an opportunity to present testimony on the proposed LTCP. A final plan will be prepared after review and consideration of all comments.

Conduct of Hearing:

Public comments will be accepted in the form of written and oral testimony at the hearing. Those who wish to testify must submit their names in writing 7 days before the hearing date to:

Dr. Mohsin Siddique, Project Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, SW
Washington D.C. 20032

Email address: Mohsin_Siddique@dcwasa.com
Telephone number: (202) 787-2634

Testimony will be heard in the order that written requests to testify are received. Those who have not submitted written requests to testify may sign up at the hearing to give oral testimony. Testimony will be received if time permits and in the order in which testifiers sign up. Oral testimony from individuals will be limited to 5 minutes and organizations will be limited to ten (10) minutes. Testimony should be limited to the subject matter. Written testimony may be submitted at the hearing and within 30 days after the date of the hearing.

The comment period will close 30 days after the public hearing. Public comments will be taken into consideration before preparation of the Final LTCP. WASA encourages your participation.

A copy of the Draft LTCP can be obtained at www.dcwasa.com and can be reviewed at the following public libraries:

Martin Luther King Jr. at Washingtoniana Room – 901 G St., NW
Capitol View – 5001 Central Ave., SE

Tenley-Friendship – 4450 Wisconsin Ave., NW
Mount Pleasant – 3160 16th St., NW
Shepherd Park – 7420 Georgia Ave., NW
Woodridge – 1801 Rhode Island Ave., NE
Southeast – 403 7th St., SE
Northeast – 330 7th St., NE
Washington Highlands – 115 Atlantic St., SW

District of Columbia Water and Sewer Authority

NOTICE OF RESCHEDULED PUBLIC HEARING

Combined Sewer System Draft Long Term Control Plan

**MARTIN LUTHER KING, JR. MEMORIAL LIBRARY
901 G Street, NW, Washington D.C.
(Auditorium A-5)**

**MONDAY, OCTOBER 22, 2001
6:00 p.m. – 8:30 p.m.**

Rescheduled from Tuesday, September 11, 2001

PURPOSE: The purpose of the hearing is to obtain public comment on the Draft Combined Sewer System Long Term Control Plan prepared by the District of Columbia Water and Sewer Authority.

BACKGROUND:

The District of Columbia Water and Sewer Authority (WASA) operates the wastewater collection system for the District of Columbia and provides wastewater treatment services for the District, as well as portions of Maryland and Virginia. Approximately one third of the District (12,955± acres) is served by combined sewers, while the remaining area is served by separate sewers. In a combined sewer system, during dry weather conditions, the sewage from homes and businesses is conveyed to the District of Columbia's Advanced Wastewater Treatment Plant at Blue Plains where it is treated and discharged into the Potomac River. When the capacity of a combined sewer is exceeded during rain storms, the excess flow, which is a mixture of sewage and storm water runoff, is discharged as Combined Sewer Overflow (CSO) to the Anacostia and Potomac Rivers, Rock Creek and tributary waters.

The Authority's National Pollutant Discharge Elimination System (NPDES) permit requires that the Authority prepare a Long Term Control Plan (LTCP) to reduce the impact of CSO's on receiving waters. A draft LTCP has been prepared in furtherance of NPDES permit requirements. A wide range of CSO control technologies was considered in the development of the draft LTCP including the following: Source Controls; Inflow Controls; Sewer System Optimization; Sewer Separation, Storage Technologies, Treatment Technologies and Receiving Water Improvement. Each technology and various combinations of technologies were evaluated to determine impacts on CSO volume. Various combinations of CSO control options have been assembled into control strategies for each receiving water.

Implementation of the following approaches for control of CSOs is recommended:

A. System Wide

1. Integrate Low Impact Development Retrofit (LID-R) as part of the

final LTCP to be implemented by WASA with regard to its facilities as well as strongly advocate the integration of LID-R in private and other governmental facilities, and by the owners, developers and operators of facilities in the District of Columbia.

B. Anacostia River

1. Rehabilitate existing pumping stations.
2. Construct a storage tunnel from Poplar Point to the Northeast Boundary Outfall.
3. Construct a storage/ conveyance tunnel parallel to the Northeast Boundary Sewer.
4. Construct a Ft. Stanton Interceptor.

C. Rock Creek

1. Separate the Luzon Valley CSO (CSO 059).
2. Construct a storage tunnel for the Piney Branch CSO (CSO 049).
3. Conduct monitoring at CSO 031, 033, 036, 037, 047 and 057 to confirm predicted overflows and perform regulator improvements or construct a connection to the Potomac Storage Tunnel if necessary.

D. Potomac River

1. Rehabilitate the Potomac Pumping Station.
2. Construct a Potomac Storage Tunnel.

The draft LTCP contains a full description of these and other options and corresponding impacts.

The purpose of the Long Term Control Plan (LTCP) is to develop a plan and schedule for controlling CSO discharges to area waterways. WASA has prepared a draft Long Term Control Plan (LTCP) to control CSOs and has submitted it to regulatory agencies and made it available to the public for comment. The draft LTCP recommends a \$1.05 billion construction program, to control CSO, which will be implemented over approximately 20 years. Under this plan, there will be a 92% reduction of CSO volume overall, and the number of CSO events will be reduced from the current 30-75 a year to 4-12 a year. This program may have a significant impact on water and sewer rates in the District of Columbia. **Federal and DC laws require CSO Control. CSO control will improve the water quality, but will not make the waters of the District fishable or swimmable, without controlling other sources of pollution.** In addition, implementation of the recommendations in the LTCP will require inclusion of additional provisions in the Water Quality Standards issued by the District of Columbia Department of Health. This is needed to allow significantly reduced CSOs, which will have minimum impact on the water quality. The remaining CSOs cannot be eliminated without severe financial impact on the District of Columbia ratepayers and major disruption of downtown DC over a very long period of time.

The purpose of the hearing is to provide the public with an opportunity to present testimony on the proposed LTCP. A final plan will be prepared after review and consideration of all comments.

Conduct of Hearing:

Public comments will be accepted in the form of written and oral testimony at the hearing. Those who submitted their names in writing 7 days before the previously scheduled hearing date of September 11, 2001 will be allowed to testify in the order that the testimony was received. There is no need to resubmit your request to testify. Written testimony or comments will be considered and can be submitted to:

Dr. Mohsin Siddique, Project Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, SW
Washington D.C. 20032

Email address: Mohsin_Siddique@dcwasa.com
Telephone number: (202) 787-2634

Those who did not submit a written request to testify 7 days before the previously scheduled hearing date, may sign up at the hearing to give oral testimony. Testimony will be received if time permits, in the order in which testifiers sign up. Oral testimony from individuals will be limited to 5 minutes and organizations will be limited to ten (10) minutes. Testimony should be limited to the subject matter. Written testimony may be submitted at the hearing and within 30 days after the date of the hearing.

The comment period will close 30 days after the public hearing. Public comments will be taken into consideration before preparation of the Final LTCP. WASA encourages your participation.

A copy of the Draft LTCP can be obtained at www.dcwasa.com and can be reviewed at the following public libraries:

Martin Luther King Jr. at Washingtoniana Room – 901 G St., NW
Capitol View – 5001 Central Ave., SE
Tenley-Friendship – 4450 Wisconsin Ave., NW
Mount Pleasant – 3160 16th St., NW
Shepherd Park – 7420 Georgia Ave., NW
Woodridge – 1801 Rhode Island Ave., NE
Southeast – 403 7th St., SE
Northeast – 330 7th St., NE
Washington Highlands – 115 Atlantic St., SW

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

***Meeting Summary for
Stakeholder Advisory Panel Meeting No. 11***

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Engineering Program Management Consultant - III
Program Manager - Greeley and Hansen
January 2002

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APPENDIX A – Attendees and Presentation Material

THE DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

**Combined Sewer System Long Term Control Plan
Public Participation Program**

***Meeting Summary For
Stakeholder Advisory Panel Meeting No. 11
January 24, 2002***

1. INTRODUCTION

The District of Columbia Water and Sewer Authority (WASA) is in the process of developing a Long Term Control Plan (LTCP) for its Combined Sewer System (CSS). As part of this effort, the eleventh in a series of planned Stakeholder Advisory Panel meetings was held on Thursday, January 24, 2002 from 6:30-8:30 p.m. at the Metropolitan Washington Council of Governments. The purpose of the meeting was to review comments on the Draft LTCP and to describe the additional evaluations to be conducted in response to the comments.

**2. NOTIFICATION AND INFORMATION AVAILABLE FOR STAKEHOLDER
ADVISORY PANEL MEETING NO. 11**

On January 10, 2002 a memo was emailed, mailed, and faxed to Panel Members informing them of the meeting.

An Information Document containing information on the LTCP has been placed on reserve at eight Public Information Depositories located in each District Ward. These Depositories are located at the following public libraries:

- Martin Luther King, Jr.: 901 G St, NW, Washingtoniana Room
- Capitol View: 5001 Central Avenue, SE
- Mount Pleasant: 31 16th Street, NW
- Northeast: 330 7th Street, NE
- Woodridge: 18th & Rhode Island Avenue, NE
- Southeast: 403 7th Street, SE
- Shepherd Park: 7420 Georgia Avenue, NW
- Tenley-Friendship: 4450 Wisconsin Avenue, NW
- Washington Highlands: 115 Atlantic Street, SE

The Information Document includes the following documents:

- “EPA Combined Sewer Overflow (CSO) Control Policy”
- “District of Columbia Combined Sewer System Long Term Control Plan (Draft Program Plan)”
- “Study Memorandum LTCP-5-1: Monitoring Plan for Sewer Systems and Receiving Waters (Draft)”
- “NPDES Permit Application”
- “CSO Abatement Program Final Report 1983”
- Nine Minimum Controls Summary Report (Draft)
- Nine Minimum Controls Action Plan (Draft)
- Study Memorandum LTCP-1-3: Existing CSO Controls and Programs (Final)
- Stakeholder Advisory Panel Meeting Summary – Meetings No. 1, 2, 3, 4, 5, 6, 7, 8 and 9
- Draft Long Term Control Plan

3. MEETING PRESENTATION AND ATTENDANCE

Mr. Jerry Johnson, General Manager of the District of Columbia Water and Sewer Authority, began the meeting by thanking the Panel Members for their resourcefulness, dedication, commitment, and contribution to the development of the Draft LTCP. Mr. Johnson then turned the floor over to Mr. Larry Jaworski of Greeley and Hansen to lead the presentation.

All the attendees introduced themselves. Following the introductions, Mr. Jaworski gave a review of the draft LTCP and a summary of the key comments received. Mr. Jaworski then reviewed the additional analyses to be performed in response to comments and presented preliminary results regarding design storms. The approach to Low Impact Development was reviewed, and the presentation concluded with a brief description of Milwaukee’s experience with tunnels for CSO control.

A total of thirty-four (34) people, including the presenters noted above, attended the meeting. The attendance list and the presentation handout are attached in Appendix A.

4. STAKEHOLDER ADVISORY PANEL QUESTIONS/COMMENTS

Question/Comment No. 1: Are comments on the LTCP available for inspection? Can the Stakeholders review the actual comments?

Response: The actual comments will be included in a Responsiveness Summary prepared to address comments. In the meantime, copies of the comments will be placed on reserve at the Martin Luther King Jr Library for review. Additional copies can be reviewed at WASA and

Greeley and Hansen. A notice will be sent to all Stakeholders with details after the meeting.

Question/Comment No. 2: Will there be opportunities for additional comments once a Final LTCP is prepared?

Response: WASA will hold another Stakeholder meeting prior to preparing a final LTCP. In addition, the public can comment to EPA on the Final LTCP once it is submitted.

Question/Comment No. 3: Mohsin Siddique clarified the 2nd slide of page 5 of handout. To date, EPA has not commented on the level of control proposed in the draft LTCP.

Response: So noted.

Question/Comment No. 4: One commenter noted that in addition to the categories of comments described in the handout, comments were submitted regarding public education and new technologies such as:

- Swedish toilets that separate solids from liquids
- Education programs designed to encourage people to not use sanitary facilities when it is raining

Response: The intent of the presentation was to focus on categories of comments where large numbers of comments were received. Other types of comments were also received and are being addressed as part of the preparation of the Responsiveness Summary.

Question/Comment No. 5: One commenter indicated that WASA should consider a more integrated approach for all infrastructure (sanitary, storm water, and CSO). Reference was made that there are 440 cross connections between the wastewater and potable water system that may constitute a more serious problem than CSO.

Response: Jerry Johnson indicated that the focus of the Stakeholder meetings had been on CSO control because that was the purpose of the LTCP planning effort. WASA is engaged in many other efforts to improve system performance, reliability and the environment. As an example, WASA is addressing cross connections as part of a separate effort and two contractors are currently working on that project. David Bardin suggested that language should be added to the LTCP saying WASA

would periodically look at the results of other efforts as they move forward with the LTCP. This would facilitate the integration process of the various infrastructure projects.

Question/Comment No. 6: Jim Woodworth asked how the model of the recommended plan would have handled the August 10 -11 2001 rainfall event.

Response: Model results show that the tunnel system would have prevented flooding in the major interceptors in the Northeast Boundary drainage area.

Question/Comment No. 7: Jim Collier requested a curve instead of a column chart for the plot of CSO overflow volume vs. design storms return frequency so that interpolation would be possible.

Response: This can be provided.

Question/Comment No. 8: What rainfall data was used for the estimation of CSO overflow volume for each design storm?

Response: National Airport data, for the 24 hour duration storm.

Question/Comment No. 9: Larry Silverman recommended that the LTCP be coordinated with the NPS and the Planning Commission to focus on areas that are considered valuable and scheduled for improvement and recreation.

Response: The NPS has been included in the Stakeholder Panel, and has submitted their comments concerning proposed plans on NPS property.

Question/Comment No. 10: When evaluating LID, WASA should consider emphasizing its application in areas where it might be done cost effectively such as in lower density residential areas.

Response: Comment noted.

Question/Comment No. 11: Larry Silverman of the Anacostia Watershed Society thanked WASA for handling the development of the LTCP so openly. Though there were differences in opinion, he was hopeful that these could be resolved to the satisfaction of most so that future efforts could be directed toward obtaining funding.

Response:

Comment noted.

6. GENERAL DISCUSSION

The Panel will meet again in April 2002, with the exact date to be determined.

7. MORE INFORMATION/CORRECTIONS

If there are any corrections to this document or if further information is needed, please contact the following:

Dr. Mohsin Siddique
Program Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, S.W.
Washington, D.C. 20032
Tel: (202) 787-2634
e-mail: Mohsin_Siddique@dcwasa.com

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

***Meeting Summary for
Stakeholder Advisory Panel Meeting No. 12***

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Engineering Program Management Consultant - III
Program Manager - Greeley and Hansen
June 2002

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APPENDIX A – Attendees and Presentation Material

THE DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

**Combined Sewer System Long Term Control Plan
Public Participation Program**

***Meeting Summary For
Stakeholder Advisory Panel Meeting No. 12
June 13, 2002***

1. INTRODUCTION

The District of Columbia Water and Sewer Authority (WASA) is in the process of developing a Long Term Control Plan (LTCP) for its Combined Sewer System (CSS). As part of this effort, the twelfth in a series of Stakeholder Advisory Panel meetings was held on Thursday, June 13, 2002 from 6:30-8:00 p.m. at the Metropolitan Washington Council of Governments. The purpose of the meeting was to present the proposed Final LTCP before submitting it to regulatory agencies in Summer 2002.

**2. NOTIFICATION AND INFORMATION AVAILABLE FOR STAKEHOLDER
ADVISORY PANEL MEETING NO. 12**

On May 20, 2002, a memo was emailed, mailed, and faxed to Panel Members informing them of the meeting.

An Information Document containing information on the LTCP has been placed on reserve at eight Public Information Depositories located in each District Ward. These Depositories are located at the following public libraries:

- Martin Luther King, Jr.: 901 G St, NW, Washingtoniana Room
- Capitol View: 5001 Central Avenue, SE
- Mount Pleasant: 31 16th Street, NW
- Northeast: 330 7th Street, NE
- Woodridge: 18th & Rhode Island Avenue, NE
- Southeast: 403 7th Street, SE
- Shepherd Park: 7420 Georgia Avenue, NW
- Tenley-Friendship: 4450 Wisconsin Avenue, NW
- Washington Highlands: 115 Atlantic Street, SE

The Information Document includes the following documents:

- “EPA Combined Sewer Overflow (CSO) Control Policy”
- “District of Columbia Combined Sewer System Long Term Control Plan (Draft Program Plan)”
- “Study Memorandum LTCP-5-1: Monitoring Plan for Sewer Systems and Receiving Waters (Draft)”
- “NPDES Permit Application”
- “CSO Abatement Program Final Report 1983”
- Nine Minimum Controls Summary Report (Draft)
- Nine Minimum Controls Action Plan (Draft)
- Study Memorandum LTCP-1-3: Existing CSO Controls and Programs (Final)
- Stakeholder Advisory Panel Meeting Summary – Meetings No. 1, 2, 3, 4, 5, 6, 7, 8 and 9
- Draft Long Term Control Plan

3. MEETING PRESENTATION AND ATTENDANCE

Mr. Jerry Johnson, General Manager of the District of Columbia Water and Sewer Authority, began the meeting by acknowledging the effort of WASA consultants in completing the LTCP, as well as the numerous comments received from the public that were incorporated into the LTCP. Mr. Johnson turned the floor over to Mr. Michael Marcotte, Chief Engineer of WASA, who led the presentation.

Mr. Marcotte gave a review of the Draft LTCP and a summary of the key comments received. Mr. Marcotte emphasized the improvements in the proposed Final LTCP, when compared to the June 2001 Draft LTCP. After Mr. Marcotte’s presentation, Mr. Paul Bender, the WASA’s Chief Financial Officer, gave a presentation on the financial impacts of the proposed LTCP on ratepayers. Mr. Bender presented data on the required rate increases necessary to fund the LTCP, under various timeframes and levels of outside assistance.

A total of thirty-two (32) people, including the presenters noted above, attended the meeting. The attendance list and the presentation handout are attached in Appendix A.

4. STAKEHOLDER ADVISORY PANEL QUESTIONS/COMMENTS

Question/Comment No. 1: How were areas for targeted separation selected?

Response: Areas were selected based on cost effectiveness (in terms of dollars spent per volume of annual CSO’s eliminated) and feasibility.

Question/Comment No. 2: What does Anacostia consolidation means?

Response: Under consolidation, combined sewer overflow pipes would be connected to a tunnel and the existing outfall would be eliminated. When the tunnel capacity was exceeded, overflow would move through the tunnel and be discharged to a less sensitive area downstream.

Question/Comment No. 3: John Deatruck, DDOT, commented that there might be an opportunity to tie the CSO construction with Anacostia waterfront development.

Response: Jerry Johnson commented that WASA has been discussing this with the Office of Planning.

Question/Comment No. 4: What happens to the LTCP after mid-July?

Response: WASA will submit the plan to EPA and DOH. If the LTCP is approved, the next step will be to move forward on soliciting funding. The Mayor has requested \$55 million from Congress. The District has received \$1.8 million thus far.

Question/Comment No. 5: In reference to public notification, how will the CSO warning lights work?

Response: The warning lights will activate during a CSO event, and remain on for a period of time after the event. The length of time the lights remain on will depend on the magnitude the overflow.

Question/Comment No. 6: Have you considered alternate rate structures?

Response: WASA is currently evaluating the benefits of alternate rate structures.

7. MORE INFORMATION/CORRECTIONS

If there are any corrections to this document or if further information is needed, please contact the following:

Dr. Mohsin Siddique
Program Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, S.W.
Washington, D.C. 20032
Tel: (202) 787-2634
e-mail: Mohsin_Siddique@dcwasa.com

**District of Columbia Water and Sewer Authority
Combined Sewer System Long Term Control Plan**

APPENDIX F

Responses to Comments

Appendix F Responses to Comments

1. INTRODUCTION

This Appendix presents responses to comments received on the Draft Long Term Control Plan which was released in June 2001. An extremely large number of comments were received. In addition, there are significant degrees of overlap and common themes in many of the comments. As a result, comments were grouped by type and subject matter and addressed together in a commentary type response. The goal of this approach is to produce a commentary that is both readable and comprehensive. The comments were grouped as being related to the following topics:

- Nine Minimum Controls
- Alternatives Evaluation
- Separation
- Low Impact Development Source Control, Pollution Prevention
- Blue Plains Wastewater Treatment Plant
- CSO Location
- Flooding
- Implementability
- Tunneling
- Regulatory Compliance
- Public Participation
- Financial Capability
- Schedule
- Water Quality Standards Revisions
- Miscellaneous Comments

In the following text, each type of comments is described and a response is provided. The numbers after each comment refer to the comment number. Table 1 at the end of this section lists the commenters by comment number.

2. COMMENTS ON NINE MINIMUM CONTROLS

- 2.1 Several commenters indicated that WASA should install a public notification system to advise people of the occurrence of CSOs. Commenters suggested that given the long time frame for LTCP implementation, a notification system was needed in the short term. One commenter suggested the system should be installed within 12 months and that a schedule should be included in the LTCP. EPA also asked what real-time enhancements

Responses to Comments

to the overflow event warning system were planned to satisfy public notification requirements of the nine minimum controls (294, 295, 296, 297, 305).

The LTCP proposes a system of colored lights on each receiving water to notify the public. One color will be displayed when the overflow is occurring. Other colors would be displayed based on the overflow volume from a representative outfall in each receiving water. There would be two levels of notification; one for a normal event and another for a major event. For a normal volume, one color would be displayed for a specified time period. For a significant overflow volume, a second color would be displayed for a longer time period. The light display and durations following CSO events would be determined in consultation with The D.C. Department of Health and EPA.

- 2.2 One commenter indicated that WASA should fully implement the Nine Minimum Controls before embarking on a LTCP (306). EPA commented that the LTCP should more fully describe WASA's nine minimum control efforts to date, and plans to implement each of the NMCs. Since the overflow volume to be addressed by the LTCP can be reduced by maximizing NMC effectiveness, EPA indicated that it is important that current NMC information be reported. EPA asked if there were any near-term plans for trash and floatables control and if portions of the LTCP could be reduced in size or eliminated through full implementation of the Nine Minimum Controls. (305)

In 1996, WASA prepared a summary of its Nine Minimum Control (NMC) program. EPA made several comments on the report, which were ultimately addressed by WASA. Absent any documentation to the contrary, WASA thus considers its NMC adequate and in compliance with the CSO Policy.

In 1998, WASA participated in EPA's "Special Panel to Address Combined Sewer Overflows and Storm Water Issues in the District of Columbia". As a panel member, WASA was asked to review its NMC program and recommend improvements. This was documented in two reports: the *Nine Minimum Control Summary Report* (July 1999) and the *Nine Minimum Control Action Plan* (February 2000). No comments were received from EPA or the D.C. Department of Health on either of those reports. WASA continues to implement the enhancements to its NMC program as outlined in the reports.

It is important to note that the NMCs are best management practices. They are based on best professional judgement and are meant to be adapted to the site specific conditions of each system. The NMC program is also not a static program but is meant to be adjusted over time as appropriate. The enhancements that have been completed and those that are underway are in the spirit of making continuous improvements where feasible.

In the Draft LTCP, WASA has taken advantage of CSO reduction benefits of NMC-related measures. The two measures which have the most significant benefit are cleaning of the Eastside Interceptor and replacement of the inflatable dams. These components were assumed to be in place during the evaluation of alternatives. The benefits of these elements are shown on page 6-2 of the LTCP. Implementation of these measures has allowed for reduction in the size of capital facilities proposed in the Draft LTCP.

Regarding trash and floatables control, WASA will continue to:

- Operate the Anacostia River Floatable Debris Program on the Anacostia River. This is a skimmer boat program which removes floating debris on the river. Note that this program removes debris from storm water and upstream Maryland sources in addition to CSO sources.
- Continue to operate the end of pipe netting system on CSO 018 on the Anacostia River
- Continue the increased frequency of catch basin cleaning recommended in the NMC Summary Report.
- Operate the screening facility at the Northeast Boundary Sewer and the bar racks at the pumped overflows at the Main and 'O' Street Pumping Stations

Regarding a warning system to advise of overflows, WASA has proposed a warning light system to advise the public in the Final LTCP.

3. COMMENTS ON ALTERNATIVES EVALUATION

3.1 Some commenters suggested moving toward decentralized treatment systems such as composting toilets in lieu of centralized treatment systems (1,2). One commenter suggested constructing holding tanks for sanitary wastewater at individual properties such that wastewater could be held back during rain events so that overflows during rain events would not contain sanitary sewage (8).

There are two basic options for the management of decentralized treatment systems: operation by the utility such as WASA or operation by private individuals. Due to the large number of properties, operation by a utility would not be cost effective or practical. The large number required would be difficult to install, manage, maintain and operate. Operation by individual properties would not be reliable in that a significant percentage would likely be inoperable due to lack of maintenance. It is also unlikely that such a system would be accepted by the populace due to the space requirements of such systems, the need to enter private property to install them, and the disruption to private properties.

Responses to Comments

Note also that WASA's discharge permit will most likely require a specified degree of performance for the combined sewer system. Violations of the permit are subject to penalties by law. If decentralized systems were relied on to provide CSO control, there would need to be a permit system with individual properties in place to assure satisfactory performance to meet CSO control requirements. The numbers of properties and sites involved would make such a system expensive and unwieldy.

In a concentrated urban environment, management of sanitary wastewater is a health issue in addition to being an aesthetic and environmental issue. The health issue could be of special concern in high rise buildings with many tenants. Given these difficulties, this type of system is not recommended for CSO control.

3.2 A commenter proposed the use of floodplains for controlling storm water to prevent its entry into the combined sewer system and thus to reduce overflows (3).

Floodplains are typically used adjacent to natural waterways to accommodate floodwaters in a natural area where damage to property and life is minimal. In the combined sewer system, the natural drainage system has been eliminated by the development of the city such that there is no natural outlet available. Typically, the only outlet available is the combined sewer. In these systems, it is not possible to effectively use floodplains without separating the system. An approach where facilities are constructed to allow storm water to infiltrate into the ground instead of into the combined sewer system is possible and is known as low impact development-retrofit (LID-R). This approach is addressed in subsequent comments.

3.3 One commenter suggested using used oil tankers for storage facilities for CSO overflows in lieu of the proposed tunnels. The tankers would be parked near outfalls and would be dewatered to the treatment plant after the rain subsided (7).

The CSO outfalls in the District are geographically dispersed along the waterways. It would be necessary to use many tankers or connect groups of outfalls to a tanker using a large diameter pipeline or tunnel. The draft LTCP uses the interconnecting tunnel as the storage facility. It is thus considered a more practical approach. Use of tankers would present the following additional difficulties:

- Tankers would take up considerable space in the water way, would present a hindrance to navigation and recreation and would detract aesthetically from the water way
- Solids in CSOs that settle in the tanker would be difficult to remove and would compromise CSO storage capacity.

- Separate pumping facilities would be needed at each tanker. This would be more expensive and difficult to operate and maintain than one or two consolidated facilities.
- In many locations, water depth an/or physical facilities nearby would not make tankers feasible

For these reasons, tankers for CSO storage are not recommended.

3.4 One commenter suggested using CSO as “grey water” to water lawns at golf courses and for other non-potable uses. (11)

Greywater typically refers to water which has received a level of treatment rendering it safe for use in non-potable applications such as watering lawns. CSO has relatively high levels of bacteria, solids, and trash/floatables which would make it unsuitable for use a greywater without treatment. Treatment of CSOs was evaluated in the draft LTCP and was found to be less practical than storage due to the extreme flow peaks that can occur, the lack of land available for treatment, and due to the intermittent and unpredictable nature of CSOs. A grey water system would require CSO to be collected, treated and then distributed to where grey water could be used. Such a system is not cost-effective compared to other technologies, particularly in the eastern United States where water is relatively plentiful.

3.5 One commenter indicated that the Draft LTCP was prepared allowing for growth in the suburbs but that it would not allow for growth in the District without increasing overflows. (18) Another commenter indicated that the Draft LTCP assumed the District flows met their IMA allowances when the District is currently exceeds its IMA allowance. (430).

BPWWTP has a rated annual average flow capacity of 370 mgd. The Blue Plains Intermunicipal Agreement of 1985 (IMA) allocates wastewater treatment capacity between the District and the surrounding jurisdictions. The surrounding jurisdictions are allocated an annual average capacity of 212 mgd. The District is allocated a capacity of 148 mgd with 10 mgd reserved to accommodate additional Potomac Interceptor flows for a total of 158 mgd. The Draft LTCP was prepared using the dry weather flows specified in the IMA: 158 mgd for the District, 212 mgd for the suburbs, or 370 mgd total.

The Metropolitan Washington Council of Governments (MWCOG) recently completed wastewater flow projections for the BPWWTP in 2002. MWCOG uses the Regional Wastewater Flow Forecast Model (RWFFM) to project flows. The RWFFM is a computer model that links GIS sewershed layer with population projections to compute wastewater flows. The RWFFM develops a base year flow based on regression analysis

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of historical data. This is done to dampen the effects of short-term flow fluctuations. From the base year flow, the model then projects future flows based on population changes, infiltration and inflow allowances, and changes in wastewater management such as flow diversions to other treatment facilities.

MWCOG indicates that the year 2000 wastewater flow to the District was 160 mgd. The population in the District is projected to increase from about 518,000 in 2000 to about 648,000 in 2025. The unadjusted year 2025 wastewater flow from the District is projected to average 180 mgd. The term 'unadjusted' means it does not account for other changes in the sewer system. WASA plans a Wastewater Flow Reduction Program, a Water Conservation Program, and a Sewer System Assessment Program that are expected to achieve a total 20 mgd reduction in District Wastewater Flows. Considering these adjustments, MWCOG projects the flow from the District in 2025 to be 160 mgd.

The year 2025 wastewater flow of 160 mgd is extremely close to the 158 mgs used in draft LTCP. As a result, the Draft LTCP does allow for substantial population growth in the District without an increase in overflows.

3.6 Several commenters indicated that the plan failed to address rehabilitation of the existing combined sewer system. A commenter suggested that it did not make sense to spend money on a new tunnel system if the existing combined sewer was in need of rehabilitation. (35, 36, 37, 38, 39, 40, 41, 42)

In the LTCP, WASA accounted for rehabilitation of the CSS in areas where there were known problems and where rehabilitation could have a measurable CSO benefit. These rehabilitations include:

- Cleaning of the Eastside Interceptor- the Eastside Interceptor is a sewer between the Northeast Boundary and Main Pumping station that was determined to have a large degree of siltation. WASA cleaned the sewer and accounted for the resulting CSO benefits in the draft LTCP.
- Replacement of the Inflatable Dams – the inflatable dams are air filled devices placed in several large sewers that provide in system storage capacity. Six of the twelve dams are not functioning and WASA is in the process of replacing them. Again, the CSO reduction benefits of replacing the dams were demonstrated and accounted for in the draft LTCP.
- Rehabilitation of Pumping Stations – WASA is in the process of rehabilitating the Potomac, Main, O Street, Eastside and Poplar Point Pumping Stations to restore pumping capacity and improve system reliability. The CSO reduction

benefits of the rehabilitations were demonstrated and accounted for in the draft LTCP.

WASA is also beginning a program of systematic evaluation of its combined and separate sewer system to identify and prioritize areas in need of rehabilitation and improvement. This will be an ongoing effort. It is unlikely that this program will result in significant CSO reduction on the order required by the CSO Policy and to meet water quality standards.

3.7 Several commenters indicated the plan did not address the following items:

- Alleged inadequate maintenance of catch basins, separate storm sewers and combined sewers (20,21)
- Pollution from the separate storm sewer system and sanitary sewer overflows (SSOs). (16)
- Cross connections between the water and sewer system (17)

The draft LTCP was prepared in accordance with WASA's NPDES Permit and EPA's CSO Policy, which is now part of the Clean Water Act. In accordance with these requirements, the purpose of the plan is to determine what CSO controls are required to meet water quality standards and other requirements specified in the Policy. Other programs are in place or under development to address other issues as follows:

- Catch Basin Cleaning and Maintenance of sewers – WASA has an approved Nine Minimum Control Program which includes catch basin cleaning and maintenance of sewers. The frequency of catch basin cleaning is approximately once per year, higher in trouble spots.
- Pollution from separate storm water system – pollution from the separate storm water system comes from both separate sewer areas in Maryland and in the District. In Maryland, The Maryland Department of the Environment (MDE) is the agency responsible for regulating state environmental issues. For waters that do not meet water quality standards, each state is responsible for developing a total maximum daily load (TMDL) for each pollution source designed to bring it into compliance with water quality standards. Maryland is in the process of developing several TMDLs. EPA is regulating this process. In the District, the separate storm water system is being addressed as part of the MS4 permit held by the District Government. WASA is the storm water administrator, and relies heavily on the Department of Public Works and Department of Health for many aspects of storm water control. In addition to District sources of storm water, the Federal Government owns many storm water outfalls.

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- Sanitary Sewer Overflows (SSOs) - EPA is in the process of developing and promulgating its SSO policy. The nation as a whole is beginning to address these issues. WASA will be doing the same.
- Cross connections Between Potable Water and Sewer – WASA has identified cross connections in the system. As of March 2002, two separate contractors were working to address them.

3.8 Several commenters indicated that since flows from Maryland and Virginia take up capacity in the combined sewer system, they contribute to overflows. Commenters suggested that the suburbs should reduce their flows by water conservation, storm water controls or other unidentified measures. Another commenter suggested that the suburban flows should be carried around the combined sewer system so they do not affect the CSS and thus reduce overflows. EPA suggested that an alternative be developed to reduce the flow from the separated sewers from the suburbs and the District by storage, satellite treatment or conveyance past BPWWTP. (22, 23, 24, 29, 30, 44)

Flows to BPWWTP are governed by the Intermunicipal Agreement (IMA) of 1985. The IMA places annual average and peak flow limitations on the suburban jurisdictions. The suburbs are currently within their average and peak flow limitations and the LTCP was prepared by assuming the suburbs were discharging at these limits. WASA cannot require the suburban jurisdictions to reduce their flows without renegotiating the IMA. This would be a long and involved political process with an uncertain outcome.

An alternative wherein WASA would construct flow equalization basins in the District for the large suburban flows was evaluated. The purpose of the equalization basins was to reduce the suburban peaks during wet weather events. The modeling indicated that reducing the suburban peaks did not have a significant effect on CSOs in the District compared to the cost of the equalization basins. This is because the majority of the flow during wet weather is rainwater from the combined sewer system. It would also be difficult to obtain land and public acceptance to construct such facilities. This alternative was not considered attractive.

Conveying the suburban flows around the combined sewer area and directly to BPWWTP was also evaluated as a CSO control option. Construction of such facilities would be extremely expensive and disruptive. In addition, the overflow volume would not change significantly since the capacity of BPWWTP would still limit the amount of total flow treated.

- 3.9 Several commenters advocated for an integrated watershed approach that includes watershed protection and involves the counties. One suggested that WASA should allocate funding to these programs (26, 27, 28, 66, 67, 68)

The draft LTCP was prepared in accordance with WASA's NPDES Permit and EPA's CSO Policy, which is now part of the Clean Water Act. In accordance with these requirements, the purpose of the plan is to determine what CSO controls are required to meet water quality standards and other requirements specified in the Policy. While control of pollution sources in other parts of the watershed could improve water quality, they will not have any effect on CSO discharges. As a result, the draft LTCP was focused on controlling CSOs in the District.

The Draft LTCP indicated that control of CSOs alone will not allow the water quality standards to be met much of the time in the District. This is due to the other sources of pollution in the District and outside of the District. The analyses indicate that a watershed approach is necessary and that all major pollution sources must be controlled to achieve water quality standards.

WASA is active in larger watershed issues and is an advocate for control of other sources of pollution. WASA currently chairs the Anacostia Watershed Restoration Committee, which is a group established to bring together the major regulatory representatives and stakeholders in the watershed. WASA also has a role as the administrator for the District's separate storm water system permit issued by EPA. In this role, there are opportunities for reducing pollution from the storm water system. It is important to note that WASA shares responsibility for the storm water system with the Department of Public Works, the Department of Health and other agencies. However, WASA is not authorized to spend financial resources to control pollution that is the responsibility of other jurisdictions.

- 3.10 One commenter indicated that WASA's CSO modeling reports indicate that during the calibration, the combined system model predicted no overflows when overflows actually occurred during some calibration events. The commenter indicated that this raised concerns as to whether the model was capable of accurately predicting overflows. The commenter further suggested that WASA should account for this underprediction in some manner such as by increasing the size of the storage facilities. (31)

The model of the combined sewer system was calibrated to 9 months of monitoring data (October 1999-June 2000) representing a wide range of rainfall conditions. In general, the model calibration was excellent. In certain instances, the model predicted CSO overflows when none occurred, and other times did not predict overflows when some were measured. This was not a common occurrence and typically occurred at the smaller

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rainfall events that were near the threshold of overflowing. This is not atypical for CSO modeling and it represents the state of current predictive technology.

Overall, the model over predicted CSO overflow volumes by about 10-15% on an average year basis. This was intentionally done to provide conservatism and to account for the under prediction on certain occasions.

- 3.11 EPA commented that that the Real Time Control (RTC) alternative assumed the use of inflatable dams to provide in-system storage. Since the dams were susceptible to damage, the commenter suggested considering other technologies. (46)

The original inflatable dams in the District were an innovative and unproven technology at the time of installation. Some of the dams failed as a result of seam failure due to a manufacturing defect (not puncture). This also happened to other municipalities that installed dams from the same manufacturer. The manufacturer ultimately went bankrupt. The replacement dams that are being installed are from a reputable manufacturer with a proven track record at other municipalities. As a result, additional inflatable dams are a viable option for future installation.

Other options also exist such as sluice gates, butterfly gates, tipping weirs and movable weirs. The assessment of the practicality and cost effectiveness of additional RTC to supplement the existing dams would not be substantially affected by the selection of the technology employed.

- 3.12 EPA suggested that further consideration be given to satellite treatment of high volume CSOs where water quality impacts would be the greatest (47)

High rate physical chemical treatment (HRPCT) and disinfection were considered both in place of, and to supplement, the proposed storage facilities. These facilities were not considered preferred alternatives for the following reasons:

- Lack of land and difficulty in obtaining public acceptance for such facilities
- Intermittent operation would require continuous staffing or potentially unreliable automatic operation
- In order to have a reasonable number of treatment facilities, it is necessary to intercept and convey the various CSOs to one or more central sites for treatment. The size of these conveyance facilities becomes so large that it becomes more cost effective to increase their size to make them storage facilities
- Lack of cost effectiveness and practicality when compared to storage options

For these reasons, satellite treatment was not considered feasible or cost effective.

- 3.13 The Draft LTCP indicated that solid and floatable control would be incorporated into the design of new regulators. EPA requested clarification regarding where regulators are to be replaced and how the evaluation regarding the applicability of solids and floatables control would be evaluated (65).

New regulators would typically be provided for CSOs that will be controlled or captured by the tunnels. The regulators are used to divert CSO into the storage tunnels. Existing regulators cannot normally be used for this new function because the diversion rates required to achieve the specified degree of CSO control are much higher than the diversion rates of the existing regulators. The physical location of the regulators will depend on final location of the tunnels, the availability of land for construction and other factors. The siting of regulators is usually done at the design development stage.

The Draft LTCP indicates that WASA will incorporate floatables control for overflows which exceed the capacity of the recommended control plan into the design of new CSO diversion structures/facilities constructed as part of the LTCP. One method that might be used is a combination baffle/bar rack arrangement in new CSO regulators. This method has been used successfully in Richmond, Virginia and Boston, Massachusetts. As was discovered in those communities, there may be some outfalls where incorporation of floatables control into new facilities is not practical due to hydraulics, site constraints or other factors. As an example, there may be some outfalls where incorporation of solids/floatables control may cause added headloss such that flooding conditions may be created. It is not possible to make these types of assessments at this time. These evaluations are typically performed at the design stage when detailed information is available regarding facility location. WASA will make every effort to incorporate solids/floatables control where feasible.

- 3.14 While acknowledging that the option of relocating the Main and O Street Pumping Facilities to the Poplar Point was costly and less desirable at the present time, a commenter supported retaining this option in the event circumstances or events changed. Examples include public/private development in Poplar Point changes in real estate values, etc. (421)

Comment noted. The decision to relocate Main and O Street Pumping Stations is relatively independent of the selection of the LTCP. That is, nearly any LTCP can accommodate the relocation of Main and O Pumping Stations to Poplar Point. Deciding to relocate the facilities prior to completion of design of the new CSO facilities would be the most beneficial because it would allow joint design, construction and integration of the relocation in conjunction with other new facilities.

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4. COMMENTS ON LEVEL OF CSO CONTROL

4.1 Ten commenters expressed support for the Draft LTCP (217, 218, 219, 220, 221, 222, 223, 224, 225, 226).

Comment noted.

4.2 One commenter indicated an opposition to any CSO control because the water quality benefits were not that great. (232). Two commenters opposed any degree of CSO control without other polluters such as Maryland, Virginia and the Federal Government doing their fair share. (25, 289)

Control of CSOs is required by the Clean Water Act and by WASA's National Pollutant Discharge Elimination System (NPDES) Permit. Other communities in the nation also are facing this issue. By controlling CSOs, WASA will lead by example and hopefully encourage the surrounding jurisdictions and the Federal Government to control their pollution sources.

4.3 EPA indicated it was unclear how benefits from LTCP implementation will translate to protection of designated and existing uses. We know the reduced number of overflows, and the reduction in CSO loading. What we do not know is how severe a storm will have to be to trigger overflows, and what the resultant water quality impacts will be (assuming of course that other point sources and NPS are controlled as envisioned in the BOD TMDL)(433).

4.3.1 What magnitude storm [5 (or whatever) year storm, defined as so many inches per hour, for a given amount of time, spread over a defined area] will cause overflows to the Anacostia (post implementation of the draft LTCP)? How severe would a storm have to be to result in sufficient overflows to exceed numeric water quality criteria? How much of a CSO load would it take to cause such an exceedance?

In accordance with the CSO Policy, CSO planning is based on average year conditions. WASA's LTCP (and most LTCPs around the country) propose that remaining overflows after implementation will be in the range of 1 to 4 per average year. This means that storms less severe than the 1 year storm will cause overflows.

Determining the return frequency of a storm that will cause overflows is complex and not directly translatable to actual conditions on the ground. In addition to rain volume and intensity, overflows can be caused by back-to-back small or moderate storms. These storms can fill the storage facility to

capacity before there is time to dewater the facility. In this case, smaller storms that do not meet the “design storm” threshold can cause an overflow.

In addition to these complexities, design storms typically do not occur in the real world. Actual rainfall has a significant spacial and temporal variation that can dramatically affect overflows. Summer thunderstorms can cause intense rainfall in one drainage basin and little or no rainfall in an adjacent basin. Because of these complexities, it is difficult to translate design storms into real world actual conditions. As a result, and in accordance with the CSO Policy, average year conditions are used to gage system performance.

If upstream and storm water sources were controlled to levels required by the Anacostia TMDLs, the LTCP would meet the bacteria geometric mean standard in the Anacostia in the average year (the design condition per the CSO Policy). With other sources controlled, the same is true for the Potomac and Rock Creek.

4.3.2 How many days of water body use, if any, do the models suggest would be lost in an average year to such exceedances (post implementation of the draft LTCP)?

For the Draft LTCP in the average year, CSOs are projected to cause fecal coliform levels to rise above an average of 200MPN/100 ml for 11 days per year, 6 of which occur in the period of likely recreational use from May to September. Storm water and upstream sources are projected to cause exceedances of this criteria 183 days per year, a far greater number. Note that the 200 MPN/100 ml average daily concentration is a much more restrictive standard than the current water quality standards which specify a 30 day geometric mean.

4.3.3 Please repeat the above for the LTCP scenario suggested by DOH, in which there would be no overflows to the Anacostia in an average year.

The LTCP was evaluated based on a 3-year analysis period: 1988, 1989, and 1990. This included a wet year, dry year and average year. Average year conditions were defined as the arithmetic average of the results for the three years. The DOH plan called for no overflows in the dry or average year but allowed overflows in the wet year. For this plan, CSOs are projected to cause fecal coliform levels to rise above the 200MPN/100 ml daily average for 1 day per year. This day occurs in the period of likely recreational use from

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May to September. Storm water and upstream sources are projected to cause exceedances of this criteria 182 days per year.

- 4.4 EPA questioned the extent to which increasing the diameters of the Anacostia tunnels increases the percent capture and decreases the number of overflow events without significantly adding to the overall cost of the project (229).

The cost versus CSO reduction curves and the associated analyses in the Draft LTCP are shown on page 9-30 for the Anacostia River. The knee-of-the-curve is the point where increasing tunnel sizes results in proportionately more costs than CSO reduction benefits. This starts to occur at the four overflows per average year level. The Draft LTCP was selected at the point where increasing tunnel sizes results in proportionately more costs than benefits. The Final LTCP increases the level of control to the point where increased level of control will provide few water quality benefits at great cost.

4.5 General Comments on Level of Control

4.5.1 Comments Applicable to All Receiving Waters

- 4.5.1.1. Many commenters advocated for a higher degree of control in general without specifying the degree of control (152, 163-199, 211, 230).
- 4.5.1.2. Several commenters recommended developing a plan that eliminates CSOs under all conditions. It was unclear from the comments whether the commenters advocated separation. (4, 161, 206, 207, 208, 209, 210,214).
- 4.5.1.3. A commenter advocated for some way to stop overflows under all conditions short of separation.(14).
- 4.5.1.4. One commenter recommended sizing facilities for zero discharges in the average year (215)
- 4.5.1.5. One commenter indicated support for the tunnels but that they should be sized for zero overflows in the wettest year of the three year evaluation period (213)
- 4.5.1.6. One commenter recommended the highest degree of control feasible without separation (212).
- 4.5.1.7. One commenter indicated that CSO controls were investments for the future and that cost was thus not the biggest consideration (228). Another commenter indicated that the decisions made now about CSO control would affect the District for the next 100 years and thus WASA should be visionary and bold in making the right decision. (231)
- 4.5.1.8. One commenter called for less pollution in general (160)

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4.5.1.9. One commenter asked for a prediction of the magnitude of overflows expected for the 1, 5, 10, 15, and 25 year storms. (32)

4.5.2 Comments Specific to Anacostia River

4.5.2.1. The D.C. Department of Health suggested a CSO plan where the Anacostia tunnels would be sized for no overflows in the dry and average year with 1 to 2 overflows in the wet year. One commenter indicated support for DOH's plan. (216)

4.5.2.2. One commenter supported the tunnels as a good first step but indicated that more control was necessary (362)

4.5.2.3. One commenter endorsed the tunnels as laid out, but recommended they be sized to control the 25 year storm. The commenter further recommended that the pumping stations be upgraded, that LID be expanded and that water conservation be implemented in the Northeast Boundary. (156)

4.5.2.4. One commenter recommended that the goal in the Anacostia should be 0 overflows per year (157).

4.5.2.5. A commenter indicated that the Anacostia should receive priority because it is the most impacted river and that a higher degree of control should be provided for the Anacostia (158)

4.5.2.6. One commenter indicated the Anacostia River should receive a degree of control such that its water quality is the equal of the Potomac. (159)

4.5.3 Comments Specific to Potomac River:

4.5.3.1. In the Potomac, DOH concurred with the recommended plan which reduced overflows to 12 per average year (154)

4.5.3.2. One commenter indicated the Potomac tunnels should be sized for the wettest year in the three year evaluation period. (200)

4.5.3.3. Commenters indicated that the level of control proposed for the Potomac was too low compared to the other receiving waters. A commenter further indicated that the Potomac River is a highly used river for recreational purposes and that its use is expanding. The commenter indicated that there are opportunities for direct human contact with the water in the form of splashing from boat, boat upsets in the river, and dogs exercising in the river and then being handled by owners. The commenter recommended a higher degree of control for the Potomac River and suggested that the plan will

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have an adverse impact on users of the Potomac River. (201, 202, 203, 204, 205, 424)

This responds to all comments listed under item 4.5. The only CSO plan that will eliminate overflows under all weather conditions is separation. Separation has a cost almost triple that of the recommended LTCP, would cause massive disruption and hardships, and results in worse water quality than the recommended LTCP. For these and other reasons separation was not recommended. Given that separation is not feasible, there will be some remaining overflows for any CSO control plan. What remains to be decided is how big to make the facilities and how infrequent the CSO overflows will be. The higher the degree of CSO control, the higher the cost. The recommended plan was selected to provide an effective balance of overflow reduction, water quality improvement and cost. After implementation, it is predicted that CSOs will occur infrequently and that there will be very infrequent disruption of water quality due to CSO.

- 4.6 One commenter questioned the efficacy and rationale behind the Piney Branch tunnel in that it has very little water quality benefits. The commenter suggested implementing extensive LID and installation of a trash trap and disinfection facility in lieu of the tunnel at the Piney Branch Outfall. (33)

Due to the sensitive park setting, a trash trap and disinfection facility are unlikely to be acceptable to the National Park Service or the public. In fact, a screening facility was proposed for Piney Branch as a result of the 1983 CSO study. This was never constructed due, in part, to the impacts on Rock Creek.

- 4.7 One commenter suggested that there might be sewer leaks at sewers crossing Rock Creek at Military Road and the Dam upstream of Boulder Bridge. (44)

The receiving water monitoring in Rock Creek conducted as part of the LTCP did not suggest the presence of leaking sewers in the areas indicated. However, WASA will be conducting a City-wide assessment of the sewer system. Creek crossings will be one of the areas where particular attention will be focused.

- 4.8 One commenter suggested redesigning or closing regulators at Rock Creek where feasible. (45)

The LTCP proposes separation to eliminate four outfalls and associated regulators along Rock Creek. The plan also proposes monitoring and regulator improvements at four additional regulators in Rock Creek.

- 4.9 A commenter recommended setting enforceable milestones for reducing bacteria levels from Montgomery county to improve water quality in Rock Creek. The commenter

indicated that WASA should mandate aggressive LID in the Rock Creek sewer shed in Montgomery county coupled with water conservation measures to reduce flows through the Rock Creek Interceptor. (253)

WASA does not have the authority to place requirements on surrounding jurisdictions.

- 4.10 EPA suggested that Rock Creek appeared to be a good candidate for selective separation or other remediation prior to construction of the Piney Branch tunnel. EPA asked about other alternatives to correct storm water and CSO overflows to Rock Creek (43).

In the combined sewer area tributary to Rock Creek, almost all of the storm water and sanitary sewage is captured by the combined sewer system. This is evident by the very low annual overflow volumes compared to the large drainage area. The analyses have indicated that large-scale separation in Rock Creek would make the water quality much worse. This is because of the very large volume of storm water which is captured by the combined sewer system that would otherwise discharge untreated to the Creek if separated. Large-scale separation is thus not beneficial.

Due to the low overflow volume in Rock Creek, CSOs do not have a significant effect on water quality. In the Draft LTCP, CSOs are projected to cause fecal coliform bacteria levels to be greater than 200 MPN/100 ml 4 days per average year, while storm water and upstream loads are projected to cause this level to be exceeded 294 days per year. The proposed CSO control will lower the concentrations of bacteria in the Creek, but will not result in the attainment of water quality standards. However, control of CSOs to zero overflows per year does not produce noticeably different water quality in Rock Creek when compared to the proposed levels of control.

The analyses demonstrate that the only way to meet water quality standards is to control urban storm water and upstream loads. This is the case for many urban streams in separate sewer areas.

- 4.11 One commenter indicated that WASA should consider not constructing the Potomac Tunnel and putting the money into Anacostia CSO control instead. (6)

CSOs can adversely affect the water quality in the Potomac. The CSO Policy thus requires this to be addressed. However, priority has been given in the schedule to the Anacostia.

- 4.12 EPA recommended that the Potomac and Rock Creek tunnels be re-evaluated when the Anacostia tunnel is completed, as part of the Anacostia post-construction monitoring plan (324).

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Anacostia performance data will be used to re-evaluate the Potomac and Rock Creek programs where it is available.

- 4.13 One commenter indicated that the Draft LTCP “fails to reverse the old system of environmental injustice that has placed a disproportionate burden on the predominantly African-American communities on the East Side of DC”. The commenter indicated that much has been spent on cleaning up the Potomac River, and that the proposed plan fails to do this for the Anacostia. (153,155)

The greatest CSO control benefit and the largest expenditures in both the Draft and Final LTCP are directed toward improving the Anacostia River. Of the \$1.265 billion program, \$940 million or about 74% are directed toward improving the water quality of the Anacostia River. The plan proposes to reduce overflows to the Anacostia such that both the frequency and volume of overflows are less than overflows to the Potomac. The LTCP is thus extremely responsive to the suggestion that the Anacostia be given priority.

- 4.14 One commenter advocated considering downstream beneficiaries in the cost benefit analysis and not just beneficiaries in the District. (162)

The LTCP identifies benefits to water quality in the District associated with CSO control. To some degree, these same benefits apply to downstream populations. Jurisdictions in close geographic proximity to the District would benefit the greatest. Jurisdictions farther from the District would benefit less so since the natural processes of dilution and assimilation of pollution mean that CSOs have less impact on waters farther from the District.

5. COMMENTS ON SEPARATION

- 5.1 EPA and several other commenters indicated that further consideration should be given to partial or targeted separation. Commenters suggested an evaluation considering such measures as cost, volume reduction, impacts on water quality, ability to alleviate flooding, potential to alleviate human health hazards from recreational contact, age and condition of existing infrastructure, impacts on wildlife and ability to be constructed in tandem with storm water management and LID measures. Some commenters recommended specifically considering separation in upper Rock Creek, the Federal area, and in the Ivy City/Trinidad neighborhoods subject to flooding to prevent human contact with wastewater. (10, 48, 49, 51, 52, 54, 57)

An evaluation of targeted separation based on feasibility, cost, CSO reduction and water quality benefits has been conducted. This evaluation is included in the Final LTCP. The studies show benefits for targeted separation and selected outfalls will be included for separation.

5.2 Two commenters indicated that the cost estimates for separation were too high compared to the costs in EPA literature and the costs being used in Atlanta, Georgia (50, 58).

The unit cost of separation (\$/acre) was obtained from the literature, actual construction experience in other cities, and estimates performed by others. This data was obtained from cities such as San Francisco, Boston, Richmond, Chicago, Alexandria and others. The cost was found to range from about \$24,000/acre (year 2001 dollars) for small communities without dense development to about \$390,000/acre (year 2001 dollars) for ultra-dense urban areas. Most separation has taken place in small to medium size communities in low-density areas. Little actual construction data is available for large-scale separation of major metropolitan areas since most major cities have not selected this route. Different unit costs for separation were used as a function of land use in the District. High density areas were assigned a higher unit cost than low density areas. This reflects the increased expense associated with working around dense urban development in tight urban confines. The following unit costs were used:

- High density land uses: \$240,000/acre
- Medium density land uses: \$150,000/acre
- Low density land uses: \$85,000/acre

These unit costs conservatively allow for potentially expensive contingencies such as working on or around private property, as well as difficulties encountered during actual construction.

5.3 One commenter suggested looking at installing separate sewers inside of the existing combined sewers as a cost saving measure (53).

Installation of small separate sewers inside larger combined sewers has not been widely applied or tested. The technique would be limited to sewers larger 3 feet to 4 feet in diameter. Some concerns include

- It will still be necessary to deal with the downspouts and connections on private property. This can be a significant portion of the cost.
- It will still be necessary to separate by conventional means the smaller diameter combined sewer
- There is the potential of taking up excessive amounts of the hydraulic capacity of the combined sewer and the resultant creation of flooding problems

In the draft LTCP, separation of combined sewers was shown to result in worse water quality than the draft LTCP. This is due to the large amount of storm water that is collected in the combined sewer system and treated prior to discharge. This same

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disadvantage would apply to separation by installing separate sewers inside of combined sewers. As a result the difficulties noted above, separation is not recommended.

5.4 Three commenters advocated for complete separation of the combined sewer system. The benefits of separation were reported to be elimination of flooding, reduction of odors and the ability to meet water quality standards (59-64). In addition several commenters indicated that since the infrastructure is old and must be replaced anyway, separation makes sense (55, 64).

Complete separation of the combined sewer system was evaluated in the draft LTCP. Issues associated with this alternative are as follows:

- Disruption – Separation essentially involves constructing a duplicate sewer system for the central one third of the District. Sewer construction would be necessary in every neighborhood and in the vast majority of streets in each neighborhood. Disruption associated with construction would be significant, widespread, and long lasting.
- Impacts to Private Property – the majority of buildings in the combined sewer area have roof drains and gutters discharging to the building sanitary system, which in turn discharges to the combined sewer system. Separation on private property would thus be required. Past separation experience in the District and in other cities has shown that obtaining access and permission from private property owners can be difficult, time consuming, and, in some cases, not achievable
- Technical Difficulty – Other cities such as Boston have discovered some separation projects to be much more difficult to construct than originally anticipated. In some cases, the efforts to separate sewer systems have been abandoned. Part of the reason for this is that there are many unknowns involved in working with sewer systems which have been constructed over a long period of time. Costs and difficulties of construction can be much greater than originally anticipated depending on what is actually discovered.
- Impact on Receiving Water Quality – the analyses conducted as part of the LTCP indicate that separation does not provide as good water quality as a high degree of CSO control. This is due to the large volume of separate storm water captured and treated by combined sewer system. Separation would eliminate CSOs and would thereby technically meet the water quality standards. However, the waterway would meet the water quality standards less frequently due to the increase in untreated storm water.

- Cost – complete separation is estimated to cost about \$3.5 billion in year 2001 dollars. This is significantly more than the LTCP
- Flooding protection - Several commenters indicated that separation had the opportunity to eliminate flooding. In most cases, separation would be conducted by constructing a new sanitary sewer and converting the combined sewer to a separate storm sewer. The storm water conveyance capacity would then be provided by the existing combined sewer. The benefit to flood control would be very marginal since the existing sewer would be used. The only benefit would be that the combined sewer would no longer receive sanitary flow and would thus have some greater capacity for storm water.
- Reduction of odors – It is unlikely that separation will have a significant effect on odors.
- Need to Rehabilitate Collection System - Separation would involve constructing new separate sanitary sewers and converting the existing combined sewers to separate storm sewers. If the combined sewers need to be rehabilitated, that cost would need to be added on top of the cost to separate.

Given these reasons and other identified in the draft LTCP, complete separation of the combined sewer system is not recommended.

5.5 EPA commented that the report lacked a cost for separation of the Anacostia CSO areas (56).

The capital cost estimate for separating the Anacostia system is \$2.1 billion in year 2001 dollars. The total estimated cost of separating the entire combined sewer system is \$3.5 billion in year 2001 dollars. The LTCP has been amended to include this.

6. **COMMENTS ON LOW IMPACT DEVELOPMENT, SOURCE CONTROL, POLLUTION PREVENTION**

6.1 Many commenters advocated for more emphasis on non-engineered solutions aimed at reducing storm water such as Low Impact Development (LID) and Best Management Practices (BMPs) (10, 234, 236, 249, 254-274, 280). Commenters indicated that LID offers many side benefits such as beautification, reduction of heating/cooling costs, etc. (252). One commenter indicated that WASA should consider implementing LID instead of the tunnel system (235). Some commenters indicated that WASA should increase funding for LID (246-248). Others indicated that WASA's evaluation of LID was not

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reasonable in that is overstated the cost and understated the effectiveness (248, 251, 432). One commenter attached information indicating that LID can cost \$20,000-60,000 per acre to install (248). EPA commented that a more thorough proposal for LID options should be included covering the following (233). One commenter indicated that increased tree cover could significantly reduce runoff. The commenter indicated that DC had experienced a 64% decrease in tree cover since 1973 and that this resulted in a 34% increase in storm water. (282-285):

- CSO reduction benefits and water quality impacts of LID throughout District and not just on WASA facilities.
- A more complete explanation of program objectives and methods including coordination with storm water management plans required by the MS-4 permit for the District.
- Specific mechanisms to implement LID District-wide
- Review a variety of levels of LID application and assess benefits

The analyses conducted as part of the LTCP indicate that LID-R can reduce the magnitude and frequency of CSOs. Generally, CSO reduction benefits of LID-R are in proportion to the quantity of storm water that would be diverted from the receiving waters (e.g. Anacostia River) by the LID-R measures. In order to achieve a high degree of CSO control, a large application rate for LID-R is required.

In order to meet the requirements of the CSO Policy, the degree of CSO control proposed in the LTCP is extremely high in that the controls are sized for large and intense storms. As a result, the analyses indicate that application of LID-R by itself cannot be expected to provide the degree of CSO control proposed in the LTCP and required to meet the CSO Policy and D.C. Water Quality Standards. However, LID-R can be coupled with structural controls to reduce CSOs or to reduce the size of capital facilities required for the degree of control proposed in the LTCP.

There are several challenges associated with the implementation of LID-R. These have been divided into technical, institutional and regulatory issues below:

- Technical Issues - In the past, LID has been primarily applied in new developments. Little data are available on the application of LID in retrofit conditions on a mass scale the size of the District. The lack of data makes it difficult to predict the implementability, performance, cost and CSO reduction benefits of such measures. As a result, there is uncertainty as to the practicability of implementation of LID-R in heavily developed urban areas and as to its benefits and cost effectiveness.

- Institutional Issues – LID-R would need to be applied in streets, sidewalks, parking lots and in public and private property in the District. One difficulty is that WASA does not control and cannot regulate development or redevelopment in the District. As a result, WASA is not able to mandate application of LID-R. Laws and building codes in the District would need to be changed in order for this to occur. WASA can, however, recommend these types of changes to the District and provide technical assistance in their development.
- Regulatory Issues - The most practical and cost-effective way to implement LID-R would be in conjunction with redevelopment and reconstruction within the District. It would be much more costly to implement LID-R separate from reconstruction that was already planned. As a result, the implementation time associated with LID-R would be a function of the rate and magnitude of redevelopment. This may make the implementation time for LID-R very long with an uncertain end. After the LTCP is implemented, WASA's discharge permit will require a specified degree of performance for the CSO controls. Violations of the permit are subject to penalties by law. If LID-R is relied on to provide all or part of the control specified in the permit, this could place WASA in the situation of having to meet a permit condition without the means to control LID-R, which is relied upon to meet the permit.

Since WASA does not control development or redevelopment in the District, WASA cannot mandate application of LID-R. WASA can, however, incorporate LID-R techniques into new construction or reconstruction on WASA facilities, where applicable. In addition, WASA recommends that the District Government develop and adopt the necessary laws and regulations to enable implementation of LID-R. In the Anacostia, LID-R can be viewed as additional control over and above that provided by the proposed tunnels. Detailed recommendations are included in the LTCP.

- 6.2 One commenter indicated that the DC Council should create incentives for LID (278).
The LTCP makes recommendations for governmental initiatives to foster LID in the District. The creation of incentives by the District and Federal Government is one of the initiatives.
- 6.3 Several commenters indicated a support for a variety of source control measures such as building code changes, public education, source reduction, water conservation, I/I

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reduction, roof leader disconnection, storm water reuse, green roofs, street sweeping, and other measures (9, 237, 250, 275, 279, 281).

WASA has a water conservation and wastewater flow reduction program to reduce flow in the system. Modeling indicates that these programs will not have a significant impact on CSO overflows because most of the water in the combined sewer system that causes overflows is from rain water (runoff). The combined sewer system is designed to convey rainwater to prevent flooding. WASA also has an approved Nine Minimum Control program which includes a public outreach and education measures. In addition, WASA is involved in building code review and updates and uses this forum to advocate for source control measures for storm water.

- 6.4 One commenter supported collaborative efforts between WASA and the Office of Planning in the areas of public education, daylighting orphaned storm sewers, storm water detention and low impact development (420).

WASA will seek opportunities to coordinate and collaborate with the Office of Planning throughout the implementation phase of the LTCP.

- 6.5 Several commenters indicated that groundwater pumpage from properties in the Federal Triangle and other areas were of concern. Commenters indicated that these properties should pay to discharge water to the system. EPA commented that the LTCP does not propose to remove the groundwater and asked if anything could be done to eliminate these flows from the system (238-242).

Prior studies have estimated groundwater flows to the combined sewer system to be approximately 8 mgd. Modeling has indicated that removal of this flow from the combined sewer system has minimal impact on CSO reduction because it is very small relative to wet weather flows. The cost of removal is extremely high because there is no separate storm sewer to the receiving water.

Assessment of the feasibility of extending orphaned storm sewers to the receiving waters is described in detail on page 8-13 of the Draft LTCP. A potential disadvantage of this option is the resulting polluted storm water that would be untreated and thus affect water quality.

Both of these options were considered as a form of CSO control. While feasible, they were determined to be much less cost effective than the proposed solution.

- 6.6 Several commenters indicated that I/I control and water conservation should be a significant part of the LTCP. One commenter indicated that WASA's own studies suggest there may be up to 118 mgd of I/I in the system. Another commenter suggested

incentives to reduce water use (243-245). A commenter recommended conducting detailed I/I studies on the existing Rock Creek Interceptor (253).

Modeling indicates that reduction in base flow via infiltration and inflow and water conservation will not have a significant impact on CSOs compared to the cost of control. This is because the vast majority of the water in the system when overflows occur is due to storm water runoff. WASA has a water conservation and wastewater flow reduction program that is currently being implemented. The program is projected to achieve a 20 mgd reduction in base flow. The reference to up to 118 mgd of I/I is taken out of context. The report in question indicated that the exact amount of I/I is unknown and that the 118 mgd probably overstates the amount. The magnitude and cost-effective opportunities to remove I/I will be addressed as part of a City-wide sewer system evaluation that will be conducted in the near future.

7. COMMENTS ON BLUE PLAINS WASTEWATER TREATMENT PLANT

7.1 EPA questioned the predicted frequency and duration that denitrification would not be achieved due to high flow conditions at BPWWTP. EPA asked what measures could be taken to optimize treatment at Blue Plains and assure maximum denitrification (71).

The BPWWTP was designed for nitrification, and these facilities were placed in operation in 1980. The plant was not originally designed to remove nitrogen (i.e. to denitrify). In 1987, the District of Columbia signed the Chesapeake Bay Agreement, which calls for voluntary reductions in nutrients to the Bay by 40 percent by 2000 using 1985 as a base year. In 1996, a Denitrification Demonstration Facility was constructed at BPWWTP. The facility uses the existing nitrification reactors and other nitrification capacity to conduct both nitrification and denitrification. Nitrification capacity was reduced to the first four stages of the reactor, to accommodate denitrification in the last stage. Full scale denitrification using this approach was later incorporated at the plant.

This approach to denitrification utilizes one facility for two processes. There are difficulties in conducting denitrification under all conditions of flow, load and temperature. This was shown to be the case when implementation of nitrogen removal was negotiated with regulatory agencies. Experience with the full scale facility has shown that denitrification process produces poorly settling solids which contribute to solids washouts and blinding of the effluent filters at high flow rates. This is due to attempting to treat high flows during storm events simultaneously with nitrification-denitrification using the same tankage, particularly during cold weather. Based on this experience, it appears that BPWWTP will not be able to reliably denitrify under high flow conditions.

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The frequency of this occurrence depends on rainfall conditions and water temperature. A preliminary estimate of the time denitrification might not be feasible is on the order of 100 days per average year. This will need to be refined when higher flows begin to be received at the plant after the pump station rehabilitations.

Because the Chesapeake Bay Program is considering revised nitrogen limits for the Bay, future nitrogen removal at Blue Plains may include total nitrogen effluent concentration as low as 3 mg/L. Chesapeake Bay Program Goals may thus dictate nitrogen removal requirements at the plant, and further measures should be based on the final outcome of the Bay Program.

- 7.2 EPA indicated that outfall 001 at BPWWTP had been characterized as a CSO under the existing NPDES permit, but that it may be characterized as a bypass under the CSO Policy. Under the CSO Policy, approval of a CSO bypass requires that the LTCP provide justification for the cut-off point at which the flow will be diverted from the secondary treatment portion of the treatment plant and provide a cost-benefit analysis demonstrating that conveyance of wet weather flow to the POTW for primary treatment is more beneficial than other CSO abatement alternatives such as storage and pump back for secondary treatment, sewer separation, or satellite treatment. EPA indicated the LTCP should include a section addressing this (70).

This assessment is included in the Final LTCP.

- 7.3 One commenter asked what modifications, if any, were required to accommodate the increased flows expected at BPWWTP. The commenter further questioned whether the increased flows would be treated by the full process train or the excess flow treatment train. If the flows are to be treated by the full train, the commenter asked if WASA possesses sufficient unused capacity in the IMA to handle the additional flow. If not, the commenter asked how the District would acquire that capacity (69, 72, 75, 427).

Once the pumping stations in the system are rehabilitated, increased flows will be sent to BPWWTP during wet weather. These improvements consist of the addition of four new clarifiers and appurtenant weir and control system improvements. To accommodate this, improvements to the excess flow treatment train are recommended to improve performance and reliability. Stored CSO captured by the tunnels will be treated by the complete treatment train that discharges effluent at outfall 002. No improvements to the complete treatment train are proposed.

- 7.4 A commenter asked if the increased flow at BPWWTP due to the LTCP would cause operational impacts or affect the plants ability to meet permit limits (74, 429).

The plant is projected to be able to meet its permit limits with the LTCP in place.

- 7.5 A commenter asked if any new facilities would be considered joint-use or non-joint use facilities and asked about the cost of the modifications (72, 73). The commenter also asked if there would be any increase in Blue Plains operational costs and if the expense would be considered a WASA-only expense (76).

The cost apportionment of facilities and operation costs at BPWWTP have not been determined, but will be addressed once a Final LTCP is approved for implementation by regulatory agencies.

- 7.6 EPA asked what additional solids handling facilities would be included in the tunnel system and at Blue Plains to handle increased flows (367)

The tunnels will capture solids that will be pumped to BPWWTP for removal. Tunnels typically include screens to protect pumps and a sump at the end with clamshell for removal of material at pumping station. Tunnel slopes are also set to wash any solids to the pump station for removal. Additional solids handling facilities are not projected to be required at BPWWTP.

- 7.7 A commenter indicated that WSSC leases 95 mgd of capacity in the Anacostia System. The commenter asked if the lease could continue or if WSSC could acquire some additional capacity in the Anacostia system (77).

The LTCP contemplates that the District will utilize the capacity it is currently using in the 108" Anacostia Force Main via pumpage from the East Side Pumping Station. As a result, the LTCP does not anticipate any change from current conditions.

8. COMMENTS ON CSO LOCATION

- 8.1 Several commenters indicated that CSOs discharge to areas that are highly used and indicated that these CSOs should be moved, eliminated or given extra control. Concern was voiced for CSOs discharging near the Zoo in Rock Creek, Thompson's Boat House in the Potomac, and the marina's in the Anacostia. The commenter suggested that the outfalls near the entrance to Zoo be closed since it is in an area where wading might occur. EPA questioned whether some CSOs could be eliminated or consolidated (45, 78, 79, 80, 104).

The Final LTCP includes consolidation and separation of some outfalls. Those outfalls that are consolidated can be eliminated entirely. For those outfalls that are separated, a separate storm sewer outfall will remain.

9. COMMENTS ON FLOODING

- 9.1 Many commenters made general complaints about flooding in various sections of the District, some within the combined sewer area, others in the separate sewer area. Many

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of the complaints were general in nature and not specific to one area. Commenters indicated that while the Draft LTCP would address flooding in some areas, it would not address problems District-wide. Other commenters indicated that the LTCP should indicate whether the proposed improvements will prevent reoccurrence of the flooding that occurred on August 11, 2001. A commenter indicated that WASA was not responsive to the flooding of August 11, 2001. Specific complaints were issued about the following areas: (128, 129, 131-139, 141, 142, 143, 145, 148)

- 31st and K Street NW in Georgetown
- West Virginia and Mt Olivet, NE
- Basement apartments in Dupont Circle area
- Bloomingdale and Trinidad neighborhoods

The purpose of the LTCP is to select CSO controls for the combined sewer system. Addressing the need for capacity/flooding relief is being addressed as part of a separate City-wide evaluation of the sewer system. However, while preparing the LTCP, an opportunity was identified to address long standing flooding problems in the Northeast Boundary drainage area. This includes the areas of West Virginia and Mt. Olivet, NE, the Bloomingdale and Trinidad neighborhoods, and Rhode Island and 4th Avenues NE. These areas were addressed due to the historical and well known nature of the chronic flooding occurring in these areas. Many of the areas that flooding on August 11, 2001 were not previously known as susceptible to flooding. These areas will be addressed as part of the city-wide assessment of the sewer system.

- 9.2 EPA commented that the LTCP should describe in greater detail how and on what schedule the recommended plan will alleviate flooding in the Northeast Boundary area (130). EPA also commented on the new “relief outfall” into the Anacostia near the Northeast Boundary Swirl Facility and outfall 019 with the following questions: 1) What is the predicted frequency and duration of overflows for this outfall? 2) Is it included in Table 9-3? 3) Are the flows part of the receiving stream model for the Anacostia? 4) What are the impacts to water quality from the discharge? 5) What controls will be placed on the new outfall? 6) How is the new outfall to be permitted? (150)

Flooding in the Northeast Boundary is described on pages 8-26 and 8-27 of the LTCP. Three of the tunnels in the Draft LTCP address flooding in these areas as follows:

- Tunnel parallel to the Northeast Boundary Sewer
- Short tunnel from the Northeast Boundary Sewer to Rhode Island & 4th St NE
- Short tunnel from the Northeast Boundary Sewer to West Virginia & Mt. Olivet, NE

The flooding in these areas is predominantly caused by inadequate capacity of existing sewers, including the Northeast Boundary Sewer. When the existing sewers reach their capacity, the excess flow would be relieved to the new tunnels. Under certain rain events, the tunnels will be large enough to contain the entire volume of flow such that there is no CSO overflow. Under extreme rain events, the tunnels will fill and then act as conveyance pipes to move flow from the neighborhoods to the river to prevent flooding. After the storm stops, the tunnel contents will be dewatered to BPWWTP for treatment.

Flooding relief would be provided when all of these project components are completed. It is important to note that the tunnel parallel to the Northeast Boundary Sewer must be constructed prior to the short tunnels to the areas prone to flooding. This is because the Northeast Boundary Sewer has limited capacity. Construction of the short tunnels prior to the relieving the Northeast Boundary Sewer would exacerbate flooding downstream.

The proposed tunnels have been sized to convey up to the 15-year storm without flooding in accordance with WASA's design standards. There may be flooding for more extreme storms. In addition to the tunnels, some surface drainage improvements may be required to transport storm flows to the tunnel inlet structures.

The existing Northeast Boundary Sewer outfall does not have adequate capacity to convey extreme storm events to the river. In order to provide flooding relief, the existing outfall may need to be replaced or augmented for a short length. Depending on how the system is designed, it may be possible to reuse a short section of the existing outfall to eliminate the need for an entirely new outfall. Another approach would be to replace the existing outfall. The final approach will need to be worked out during detailed design.

The outfall replacement/augmentation does not affect the overflow volume, frequency, water quality, etc.; it only affects whether the overflow gets to the river in the existing pipe or in a new pipe. As a result, the overflow predictions, the data in Table 9-3 and the water quality models and predictions are all correct for replacement/augmentation of the Northeast Boundary outfall. The proposed tunnel will control the Northeast Boundary overflows. Permitting approaches will depend on the approach taken in final design.

The schedule for completion of these projects in the Draft LTCP is provided on pages 12-16 and 12-17.

- 9.3 A commenter expressed concern about flooding in a basement caused by roots in a sewer lateral (140).

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WASA will clear blockages of sewer laterals in the public right of way. Contact Consumer services at 202-612-3400. Blockages of laterals on private property are the responsibility of the property owner. A licensed plumber should be contacted to address the problem.

- 9.4 One commenter stated that WASA indicated a large quantity of rain fell on August 11, 2001 but that National Airport reported a relatively small amount of rain (144).

The rainfall on August 11, 2001 was extremely regional in nature. National Airport reports that rainfall totaled 0.92" that day. In contrast, certain areas of the District such as near McMillan Reservoir, Dupont Circle and along MacArthur Boulevard, NW received more than 4" of rain on August 11, 2001. The rainfall was not uniform and rainfall quantities and intensities depended on geographic location.

- 9.5 Two commenters indicated that implementation of the LTCP was too long to wait for flooding relief in Northeast Boundary and that short term fixes should be implemented. (147, 149).

WASA has a program to provide temporary flooding relief in certain areas of the Northeast Boundary, primarily those off of Florida Avenue. These projects are being performed in conjunction with the Department of Public Works and involve regrading and the addition/revision of catch basins and inlets. These projects will provide a measure of flooding relief in certain areas until the tunnels are completed.

10. COMMENTS ON IMPLEMENTABILITY

- 10.1 EPA asked to what degree the "implementability" of the recommended control plan been evaluated. EPA asked what permits or approvals might be required from the National Park Service (NPS) and if discussions been undertaken with NPS or LTCP comments had been received from them (150).

Many alternatives were evaluated prior to selecting the Draft LTCP. These alternatives included surface storage facilities, treatment facilities or other measures that were determined unlikely to be implementable for a variety of reasons. These include lack of available land, public acceptance, need for permits and other operational and maintainability reasons. In contrast, the Draft LTCP was selected in part because it has a good likelihood of being implementable. Tunnels can be constructed with much less surface disruption and land requirements than many other alternatives and do not include the relatively complex operation and maintenance features of treatment and surface storage facilities.

On September 10, 2001, WASA briefed the National Park Service on the Draft LTCP. The response of the NPS was generally favorable in that the Draft LTCP would require

significantly less construction in the park than other alternatives. Some comments have been received from the NPS. Comments from the staff level at the National Park Service Rock Creek Office expressed concern over the Piney Branch tunnel and issues associated with construction access, tunnel location, whether the tunnel was needed, and others. WASA hopes to be able to work through these during preliminary engineering and design.

- 10.2 EPA questioned if it would be necessary to obtain easements for the tunnels, who the affected property owners would be and if efforts had been made to reach agreement with them (151).

Actual land/easement requirements will depend on the final alignment and configuration selected for the control facilities. Efforts will be made to select alignments in public right-of-ways where possible to minimize the need for easements. No efforts have been made to reach agreements with landowners since the alignments of the proposed tunnels have not been selected and since the LTCP has not been finalized or approved. Easement/land acquisition will be part of the design phase. A preliminary assessment of the possible land requirements is in Section 13 of the LTCP.

11. COMMENTS ON TUNNELING

- 11.1 Several commenters indicated that Milwaukee CSO tunnels have experienced significant leakage which has compromised their capacity. Others indicated that Chicago's tunnels are undersized and have not performed as designed. Commenters indicated concern as to whether tunnels are a reliable and effective solution. Another commenter indicated that WASA should look at the lessons learned in other cities (345, 346, 347, 348, 15). EPA asked what degree of confidence WASA had that the tunnel sizing will be adequate to limit overflow events and avoid a situation such as that being experienced in Milwaukee where tunnels must be expanded due to continued CSO overflows and system backups. (369)

This comment goes to whether tunnels are a reliable technology for CSO control. Tunnels have been used successfully in many CSO cities including Rochester, Chicago, St. Louis and San Francisco. Tunnels are also proposed for other CSO cities such as Atlanta. WASA has surveyed these other municipalities regarding their experience and will take this into consideration during design.

Milwaukee's control program started in 1977 and its tunnels went into service in 1993. The cost of the system was about \$2.8 billion. The program included approximately 17 miles of tunnels with diameters ranging from 12 to 32 feet, having a total storage volume of about 405 million gallons. In addition to CSOs, the tunnels were designed to control sanitary sewer overflows and to relieve the existing interceptors in the system. The

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design goals of the system were to reduce overflows from approximately 50 to 2 per average year. The tunnels were constructed in rock, with approximately 60% of the tunnel unlined.

The performance of the system as reported by Milwaukee is as follows:

Performance of Milwaukee CSO Tunnels

<i>Year</i>	<i>Rainfall</i>	<i># of CSO Events</i>	<i>Notes</i>
1991	68"	66	
1992	46"	46	
1993	65"	64	
1994	27"	1	Tunnels in service
1995	31"	1	
1996	24"	1	
1997	33"	2	
1998	35"	2	
1999	38"	6	
2000	44"	5	
Long Term Average Rainfall = 31"			

The system is performing as designed. In dry years, the overflows were less than the average year and in wet years the number of overflows were more than the average year.

There have been reports of infiltration of groundwater into the tunnel and exfiltration of CSO out of the tunnel at levels above what was expected. Milwaukee is in the process of performing an inspection to quantify the degree of infiltration. One of contributing factors may be that 60% of the tunnels are unlined. Lining tunnels significantly improves the ability to control infiltration. In the District, it is likely that tunnels will need to be lined since the majority are expected to be soft ground tunnels. Other measures such as synthetic barriers in conjunction with concrete can also be employed to control infiltration.

Chicago is in the process of implementing the Tunnel and Reservoir Plan (TARP). It consists of 4 main tunnels and three reservoirs. Construction began in 1975 and is ongoing. The tunnels have been completed and hold approximately 2 billion gallons (bg) of CSO. The reservoirs are proposed to store in excess of 12 bg. Only one reservoir with a storage volume of 3.5 bg has been completed.

There is no indication that the Chicago system is not performing properly. The level of performance is reported to be in keeping with the degree of completion of the tunnels and

without the reservoir components in place. Prior to implementation, overflows occurred about every 4 days (90 times per year) and they have decreased to about once per month (12 times per year). The performance is expected to improve with completion of the majority of the storage volume, which is in the reservoirs.

The technology of constructing tunnels has improved significantly since many of the earlier CSO tunnels were constructed. The District also has the advantage in that Metro has constructed many miles of subway tunnels. This experience will assist in the proper selection of construction methods to achieve reliable operating tunnels.

11.2 Commenters indicated concerns about odors from the tunnel particularly when filling and emptying (351, 357).

Tunnels are constructed very deep and there are limited points of access to the facilities. As a result, odors generated in the tunnels have a reduced potential for contact with the public when compared to a wastewater treatment plant or other above-ground wastewater facility. In addition, odor control facilities are sometimes employed to reduce the potential for odors. When they are being emptied, water is pumped out of the tunnels. In these conditions, air flows into the tunnels to replace the water that is being removed. This tends to minimize odors. During filling, air in the tunnels is displaced by the incoming CSO. The tunnel usually fill relatively quickly, reducing the time available for contact with odors. In addition, the tunnels fill during rain storms when there are few people about. Techniques to minimize odors include locating vents in areas where there is reduced opportunity for public contact, maintaining a slightly negative air pressure on the tunnels to prevent fugitive emissions, incorporating dampers or other controls to reduce fugitive emissions, and incorporating odor control. The specific techniques to apply to the proposed tunnels will depend on the alignment and configuration developed during detailed design.

11.3 A commenter indicated a concern about the tunnel leaking and contaminating the groundwater or collapsing. (352). EPA also asked what measures would be taken in tunnel design and construction to monitor and control infiltration and exfiltration in the tunnels (370)

Measures to control groundwater infiltration and exfiltration of tunnel contents will depend on the geology, groundwater chemistry, location and size of the tunnels. The exact measures to be employed will be selected during the detailed design phase when specific information is available for each tunnel section. It is possible that different measures will be employed along the length of the same tunnel as conditions change. Given that the tunnels are well below grade, are below the river level, and will be empty for much of the time, it is likely that groundwater infiltration will be the most significant

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concern. Measures to control both infiltration and exfiltration include lining the tunnel with concrete, incorporating a synthetic liner in conjunction with the concrete liner and grouting from inside the tunnel or from the surface to reduce the permeability of the ground immediately around the tunnel.

- 11.4 One commenter recommended that a ground water flow system analysis be performed prior to construction consisting of 1). Investigating and describing the hydrogeologic framework (geology) 2). Understanding the inflows and outflows of the groundwater flow system, 3). Describing the hydraulic properties of the geologic media and its ability to groundwater to the tunnels, 4). Determining the interaction of the groundwater with the major surface water bodies in the District and 5). Studying the groundwater quality conditions in the District to assess the potential impact of storage tunnels on groundwater and surface water quality (355, 356, 359, 361, 363, 364).

These types of evaluations are typically performed during the preliminary engineering phase where horizontal and vertical alignments for the tunnel are chosen. The impacts of the tunnel on groundwater and the selection of appropriate lining and waterproofing techniques for the tunnel are important elements of the design and will be performed in that phase of implementation.

- 11.5 Concern was expressed about the lack of specificity as to the alignment of the Potomac tunnel, the location of shafts, the locations for hauling tunnel spoil, the disruptions associated with hauling such as traffic (349, 350, 365). Some commenters expressed concern over the possibility of adversely affecting existing structures during tunnel construction due to excavation of the tunnel or the ancillary activities such as truck traffic. Particular concern was expressed over possible effects on the Potomac Boat Club, Key Bridge, Whitehurst Freeway, Metro Tunnel, and the C&O Canal Park. Reference was made to shifting soils during construction of unspecified Metro tunnels (354, 360). A commenter asked for more details regarding Piney Branch such as details on construction methods, access locations, construction impacts to the park, impact on groundwater, if other alignments were considered, if the tunnel could be eliminated by using LID, etc (425, 426).

The tunnel alignments presented in the draft LTCP are preliminary concepts. If approved, engineering studies would be performed to collect data necessary to site the tunnels and shafts. During this phase, data is collected on the location, depth and condition of existing structures. Consideration is also given to siting construction shafts where removal of excavated material is feasible and where access routes during construction will minimize nuisances to the public. WASA will select tunnel routes and/or construction methods to protect and preserve existing facilities and to minimize

construction impacts such as traffic. The lessons learned by Metro will be valuable in assisting the successful construction of the proposed CSO tunnels.

- 11.6 One commenter expressed concern over the possible interruption of sewer service associated with construction of the plan (353).

The tunnels are proposed to be connected to the main interceptor sewers and outfalls in the system, typically well downstream of most residential and private sewer connections. As a result, it is unlikely there will be an interruption in sewer service for the vast majority of customers. In the unlikely event that an interruption in service is required, it would likely be of short duration and would affect a small number of customers.

- 11.7 One commenter expressed concern about WASA's ability to maintain the tunnels because of their depth and inaccessibility (358).

Many other municipalities have tunnels for CSO control and other purposes. Review of the experience of these municipalities indicate that it is important to design the facilities in a manner that will facilitate maintenance and access in the future. Examples might include providing openings/shafts to the tunnel large enough to accommodate cleaning equipment and providing facilities for proper ventilation.

- 11.8 EPA noted that the recommended plan for Rock Creek requires monitoring regulators for overflows. Connection of the Rock Creek Interceptor to the Potomac Tunnel may be required as a result. EPA asked if the Potomac Tunnel has been sized to accept the Rock Creek Interceptor flows initially (366)

The Potomac Tunnel has been sized to relieve the Rock Creek Main Interceptor.

- 11.9 EPA asked what cost estimation data was used to develop cost estimates for the proposed tunnels and asked for an assessment of WASA's level of confidence in the estimates (368).

WASA obtained construction cost data from Metro and from tunnels in other cities.

WASA also retained a tunnel consultant to provide specific estimates for the tunnels as proposed. In addition, cost curves for tunnel projects in other municipalities were reviewed. Based on this data, cost curves were developed for tunnels in rock and tunnels in soft ground as a function of geology. The basis for the tunnel construction costs has been included in an appendix of the Final LTCP.

In accordance with the Association for the Advancement of Cost Engineering definitions, cost opinions developed for the LTCP are considered to be concept screening level estimates, with an expected accuracy of +40%, -15%. Cost opinions are of this accuracy because alternatives have been prepared with a minimum of detailed design data for the

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purposes of relative comparison. This type of analysis is appropriate for comparisons between control programs.

- 11.10 EPA inquired as to what preliminary geologic and hydrogeologic investigation had been done to determine feasibility and potential siting of underground storage tunnels (371).
Data on soil borings from other projects were collected and reviewed by geotechnical and tunneling experts. Some data was available on other tunnels in the District such as the B Street/New Jersey Avenue relief sewer which terminates at the Main and O Street site. The largest amount of data demonstrating the feasibility of tunneling is Metro's experience in constructing miles of tunnels in the DC area. Detailed site specific information will be collected as part of the facility planning investigations which will be conducted once the Final LTCP is approved.

12. COMMENTS ON REGULATORY COMPLAINT

- 12.1 One commenter indicated that the recommended LTCP will still allow overflows every year and that such overflows will violate existing DC water quality standards. The commenter indicated that CSOs must comply with both the numerical and narrative portions of the standard. The commenter further indicated that the LTCP must demonstrate compliance the water quality standards under "all potential weather conditions", not just the average year (318).

The current District of Columbia water quality standards include both numeric and narrative components. The narrative components require, among other items, that discharges be "free of untreated sewage". Given the current standards, no alternative short of complete separation can completely eliminate overflows (and thereby comply with current standards) during all conditions. Separation has a cost almost triple that of the recommended LTCP, would cause massive disruption and hardships, and results in worse water quality than the recommended LTCP. For these and other reasons, separation was not recommended.

The CSO Policy requires development of controls based on average year conditions, not "all conditions". It is difficult to conceive of any plan that can accommodate "all condition" since this would include hurricanes, 100 year storms, and the intense August 11, 2001 rain event that occurred in the District.

Given that separation is not feasible, there will be some remaining overflows for any CSO control plan. What remains to be decided is how big to make the facilities and how infrequent the CSO overflows will be. The higher the degree of CSO control, the higher the cost. The recommended plan was selected to provide an effective balance of overflow reduction, water quality improvement and cost. After implementation, it is

- predicted that CSOs will occur infrequently and that there will be very infrequent disruption of water quality due to CSO. This is consistent with the CSO Policy (now part of the Clean Water Act), which calls for an evaluation of what water quality standards are actually achievable and for revision of standards, where appropriate.
- 12.2 A commenter indicated that the LTCP fails to comply with the CSO Policy because it does not address cost-effective expansion or retrofitting of the proposed system. EPA requested an explanation as to how cost effective expansion might be accomplished. (317, 317, 435)
The LTCP is expandable and a section describing this is included in Section 13 of the LTCP.
- 12.3 A commenter alleged that the draft LTCP violates the 2001 Anacostia Watershed Restoration Agreement and the Chesapeake Bay Agreement, which the District is a signatory (319).
In 1991, the District of Columbia, State of Maryland, Montgomery County and Prince George's County signed the Anacostia Watershed Restoration Agreement. The Agreement was reaffirmed in 1999 and again in 2001. The agreement has six main goals that call for improvement in water quality, ecological integrity, increased forest cover and public involvement. The attachment to the Agreement calls for initiation of long term CSO controls before 2010, a 95% reduction in CSO to the Anacostia with the LTCP determining the ultimate level of control and schedule for implementation. The LTCP is completely consistent with the agreement.

In 1983 and 1987, Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and EPA signed agreements establishing the Chesapeake Bay Program to protect and restore the Chesapeake Bay. In 2000, *Chesapeake 2000* was signed which reaffirmed the commitments. The Agreement calls for many measures to improve the ecosystem such as habitat restoration, water quality protection and improvement, nutrient reduction, land conservation and other factors. The reductions in CSO overflow of more than 96 % for all receiving waters is a massive reduction in pollutants and is entirely consistent with the Chesapeake Bay Program Goals and Agreement.
- 12.4 A commenter indicated that the LTCP does not adequately meet the CSO Policy requirements for including a post-construction monitoring plan. The commenter indicated that the plan provides inadequate details regarding the how, when and where such monitoring will be conducted. (321). EPA also indicated that more detail on the

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Post Construction monitoring plan should be included in the LTCP, including a schedule. (320).

A post-construction monitoring program has been included in the LTCP.

- 12.5 EPA indicated that a more detailed discussion of sensitive areas should be included for each of the three receiving waters. EPA indicated that the LTCP only addresses Rock Creek and does not explain how the Hay's Spring Amphipod will be protected by implementing CSO controls. EPA stated that a discussion of the actual impacts of CSOs and LTCP-related construction on each species (and mitigation efforts) is necessary. EPA noted that the Short Nosed Sturgeon was not been included in any discussion of sensitive areas for the Potomac. Since this endangered species has been known to reside in Potomac waters, EPA said it should be addressed in the plan along with the other threatened and/or endangered species (314). A second commenter indicated that the Anacostia and Potomac Rivers are waters with primary contact recreation as an existing use. The commenter attached photographs of people using the water body. The commenter indicated that this makes the Anacostia and Potomac Rivers sensitive areas as defined by the CSO Policy. The commenter indicated that the presence of the Hayes Spring Amphipod also makes this section of Rock Creek a sensitive area. The commenter indicated that the CSO Policy requires WASA to eliminate or relocate the outfalls on these water bodies unless it can demonstrate that it is not physically possible or economically achievable or that it would provide less environmental protection than additional treatment. The commenter further indicated that even if this determination could be made, the CSO Policy requires WASA to provide the level of treatment for remaining overflows necessary to protect existing and designated uses, which include primary contact recreation. (315)

An extensive assessment of sensitive areas for all receiving waters was made in *Study Memorandum 3-4: Sensitive Area*. An overview of the analyses was included in the Draft LTCP on page 2-13. In the Final LTCP, the complete analyses from the study memorandum have been included.

The analyses indicated that there were no sensitive areas in the Anacostia and the Potomac, and that the only potential sensitive areas were the occurrences of the Hayes Spring Amphipod in Rock Creek. In accordance with the CSO Policy, the analyses in Section 9 of the LTCP evaluate the feasibility of eliminating, relocating, or treating overflows to potential sensitive areas. The report concluded that these alternatives were not feasible and that the approach should be to provide the level of control necessary to protect designated uses and meet water quality standards. Actual construction activities will have no impact on the amphipod and the resulting water quality improvement will be of benefit to it.

Regarding the Short Nosed Sturgeon, correspondence with the U.S. Fish and Wildlife Service does not indicate that this fish is a federally listed species in the District. The only reference that we can find to it is in the District's MS4 Permit, which indicates that the fish may occur in the Potomac. In any case, the selected CSO controls will improve the water quality in the Potomac.

Note that in comments on the Draft LTCP, the U.S. Fish and Wildlife Service has indicated that the proposed LTCP will have no adverse impacts on threatened or endangered species and is likely to be beneficial to them.

Regarding primary contact recreation and existing uses, EPA defines an existing use as one which is actually attained in the water body on or after November 28, 1975. The waters of the District of Columbia do not have the water quality to support primary contact recreation in dry and wet weather most of the time. Indeed, the District instituted a ban on swimming 1971. This is also reflected in the District water quality standards which list primary contact recreation as a designed use, not an existing use. Thus, a water body does not attain the use of primary contact recreation just because some persons illegally elect to use the water body in that manner. Instead, the use of primary contact recreation is attained when the water quality that will allow safe swimming to occur is achieved and when the regulations allow it to occur. Primary contact recreation is thus not an existing use.

- 12.6 The U.S. Fish and Wildlife Service commented that implementation of the Draft LTCP will likely have no adverse effects on endangered species and may actually be beneficial to them. (423)
Comment noted.

13. **COMMENTS ON PUBLIC PARTICIPATION**

- 13.1 Several commenters called for more extensive public participation that involves more people and groups, and fosters public-private partnerships. One commenter indicated that there was inadequate citizen attendance at public meetings in that only about 50 citizens participated. (307-310).

WASA conducted an extensive public participation program designed to educate the affected public and to obtain their input and consultation in selecting the long term CSO controls. The public participation process included public meetings, establishment of a Stakeholder Advisory Panel, and an elaborate public information process. Four public meetings have been held to educate the public and to obtain feedback about CSO issues. At the request of the public during the first public meeting, a Stakeholder Advisory Panel

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was formed. The panel consisted of representatives from government agencies, regulatory agencies, citizens' groups, and environmental advocacy groups that are concerned about water quality issues within the District. Twelve Panel meetings were held during development of the LTCP.

In addition, the public outreach program included educational mailers in water and sewer bills, establishment of a CSO website, creation of a CSO mailing list, informational CSO newsletters, and establishment of public information depositories.

After release of the Draft LTCP, nine neighborhood meeting were held throughout the District to explain the program and obtain public comments. The D.C. Council and WASA held public hearings on the plan. Informational mailers, WASA's website and presentations to interested groups were also used to obtain input on plan. The Draft LTCP was well publicized and members of the public provided thoughtful comments. Over 2,300 comments were received on the Draft LTCP. This does not suggest a lack of public involvement.

- 13.2 EPA indicated that the public participation section of the Draft LTCP (Section 10.7) should be expanded to include the preparation of a Public Responsiveness Document, its distribution, and information on how later versions of the LTCP will include additional information on the public participation process (311).

The Final LTCP includes a description of the public participation efforts that have taken place after release of the Draft LTCP. This includes WASA's public hearing, the D.C. Council's public hearing, neighborhood civic association meetings, other efforts and preparation of the responsiveness summary. Once the LTCP is finalized and approved, no subsequent versions of the LTCP are currently planned. However, updates on implementation of the program or on modifications to the program will include descriptions of public participation as appropriate.

- 13.3 EPA asked for information on what steps have been taken to ensure that public participation has effectively reached minority and low income populations (312).

WASA has advertised public hearings and neighborhood meetings in newspapers which have an audience with a high proportion of minority and low income persons. Neighborhood meetings have also been held in every ward of the city, including those with a high proportion of minority and low income persons. Special effort was made to hold two neighborhood meetings in Ward 6, which spans the east and west sides of the Anacostia River. This was done to encourage minority and low-income participation. Public information depositories were also set up in libraries in these wards of the District. In addition, the informational mailer describing the Draft LTCP and requesting public

comment was printed in both English and Spanish. Special mailings of the Spanish edition were made by the Washington Post to Spanish speaking households.

- 13.4 EPA asked for information on what steps have been taken to evaluate the potential for disproportionately high and adverse human health or environmental effects on minority and low-income populations (313).

Minority and low income populations make up a proportionally high share of the watershed of the Anacostia River in the District. The greatest CSO control benefit and the largest expenditures in the LTCP are directed toward improving the Anacostia River. Of the \$1.265 billion program, \$940 million or about 74% are directed toward improving the water quality of the Anacostia River. The LTCP is thus extremely responsive to those communities. Instead of having a negative impact, the LTCP will bring a much greater benefit to those communities.

14. COMMENTS ON FINANCIAL CAPABILITY ASSESSMENT

- 14.1 Several commenters opposed increasing rates to pay for CSO control. (82-85)

Control of CSOs is required by the Clean Water Act and by WASA's National Pollutant Discharge Elimination System (NPDES) Permit. Other communities in the nation also are facing this issue. One strategy that may mitigate rate increases is to seek financial assistance from the federal government.

- 14.2 Many commenters indicated that the Federal Government should pay a significant portion of the cost of CSO control. Some commenters asked for Federal participation in the 75-90% range. Commenters offered the following as reasons why federal involvement was justified: (86, 88, 89, 93, 94, 109-123)

- The ACOE and Federal Government built the CSS and turned it over to the District. The Fed Gov should pay for fixing the problem it created
- The special relationship between the Federal Government and the District Government
- The large number of federal properties in the District and government institutions such as embassies, etc. that are exempt from taxes
- CSO control is an unfounded mandate
- Financial burden on the District is too high
- Other Cities have received significant help with CSO costs (Boston, Chicago). There is precedent.

WASA is seeking financial assistance from the Federal Government for CSO control. In addition to paying water and sewer bills, the Federal Government bears a special responsibility to the District for the CSO system. This is because the Federal Government designed and constructed the combined sewer system and essentially left the

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District with the liability for CSO control. In addition, the Federal Government has in the past and continues to govern the District in all matters. This situation places a special responsibility on the Federal Government to mitigate CSO costs to District ratepayers.

- 14.3 EPA questioned the method used to establish billings to the Federal Government and whether the current system properly allocates costs. EPA questioned whether changes should be made in the separate vs. combined sewer areas and if such changes would impact affordability (87).

The Federal Government and other large users pay water and sewer bills in proportion to metered potable water used. Combined sewer costs are proportional to runoff, and water consumption is not a good indicator of runoff. An example would be a parking lot with a large amount of runoff but only minimal water usage. As a result, WASA is evaluating alternate rate structures that give some consideration to impervious area. It is unlikely that alternate rate structures will substantially affect affordability.

In addition to water used and wastes/runoff generated, the Federal Government bears a special responsibility to the District for the CSO system. This is because the Federal Government designed and constructed the combined sewer system and essentially left the District with the liability for CSO control. In addition, the Federal Government has in the past and continues to govern the District in all matters. This situation places a special responsibility on the Federal Government to mitigate CSO costs to District ratepayers.

- 14.4 Several commenters indicated that since Maryland and Virginia send flow to the District for treatment, they contribute to CSOs and should pay a fair share toward CSO control. One commenter suggested that some form of commuter tax be employed (90-97).

In accordance with the Intermunicipal Agreement (IMA) of 1985, the surrounding jurisdictions pay WASA for the wastewater these jurisdictions send to BPWWTP for treatment. The suburbs are currently within their average and peak flow limitations and the LTCP was prepared by assuming the suburbs were discharging at these limits. Under the current IMA, WASA cannot charge surrounding jurisdictions additional fees for CSO control since the suburbs are already paying for the wastewater they send to BPWWTP. Requiring the suburbs to pay an additional charge for CSO control would require justification and renegotiation of the IMA. This would be a long and involved political process with an uncertain outcome.

- 14.5 Several commenters indicated that consideration should be given to an alternate rate structure that incorporates impervious area since impervious surface is what contributes runoff and CSOs (101, 103, 105, 106). Several commenters indicated that the rate

structure should be revised to include incentives for promoting the reduction of storm water. (276, 277).

WASA will give this consideration as the LTCP is implemented. However, changing the rate structure is unlikely to significantly affect affordability or the selection of the proposed CSO controls.

- 14.6 Several commenters suggested that a “lifeline” rate or other mechanism be developed to protect low income and the elderly from elevated rates, especially upon implementation of the LTCP (102, 104, 107, 108).

WASA will give this consideration as the LTCP is implemented.

- 14.7 One commenter suggested putting CSO costs in perspective by comparing them to school, road or other DC budgets (100).

Budgets for other programs might be considered large compared to the cost of CSO control. For example, the D.C. school budget for 2003 is reported to be about \$5.7 billion. However, the impact on rates is a better indicator of the true cost to rate payers of CSO controls. Households in the District have a limited amount of disposable income. The proposed CSO controls will raise the cost of wastewater service to very high amounts.

- 14.8 Several commenters indicated that there was an overlap between the Draft LTCP and WASA’s Capital Improvement Program (CIP). The pumping station rehabilitations are included in both the LTCP and the CIP. One commenter suggested that this overlap resulted in double counting of the pump station costs and overstatement of the effect on rates (98, 99).

The LTCP includes the following projects that are in the CIP: \$127 million for pumping station rehabilitations and the \$3 million for LID. Since these items are already budgeted, they were excluded from the cost of the LTCP for purposes of doing the financial analysis. Thus, these items are not “double counted” when evaluating the effect on rates.

- 14.9 One commenter indicated that the analysis in the Draft LTCP overstates the costs in the early years because it assumes the entire cost of the program is bonded from year one. Typically, bonds will be issued over time so the rate impacts are phased-in (127).

The affordability analysis in the LTCP was prepared according to the method proscribed by EPA. The analysis estimates the cost per household in terms of today’s dollars near the peak in the program. It is a method of assessing what the relative cost of the program will be compared to income. It is true that in the early years of any program, rate increases are typically gradual to build up to the amount required to finance they

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program. However, the EPA methodology is a good indicator of what real costs will be compared to income.

14.10 One commenter indicated that a rate structure should be instituted so that non-profits such as the World Bank and Fannie Mae pay into the system. (81)

Non-profits and the Federal Government all pay water and sewer bills and thus contribute to the cost of the infrastructure including CSO control.

14.11 EPA commented that the Draft LTCP does not indicate when higher residential customer rates would be seen. EPA recommended that the projected phase-in of the rate increase be presented. (124)

The phase in of rate increases depends on many factors including:

- Implementation schedule
- Availability of grant funding
- Other capital improvements in the system
- Other regulatory requirements
- Approval date of LTCP

At this stage it is not possible to predict the actual rate increases necessary with a sufficient degree of accuracy. However, it is likely that rates increases will be small in the beginning, reach a peak near the middle of the program, and tail off near the end of the program.

14.12 EPA commented that that the report indicates the District has a disproportionate number of low income households, but does not provide census or other information to support the statement. (125)

The LTCP has been revised to compare the District's income distribution to that of Maryland and Virginia.

14.13 A commenter indicated that WASA needed a fall-back position if Federal Funding does not come through. (126)

If no federal funding is provided, the schedule for implementation may be extended to lessen the impact on ratepayers.

14.14 EPA indicated the LTCP should describe how much money will be needed to fund individual control plan elements based on the project schedule. They also requested that work be identified that has funding available. EPA also questions what was the significance that certain project elements were in the CIP (434).

The estimated capital and operation and maintenance costs for the items in the schedule are shown in Section 13 of the LTCP. Items in the capital improvement program (CIP) have also been identified in this section. These are significant in that they have a schedule and budget in the program.

- 14.15 A commenter indicated that WASA should consider opportunities for partnership with the Federal ISTEA program, EPA 319 grants and other federal programs. (431)
Comment noted.

15. COMMENTS ON SCHEDULE

- 15.1 Several commenters advocated for a shorter schedule (322, 330-339). One commenter incorrectly indicated that the LTCP will take 30 years to build. (326). Another commenter indicated that the 20-year implementation time is not adequately justified in the plan (328).

The projects in the LTCP can be divided into two categories: those in the existing Capital Improvement Program (CIP) and those not in the CIP. Projects in the CIP have been budgeted and scheduled and these projects will move forward without approval of the LTCP. These can generally be completed in about 6 years. For projects not in the CIP, an implementation schedule has been developed based on years after approval of the LTCP. Based on the financial capability assessment and the impact on rates, a 40-year implementation time is proposed for the entire recommended plan without any outside financial assistance. This is to mitigate the impact on rate payers of the large expenditures for CSO control. If significant outside financial assistance is obtained, it is technically feasible to accelerate the schedule to a 15-year implementation time frame. Significant outside assistance on the order of 75% would be required to achieve this schedule.

- 15.2 Some commenters indicated that there were things that could be done immediately (like trash control) and that these should be implemented early because 20 years is too long to wait for trash control (327, 342).

WASA has a nine minimum control program which includes the following measures to control solid and floatables control:

- Anacostia River Floatable Debris Program on the Anacostia River - this is a skimmer boat program which removes floating debris on the river. Note that this program removes debris from storm water and upstream Maryland sources in addition to CSO sources.
- End of pipe netting system on CSO 018 on the Anacostia River
- Catch basin cleaning

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- Screening facility at the Northeast Boundary Sewer and the bar racks at the pumped overflows at the Main and 'O' Street Pumping Stations

Additional floatables control will be provided as LTCP elements come on line. These elements will come on line throughout the duration of implementation period. It will not be necessary to wait until the end of the implementation period.

- 15.3 One commenter indicated that the plan does not have fixed date schedules and thus does not comply with the CSO Policy (328).

It is unknown when the LTCP will be approved for implementation. The schedules in the LTCP were thus developed in years after the date of approval. The CSO Policy does not require fixed date schedule. The CSO Policy says: *"The permittee should include all pertinent information in the long term control plan necessary to develop the construction and financing schedule for implementation of CSO controls. Schedules for implementation of the CSO controls may be phased based on relative importance of adverse impacts on WQS and designated use, priority projects identified in the LTCP, and on the permittee's financial capability."* The LTCP complies with these requirements.

- 15.4 One commenter indicated that the Potomac tunnel is pushed too far out in the schedule. The commenter advocated for earlier implementation. (329)

In accordance with the CSO Policy, the implementation schedule was developed giving consideration to public comments and to areas where water quality impacts due to CSOs were the greatest. The majority of the public and the regulatory agencies public indicated that the Anacostia River projects should be given priority. The Anacostia also receives the most CSO overflow volume and is the area where CSO impacts are the greatest. Given outside financial assistance, the Potomac CSO controls could be accelerated in the schedule.

- 15.5 EPA commented that the constraints that prevent nearer-term completion of each major project component should be described. (325)

This is included in Final LTCP.

- 15.6 EPA questioned whether the first 2 segments of the Anacostia tunnel project would be independently operational in terms of providing useable storage and transmission immediately upon completion of construction. (343)

There are three basic elements to the Anacostia system. They are listed from downstream to upstream as follows

- Tunnel from Poplar Point to Northeast Boundary Outfall
- Tunnel Parallel to Northeast Boundary Sewer
- Short tunnels from flood areas to Northeast Boundary Sewer

The downstream facilities must be completed before upstream tunnels come on line. However, the downstream tunnels can come on line before upstream tunnels are complete. This will enable achieving some CSO benefit earlier than otherwise expected.

- 15.7 A commenter and EPA suggested presenting year by year improvements in CSO reduction to demonstrate that CSO reduction is progressive and that the District will not have to wait 20 years to realize all the benefits of the plan (287, 341).

This is included in Final LTCP.

- 15.8 EPA commented that the draft plan identified early action items that are not dependent on LTCP approval. EPA indicated that a summary action plan should be prepared and submitted to implement the early action items (340).

The schedule in the LTCP includes elements that can proceed without approval of the plan.

- 15.9 One commenter indicated that WASA should be given more time to implement the LTCP if it includes more emphasis on non-engineered solutions (323).

Comment noted.

16. COMMENTS ON WATER QUALITY STANDARDS REVISIONS

- 16.1 Several commenters expressed support for modifying the water quality standards as proposed in the LTCP to acknowledge discharges that would remain after implementation of the Draft LTCP (411-416). Many commenters opposed changes to the water quality standards proposed in the Draft LTCP (373-407).

The current District of Columbia water quality standards include both numeric and narrative components. The narrative components require, among other items, that discharges be “free of untreated sewage”. Given the current standards, no alternative short of complete separation can completely eliminate overflows (and thereby comply with current standards) during all conditions. Separation has a cost almost triple that of the recommended LTCP, would cause massive disruption and hardships, and results in worse water quality than the recommended LTCP. For these and other reasons, separation was not recommended. Given that separation is not feasible, there will be some remaining overflows for any CSO control plan under some weather conditions. Given the large investment in the LTCP, water quality standards provisions need to be adopted to provide for the remaining discharges that will occur. While the goal of

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fishable and swimmable waterways should not be changed, there needs to be a recognition in the standards that there is an upper limit to the control provided by any CSO plan.

- 16.2 A commenter indicated that instead of seeking to change the water quality standards, WASA could seek a variance for CSO and thereby not need to change them. (417)

Variances are short-term modifications to the water quality standards that could be configured to allow CSOs. However, the District Standards and the CSO Policy indicate that variances are valid for 3 years and must be applied for and reviewed every 3 years. EPA guidance and practice indicate that variances are envisioned for short term application when some additional time is needed to ascertain a water quality impact or to develop a control approach. This is not the case for CSO controls, where implementation is expected to take 20 years and where there will be a lengthy period of evaluation of effectiveness after implementation. In addition, the renewal of a variance every 3 years is not guaranteed or certain. If the variance is not granted, the investment in the LTCP would be at risk and subject to lawsuits or regulatory action. It is not practical to risk the magnitude of the investment in the LTCP on the possibility of attaining many variances through the years.

- 16.3 EPA questioned how the implementation of the WQS currently proposed by DOH would affect the plan (408)

The District proposed revisions to the WQS in the October 12, 2001 D.C. Register. The revisions included several technical changes regarding light clarity and bacteriological standards, and a wet weather provision proposed to accommodate CSO. The District subsequently withdrew the proposed revisions and published an emergency rulemaking adopted on January 25, 2002. The emergency rule making included new numeric criteria for Secchi Depth, Chlorophyll a, Arsenic, and Ammonia, and made various other technical changes. The rule making did not propose any wet weather provisions or otherwise affect any portion of the standards pertaining to wet weather discharges.

As a result, the assessments made in the Draft LTCP regarding the impact of the current water quality standards on CSO remain accurate. WQS provisions are also addressed in the Final LTCP.

- 16.4 A commenter indicated that potable water was unsanitary and that higher water quality standards were needed to have safe drinking water (409). Another commenter indicated that CSOs affect our water supplies and that for this reason more CSO control is necessary. (302)

The District withdraws potable water from the Potomac well upstream of any CSO discharges. In addition, no potable water supplies withdraw water from the Potomac River downstream of the District CSO areas. This is due to the salinity in the Potomac River. As a result, the District's CSOs will not affect drinking water.

- 16.5 Commenters indicated that WASA worked backwards by proposing to change the WQS to fit the preferred LTCP instead of trying to develop a plan to meet the existing water quality standards. Commenters further stated that WASA did not start off with a goal of meeting the existing water quality standards.(418-419)

An evaluation was made of whether it was possible to meet the current water quality standards with any form of CSO control. The only plan that would meet the current standards is separation. In addition, separation provides worse real-world water quality than a high degree of CSO control. Due to the high cost, impracticality, and poor water quality performance of separation, an evaluation was made of other degrees of CSO control that provide an effective combination of performance, minimal disruption of the use of the water body, reasonable cost and practicality. This is in accordance with the approach described in EPA's CSO Policy which is now part of the Clean Water Act.

- 16.6 A commenter indicated that primary and secondary contact recreation are existing uses on each of the receiving waters and that the Clean Water Act legally prohibits changing the standards that would interfere with an existing use. (410)

Primary contact recreation is not an existing use. Reference the discussion in the comments related to Sensitive Areas. The District of Columbia Department of Health has established the existing use of the waterways as Class B or secondary contact recreation. The LTCP will meet the bacteria geometric mean standard for the design condition specified in the CSO Policy (average year) for Class B waters.

- 16.7 A commenter indicated that the net effect of changing the water quality standards as recommended in the LTCP would be to ban swimming in perpetuity. Without the existing water quality standards as a driving force, there would be no impetus to improve water quality and the people of the District deserve to be able to use the waters for recreation.

The recommended plan for CSO control will meet the geometric mean bacteria standard in all receiving waters. If other sources were controlled in conjunction the recommended plan, the bacteria standard could be met in all receiving waters. The CSO plan is thus protective of swimming and the current water quality standards.

After implementation, CSOs are projected to cause fecal coliform levels to rise above an average of 200MPN/100 ml for 7 days per year in the Anacostia, 5 of which occur in the

Responses to Comments

period of likely recreational use from May to September. The LTCP is thus projected to be protective of swimming the remaining 358 days of the year or more than 98% of the time. The days when CSOs cause high bacteria levels will likely coincide with other natural conditions such as high water flows, severe thunder storms, lightning and other conditions that would make use of the waterbody impractical or unsafe.

17. MISCELLANEOUS COMMENTS

- 17.1 A commenter indicated that WASA should consider the effects of global warming on long term rainfall patterns and determine if changes need to be made in the evaluation. (286).

A report entitled *Climate Change Impact on the United States* (National Assessment Synthesis Team. 2001) was reviewed to assess the possible impact of changes in precipitation on modeling future rain events for the recommended Long Term Control Plan. There are two major models, known as the Hadley Model and the Canadian Model that simulate and predict future precipitation in North America. Although both models predict an increase in the amount of precipitation in the Northeastern United States by the year 2100, the projected increase varies from 5% to 25%. Furthermore, additional studies offer conflicting results concerning the nature of precipitation in the future. Some studies predict more intense storms, while others predict less intense ones; some studies suggest an increase in the actual number of storms, while others suggest a decrease. There are also variations in the predicted tracks of storm events. Given the long time frame for a climate change and the lack of consistent and specific predictions regarding its effects, it impractical now to revise sizing of controls. If climate change does occur, the LTCP is expandable by techniques described in subsequent sections to accommodate any increased overflows.

- 17.2 A commenter suggested developing a system to track and respond to environmental complaints such as suspicious discharges to waterways, street and basement flooding incidences, and others. The commenter suggested incorporating some reporting mechanism so the public understands the complaint and knows what action was taken. (288)

WASA is responsible for the water and wastewater system in the District. The D.C. Department of Health and Police Department are responsible other discharges to waterways, illicit discharges, environmental crimes, and the like.

- 17.3 A commenter indicated that WASA should keep a record of notice of violations (292).
WASA submits discharge monitoring reports to EPA for Blue Plains and a quarterly report on the CSO system. These reports include information on permit violations. The CSO quarterly reports are available on WASA's web site at www.dcwasa.com.

- 17.4 Commenters indicated that continued CSOs present a health risk due to fish consumption and the potential for contact. The commenters indicated that the LTCP fails to adequately address this issue. (290,291)
The fish advisories in District waters are for PCBs in fish tissue. During the monitoring program prepared for this study, no PCBs were detected in CSO discharges. In addition, the proposed CSO controls will reduce CSOs by a large amount. See the response to comment 16.7 regarding primary contact with the receiving waters.
- 17.5 A commenter expressed a concern as to whether the LTCP would be competently and correctly implemented. (304)
Once approved, WASA is committed to professionally implementing the LTCP. WASA was created in 1996 and since that time has made major strides in improving operations, financial management, and the water and wastewater systems. WASA is currently managing a \$1.6 billion capital improvement program separate from the LTCP. WASA capabilities have been proven by the major changes in operations and performance since its creation in 1996.
- 17.6 A commenter expressed concern that WASA was not forthcoming to the public and that WASA's statements were not reliable. (303)
WASA is committed to complete, truthful and timely responses to public inquiries and concerns. WASA's performance since 1996 is evidence of this and demonstrates WASA's commitment to these goals.
- 17.7 EPA commented that the statement in the LTCP reading "In March 2001 the DOH released its first TMDL for the impaired waterbody." is incorrect. The first TMDL was issued on January 12, 1999. The Anacostia BOD TMDL is the second (301).
The report will be corrected to reflect that the oil and grease TMDL for Hickey Run, a tributary to the Anacostia, was issued prior to the BOD TMDL.
- 17.8 EPA asked that the toxic pollution control benefits of the recommended plan be quantified, to the extent permitted by available information. EPA also asked for an estimate of the amount of toxics that will be captured and treated at Blue Plains WWTP that would otherwise be discharged if sewers were separated. (344)
The Draft LTCP is predicted to remove toxics (metals, organics, etc.) in proportion to the amount of CSO overflow volume reduced. The Draft LTCP proposed a system-wide 92% reduction in CSO overflow volume. The total discharge of toxics will be reduced proportionately. This is a conservative estimate since discharges that occur after

Responses to Comments

implementation of the LTCP will typically occur well after the first flush when toxics concentrations are likely to be lower.

Separation would result in a significant increase in untreated discharges to the receiving waters. The Table below summarizes untreated discharged (i.e. excluding Blue Plains discharged) from the combined and separate storm water systems in the District.

**Untreated Discharge Volumes in Average Year
(Average of 1988-1990)**

Scenario	CSO Overflow Volume (mg/yr)	Untreated Storm Water Discharges (mg/yr)	% Change From No Phase I Controls	% Change From Draft LTCP
No Phase I Controls	3,254	18,108	0%	
Draft LTCP	264	15,118	-17%	0%
Separation	0	22,491	24%	49%

The untreated discharges from the combined and separate storm water systems were found to have similar concentrations of toxics during the monitoring conducted as part of the LTCP. As a result, comparison of volumes alone is a good indicator of pollutants discharged. As indicated in the table, the Draft LTCP would result in a net 17% reduction in untreated volume discharged, while separation would result in an estimated 24% increase in untreated discharges. When compared to the Draft LTCP, separation would result in an estimated 49% increase in untreated discharges.

- 17.9 EPA asked if rehabilitation of the Potomac Pump Station would provide any additional screening of floatables (34).

Rehabilitation of Potomac Pumping Station will restore the capacity of the station to its design rating of 460 mgd. This will increase the amount of CSO captured and treated and will thereby increase the amount of floatables material captured.

- 17.10 A commenter recommended coordinating surface construction with the District Office of Planning for the possibility of integrating parks or other enhancements into the design. (422).

WASA will seek opportunities to coordinate and collaborate with the Office of Planning throughout the implementation phase of the LTCP.

- 17.11 One commenter requested the removal of references to upstream pollution sources being a significant source of water quality impairment (428).

WASA's NPDES permit requires the preparation of the LTCP in accordance with EPA CSO Policy which is now part of the Clean Water Act. The CSO Policy and EPA's

guidance documents indicate that since pollution sources other than CSOs can affect receiving water quality and the ability to attain water quality standards, they should be considered and assessed in the LTCP. As result, discussion of upstream pollution sources and their effect on water quality is unavoidable.

District of Columbia Water and Sewer Authority
Combined Sewer System Long Term Control Plan

Table 1 - Summary of Comments on Draft LTCP

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
1	Bobreski	Jim	Citizen			DC Council Pub Hearing	Consider decentralized treatment and tell people it has to be in their backyard	Alternatives
2	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Questionnaire	Consider eliminating wastewater systems that use clean water- use grey water, composting toilets, natural filtration, etc.	Alternatives
3	Stiehler	Robert D.	Citizen	3234 Quesada St NW	Washington DC 20015	Questionnaire	Consider flood plains for storm water would reduce overflows	Alternatives
4			Cltizen			Neigh Mtg#12	Consider innovative technologies to eliminate overflows entirely	Alternatives
5			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Consider near term consolidation of CSOs & disinfection	Alternatives
6	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	DC Council Pub Hearing	Consider not doing Potomac Tunnel and putting money into Anacostia	Alternatives
7	Napier	Maurice, J.	The McCombie Napier Compant, Ltd		Scotland	Written Comments	Consider old ship tankers for CSO storage	Alternatives
8	Heinrich	Phil	Citizen			Written Comments	Consider on-site storage of sanitary wastes to "share" CSO system	Alternatives
9	Wells	Jeffrey R.	Citizen	3730 Windom Place, NW	Washington DC 20006	Written Comments	Consider pollution prevention	Alternatives
10	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Consider storm water management incentives and targeted separation	Alternatives
11			Cltizen			Neigh Mtg#3	Consider using CSO like greywater at golf courses	Alternatives
12							Number not used	
13							Number not used	
14	Forsberg	Ken	Citizen	1809 Monroe St, NW	Washington DC 20010	Questionnaire	Find some ways of stopping overflows other than separation	Alternatives
15	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Look at lessons learned in other cities	Alternatives
16	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	LTCP does not address SSOs and storm water pollution from separate sewer system	Alternatives
17	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	LTCP does not address water cross connections or water/sewer pipes crossing	Alternatives
18	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	LTCP does not allow for any growth in District (IMA) whereas suburbs have growth	Alternatives
19	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	Written Comments	LTCP will provide no WQ benefits	Alternatives
20			Cltizen			Neigh Mtg#5	Maintenance: Concern that this plan does not address clogging in separate ststorm sewers/catch basin cleaning	Alternatives
21	Slowenski	Kent	Citizen	NA	NA	WASA Pub Hearing	Maintenance: Doesn't address maintenance of deteriorated sewer system	Alternatives
22	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	MD & VA should reduce their flows	Alternatives

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
23	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	MD/VA - An alternative should be developed and evaluated to temporarily reduce the input of flows from separated sewers during wet weather from Fairfax County, WSSC, and other currently separated portions of the District to the CSS. Options might include storage (in sewers or otherwise), satellite treatment, or conveyance past the combined system directly to Blue Plains	Alternatives
24			Citizen			Neigh Mtg#5	MD/VA - Concern that flows from MD/VA take up capacity in CSS, causing overflows	Alternatives
25	Glover	Joseph	Citizen	1215 33rd Palce SE	Washington DC	DC Council Pub Hearing	MD/VA - DC should not pay for pollution control without MD/VA doing their share	Alternatives
26	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	MD/VA - Fed Gov, Maryland and Virginia should stop polluting	Alternatives
27	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	MD/VA - Push for watershed approach to storm water in MD and put some money toward it	Alternatives
28	Sesil	Joe	Citizen	3421 N St NW	Washington DC	Questionnaire	MD/VA - Recommends watershed protection program with counties	Alternatives
29	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	MD/VA - Suburban flows should be carried around CSS or MD/VA should pay proportionate share of CSO cost	Alternatives
30	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	WASA Pub Hearing	MD/VA should conserve water/have storm water controls to reduce their peak flows	Alternatives
31	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Model underpredicts overflows in some cases - is model accurate? If so how will this be taken into account (i.e. increase storage)	Alternatives
32	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Myth of avg year: correlate overflows to return frequencies (most intense, 1-yr, 5-yr, 10 yr etc)	Alternatives
33	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Piney Branch: Consider trash trap & disinfection , they question WQ benefits of tunnel, consider intensive LID	Alternatives
34	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Potomac - Will rehabilitation of the Potomac Pump Station provide any additional screening of floatables?	Alternatives
35	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	DC Council Pub Hearing	Rehab existing system	Alternatives
36	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Rehab existing system	Alternatives
37	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	WASA Pub Hearing	Rehab existing system	Alternatives
38	Le Hall	Elizabeth	Citizen	6231 Piney Branch Road, NW	Washington DC 20011	Written Comments	Rehab existing system	Alternatives
39	Slowinski	Kent	Citizen	NA	NA	WASA Pub Hearing	Rehab existing system	Alternatives
40	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Rehab existing system	Alternatives
41	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	Rehab existing system	Alternatives
42	New	Gregory R.	DC Federation of Civic Associations	P.O. Box 4549	Washington DC 20017	Written Comments	Rehab existing system: Is existing CSS in good enough shape?	Alternatives

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
43	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Rock Creek - Data found in Chapter 3 shows sources of fecal coliform to Rock Creek to be 42% attributable to CSOs and 33% to DC storm water. Further, Rock Creek is expected to exceed the Class A standard for fecal coliform every month of the year (after implementation of CSO controls) and it is the habitat of an endangered species. This area appears to be a good candidate for selective separation or other remediation prior to installation of a deep tunnel that won't be implemented for fourteen years. What other alternatives can be developed to correct SW and CSS overflows in this area?	Alternatives
44	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Rock Creek: Conduct detailed I/I studies in Rock Creek. Two places for possible sewer leaks are: Ford at Military Rd, Dam upstream of Boulder Bridge	Alternatives
45	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Rock Creek: Redesign & close selected regulators: look at closing regulators at entrance to Zoo since it is area of most likely wading	Alternatives
46	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	RTC - An alternative for RTC presupposes use of additional inflatable dams; however, past experience has shown that inflatable dams are subject to puncture. What other alternatives are there that can be implemented for RTC?	Alternatives
47	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Satellite Treatment - is eliminated from further consideration based upon location, staffing and sludge generation. However further consideration should be given to satellite treatment of the high volume CSOs (such as CSO 010,019,022 and 049) where WQ impacts are the greatest. What would the stream impacts be by providing satellite treatment at critical locations? Satellite treatment should be evaluated for short term to long term application.	Alternatives
48			Citizen			Neigh Mtg#4	Separation - areas other than luzon valley can and should be separated	Alternatives
49	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Separation - Complete system separation is dismissed from further consideration due to cost, disruption, and increased loading to the SW system. Alternatives should be developed and evaluated for separation of discrete areas where combined flows are high, possibly in combination with constructing new storm sewers and satellite treatment systems or satellite storage. Areas tributary to the CSS that could most readily be separated should be identified. For each such area, identify the volume of SW flows that could be eliminated from the CSS during wet weather, where those flows would be discharged (if they were not to be discharged to the CSS), and the effect that such discharges would have on the receiving water body.	Alternatives
50	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	Written Comments	Separation - cost is too high - EPA cost is \$20-\$60,000/ acre	Alternatives
51	Culp	David	Citizen	121 12th Street, SE #403	Washington, DC 20003	WASA Pub Hearing	Separation - look at partial separation in Federal area & make Fed Gov pay for it	Alternatives
52			Citizen			Neigh Mtg#3	Separation - look at separation in upper Rock Creek	Alternatives

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
53	Tibbetts	David, A.	Anacostia Watershed Society Treasurer	4302 Baltimore Ave.	Bladensburg, MD 20710	Written Comments	Separation - look at separation within existing combined sewers	Alternatives
54			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Separation - look at targeted separation at Ivy City/Trinidad flood areas (to prevent human contact w/sewage)	Alternatives
55	Slowenski	Kent	Citizen	NA	NA	WASA Pub Hearing	Separation - Need to replace infra structure anyway, so why not just separate	Alternatives
56	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Separation - Separation cost is included for Potomac & Rock Creek, but not Anacostia - correct.	Alternatives
57	Fitzpatrick	Neil	Audubon Naturalist Society	8940 Jones Mill Road	Chevy Chase, MD 20815	WASA Pub Hearing	Separation - supports targeted separation	Alternatives
58			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Separation - WASA's separation costs are too high compared to Atlanta	Alternatives
59	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	DC Council Pub Hearing	Separation is the answer	Alternatives
60	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	WASA Pub Hearing	Separation is the answer	Alternatives
61	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	Written Comments	Separation is the Answer	Alternatives
62	Glover	Joseph	Citizen	1215 33rd Palce SE	Washington DC	WASA Pub Hearing	Separation is the answer	Alternatives
63	Osted	Sarah	Citizen	4934 Eskridge Terrace, NW	Washington, DC	WASA Pub Hearing	Separation is the answer	Alternatives
64	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	Written Comments	Separation will eliminate flooding, reduce odors, replace old infrastructure and will allow WQS to be met	Alternatives
65	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The discussion of solids and floatables on page 12-12 alludes to new CSO regulators. Specifically, which regulators are to be replaced or modified under the LTCP? What is the process that will be used to evaluate individual regulator performance?	Alternatives
66	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Watershed - Need holistic, integrated approach that involves entire watershed	Alternatives
67	Fitzpatrick	Neil	Audubon Naturalist Society	8940 Jones Mill Road	Chevy Chase, MD 20815	WASA Pub Hearing	Watershed approach - do something about it, don't just talk	Alternatives
68	Sesil	Joe	Citizen	3421 N St NW	Washington DC	Questionnaire	Watershed approach -Work with upstream counties to improve their water quality	Alternatives
69	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	If the full process train is to be used, does DCWASA possess sufficient unused treatment capacity within its IMA allocation to handle the additional flow? If not, how does the District intend to acquire the necessary additional capacity?	Blue Plains

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
70	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Outfall 001 at BPWWTP has been characterized as a CSO under the existing NPDES permit, however, under the CSO policy it may be characterized as a bypass. Under the CSO Policy, approval of a CSO bypass requires that the LTCP, at a minimum, should provide justification for the cut-off point at which the flow will be diverted from the secondary treatment portion of the treatment plant and provide a cost-benefit analysis demonstrating that conveyance of wet weather flow to the POTW for primary treatment is more beneficial than other CSO abatement alternatives such as storage and pump back for secondary treatment, sewer separation, or satellite treatment. The LTCP should include a section to include this demonstration.	Blue Plains
71	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What is the predicted frequency and duration that denitrification will not be achieved due to high flow conditions? With additional flows that will be sent to Blue Plains, what measures can be taken to optimize treatment at Blue Plains and assure maximum denitrification?	Blue Plains
72	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	What modifications to Blue Plains, if any, would be required? Would they be considered as joint-use or non-joint use projects?	Blue Plains
73	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	What would be the cost for the required modifications?	Blue Plains
74	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	Whichever train is used, what would be the operational impacts of the additional flow and the plants ability to meet its permit limits?	Blue Plains
75	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	Will the flow be treated by the full process train or the excess flow facility?	Blue Plains
76	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	Would there be any increase in Blue Plains operational costs? Would an increase be considered a DCWASA-only expense?	Blue Plains
77	Jones	Cy	Washington Suburban Sanitary Commission			Written Comments	WSSC leases 95 mgd in Anacostia System. Can lease continue or does WASA need it back. Can WSSC acquire soem additional capacity in Anacostia System?	Blue Plains
78	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Existing CSOs are located next to highly used areas of River	CSO Location
79	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	DC Council Pub Hearing	Take extra effort to controls CSOs at Thompson Boathouse & Anacostia Marinas (pub contact)	CSO Location
80	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Will the recommended Plan eliminate (or consolidate) combined sewer outfalls to the point where they can be permanently sealed or the structures dismantled and removed from the receiving waterbody?	CSO Location

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
81	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	Nonprofits should pay somehow (e.g. World bank, Fannie Mae)	Financial Impacts
82	Patrick-Jones	Peggy	Citizen	813 West Va. Ave, NE	Washington DC 20003	Written Comments	Don't raise rates	Financial Impacts
83	Wethered	Suzanne & J.V. Anil Kumar	Citizen	3726 Kanawha St, NW	Washington DC 20015	Written Comments	Don't raise rates	Financial Impacts
84			Cltizen			Neigh Mtg#7	Don't raise rates	Financial Impacts
85	New	Gregory R.	DC Federation of Civic Associations	P.O. Box 4549	Washington DC 20017	Written Comments	Don't raise rates	Financial Impacts
86	Stiehler	Robert D.	Citizen	3234 Quesada St NW	Washington DC 20015	Questionnaire	Fed Gov - Costs need to be reduced unless federal government pays 80% of costs	Financial Impacts
87	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Fed Gov - Describe the method used to establish billings to the Federal government (and potentially to other major flow contributors). Does the current system properly and fully allocate O&M and capital needs for sanitary flow (in separated areas) and both sanitary and storm flow (in combined areas)? What changes need to be made, by whom, and when? What should be the impact of such changes on the affordability of the proposed project to District residents? Can such changes make the project affordable to District residents without special appropriations?	Financial Impacts
88			Cltizen			Neigh Mtg#8	Fed Gov - If ACOE/Fed built it, they should pay to fix it	Financial Impacts
89	New	Gregory R.	DC Federation of Civic Associations	P.O. Box 4549	Washington DC 20017	Written Comments	Federal Government should pay 80%	Financial Impacts
90	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	DC Council Pub Hearing	MD & VA cause CSOs, so they should pay	Financial Impacts
91	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	MD & VA should pay	Financial Impacts
92			Cltizen			Neigh Mtg#4	MD and VA should pay	Financial Impacts
93			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	MD, VA & Fed gov should pay	Financial Impacts
94	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	MD/VA - Obtain commitments from MD, VA & Federal Government to pay	Financial Impacts
95			Cltizen			Neigh Mtg#11	MD/VA - suburbs should pay	Financial Impacts
96	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	MD/VA consider commuter tax	Financial Impacts
97			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	MD/VA should pay	Financial Impacts
98	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Overlap between LTCP and CIP	Financial Impacts
99			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Overlap between LTCP and CIP - WASA double counted P.S. costs & overstated rate impacts	Financial Impacts
100	Forsberg	Ken	Citizen	1809 Monroe St, NW	Washington DC 20010	Questionnaire	Put CSO costs in perspective by comparing them to school, road or other DC budgets	Financial Impacts

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
101	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Rate Structure - Consider cost based on impervious land and not water volume	Financial Impacts
102			Citizen			Neigh Mtg#3	Rate structure - consider giving senior citizens discounts in rates	Financial Impacts
103	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	Rate structure - consider impervious area	Financial Impacts
104	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Rate structure - implement a lifeline rate for low income households	Financial Impacts
105	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Rate structure - look at alternate funding options such as tax on impervious surfaces	Financial Impacts
106			Citizen			Neigh Mtg#6	Rate structure - look at alternate rate structure taking into account impervious area	Financial Impacts
107	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	DC Council Pub Hearing	Rate structure - Protect lower income households	Financial Impacts
108	Schwartz	Paul	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	DC Council Pub Hearing	Rate structure-need lifeline rate for low income customers like Philadelphia	Financial Impacts
109	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
110	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
111	Arner	Robert L.	Citizen	7209 Exfair Road	Bethesda MD 20815	Written Comments	Secure Federal assistance	Financial Impacts
112	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
113	Glover	Joseph	Citizen	1215 33rd Palce SE	Washington DC	DC Council Pub Hearing	Secure Federal assistance	Financial Impacts
114	Glover	Joseph	Citizen	1215 33rd Palce SE	Washington DC	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
115	Patrick-Jones	Peggy	Citizen	813 West Va. Ave, NE	Washington DC 20003	Written Comments	Secure Federal assistance	Financial Impacts
116	Pittman	Robert	Citizen			DC Council Pub Hearing	Secure Federal assistance	Financial Impacts
117	Reusga	Albert	Citizen	1727 P St NW, Apt D	Washington DC 20036	Written Comments	Secure Federal assistance	Financial Impacts
118	Wethered	Suzanne & J.V. Anil Kumar	Citizen	3726 Kanawha St, NW	Washington DC 20015	Written Comments	Secure Federal assistance	Financial Impacts
119			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Secure Federal assistance	Financial Impacts
120	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
121	Wentworth	Marchant	Sierra Club	1727 St NW, Suite 902	Washington DC 20037	WASA Pub Hearing	Secure Federal assistance	Financial Impacts
122	Wentworth	Marchant, and Robert Morris	Sierra Club	1727 St NW, Suite 902	Washington DC 20037	Written Comments	Secure Federal assistance	Financial Impacts
123	Wrin	Bob	Citizen	5509 Chevy Chase Pkwy, NW	Washington DC	Questionnaire	Seek Federal assistance at 75%-80% level - this is an unfunded mandate	Financial Impacts

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
124	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Table ES-4 analysis does not indicate when higher residential customer rates would be seen. What is the projected phase-in of the rate increase for customer rates?	Financial Impacts
125	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The report suggest that the District has an disproportionate number of low income households, presumably relative to other large urban centers. It does not however provide census or other information to support the statement. Such data, if included in the report, would strengthen the argument for outside assistance.	Financial Impacts
126			Cltizen			Neigh Mtg#5	WASA needs a fall-back position if Federal funding does not come through	Financial Impacts
127			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	WASA overstates costs in early years by financing all bonds now	Financial Impacts
128			Cltizen			Neigh Mtg#6	Concern about flooding basement apartments and that the plan does not address these	Flooding
129			Cltizen			Neigh Mtg#8	Concern that plan will not benefit flooding especially at 31st & K St in Georgetown	Flooding
130	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Describe in greater detail how, and on what schedule, the recommended plan will alleviate flooding experienced in the NE boundary.	Flooding
131			Cltizen			Neigh Mtg#1	Flooding at West Virginia & Mt. Olivette is a problem, when will it be fixed?	Flooding
132	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Flooding complaint	Flooding
133	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92692	Washington, DC 20091	DC Council Hearing	Flooding complaint	Flooding
134	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Flooding complaint	Flooding
135	Chanay	Robin D	Cltizen	503 S St NW	Washington DC 20001	WASA Pub Hearing	Flooding complaint	Flooding
136	Mack	Geterrius	Citizen	1430 L St SE, #509	Washington DC 20003	Written Comments	Flooding complaint	Flooding
137			Cltizen			Neigh Mtg#6	Flooding complaint	Flooding
138			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Flooding complaint	Flooding
139	Strain	Sally	Pallisades Citizens Assoc.			Written Comments	Flooding complaint	Flooding
140	Le Hall	Elizabeth	Citizen	6231 Piney Branch Road, NW	Washington DC 20011	Written Comments	Flooding in basement caused by roots in sewer lateral	Flooding
141			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	LTCP does not explain how flooding will be alleviated in NEB, does not address flooding in other areas	Flooding
142	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	LTCP does not protect City form flooding everywhere	Flooding
143			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	LTCP does not say if plan will fix the August 11, 2001 Flood	Flooding
144	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	National Airport gages did not read alot of rain- WASA said it rained a lot on Aug 11	Flooding
145	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Plan should address lessons learned Aug 11	Flooding

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
146	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The recommended plan shows a new "relief outfall" into the Anacostia near the current NE Boundary swirl facility and outfall 019. It is stated that this is necessary for flooding protection. 1) What is the predicted frequency and duration of overflows for this outfall? 2) Is it included in Table 9-3? 3) Are the flows part of the receiving stream model for the Anacostia? 4) What are the impacts to water quality from the discharge? 5) What controls will be placed on the new outfall? 6) How is the new outfall to be permitted?	Flooding
147			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	WASA must address immediate flooding problems	Flooding
148	Sanders	Serita	Bloomington Civic Assoc	P.O. Box 92691	Washington, DC 20090	DC Council Hearing	WASA was not responsive during flooding	Flooding
149	Sanders	Serita	Bloomington Civic Assoc	P.O. Box 92691	Washington, DC 20090	DC Council Hearing	What are short term fixes for flooding (Can't wait 20 yrs)	Flooding
150	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	To what degree has the "implementability" of the recommended control plan been evaluated? What permits or approvals are contemplated to be necessary from the National Park Service in order to implement the plan? Have discussions been undertaken with NPS or LTCP comments received from them?	Implementability
151	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Will it be necessary to obtain easements from owners of property above the tunnels? If yes, who are the major property owners. What efforts have to be made to reach any needed agreements?	Implementability
152			Citizen			Neigh Mtg#2	Higher level of control - do not agree with cost/benefit	Level of Control
153	Eisenhardt	Julie	Sierra Club - Env. Justice Program	2568 Martin Luther King Jr. Ave, SE	Washington DC 20020	Written Comments	LTCP fails to reverse the old system of environmental injustice that has placed a disproportionate burden on the predominantly African-American communities on the East Side of DC. All DC waterways should achieve fishable/swimmable std	Level of Control
154	Collier	James R	DC Dept of Health	51 N St NE Suite 5010	Washington DC 20002	Written Comments	Anacostia & RC: 1 OF in wet year only; Potomac 12 OF/year is OK	Level of Control
155	Eisenhardt	Julie	Sierra Club - Env. Justice Program	2568 Martin Luther King Jr. Ave, SE	Washington DC 20020	Written Comments	Anacostia : should be as clean as Potomac	Level of Control
156	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Anacostia: Endorse tunnels as laid out, Control to 25 year storm, upgrade P.S., expand LID, water conservation in NEB	Level of Control
157	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Anacostia: Goal should be 0 overflows per year in Anacostia	Level of Control
158	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	DC Council Pub Hearing	Anacostia: Higher degree of control is recommended	Level of Control
159	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	Anacostia: make Anacostia equal Potomac	Level of Control
160	Harris	Mitch	Citizen	828 Mountain Stream Lane	Lakemont GA 30552	Written Comments	Call for less pollution in general	Level of Control
161	New	Gregory R.	DC Federation of Civic Associations	P.O. Box 4549	Washington DC 20017	Written Comments	Come up with a plan that eliminates overflows	Level of Control
162	Dwyer	Stuart	Citizen	2113 N St NW #201	Washington DC 20037	Questionnaire	Consider downstream beneficiaries in cost/benefit analysis	Level of Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
163	Dwyer	Stuart	Citizen	2113 N St NW #201	Washington DC 20037	Questionnaire	Err on the side of more control	Level of Control
164	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	DC Council Pub Hearing	Higher level of control	Level of Control
165	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Higher level of control	Level of Control
166	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Higher level of control	Level of Control
167	Siglin	Douglas	Chesapeake Bay Foundation	717 E Street, NE	Washington, DC 20002	WASA Pub Hearing	Higher level of control	Level of Control
168	Armsby	Michelle	Citizen	#61 PO Box 18901	Rochester NY 14619	Written Comments	Higher level of control	Level of Control
169	Arner	Robert L.	Citizen	7209 Exfair Road	Bethesda MD 20815	Written Comments	Higher level of control	Level of Control
170	Bouri	S	Citizen			Written Comments	Higher level of control	Level of Control
171	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	Higher level of control	Level of Control
172	Culp	David	Citizen	121 12th Street, SE #403	Washington, DC 20003	Neigh Mtg#3	Higher level of control	Level of Control
173	Culp	David	Citizen	121 12th Street, SE #403	Washington, DC 20003	WASA Pub Hearing	Higher level of control	Level of Control
174	Forsberg	Ken	Citizen	1809 Monroe St, NW	Washington DC 20010	Questionnaire	Higher level of control	Level of Control
175	Hamilton	Dawn, M.	Citizen	126 16th St SE	Washington DC	Written Comments	Higher level of control	Level of Control
176	Ho	Colisa	Citizen	7548 Glenmoor Lane	Winter Park, FL 32792	Written Comments	Higher level of control	Level of Control
177	Hurt	Harold A	Citizen	640-B Croissant PL SE	Washington DC 20019	Questionnaire	Higher level of control	Level of Control
178	Lindley	George	Citizen	1444 Rhode Island Ave, NW, # 615	Washington DC 20007	Written Comments	Higher level of control	Level of Control
179	Mayock	Melanie	Citizen	501 Constitution Ave NE	Washington DC 20003	Written Comments	Higher level of control	Level of Control
180	McCuran	Elizabeth	Citizen	216 K St, NE	Washington DC 20003	Written Comments	Higher level of control	Level of Control
181	Mirsky	Jonathan, B.	Citizen	2321 Wisconsin Ave, NW #208	Washington DC 20008	Written Comments	Higher level of control	Level of Control
182	Mitchell	Jeanene	Citizen	3723 Winfield Lane NW	Washington DC 20007	Questionnaire	Higher level of control	Level of Control
183	Nagi	Suzanne	Citizen	4035 Highland Ct NW	Washington DC 20008	Written Comments	Higher level of control	Level of Control
184	Niswander	Ruth	Citizen	623 Barbera	Davis CA 95617	Written Comments	Higher level of control	Level of Control
185	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Higher level of control	Level of Control
186	Robertson	Sean	Citizen	4540 MacArthur Blvd, NW Apt #81	Washington DC 20007	Written Comments	Higher level of control	Level of Control
187	Roepnack	Beth Rene	Citizen	213 Lansdowne Ave	Decatur, GA 30031	Written Comments	Higher level of control	Level of Control
188	Saidman	Amy	Citizen	1871 Engleside	Washington DC 20010	Written Comments	Higher level of control	Level of Control
189	Tyler	Joseph	Citizen	Georgetown University, Box 573145	Washington DC 20057	Written Comments	Higher level of control	Level of Control
190	Vogel	Mary	Citizen	3105 Crest Ave	Cheverly Md 20785	Questionnaire	Higher level of control	Level of Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
191	Wells	Jeffrey R.	Citizen	3730 Windom Place, NW	Washington DC 20006	Written Comments	Higher level of control	Level of Control
192			Citizen			Neigh Mtg#5	Higher level of control	Level of Control
193			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Higher level of control	Level of Control
194	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	Higher level of control	Level of Control
195	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	DC Council Pub Hearing	Higher level of control	Level of Control
196	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	WASA Pub Hearing	Higher level of control	Level of Control
197	Eisenhardt	Julie	Sierra Club - Env. Justice Program	2568 Martin Luther King Jr. Ave, SE	Washington DC 20020	Written Comments	Higher level of control	Level of Control
198	Niedzwieki	W.R. "Max"	Southeast Asia Resource Action Center	1628 16th St NW	Washington DC 20009	Written Comments	Higher level of control	Level of Control
199	Moore	K. Ruth Anderson	Citizen	4333 Yuma St NW	Washington DC 20016	Written Comments	Make things as clean as possible	Level of Control
200	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Potomac - size Potomac Tunnels for the wettest year in 3-year period	Level of Control
201	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Potomac level of control is too low compared to Anacostia & Rock Creek	Level of Control
202	Webber	Elizabeth A.	Citizen	2320 Wisconsin Ave., NW, #201	Washington DC 20007	Written Comments	Potomac River is a recreational Resource and is used by many and its use is expanding.	Level of Control
203	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Potomac: Myth #1: Potomac is used only occasionally - it is highly used and its use is growing, examples cited	Level of Control
204	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Potomac: Myth #2: Existing uses do not entail direct contact between humans & water (describes spashing & risk of craft upset, Dogs exercise in River & pet owners touch dogs)	Level of Control
205	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Potomac: plan will have adverse impact on Potomac members?	Level of Control
206	Reusga	Albert	Citizen	1727 P St NW, Apt D	Washington DC 20036	Written Comments	Prefer to pay more, have a longer schedule and fix the problem entirely,	Level of Control
207	Niedzwieki	W.R. "Max"	Southeast Asia Resource Action Center	1628 16th St NW	Washington DC 20009	Written Comments	Prefer to pay more, have alonger schedule and fix the problem entirely	Level of Control
208	Amacker	Hilda	Citizen	1610 3rd St NW	Washington DC 20001	Written Comments	Recommendation - Advocates a permanent fix, no overflows	Level of Control
209	Lindley	George	Citizen	1444 Rhode Island Ave, NW, # 615	Washington DC 20005	Written Comments	Recommendation - Allow no overflows	Level of Control
210	Robertson	Sean	Citizen	4540 MacArthur Blvd, NW Apt #81	Washington DC 20007	Written Comments	Recommendation - Fix the problem completely, I am willing to pay more	Level of Control
211	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	DC Council Pub Hearing	Recommendation - get closer to 0 overflows	Level of Control
212	Tyler	Joseph	Citizen	Georgetown University, Box 573145	Washington DC 20057	Written Comments	Recommendation - Highest degree of control possible without separation	Level of Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
213	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	WASA Pub Hearing	Recommendation - Support tunnels, but size for 0 overflows in wettest yr	Level of Control
214			Citizen			Neigh Mtg#4	Recommendation: Objection to continued CSO discharges under any conditions	Level of Control
215			Citizen			Neigh Mtg#4	Recommendation: zero discharges per average year	Level of Control
216	Siglin	Douglas	Chesapeake Bay Foundation	717 E Street, NE	Washington, DC 20002	WASA Pub Hearing	Support Collier's plan	Level of Control
217	Dwyer	Stuart	Citizen	2113 N St NW #201	Washington DC 20037	Questionnaire	Support LTCP as written	Level of Control
218	Gallucci	Jerry	Citizen	Westover PL, NW	Washington DC 20016	Written Comments	Support LTCP as written	Level of Control
219	Hackney	Lynn, & Kimberly Hoover	Citizen	1761 Church St NW	Washington DC 20036	Written Comments	Support LTCP as written	Level of Control
220	Not Provided	Not Provided	Citizen	Mt Pleasant	Washington DC	Questionnaire	Support LTCP as Written	Level of Control
221	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Support LTCP as Written	Level of Control
222	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Support LTCP as Written	Level of Control
223	Sesil	Joe	Citizen	3421 N St NW	Washington DC	Questionnaire	Support LTCP as written	Level of Control
224	Stiehler	Robert D.	Citizen	3234 Quesada St NW	Washington DC 20015	Questionnaire	Support LTCP as written	Level of Control
225	Wrin	Bob	Citizen	5509 Chevy Chase Pkwy, NW	Washington DC	Questionnaire	Support LTCP as written	Level of Control
226	Wrin	Bob	Citizen	5509 Chevy Chase Pkwy, NW	Washington DC	Questionnaire	Support LTCP as Written	Level of Control
227	Gallagher	Patricia, E.	National Capital Planning Commission	401 9th St NW, North Lobby, Suite 500	Washington DC 20576	Written Comments	Support LTCP as written	Level of Control
228	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	DC Council Pub Hearing	This is an investment for the future, so cost is not the biggest consideration	Level of Control
229	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	To what extent can increasing the diameters of the Anacostia tunnels increase the percent capture and decrease the number of overflow events without significantly adding to the overall cost of the project?	Level of control
230	Mitchell	Jeanene	Citizen	3723 Winfield Lane NW	Washington DC 20007	Questionnaire	WASA should do all it can to reduce CSOs, even though it isn't the only polluter	Level of Control
231	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	We are making decisions for 100yrs, so be bold and make it the right one	Level of Control
232			Citizen			Neigh Mtg#4	We should not spend all this money because we don't get a big WQ benefit	Level of Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
233	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	A more thorough proposal for LID options should be included in the LTCP. The plan should address the benefits and calculate reductions and water quality impacts for the application of LID throughout the entire District, not just the benefits related to WASA's facilities. A more complete explanation of program objectives and methods should be detailed, including coordination with stormwater management plans required by the MS-4 permit for the District. Specific mechanisms to implement District-wide LID should be identified (such as building codes, zoning ordinances, and permits) as well as institutional responsibilities. Also various levels of application for LID projects should be reviewed (such as new development, re-development, or retrofit of all development) to assess stormwater flow reduction.	LID/Source Control
234	Schwartz	Paul	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	DC Council Pub Hearing	Bldg codes need to change to allow more LID	LID/Source Control
235			Cltizen			Neigh Mtg#9	Build LID instead of tunnel	LID/Source Control
236	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Written Comments	Do cost-benefit comparison of engineered to non-engineered solutions	LID/Source Control
237	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Written Comments	Explore less capital intensive solutions like source reduction, bldg code improvements & public eductaion	LID/Source Control
238	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Groundwater - Look at Federal groundwater pumpage	LID/Source Control
239			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Groundwater - Reroute groundwater pumpage	LID/Source Control
240	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Groundwater - Table 8-2 and 8-3 show significant groundwater flows from existing sources and orphan storm sewers, but does not propose to remove them from the system. What can be done to eliminate these flows from the system?	LID/Source Control
241	Hanrahan	Debra	DC Green Party	1505 Q Street, NW	Washington, DC	WASA Pub Hearing	Groundwater : Those pumping ground water should pay their fair share	LID/Source Control
242	Hanrahan	Debra	DC Green Party	1505 Q Street, NW	Washington, DC	WASA Pub Hearing	Groundwater: Groundwater pumpage is a concern	LID/Source Control
243	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	I/I & Water Conservation - Inadequate I/I reduction program WASA's own studies show show there is 118 mgd of flow (WW flow reduction + Water Conservation)	LID/Source Control
244			Cltizen			Neigh Mtg#4	I/I & Water Conservation - Incentives/water conservation should be a big part of program	LID/Source Control
245			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	I/I & Water Conservation - should be part of program	LID/Source Control
246	Deutsch	Barbara	Casey Trees	1800 K St NW, Suite 622	Washington DC 20002	WASA Pub Hearing	Increase funding for LID	LID/Source Control
247	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Increase funding for LID	LID/Source Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
248			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	LID: overstates cost, understates effectiveness, \$3 mill is inadequate	LID/Source Control
249			Citizen			Neigh Mtg#8	Look at more BMPs to treat storm water	LID/Source Control
250			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Look at Water conservation, roof leader disconnection, storm water reuse, green roofs, urban forest	LID/Source Control
251	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Low impact development alternatives have not been given a fair evaluation	LID/Source Control
252	Vogel	Mary	Citizen	3105 Crest Ave	Cheverly Md 20785	Questionnaire	Low impact development could achieve CSO reduction and beautify/ ecologically help City	LID/Source Control
253	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Mandate LID/waterconservation in Rock Creek for Montgomery County, set enforceable bacteria milestones	LID/Source Control
254	Abrams	Alan	Citizen	808 Aspen St NW	Washington DC 20013	Written Comments	More emphasis on non-engineered solution	LID/Source Control
255	Armsby	Michelle	Citizen	#61 PO Box 18901	Rochester NY 14619	Written Comments	More emphasis on non-engineered solution	LID/Source Control
256	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	WASA Pub Hearing	More emphasis on non-engineered solution	LID/Source Control
257	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	Written Comments	More emphasis on non-engineered solution	LID/Source Control
258	Hamilton	Dawn, M.	Citizen	126 16th St SE	Washington DC	Written Comments	More emphasis on non-engineered solution	LID/Source Control
259	Ho	Colisa	Citizen	7548 Clenmoor Lane	Winter Park, FL 32792	Written Comments	More emphasis on non-engineered solution	LID/Source Control
260	Mayock	Melanie	Citizen	501 Constitution Ave NE	Washington DC 20003	Written Comments	More emphasis on non-engineered solution	LID/Source Control
261	McCuran	Elizabeth	Citizen	216 K St, NE	Washington DC 20003	Written Comments	More emphasis on non-engineered solution	LID/Source Control
262	Mirsky	Jonathan, B.	Citizen	2321 Wisconsin Ave, NW #208	Washington DC 20008	Written Comments	More emphasis on non-engineered solution	LID/Source Control
263	Nagi	Suzanne	Citizen	4035 Highland Ct NW	Washington DC 20008	Written Comments	More emphasis on non-engineered solution	LID/Source Control
264	Nagi	Suzanne	Citizen	4035 Highland Ct NW	Washington DC 20008	Written Comments	More emphasis on non-engineered solution	LID/Source Control
265	Niswander	Ruth	Citizen	623 Barbera	Davis CA 95617	Written Comments	More emphasis on non-engineered solution	LID/Source Control
266	Saidman	Amy	Citizen	1871 Engleside	Washington DC 20010	Written Comments	More emphasis on non-engineered solution	LID/Source Control
267	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	More emphasis on non-engineered solution	LID/Source Control
268	Woodworth	James	Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	DC Council Pub Hearing	More emphasis on non-engineered solution	LID/Source Control
269			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	More emphasis on non-engineered solution	LID/Source Control
270	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	More emphasis on non-engineered solution	LID/Source Control
271	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	More emphasis on non-engineered solution	LID/Source Control
272	Wentworth	Marchant	Sierra Club	1727 St NW, Suite 902	Washington DC 20037	WASA Pub Hearing	More emphasis on non-engineered solution	LID/Source Control

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
273	Siglin	Douglas	Chesapeake Bay Foundation	717 E Street, NE	Washington, DC 20002	WASA Pub Hearing	More LID	LID/Source Control
274	Morris	Bob	Sierra Club	413 5th Street, NE	Washington, DC 20002	WASA Pub Hearing	More LID	LID/Source Control
275			Cltizen			Neigh Mtg#4	Public education should be part of program	LID/Source Control
276	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Written Comments	Rate Structure - Consider fee-incentives such as property tax credits to promote source reduction of storm water	LID/Source Control
277			Cltizen			Neigh Mtg#10	Rate Structure - Consider incentives in water/sewer rates to encourage LID	LID/Source Control
278	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Rate structure - Plan should creat incentives for LID (City Council should do it)	LID/Source Control
279	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Support an integrated planning process e.g. street sweeping, eduction, water cons., grey water, etc	LID/Source Control
280	Hurt	Harold A	Citizen	640-B Croissant PL SE	Washington DC 20019	Questionnaire	Supports LID	LID/Source Control
281	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	Supports source control (Wat. conserv., street sweeping, tree planting, LID, water reuse	LID/Source Control
282	Hogan	Sheila	Casey Trees	1800 K St NW, Suite 622	Washington DC 20002	Written Comments	Trees - DC has experienced a 64% decrease in tree cover since 1973 and a resulting 34% increase in storm water	LID/Source Control
283	Hogan	Sheila	Casey Trees	1800 K St NW, Suite 622	Washington DC 20002	Written Comments	Trees - If tree cover were restored to 1970 levels, could reduce storm water runoff by 826 mg/yr	LID/Source Control
284	Hogan	Sheila	Casey Trees	1800 K St NW, Suite 622	Washington DC 20002	Written Comments	Trees - LTCP has not adequately addressed tree loss & using it to control CSO	LID/Source Control
285	Deutsch	Barbara	Casey Trees	1800 K St NW, Suite 622	Washington DC 20002	WASA Pub Hearing	Trees - Make trees a critical component of LID	LID/Source Control
286	Forsberg	Ken	Citizen	1809 Monroe St, NW	Washington DC 20036	Written Comments	Consider effects of global warming on long term rain intensity/patterns	Misc
287	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	Demonstrate year by year improvements	Misc
288	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Devise system to track & respond to Environmental complaints	Misc
289	Reusga	Albert	Citizen	1727 P St NW, Apt D	Washington DC 20036	Written Comments	Do not do anything unless other polluters do their share	Misc
290	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Health effects - Continued CSOs are a health risk due to fish consumption	Misc
291	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	DC Council Pub Hearing	Health Effects - fails to recognize health effects	Misc
292	Sesil	Joe	Citizen	3421 N St NW	Washington DC	Questionnaire	Keep recording notice of violations	Misc
293	DeGroot	Allison	Citizen		Washington, DC	WASA Pub Hearing	No comments	Misc
294	Wentworth	Marchant	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	WASA Pub Hearing	Public notification - add system in short term	Misc
295	Wentworth	Marchant, and Robert Morris	Sierra Club	1726 St NW, Suite 902	Washington DC 20036	Written Comments	Public notification - Given long implementation time, take steps to advise people of CSOs (examples given)	Misc

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
296	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Public Notification - Visual notification system should have schedule in LTCP & be installed in 12 mos	Misc
297			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Public notification - WASA must have immediate public notification system	Misc
298	Woodworth	James	Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	WASA Pub Hearing	Same as written comments	Misc
299	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	WASA Pub Hearing	Same as written comments	Misc
300	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	WASA Pub Hearing	Same as written testimony	Misc
301	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The statement, "In March 2001 the DOH released its first TMDL for the impaired waterbody." is incorrect. The first TMDL was issued on January 12, 1999. The Anacostia BOD TMDL is the second.	Misc
302	Mack	Getterius	Citizen	1430 L St SE, #509	Washington DC 20003	Written Comments	This affects our water supplies	Misc
303	Bobreski	Jim	Citizen			DC Council Pub Hearing	WASA is not forthcoming to public	Misc
304	Battle	C.A.	Citizen	5503 13th St NW	Washington DC 20011	Written Comments	Will the plan be implemented correctly	Misc
305	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The LTCP should more fully describe WASA's efforts to date, and plans to implement each of the NMCs. Since the overflow volume to be addressed by the LTCP can be reduced by maximizing NMC effectiveness, it is important that current NMC information be reported. Although a NMC Summary Report was complete in July 1999 and NMC Action Plan Report in February 2000, the plan should include up-to-date NMC efforts and a current schedule for full implementation of NMCs. What near-term plans are there for trash and floatables control? Could any portions of the recommended Plan be reduced in size or eliminated through full implementation of the Nine Minimum Controls? Also what real-time enhancements to the overflow event warning system are planned to satisfy public notification requirements?	NMC
306			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	WASA must fully implement NMCs	NMC
307	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Written Comments	Consider larger public involvement to bring in fresh perspectives & foster public-private partnerships	Public Participation
308	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	Inadequate citizen attendance at public meetings (only 50)	Public Participation
309	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Need better public involvement process that includes all the players	Public Participation
310	Sanders	Serita	Bloomingdale Civic Assoc	P.O. Box 92691	Washington, DC 20090	WASA Pub Hearing	Need better public participation	Public Participation

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
311	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Section 10.7 should be expanded to include the process and preparation of Public Responsiveness Document and how it will be distributed through WASA's website and other means. Also explain how later versions of the LTCP will include additional information on the public participation process.	Public Participation
312	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What steps have been taken to ensure that public participation has effectively reached minority and low income populations?	Public Participation
313	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What steps have been taken to evaluate the potential for disproportionately high and adverse human health or environmental effects on minority and low-income populations? What steps have been taken to avoid any such impacts?	Public Participation
314	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	A more detailed discussion of sensitive areas to include each of the three receiving waterbodies is required. Presently, the LTCP only addresses the Rock Creek and does not explain how the Hay's Spring Amphipod will be protected by implementing CSO controls. A discussion of the actual impacts of CSOs and LTCP related construction on each species (and mitigation efforts) is necessary. The Short Nosed Sturgeon has not been included in any discussion of sensitive areas for the Potomac. Since this endangered species has been known to reside in Potomac waters, it should be addressed in the plan along with the other threatened and/or endangered species.	Regulatory
315	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Anacostia, Pot. & RC are all sensitive areas and must be treated as such per CSO Policy	Regulatory
316	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Expansion - CSO controls cannot be expanded as required by CSO Policy	Regulatory
317	Dwyer	Stuart	Citizen	2113 N St NW #201	Washington DC 20037	Questionnaire	Expansion - Make sure system can be upgraded in future	Regulatory
318	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	LTCP should project water quality impacts of CSOs under "all potential weather conditions", not just average year.	Regulatory
319	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	LTCP violates Chesapeake Bay Agreement and 2001 Watershed Restoration Agreement	Regulatory
320	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Monitoring - More detail about the Post Construction monitoring plan development should be included in the LTCP along with a schedule for plan development. A monitoring program (to include Post Construction monitoring) is expected during and after LTCP implementation to determine the effectiveness of the overall program using monitoring conducted during LTCP development as a baseline.	Regulatory
321	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Monitoring - Post-construction monitoring program has inadequate detail and no schedule per CSO Policy	Regulatory
322			Citizen			Neigh Mtg#4	Can the plan be implemented faster?	Schedule
323	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Questionnaire	DC should be given more time to develop less of a "middle of the pipe" solution	Schedule

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324	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	EPA notes that the project schedule identifies the start of design for the Rock Creek and Potomac tunnels in years 10 and 13. We agree that the initial emphasis should be on the Anacostia elements. We further suggest that the proposed Rock Creek and Potomac tunnels be re-evaluated when the Anacostia tunnel (Poplar Point to NE Boundary Outfall) is completed, as part of the Anacostia post-construction monitoring plan.	Schedule
325	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	For each major project component, describe implementation schedule constraints that prevent nearer-term completion.	Schedule
326	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Misconception that plan will take 30 years to build	Schedule
327	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Plan does not adequately address trash - too long to wait for tunnels	Schedule
328	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Plan does not have fixed date schedules per CSO Policy and 20-yr time frame is not justified	Schedule
329	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Potomac is pushed out too far in schedule	Schedule
330	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	DC Council Pub Hearing	Shorter schedule	Schedule
331	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Shorter schedule	Schedule
332	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Shorter schedule	Schedule
333	Arner	Robert L.	Citizen	7209 Exfair Road	Bethesda MD 20815	Written Comments	Shorter schedule	Schedule
334	Caposi	John	Citizen	1619 G St SE	Washington DC	WASA Pub Hearing	Shorter schedule	Schedule
335	Hamilton	Dawn, M.	Citizen	126 16th St SE	Washington DC	Written Comments	Shorter schedule	Schedule
336	Woodworth	James	Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	DC Council Pub Hearing	Shorter schedule	Schedule
337			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Shorter schedule	Schedule
338	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	Shorter schedule	Schedule
339	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	Shorter schedule	Schedule
340	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The draft plan identifies early action items that are not dependent on LTCP approval. A summary action plan should be prepared and submitted to implement the early action items.	Schedule
341	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The schedule should include a projection of the incremental progress in terms of increase in percent capture (1 or 2 year increments suggested) throughout the course of the proposed schedule.	Schedule
342	Woodworth	James	Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	DC Council Pub Hearing	Things should be done immediately - trash control, better O & M, LID, wat conserv	Schedule
343	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Will the first 2 segments of the Anacostia tunnel project be independently operational in terms of providing useable storage and transmission immediately upon completion of construction?	Schedule

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344	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Quantify, to the extent that currently available information allows, the toxic pollution control benefits of the recommended plan. Provide an estimate of toxics that will be captured and treated at Blue Plains WWTP that would otherwise be discharged if sewers are separated.	Toxics
345	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	Written Comments	Chicago & Milwaukee - Milwaukee tunnels leak, Chicago tunnels are undersized	Tunnel
346	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Chicago & Milwaukee - WASA did not look at other tunnels that failed (Chicago, Milwaukee)	Tunnel
347	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	DC Council Pub Hearing	Chicago & Milwaukee have problems w/their tunnels	Tunnel
348	Chanay	Robin D	Citizen	503 S St NW	Washington DC 20001	WASA Pub Hearing	Chicago & Milwaukee have problems w/their tunnels	Tunnel
349			Citizen			Neigh Mtg#6	Concern about hauling tunnel spoil and traffic messes at Georgetown	Tunnel
350	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Concern about lack of details regarding tunnel (where will muck be removed, disturbance of existing structures,	Tunnel
351			Citizen			Neigh Mtg#6	Concern about odors in the tunnel	Tunnel
352			Citizen			Neigh Mtg#8	Concern about tunnel leaking, contaminating groundwater, collapsing	Tunnel
353			Citizen			Neigh Mtg#8	Concern regarding interruption of sewer service and disruption associated with Plan	Tunnel
354	Webber	Elizabeth A.	Citizen	2320 Wisconsin Ave., NW, #201	Washington DC 20007	Written Comments	Construction will adversely affect existing structures (Key Bridge, canal, etc due to shaking, etc	Tunnel
355	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Describe hydraulic properties of geologic media (ability to transmit groundwater to tunnels)	Tunnel
356	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Determine interaction of groundwater with surface waters	Tunnel
357	Slowinski	Kent	Citizen	NA	NA	WASA Pub Hearing	How will odors be controlled when tunnels fill and empty	Tunnel
358	Slowinski	Kent	Citizen	NA	NA	WASA Pub Hearing	How will WASA maintain tunnels	Tunnel
359	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Investigate & describe hydrogeologic framework (geology)	Tunnel
360			Citizen			Neigh Mtg#2	Metro caused shifting soils. What are you going to do to prevent this	Tunnel
361	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Perform groundwater flow system analysis prior to designing tunnel	Tunnel
362	Connelly	Jim	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	DC Council Pub Hearing	Storage tunnels good first step	Tunnel
363	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Study groundwater quality conditions & evaluate effect of tunnels on ground water and surface water quality	Tunnel
364	Gerhart	James M.	U.S. Geological Survey	8987 Yellow Brick Road	Baltimore MD 21237	Written Comments	Understand inflows & outflows of groundwater system	Tunnel
365	Webber	Elizabeth A.	Citizen	2320 Wisconsin Ave., NW, #201	Washington DC 20007	Written Comments	Where will tunnel muck be removed, won't it cause a disruption?	Tunnel

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366	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The recommended plan for the Rock Creek requires monitoring regulators for overflows. Connection of the Rock Creek Interceptor to the Potomac Tunnel may be required as a result. Is the Potomac Tunnel being sized to accept the RC Interceptor flows initially?	Tunnels
367	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What additional solids handling facilities will be included in the tunnel system and at Blue Plains to handle increased flows?	Tunnels
368	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What cost estimation data was used to develop cost estimates for installation of the proposed tunnels in DC? What is WASA's level of confidence in the cost estimates for the tunnels?	Tunnels
369	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What degree of confidence does WASA have that the tunnel sizing will be adequate to limit overflow events and avoid a situation such as that being experienced in Milwaukee where tunnels must be expanded due to continued CSO overflows and system backups. Has WASA reviewed installation of tunnels in other cities and evaluated their problems and successes?	Tunnels
370	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What measures will be taken in tunnel design & construction to monitor and control infiltration and exfiltration in the underground tunnels?	Tunnels
371	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	What preliminary geologic and hydrogeologic investigation has been done to determine feasibility and potential siting of underground storage tunnels?	Tunnels
372	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Changing WQS & the proposed LTCP would ban swimming in perpetuity	WQS
373	Cole	Cynthia	Potomac Boat Club	3530 Water Street NW	Washington DC 20002	Written Comments	Concern about changing WQS	WQS
374	Culp	David	Cltizen	121 12th Street, SE #403	Washington, DC 20003	Neigh Mtg#3	Don't change WQS	WQS
375	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Questionnaire	Don't change WQS	WQS
376	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	DC Council Pub Hearing	Don't change WQS	WQS
377	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	Don't change WQS	WQS
378	Silverman	Larry and Robert Boone	Anacostia Watershed Society	4302 Baltimore Ave.	Bladensburg, MD 20710	WASA Pub Hearing	Don't change WQS	WQS
379	Tibbetts	David, A.	Anacostia Watershed Society Treasurer	4302 Baltimore Ave.	Bladensburg, MD 20710	Written Comments	Don't change WQS	WQS
380	Armsby	Michelle	Citizen	#61 PO Box 18900	Rochester NY 14618	Written Comments	Don't change WQS	WQS
381	Culp	David	Citizen	121 12th Street, SE #403	Washington, DC 20003	WASA Pub Hearing	Don't change WQS	WQS
382	Forsberg	Ken	Citizen	1809 Monroe St, NW	Washington DC 20010	Questionnaire	Don't change WQS	WQS
383	Ho	Colisa	Citizen	7548 Clenmoor Lane	Winter Park, FL 32792	Written Comments	Don't change WQS	WQS

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384	Hurt	Harold A	Citizen	640-B Croissant PL SE	Washington DC 20019	Questionnaire	Don't change WQS	WQS
385	Mack	Getterius	Citizen	1430 L St SE, #509	Washington DC 20003	Written Comments	Don't change WQS	WQS
386	Mayock	Melanie	Citizen	501 Constitution Ave NE	Washington DC 20003	Written Comments	Don't change WQS	WQS
387	McCuran	Elizabeth	Citizen	216 K St, NE	Washington DC 20003	Written Comments	Don't change WQS	WQS
388	Mitchell	Jeanene	Citizen	3723 Winfield Lane NW	Washington DC 20007	Questionnaire	Don't change WQS	WQS
389	Morgan	James	Citizen	4618 Bass Pl., SE	Washington DC	Questionnaire	Don't change WQS	WQS
390	Nagi	Suzanne	Citizen	4035 Highland Ct NW	Washington DC 20008	Written Comments	Don't change WQS	WQS
391	Niswander	Ruth	Citizen	623 Barbera	Davis CA 95617	Written Comments	Don't change WQS	WQS
392	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Don't change WQS	WQS
393	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Don't change WQS	WQS
394	Saidman	Amy	Citizen	1871 Engleside	Washington DC 20010	Written Comments	Don't change WQS	WQS
395	Sesil	Joe	Citizen	3421 N St NW	Washington DC	Questionnaire	Don't change WQS	WQS
396	Tyler	Joseph	Citizen	Georgetown University, Box 573145	Washington DC 20057	Written Comments	Don't change WQS	WQS
397	Vogel	Mary	Citizen	3105 Crest Ave	Cheverly Md 20785	Questionnaire	Don't change WQS	WQS
398	Wells	Jeffrey R.	Citizen	3730 Windom Place, NW	Washington DC 20006	Written Comments	Don't change WQS	WQS
399	Fellows	Andrew, and Paul Schwartz	Clean Water Action	4455 Connecticut Ave, NW, A-300	Washington, DC 20008	WASA Pub Hearing	Don't change WQS	WQS
400	Woodworth	James	Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	DC Council Pub Hearing	Don't change WQS	WQS
401			Clean Water Campaign	NRDC 1200 New York Ave., NW	Washington DC 20005	Written Comments	Don't change WQS	WQS
402	Norouzi	Parisa	D.C. Environmental Network	1025 Vermont Avenue NW 3rd Flr	Washington DC 20005	DC Council Pub Hearing	Don't change WQS	WQS
403	New	Gregory R.	DC Federation of Civic Associations	P.O. Box 4549	Washington DC 20017	Written Comments	Don't change WQS	WQS
404	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	DC Council Pub Hearing	Don't change WQS	WQS
405	Blackwelder	Brent	Friends of the Earth	1025 Vermont Avenue, NW	Washington, DC 20005	WASA Pub Hearing	Don't change WQS	WQS
406	Eisenhardt	Julie	Sierra Club - Env. Justice Program	2568 Martin Luther King Jr. Ave, SE	Washington DC 20020	Written Comments	Don't Change WQS	WQS
407	Schulman	Jim	Sustainable Community Initiatives	631 E St NE	Washington DC 20002	Written Comments	Don't Change WQS	WQS
408	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	How would implementation of the WQS currently proposed by DOH affect the plan?	WQS

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409	Miller	Emily	Citizen	4109 12th St, NE	Washington DC 20017	Written Comments	Potable water is unsanitary, need higher WQS to have safe drinking water	WQS
410	Baron	David	Earthjustice	1625 Mass. Ave, NW Suite 702	Washington DC 20036	Written Comments	Primary contact & secondary contact are existing uses. WQS cannot legally be changed to interfere with existing uses.	WQS
411	Dwyer	Stuart	Citizen	2113 N St NW #201	Washington DC 20037	Questionnaire	Supports changing WQS	WQS
412	Not Provided	Not Provided	Citizen	Mt Pleasant	Washington DC	Questionnaire	Supports changing WQS	WQS
413	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Supports changing WQS	WQS
414	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Supports changing WQS	WQS
415	Wrin	Bob	Citizen	5509 Chevy Chase Pkwy, NW	Washington DC	Questionnaire	Supports changing WQS	WQS
416	Not Provided	Not Provided	Citizen	Not Provided	Not Provided	Questionnaire	Supports changing WQS - Some kind of recognition in water quality standards that allows a few overflows is OK	WQS
417	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	WASA could seek a variance from the WQS - they don't need to change them	WQS
418	Fitzpatrick	Neil	Audubon Naturalist Society	8940 Jones Mill Road	Chevy Chase, MD 20815	WASA Pub Hearing	WASA worked backwards - adjusted WQS to fit plan and did not try to meet stds	WQS
419	Whitehead	Damon	Anacostia Riverkeeper	1st & Potomac Avenue, SE	Washington, DC 20003	WASA Pub Hearing	WASA worked backwards - WASA did not start off with a goal of achieving WQS	WQS
420	Altman	Andrew	Office of Planning	801 N. Capitol St, NE Ste 4000	Washington, DC 20002	Written Comments	Consider collaborative efforts in public education, orphaned storm sewers, stomr water retention, LID	Alternatives
421	Altman	Andrew	Office of Planning	801 N. Capitol St, NE Ste 4000	Washington, DC 20002	Written Comments	Support relocation of Main & O P.S., retain as option	Alternatives
422	Altman	Andrew	Office of Planning	801 N. Capitol St, NE Ste 4000	Washington, DC 20002	Written Comments	Coordinate surface construction with Office of Planning, possibly integrate parks into designs	Alternatives
423	Wolflin	John P.	U.S. Fish & Wildlife Service	177 Admiral Cochrane Drive	Annapolis MD 21401	Written Comments	Implementation of Draft LTCP will have no adverse effects on Endangered Speciaes and may be beneficial to them	Misc
424	Robinson	Carole	Arlington Boathouse Foundation, Inc.	177 Admiral Cochrane Drive	Annapolis MD 21401	Written Comments	Potomac level of control is too low - design plan to virtually eliminate risk of overflows	Level of Control
425	Curtis	Doug	National Park Service - Rock Creek Park	N/A	N/A	Written Comments	Piney Branch Tunnel - Want more details on construction methods, access locations, construction impacts to park, etc	Tunnel
426	Curtis	Doug	National Park Service - Rock Creek Park	N/A	N/A	Written Comments	Piney Branch Tunnel - Were other alignments considered?, what is impact on groundwater?, could LID decrease the size of proposed facilities	Tunnel
427	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercom Place	Largo MD 20774	Written Comments	Concern about LTCP taking up Blue Plains capacity	Blue Plains
428	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercom Place	Largo MD 20775	Written Comments	Remove references to upstream contributors being a significant source of watershed impairment	Misc

No.	Last Name	First name	Affiliation	Address 1	Address 2	Forum	Comment	Category
429	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercorn Place	Largo MD 20776	Written Comments	What will be the effect of dewatering tunnels on Blue Plains, performance, O & M costs, etc	Blue Plains
430	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercorn Place	Largo MD 20776	Written Comments	Questions use of IMA numbers for District given that District is above IMA allocation	Blue Plains
431	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercorn Place	Largo MD 20776	Written Comments	Consider opportunities for partnership with Federal ISTE program, EPA 319 grants and others	Misc
432	Wynkocp, Jr	Samuel E.	Prince George's County	Inglewood Center Three, 9400 Peppercorn Place	Largo MD 20776	Written Comments	LID 0.5" assumption wrong, costs too high, did not consider timing, funding of LID wrong, time too long, maintenance costs are lower, recommends an LID demonstration project	LID/Source Control
433	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	It is unclear how benefits from LTCP implementation will translate to protection of designated and existing uses. How severe a storm will have to be to trigger overflows, and what the resultant water quality impacts will be (assuming of course that other point sources and NPS are controlled as envisioned in the BOD TMDL). 1. What magnitude storm [5 (or whatever) year storm, defined as so many inches per hour, for a given amount of time, spread over a defined area] will cause overflows to the Anacostia (post implementation of the draft LTCP)? How severe would a storm have to be to result in sufficient overflows to exceed numeric water quality criteria? How much of a CSO load would it take to cause such an exceedance? 2. How many days of water body use, if any, do the models suggest would be lost in an average year to such exceedances (post implementation of the draft LTCP)?3. Please repeat the above for the LTCP scenario suggested by DOH, in which there would be no overflows to the Anacostia in an average year.	Level of Control
434	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	The LTCP should describe how much money will be needed to fund individual control plan elements based on the project schedule (Figure 12-4). Identify work that already has funding available (especially for the "early action items"). Identify work on an approved CIP, and explain the significance of being included on the CIP (does that mean that funds are committed?).	Financial Impacts
435	Hanmer	Rebecca	EPA Reg 3	1650 Arch Street	Philadelphia, PA 19103	Written Comments	Demonstrate how the recommended LTCP can be cost effectively expanded in accordance with the CSO Policy	Regulatory

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