

EXHIBIT 9

**Attachment No. 3**

**WASA COMMENTS ON DRAFT "PHASE II" PERMIT CONDITIONS  
AND FACT SHEET**

**March 18, 2004 Draft Permit for Public Notice**

**NPDES Permit No. DC0021199**

**I. INTRODUCTION AND OVERVIEW**

Following one of the most extensive stakeholder and public participation processes ever undertaken during the development of a Long Term Combined Sewer Overflow Control Plan ("LTCP"), WASA submitted its July 2002 LTCP Final Report to EPA and the District of Columbia Department of Health ("DOH") in early August 2002 for their review and approval.<sup>1</sup> WASA's LTCP was developed in strict accordance with EPA's 1994 Combined Sewer Overflow ("CSO) Policy ("Policy"). During development of its LTCP, WASA characterized, monitored, and modeled its combined sewer system, considered sensitive areas, evaluated a wide range of control alternatives, and ultimately selected as its control program a storage, conveyance and treatment system under the "demonstration" approach in section II.C.4.b.of the Policy. As provided in the Policy and as discussed later in these comments, the selected control program was based upon design conditions reflecting average year wet weather conditions for the combined sewer area. When fully implemented, the selected controls in WASA's LTCP will reduce CSO discharges by approximately 96 percent over uncontrolled levels based on the average wet weather condition at a capital cost of approximately \$1.265 billion in 2001 dollars. CSO discharges will remain following LTCP implementation, but they will be few and far between.

By letter dated August 28, 2003, DOH approved the LTCP and found that following implementation, the selected controls in the LTCP would not cause or contribute to a violation of District of Columbia water quality standards ("WQS").<sup>2</sup> Unfortunately, however, to date, EPA has refused to fulfill its responsibilities under the Policy and Clean Water Act ("CWA") and find that the CSO discharges remaining after LTCP will not cause or contribute to a violation of WQS. EPA's failure to follow the Policy and comply with the CWA is carried over to the draft phase II permit conditions.

The following overview of the relevant provisions of the Policy and their application to the long term control planning process in WASA's case is intended to set the stage for WASA's comments on the flaws in, and proposed revisions to the phase II permit conditions in the draft permit and fact sheet.

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<sup>1</sup> WASA's July 2002 LTCP Final Report and supporting documents are incorporated into these comments by reference.

<sup>2</sup> The August 28, 2003 letter is attached to and incorporated into these comments as Exhibit A.

When it incorporated the Policy into the CWA at section 402(q), Congress gave EPA, the states, and CSO communities clear direction with respect to their CSO-related duties and responsibilities. CWA § 402(q)(1) provides, in relevant part, as follows:

*Each permit, order, or decree issued pursuant to this chapter after December 21, 2000 for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Policy signed by the Administrator on April 11, 1994.*

33 U.S.C. § 1342(q)(1).

This subsection reflects the planning, permitting, and enforcement processes in the Policy governing the development and implementation of the technology-based (Nine Minimum Controls) and water quality-based (Long Term Control Plan) requirements of the Policy. The following steps set forth the substance, timing, and sequence of EPA's and the states' LTCP planning, permitting, and enforcement responsibilities under the Policy, the relevant aspects of which must be reflected in all permits, orders, and decrees issued for discharges from municipal combined sewer systems. The following is an abbreviated version of the full 11-step administrative process in Figure 1, which is taken from EPA guidance<sup>3</sup> and is attached to and incorporated into these comments as Exhibit B.

Step 1 - EPA (or the state permitting authority in a delegated state) must issue a phase I permit containing requirements for demonstrating implementation of the Nine Minimum Controls and development of the LTCP. (Figure 1, Step 1). Policy at IV.B.1.

Step 2 - The permittee must complete development of the LTCP and the selection of the controls necessary to meet CWA requirements (including WQS) following coordination with the permitting and WQS authorities. Policy at II.C.&III.A. The Policy gives EPA, as the permitting authority in this case, responsibility for coordinating review of the LTCP to determine if revisions to the WQS are appropriate (Policy at III.A.) and development of the phase II permit with DOH (as the WQS authority). (Figure 1, Steps 3-8). Policy at IV.

Step 3 - The permitting authority must approve the LTCP under either the presumption or demonstration provisions of section II.C.4. of the Policy. (Figure 1, Step 9). Policy at IV. As stated above, WASA has chosen the demonstration approach in its LTCP, and the Policy and implementing guidances<sup>4</sup> make clear that this approach can be employed only where the permittee can demonstrate that the selected control program is adequate to meet WQS. Policy at II.C.4.b.i.&ii. The Policy does recognize that post-construction monitoring may disclose that the controls may not, in fact, comply with the

<sup>3</sup> Figure 1 is from U.S. EPA *Guidance: Coordinating CSO Long-Term Planning with Water Quality Standards Reviews* (EPA-833-R-01-002)(July 31, 2001). This and all other EPA CSO guidances are incorporated into these comments by reference.

<sup>4</sup> See, eg., *Guidance, Id.* at 11-12

standards, and requires that LTCPs utilizing the demonstration approach provide for cost-effective expansion or cost-effective retrofitting should additional controls be needed to meet the standards. Policy at II.C.4.b.iv.

Step 4 – After the LTCP is approved, the permitting authority must include in a “phase II” permit the various requirements and conditions set forth in section IV.B.2. of the Policy, including “[w]ater quality-based effluent limits ... requiring, at a minimum, compliance with, no later than the date allowed under the State’s WQS, the numeric performance standards for the selected CSO controls ....” (Figure 1, Step 9)

Step 5 – The permittee must implement the LTCP to comply with the phase II permit conditions. (Figure 1, Step 10). An administrative or judicial decree is appropriate only where the permittee cannot comply with all the requirements of its phase II permit. LTCP implementation schedules should be included in judicial decrees issued in conjunction with the phase II permits for those major permittees that cannot meet the numeric performance standards for the selected CSO controls by the deadline established in the phase II permit. Policy at V.A.

It is apparent from this process that EPA, and later, Congress, recognized that controlling CSOs would be an extremely expensive, long-term undertaking for CSO communities nationwide and that these communities’ finite resources would be most effectively and efficiently utilized by following and completing the administrative process established in the Policy. The Policy also reflects EPA’s and Congress’ intent that these communities not be exposed to liabilities unrelated to their obligations under the Policy. As demonstrated below, EPA has failed to follow the Policy in the draft phase II permit conditions and fact sheet and those failures expose WASA and its ratepayers to the very inefficiencies, risks and potential liabilities that the Policy was designed to avoid.

Steps 1 and 2 above (Figure 1, Steps 1, 3-8) have been completed in WASA’s case. The phase I permit issued by EPA on January 22, 1997 required WASA to develop its LTCP. WASA completed the LTCP and submitted its July 2002 LTCP Report to EPA and DOH in August 2002 for their review and approval. WASA is now prepared to proceed with LTCP implementation. (Figure 1, Step 10). To fulfill its responsibilities and complete the administrative process established by the Policy, EPA must first find that the CSO discharges remaining after implementation of the selected controls in WASA’s LTCP will not preclude WQS attainment (Policy at II.C.4.b.i&ii), and then modify WASA’s permit to incorporate the phase II permit conditions, including narrative requirements to implement, operate and maintain the selected CSO controls and water quality-based numeric performance standards for the selected CSO controls based on the standards compliance determination. (Figure 1, Step 9). Policy at IV.B.2.

Section II.C. of the draft permit contains the narrative requirements and water quality-based numeric performance standards, but fails to make the WQS compliance determination required by the Policy and the CWA. Performance standards for the selected CSO controls under the demonstration approach must be based on a

determination by the permitting authority that compliance with the performance standards will provide for compliance with WQS, subject to post construction monitoring. The absence of such a determination exposes WASA to the risk and attendant financial consequences of having to make substantial modifications to its LTCP after the selected controls are installed in the event of a later determination that these controls will not attain WQS.<sup>5</sup> The Policy was designed to avoid these very risks and consequences for permittees by requiring that the permitting authority make its standards compliance determination before, not after, LTCP implementation.

The potential consequences to WASA of EPA's failure to make the required WQS compliance determination is compounded by EPA's unauthorized inclusion of effluent limits based on the approved TMDLs for the Anacostia River and Rock Creek and the general WQS compliance requirement in section III.E. of the draft permit modification. Section IV.B.2.c.iv. of the Policy calls for phase II permits to contain water quality-based effluent limits requiring compliance with the numeric performance standards for the selected CSO controls. Section III.E. of the draft permit modification fails to conform to Section IV.B.2.c.iv. because, as explained below, the TMDL-derived effluent limits and the general WQS compliance requirement do not reflect the selected CSO controls, are unrelated to and go beyond the permit conditions authorized by the phase II permit provisions in section IV.B.2. of the Policy, and impose liabilities unrelated to WASA's obligations under the Policy.

Specifically, the draft permit and fact sheet contain the following errors:

- The draft permit and fact sheet do not conform to CWA § 402(q) because they fail to make the water quality standards compliance determination required by the Policy;

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<sup>5</sup> One might ask why WASA should be so concerned about having to modify its LTCP following implementation when the Policy itself recognizes that the selected controls may have to be expanded or retrofitted where post construction monitoring establishes that CSOs remaining after LTCP will not attain WQS. The answer is that LTCP modifications under these circumstances would by their very nature be cost effective because the possible expansions or retrofits would have been built into the LTCP at the time it was developed and approved, just as WASA has done in its LTCP. In fact, the Policy calls for modifications under these circumstances to be cost effective. Policy at II.C.4.b.iv. WASA also recognizes that it may have to modify its LTCP based on future WQS modifications; however, the financial consequences of LTCP modifications made in response to subsequently adopted WQS modifications are known and accepted at the time the WQS modifications are adopted. The financial consequences of future compliance determinations based on WQS in effect at the time of LTCP development, on the other hand, could have unintended and severe consequences that can be avoided with WQS compliance determinations prior to LTCP implementation. For example, a future WQS compliance determination following implementation of a LTCP that called for continued CSO discharges might require that the discharges be eliminated through separation based on a finding that the discharges impair an existing use that can not be changed. Had such a determination been made prior to LTCP implementation, the CSO community could have turned directly to separation and avoided investing in facilities that can not meet WQS. Also, even if subsequent standards determinations do not result in the abandonment of CSO facilities, it is reasonable to assume that expansions or retrofits that are anticipated or planned for at the time of LTCP development will cost less than unexpected expansions or retrofits required by subsequent standards compliance determinations.

- The draft permit fails to conform to CWA § 402(q) because it contains the general water quality standards compliance requirement in section III.E.1.;
- The draft permit fails to conform to CWA § 402(q) because it contains the TMDL-derived effluent limits in section III.E.2.;
- The TMDL-derived effluent limits and monitoring requirements in sections III.E.2. and III.E.3., respectively, of the draft permit are erroneous and arbitrary and capricious because they incorrectly assume that the TMDLs can be employed directly as effluent limits for the CSO discharges remaining after implementation of the LTCP;
- The draft permit and fact sheet fail to conform to CWA § 402(q) and are contrary to the law because they neither contain nor acknowledge WASA's right to a schedule for implementation of WASA's LTCP based on the erroneous conclusion that the Policy requires WASA to immediately implement its LTCP.

## II. ERRORS IN THE PHASE II PERMIT CONDITIONS

### A. The Draft Permit and Fact Sheet Do Not Conform to CWA § 402(q) Because They Fail to Make the Water Quality Standards Compliance Determination Required by the Policy.

As discussed above, CWA § 402(q)(1) requires that each permit issued after December 21, 2000 for a discharge from a municipal combined storm and sanitary sewer conform to the Policy. The Policy at II.C.4.b, EPA guidances implementing the Policy<sup>6</sup>, and, indeed, EPA's comments on WASA's LTCP itself<sup>7</sup>, make clear that when, as here, EPA is the permitting authority, it can not approve a LTCP submitted pursuant to the Policy's demonstration approach and use that LTCP to establish water quality-based conditions in a phase II permit without first determining that the LTCP will comply with applicable water quality standards following implementation. Therefore, a phase II permit that is based upon a LTCP utilizing the demonstration approach which has not been determined by the permitting authority to meet water quality standards does not conform to the Policy and violates CWA § 402(q).

Section II.C.4.b.of the Policy reflects, first, a fundamental legal principle in the CWA that permits issued pursuant to the CWA must, among other things, provide for

<sup>6</sup> See, e.g., *supra*. fn 4

<sup>7</sup> Letter dated September 5, 2002 from Jon Capacasa to Nancy Stoner, et al., which is attached to and incorporated into these comments as Exhibit C.

compliance with applicable water quality standards<sup>8</sup>, and, second the practical importance of making standards compliance determinations before using LTCPs to establish phase II permit conditions. Without such compliance determinations, permittees are exposed to the risk of spending hundreds of millions of dollars on LTCP implementation to meet their phase II permit conditions only to learn during or following LTCP implementation that the LTCP must undergo significant modification to meet WQS. These modifications may prevent some portion of the facilities installed pursuant to the LTCP from being utilized for their intended purposes or they may require the permittee to install significant additional controls at considerably greater cost than the permittee would have incurred had these controls been installed as part of the original LTCP.

The relevant provisions from the Policy that require the permitting authority to make the standards compliance determination discussed above are found in section II.C.4.b. Both this section and WASA's LTCP contemplate CSOs remaining after LTCP implementation. Section II.C.4.b. provides that permittees using the demonstration approach must make the following water quality standards compliance demonstration:

*i. The planned control program is adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs;*

*ii The CSO discharges remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment. Where WQS and designated uses are not met in part because of natural Background conditions or pollution sources other than the CSOs, a total maximum daily load, including wasteload allocation and a load allocation, or other means should be used to apportion pollutant loads.*

In turn, under the Policy, the permitting authority must determine that the permittee has made the required water quality standards compliance demonstration. In making this determination that the LTCP is adequate to meet WQS, the Policy contemplates that the permitting authority must specifically pass upon the design conditions that are the basis for the LTCP. This is because section IV.B.2. of the Policy clearly mandates that specific phase II permit terms and conditions reflect the approved LTCP, and that these permit terms and conditions consequently reflect the design capacities of the selected controls in the LTCP.

Thus, for permittees using the demonstration approach, section IV.B.2.c. of the Policy calls for phase II permits to contain

*[w]ater-quality based effluent limits under 40 CFR 122.44(d)(1) and 122.44(k), requiring, at a minimum, compliance with ... the numeric performance standards for the selected CSO controls,*

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<sup>8</sup> See, CWA § 402(a)(1), 33 USC § 1342(a)(1).

based on average design conditions specifying at least one of the following:

*iv. performance standards and requirements that are consistent with [section] II.C.4.b. of the Policy.*

Emphasis added.

Again, we note that the above referenced section II.C.4.b. of the Policy provides for the two-part WQS compliance demonstration specified in that section.

Together, these provisions of the Policy mean that at the time it issues the phase II permit, EPA must (1) determine that WASA's LTCP makes the compliance demonstration specified in section II.C.4.b.i.&ii., and (2) include in the permit, water quality-based performance standards for the selected CSO controls based on average design conditions from WASA's LTCP. While the draft phase II permit does contain the performance standards specified in (2) above, it is legally flawed because it does not contain the WQS compliance determination specified in (1) above. The draft fact sheet suggests that EPA believes it has fulfilled its WQS compliance determination obligations under section II.C.4.b. of the Policy by its references to DOH's August 28, 2003 standards compliance determination and the various TMDLs that have been approved for the Anacostia River and Rock Creek. As discussed below, these references not only fail to fulfill EPA's obligation, they illustrate the importance of the WQS compliance determination.

EPA's reference to DOH's August 28, 2003 standards compliance determination in the draft fact sheet is not sufficient to fulfill its obligation because EPA is the permitting authority in this case. As the permitting authority, EPA is required by the Clean Water Act and its own regulations and guidances to make this determination rather than simply referencing DOH's determination. We believe EPA can fulfill its obligation by concurring in DOH's determination and rationale, but here, EPA has not even stated that it agrees with DOH.

Further, EPA can not rely simply on its reference to and use of the TMDLs that have been approved for the Anacostia River and Rock Creek to fulfill its obligation to find that the CSO discharges remaining after implementation of the planned control program in WASA's LTCP will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment. A number of TMDLs containing waste load allocations for WASA's CSO discharges, including all of the TMDLs for CSO discharges to the Potomac River, remain to be developed.<sup>9</sup> Obviously, there can be no finding of standards compliance based on TMDLs that have not been developed. Also, WASA's CSOs must comply with DOH's narrative water quality

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<sup>9</sup> See, D.C. Dept. of Health 303(d) 2002 list of impaired waters, which is incorporated into these comments by reference.



standards and the TMDLs that have been approved and are referenced in the draft fact sheet and permit do not address compliance with the narrative standards.<sup>10</sup>

Finally, like the planned control program in WASA's LTCP, the TMDLs reflect the average year loads from the years 1988, 1989, and 1990. EPA approved the TMDLs on the basis of these average year loads. However, it is not clear from EPA's TMDL approvals whether EPA has also found, or whether it believes it even needs to find that the TMDLs will provide for compliance under all reasonably foreseeable wet weather conditions as opposed to the wet weather conditions reflected in the average loads. EPA's failure to make such a finding in connection with this phase II permit, or at least explain its finding, calls into question whether EPA has found that the planned control program will comply with water quality standards under all reasonably foreseeable wet weather conditions, not just the wet weather conditions reflected in the average of the years 1988, 1989, and 1990. Moreover, an examination of EPA's approval documents for the TMDLs reveals that EPA has not made any WQS compliance determination at all with respect to a number of the TMDLs.<sup>11</sup>

As explained above, Policy's requirement that WQS compliance determinations be made before, rather than after LTCP implementation is designed to ensure that, to the extent possible, CSO communities are not called upon to invest hundreds of millions of dollars in public funds to implement LTCPs that may have to be modified substantially based on future standards compliance determinations, particularly when these same determinations can be made prior to LTCP implementation. No where is the justification for this requirement more apparent than here. As reflected in the letter attached to these comments<sup>12</sup>, several environmental groups have asserted that the CSO discharges remaining after implementation of the selected controls in WASA's LTCP will not comply with WQS. In fact, they have asserted that any CSO discharge following implementation of WASA's LTCP would violate WQS and the Clean Water Act. WASA and DOH disagree; however, the existence of this conflict makes it all the more important that EPA make the standards compliance determination called for in the Policy. Otherwise, WASA faces the very real risk that future challenges to the LTCP could force WASA to spend far more to achieve compliance with WQS than it would have spent had this dispute been resolved prior to or during the early stages of LTCP implementation.

Finally, it should be noted that EPA itself has acknowledged the value of proceeding with LTCP implementation based on the added assurance of the standards compliance determination associated with the demonstration approach. In its December, 2001 CSO Report to Congress<sup>13</sup>, EPA assessed State implementation of LTCPs, and observed that "the clear levels of controls needed to meet water quality standards are often not defined" and that "uncertainty" has resulted in "delays on the part of the CSO

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<sup>10</sup> All EPA TMDL administrative record documents related to the TMDLs referenced in the draft permit and fact sheet are incorporated into these comments by reference.

<sup>11</sup> See, e.g., Anacostia TSS, oil & grease, and organics & metals TMDLs; and Piney Branch organics & metals TMDLs.

<sup>12</sup> See, letter dated November 21, 2002 from David S. Baron, et al. to Dr. Mohsin Siddique, which is attached to and incorporated into these comments as Exhibit D.

<sup>13</sup> The Report is incorporated into these comments by reference

communities to commit to development and implementation of LTCPs.” Report at 7-6. EPA further noted that while use of the explicit performance criteria found in the LTCP presumption approach has helped communities design LTCPs, “a number of CSO permittees have decided to follow the demonstration approach in their LTCPs. In general, following a demonstration approach provides CSO communities with more assurance that when completed and implemented, LTCPs will result in attainment of applicable water quality standards.” Report at 7-7. Here, WASA has specifically sought the greater level of assurance with regard to WQS compliance that EPA says the demonstration approach was intended to offer because it wants to eliminate levels of uncertainty and the associated risks before implementing its LTCP. Where, as here, EPA, and not a State, is the permitting authority, it would be wholly inadequate for EPA not to pass upon the specific WQS compliance issues and not provide the level of assurance it intended from the Policy, and which it expects its State implementing partners to provide.

**B. The Draft Permit Fails to Conform to CWA § 402(q) Because it Contains the General Water Quality Standards Compliance Requirement in Section III.E.1.**

EPA does not have the authority to add, on top of the water quality-based requirements derived from the LTCP, the separate general water quality standards compliance requirement in section III.E.1 of the draft permit. Section IV.B.2. of the Policy clearly provides that upon issuance of the phase II permit following LTCP development, water quality-based requirements for the combined system will be expressed as “numeric performance standards for the selected CSO controls.” If EPA could simply toss a general standards compliance requirement into permits, it would render the WQS compliance determination in the Policy meaningless.

Moreover, the general water quality standard compliance requirement is wholly unrelated to WASA’s obligations under the Policy because, while WASA is obligated to comply with WQS, its WQS obligation is tied directly to the process established in the Policy. Consequently, the Policy does not authorize the general standards compliance requirement in section III.E.1. of the draft permit.

Finally, for the same reasons it is not authorized by the Policy, it would be grossly unfair for EPA to include such a broad standards compliance requirement in the permit before EPA had even made a determination that the CSOs remaining after LTCP implementation will not cause or contribute to violations of WQS. Now that the water quality-based performance standards can be derived from WASA’s LTCP, the requirement in section III.E.1. would serve no purpose other than to expose WASA to potential liability for non-compliance with an undefined obligation. The Policy does not authorize such an obligation.

**C. The Draft Permit Fails to Conform to CWA § 402(q) Because it Contains the TMDL-derived Effluent Limits in Section III.E.2.**

The draft fact sheet (page 14) discloses that EPA included the TMDL-derived effluent limits based on its conclusion that section II.C.4.b. of the Policy provides for the

use of TMDLs and wasteload allocations in establishing performance standards for LTCPs using the demonstration approach. Section II.C.4.b. does authorize the use of TMDLs and wasteload allocations, but not for the purpose that EPA uses them here. Rather, section II.C.4.b.ii. of the Policy provides that TMDLs and wasteload allocations can be used to apportion pollutant loads in determining whether the CSO discharges remaining after implementation of the selected controls will not preclude attainment of WQS where WQS are not met in part because of natural background conditions or pollution sources other than CSOs. In other words, while it may be appropriate for EPA to use the wasteload allocations in the TMDLs to determine that the performance standards for the selected controls in WASA's LTCP will not preclude attainment of WQS, it is not appropriate to use these allocations as the performance standards themselves.

Had the draft permit modification and fact sheet been written to conform to the Policy, they would have stated that the requirements in section III.C. of the draft permit include the performance standards required by section IV.B.2.c. of the Policy. The fact sheet would have stated that these performance standards reflect the selected controls in WASA's LTCP, based on average design conditions. The fact sheet would have also stated that EPA has determined that, subject to post construction monitoring, the CSO discharges remaining after implementation of WASA's LTCP will not preclude attainment of WQS in accordance with section II.C.4.b. of the Policy as long as WASA complies with the performance standards in section III.C. of the permit. EPA could have used the TMDLs and wasteload allocations to make its standards compliance determination for the performance standards,<sup>14</sup> but it would have been unnecessary to include the water quality-based requirements in section III.E of the permit because the performance standards in the permit and EPA's standards compliance determination in the fact sheet would have provided for compliance with WQS.

Unfortunately, the water quality-based CSO provisions in the draft permit and fact sheet bear little resemblance to the way the water quality-based CSO provisions would have been written had the draft permit conformed to the Policy. Rather than expressing the requirements in section III.C of the draft permit as both the narrative requirements pursuant to section IV.B.2.b. of the Policy and the water quality-based performance standards that they are, the fact sheet erroneously describes the requirements in section III.C. only as the narrative requirements. Fact Sheet at p.14. Further, rather than making a standards compliance determination based on the performance standards in section III.C. of the draft permit as it is required to do to conform to the Policy, EPA simply failed to make a standards compliance determination, and instead, added the independent TMDL and WQS compliance obligations in section III.E. of the draft permit.

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<sup>14</sup> As explained above, however, reliance on the TMDLs and wasteload allocations alone would not provide the WQS compliance determination required by the Policy. EPA's WQS compliance determination would also have to address the parameters and water bodies for which TMDLs have not been developed, the narrative WQS, those TMDL which contain no WQS determination at all, and the uncertainty associated with the average year rainfall conditions use to develop the TMDLs and the TMDL approvals, i.e., whether TMDLs developed for average wet weather conditions are sufficient to provide for WQS compliance under all wet weather conditions.

Collectively, these failures by EPA to conform to the Policy have the effect imposing upon WASA (1) the risks and burdens of proceeding with LTCP implementation without any assurance that it will not have to significantly modify its LTCP based on a future standards compliance determination after investing hundreds of millions of dollars toward LTCP implementation; (2) potential liability for non-compliance with TMDL and WQS compliance obligations in section III.E. of the draft permit even if WASA meets the performance standards in section III.C. of the draft permit; and (3) multiple liabilities for the same acts or failures to act because EPA's failure to provide for WQS compliance through the performance standards in section III.C. and its inclusion of redundant and unnecessary water quality-based compliance obligations in section III.E. of the draft permit. Had the draft phase II permit been written to conform to the Policy it would have provided for compliance with WQS based upon three clear and distinct obligations – (1) to implement, operate, and maintain the selected CSO controls as described in the LTCP, (2) to meet the performance standards, and (3) to demonstrate compliance with WQS based on post construction monitoring.

D. The TMDL-derived Effluent Limits and Monitoring Requirements in Sections III.E.2. and III.E.3., Respectively, of the Draft Permit are Erroneous and Arbitrary and Capricious Because They Incorrectly Assume That the TMDLs Can be Employed Directly As Effluent Limits For the CSO Discharges Remaining After Implementation of the LTCP.

The loads allocated to CSOs in the TMDLs cannot be used directly as effluent limits for the CSOs remaining after LTCP implementation as proposed by EPA in section III.E. of the draft permit because the numeric TMDL values and WASA's LTCP were developed from mathematical models that do not reflect the CSO discharges and other sources of water quality impacts on the receiving waters under all rainfall conditions. Thus, the loads in the CSOs remaining after implementation of the selected controls in WASA's LTCP can be expected to exceed the TMDL-derived effluent limits in section III.E.2. in those years when rainfall exceeds the rainfall volumes that are the basis for the design capacity of the selected controls in WASA's LTCP. The performance standards in section III.C. of the draft permit, on the other hand, are derived from the selected controls in WASA's LTCP, and, therefore, do reflect the design capacities of the selected controls. Consequently, WASA could be in full compliance with the performance standards in section III.C. of the draft permit and exceed the TMDL-derived effluent limits in section III.E.2.

The mathematical models that were used to develop both the TMDLs and WASA's LTCP are based on the climate conditions for the average of 1988, 1989, and 1990, which represent wet, dry, and average rainfall years. The documentation supporting the TMDLs identify the average of these years as the critical environmental condition for establishing a wasteload allocation for the CSOs. The wasteloads allocated to the CSO discharges that will remain following implementation of the selected controls in WASA's LTCP are the average annual values of the three-year period. It is these wasteloads that EPA proposes to use as effluent limits in section III.E.2. of the draft permit. Following LTCP implementation, actual loads discharged from the remaining CSOs will vary from year-

to-year depending on rainfall volume, duration and frequency, with the expectation that the actual loads discharged will exceed the TMDL-derived effluent limits in those years when rainfall produces loads that exceed the average annual loads for the 1988, 1989, and 1990 period that is the basis for both the TMDLs and WASA's LTCP.<sup>15</sup>

The monitoring requirements for the TMDL-derived effluent limits in section III.E.3. of the draft permit incorrectly assume that compliance with the TMDLs can be monitored directly. Therefore, the monitoring requirements suffer from the same flaws as the effluent limits themselves. As discussed above, compliance with the TMDLs has to be measured against the average annual loads for the three-year period that is the basis for the TMDLs, not the loads in the year in which the monitoring is performed. Therefore, the only way to accurately measure compliance with the TMDLs is to use the same sampling protocols and data analysis that were used to develop the TMDLs themselves. This would involve periodic monitoring of the CSO discharges and the water quality conditions in the receiving waters. This information would then be used to make a modeling evaluation to determine whether the selected controls in the LTCP are providing the degree of control required by the TMDLs, again, based on the average annual loads for the three-year period that is the basis for both the TMDLs and WASA's LTCP.

The correct procedure for monitoring compliance with the TMDLs is already set forth in the post construction monitoring provisions in section III.D. of the draft permit. Moreover, section III.C. of the draft permit contains monitoring requirements to ensure that the selected controls in the LTCP are providing the level of CSO control used to establish the wasteload allocations in the TMDLs.

E. The Draft Permit Modification and Fact Sheet Fail to Conform To CWA § 402(q) and Are Contrary to the Law Because They Neither Contain Nor Acknowledge WASA's Right to a Schedule for Implementation of WASA's LTCP Based on the Erroneous Conclusion That the Policy Requires WASA to Immediately Implement its LTCP.

The draft permit fails to include a schedule for implementation of the selected CSO controls in WASA's LTCP based on EPA's conclusion that the Policy "... requires implementation of the LTCP immediately upon issuance of this permit." Fact Sheet at p.13. The Policy contains no such requirement. Rather, it expressly provides that phase II permits should require compliance with numeric performance standards for the selected CSO controls "... no later than the date allowed under the State's WQS..." Policy at § IV.B.2.c. The District of Columbia's WQS contain the following schedule authorization:

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<sup>15</sup> Further, neither the permit nor the fact sheet contain any explanation of the term "average annual load" in the TMDL-derived effluent limits in section III.E. Presumably, they are based on the TMDLs, but it is impossible to determine from the permit how the average annual loads are to be calculated or used for compliance purposes.

*Whenever a new water quality standard based effluent limitation is imposed in a discharge permit, the permittee shall have no more than three years in which to achieve compliance with such limitation, unless it can demonstrate that a longer compliance period is warranted. A compliance schedule shall be included in the permit.*

21 DCMR 1105.9

The obligation to implement the LTCP is unquestionably “a new water quality standard based effluent limitation” within the meaning of the above referenced the WQS provision. Further, DOH’s August 28, 2003 letter to EPA (Exhibit A.) indicates that WASA has demonstrated to DOH’s satisfaction that a LTCP implementation schedule is warranted. Accordingly, WASA believes that EPA is legally obligated to include a LTCP implementation schedule in the permit. WASA intends to confer immediately with DOH to establish a mutually agreeable LTCP implementation schedule for the permit, and requests that EPA afford WASA and DOH a reasonable period of time to confer and transmit a schedule to EPA.

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
Department of Health  
Environmental Health Administration  
Bureau of Environmental Quality

EXHIBIT A

Office of the Bureau Chief

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August 28, 2003

Jon Capacasa, Director  
Water Protection Division  
USEPA Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

Dear Mr. Capacasa:

We have completed our review of the Water And Sewer Authority's Long Term Control Plan. The LTCP recommends a combination of pump station improvements, storage tunnels, sewer separation, outfall consolidation, regulator improvements, low impact development and excess flow treatment improvements at Blue Plains. The system will be sized to control the one year 24 hour storm (it is recognized that there is considerable variation in such a storm and antecedent events). Based upon the capacity of the system derived from the one year 24 hour storm, in the average year the system will reduce overflows to the Anacostia river by 98% and to the Potomac by 93% and to Rock Creek by 90%. In an average year there will only be two overflow events to the Anacostia, four overflow events to the Potomac and four to Rock Creek.

The DC Water Quality Standards Section 1104.3 provides narrative criteria for Class A use - primary contact recreation. These narrative criteria were developed by the District of Columbia and are not commonly in use in the other states. Additionally, the District of Columbia Water Quality Standards were modified in the 1980s to recognize that wet weather events were one of the most serious sources of pollution remaining. The District became the third jurisdiction in the nation to require regulatory storm water BMPs on all new development and redevelopment, while simultaneously understanding that there were combinations of wet weather that would be technically and economically difficult to control. Consequently, the District developed a high flow exemption for four criteria that was patterned after the commonly used low flow exemption (known as the 7Q10). This high flow exemption was approved by EPA three times during triennial reviews. High flow exemptions are cited in the EPA CSO strategy as a legal mechanism for dealing with weather induced uncertainty. The remnants of the District high flow exemption are still contained in the implementation section of the Water Quality Standards as an indication that extreme events such as floods and hurricanes will occur.

The District of Columbia is located at the Fall Line and it is here that the free flowing rivers become tidally influenced estuaries. The majority of the pollution loads that are in the District of Columbia waters originate outside of the District of Columbia. Storm flows on Rock Creek, the Anacostia and the Potomac bring tremendous loads of pollutants to the District waters that exacerbate the difficulty of controlling District of Columbia sources. Even so, huge amounts of progress have been made in restoring the aquatic habitat. American shad, hickory shad and striped bass now spawn in the District of Columbia after a thirty year absence. Submerged aquatic vegetation has staged a slow recovery in the Potomac and Anacostia. Bald Eagles and ospreys routinely nest in and near the District. The restoration of the rivers is not complete, particularly in the case of the Anacostia. The CSO LTCP is a major step in restoring the Anacostia and it places a priority on controlling the overflows to the Anacostia.

We have developed Final Total Maximum Daily Loads (TMDLs) for biochemical oxygen demand, toxics, and total suspended solid for the Anacostia and made load allocations to the combined sewers. The LTCP is in conformance with those TMDLs. The TMDLs demonstrate attainment of the appropriate Water Quality Standards for the District of Columbia. We have reviewed the water quality computer modeling done for the LTCP concerning the water quality standards for Rock Creek and the Potomac and find that the LTCP will meet the water quality standards as long as other sources of pollution receive similar levels of reduction. We therefore believe that TMDLs can be developed for Rock Creek and the Potomac that will demonstrate attainment of the Water Quality Standards for Class A and Class B uses for bacteria criteria.

The Final Anacostia Bacteria TMDL requires a 98 % reduction of CSOs exactly as in the final LTCP. Analysis of the computer simulations indicates that the remaining CSOs have only localized impacts upon the Anacostia River. The LTCP, page 14-9 deals with the degree of treatment to be provided to the remaining overflows. There will be a 98% removal by volume of combined sewage. There will be a total capture of the first flush loads containing the most concentrated combined sewage. There will be capture of floatables and large solids prior to discharge. The Department of Health has determined that the remaining CSO discharges to be "partially treated sewage" and will meet the narrative water quality standards in all receiving waters. The Department of Health does not advocate swimming nor complete, prolonged immersion in the discharge plume or mixing zone or near vicinity of any point source discharge whether sewage or industrial pollutant. We have a final TMDL for bacteria on the Anacostia River with load allocations to the combined sewers, which achieves Class A water quality standards. Some Class A uses that involve limited immersion will have a lower risk than those with prolonged immersion. However, the fact that for a few areas for a few days of the year the risk will be higher than other days and other areas does not negate the attainment of the designated use of the waterbody. This variation in risk is implicit in the criteria adoption as a regulation of the District of Columbia. Furthermore, installation of signs and warning lights concerning CSOs will provide real time guides to users to insure that any risk from the few remaining CSO discharges, are in fact minimal. Once the LTCP is fully implemented, the high risk to full body contact will be the result of storm flows propagating into the District waters from Maryland; rather than being caused by the remaining overflows.



Overall, the studies and modeling included in the LTCP demonstrate that, in accordance with the CSO Policy, for CSO loads only, the remaining overflows after implementation of the LTCP will meet the D.C. Water Quality Standards in all receiving waters.

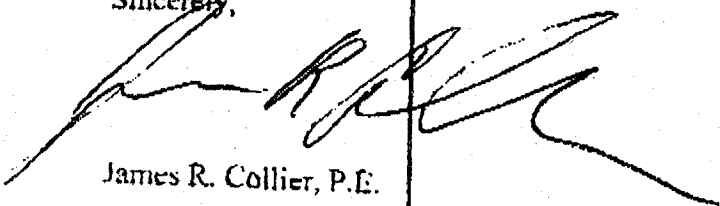
We have reviewed the framework for NPDES permit conditions in subsection 15.7 of the LTCP. These provisions will assure adequate monitoring and compliance measurements during operation of the facilities. Additionally, the phased post construction monitoring program described in the LTCP will provide an information base to review overall actual performance after the plan has been in operation.

We have reviewed the schedules in the LTCP which are based upon varying assumptions for federal assistance. In FY 2003, federal assistance is \$50M and the President's budget for FY2004 has \$15M for the LTCP. The Mayor has expressed his desire to expedite the cleanup of the Anacostia River. The 12 year schedule for the Anacostia River is approved subject to the federal funding assistance assumptions in the Final LTCP. The Potomac and Rock Creek are not as severely impacted by combined sewer overflows and may be subject to slower schedules.

Therefore, pursuant to District of Columbia Water Pollution Control Act, section 12 (c), The Water And Sewer Authority's Final Long Term Control Plan for the combined sewer system is approved. The LTCP meets the requirements of the EPA CSO policy.

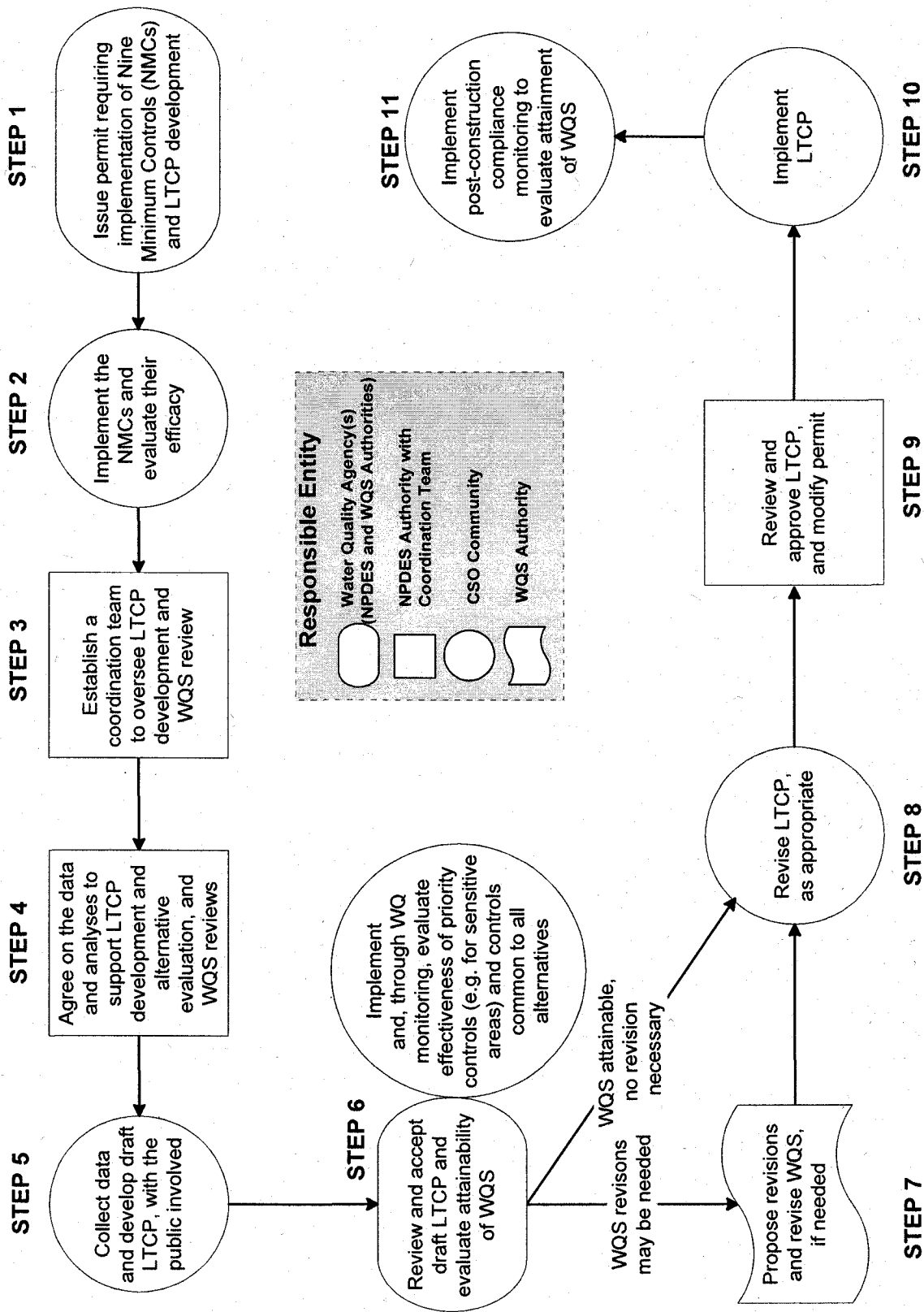
We appreciate the efforts of you and your staff to assist the Mayor in restoring the Anacostia River.

Sincerely,



James R. Collier, P.E.

FIGURE 1 - Coordination of LTCP Development and Water Quality Standards Review and Revision





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

SEP 05 2002

Ms. Nancy Stoner  
Mr. Jim Woodworth  
Natural Resources Defense Council  
1200 New York Avenue, N.W.  
Suite 400  
Washington, D. C. 20005

2002 SEP -9 P 3:47

Dear Ms. Stoner and Mr. Woodworth:

Thank you for your August 16, 2002 letter to Regional Administrator Donald Welsh. In that letter you make several recommendations concerning the District of Columbia (D.C.) Long Term Control Plan (LTCP) for combined sewer overflows (CSO's).

I believe that the U. S. Environmental Protection Agency (EPA) and the Natural Resources Defense Council agree on the most critical issues impacting water quality in D.C. It has been most useful to exchange insights on the important aspects of the developing CSO plan through several meetings and conference calls we have had over the recent months, most recently on July 11 in Philadelphia. We agree with D.C. and with you that the highest priority is the Anacostia River. We also agree that an effective means to get this problem under full control in the Anacostia would involve the early construction of tunnels as suggested by the D.C. Water and Sewer Authority (WASA). We further agree that the implementation of Low Impact Development (LID) techniques has significant potential to reduce CSO and storm water flows, to improve low flow stream conditions, and to improve upon the "greening" of the city. We have read with interest your recent report entitled "Out of the Gutter," and support the kind of efforts you recommend, which could be applied through the efforts of a number of city, state, federal and other agencies working in partnership.

It is EPA's view that the techniques incorporated into an LTCP can change and be refined, over the years that the plan is implemented, so long as those changes meet with D.C. and EPA approval, as appropriate, in the context of NPDES permit and enforcement document obligations. Particularly with respect to the use of LID in the Rock Creek and Potomac River sewer drainage areas, work to implement those phases of the LTCP, as you know, will not start for a number of years. Given that, we expect that any subsequent EPA approval of the LTCP will provide a clear opportunity for the Rock Creek and Potomac River elements of the LTCP to be updated to reflect developments in LID at the time. The 5-year NPDES permit renewal cycle provides a clear check point for EPA in ensuring that significant advances in technology and or our understanding of best management practices are incorporated in the Plan as appropriate.



Let me review for you our perspective on the LID aspects of this Plan and EPA's leadership position on the implementation of Low Impact Development techniques. First, EPA is serving as the reviewer of this locally developed WASA CSO Plan which has been the subject of considerable stakeholder input spanning several years. It is not our role to finally select for locals authorities and stakeholders the specific measures to be used in the final plan so long as the requirements of the Clean Water Act are met. Second, EPA Region III has provided considerable support and leadership on the implementation of LID techniques through the years through a combination of financial and technical assistance, development of technical support materials, and outreach to communities within the Region and nationally. Our early efforts began with the CSO Special Expert Panel which Rebecca Hanmer and I convened in the mid 1990s in order to advance thinking on CSO, trash and source controls in DC. It continues today through the funding of a national conference on LID by Region III to be held in the DC/MD area in FY 2003, \$1 million of federal funding for significant LID projects in the Anacostia watershed in FY 2002 matched by local dollars, working in earnest with federal property managers to complete on-the-ground demonstration projects such as exist at the Washington Navy Yard and Southeast Federal Center, partnering with the Anacostia Waterfront Initiative, and providing financial support to the documentation of LID technical specifications and evaluations of effectiveness.

With respect to requiring WASA to adopt an incentive-based approach for LID, it is our belief that the greening of the City using LID and other source control techniques is a tremendous partnership opportunity for many agencies, public and private. LID is an approach with multiple benefits, not limited to CSO or storm water management. Launching a partnership initiative in our view would be the best way to fully realize the potential while considering the many barriers that come with an advanced stage of urbanization and multiple landholding entities. WASA's funding investment to LID in the LTCP and more importantly their commitment to seek changes in local DC ordinances to remove barriers to LID implementation are solid commitments toward this partnership effort. We are greatly encouraged by the partnership approaches of the Anacostia Watershed Toxics Alliance, which EPA convened, and the Anacostia Waterfront Initiative which are serving to expand the reach of environmental management to many non-traditional partners, and melding economic development and environmental objectives. We are hopeful we can work with you to apply this model to the LID challenge in DC.

Before leaving this subject, we would like to repeat a caution on LID that one of the national leaders on LID, Larry Coffman, said in a recent Washington Post article on the subject: "My preference is to take baby steps and make sure we know exactly what we're doing." From a technical standpoint, CSO controls must by necessity be designed for peak flow conditions and repeat storm conditions. While LID can prove useful for filtering flows and dampening the effects during smaller storm conditions, it may not be nearly as effective in handling the peak flows of major storms which are the design conditions for the virtual elimination of overflows contained in the LTCP. Further, ground water recharge in the DC environs is made difficult by the soil types and a legacy of fill material. These are subjects for serious, continuing evaluation.

We do not share your opinion that the LTCP can be approved without establishing that it is in accord with water quality standards (WQS). EPA's Combined Sewer Overflow Policy (the CSO Policy), which as you know has the effect of Federal law, reads, in part:

"...the permittee should demonstrate each of the following:

- i. *the planned control program is adequate to meet WQS and protect designated uses (emphasis added), unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs;*
- ii. *the CSO discharge remaining after implementation of the planned control program will not preclude the attainment of WQS or the receiving waters' designated uses (emphasis added) or contribute to their impairment...*
- iii. the planned control program will provide the maximum pollution reduction benefits reasonably attainable; and
- iv. The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses."

The CSO Policy makes it inappropriate for EPA to approve an LTCP which falls short of WQS. LTCP's must provide the degree of CSO control adequate to meet the water quality required by WQS. Conversely, if a state government decides that the degree of CSO control required to meet existing WQS is not reasonably attainable, then the state may propose changes to WQS which would allow a reasonable LTCP to be implemented. This debate should occur with the understanding that the WQS process is dynamic, and as a result, the content of the LTCP may be adjusted over time. EPA regulations require a triennial review of WQS, which could affect CSO (and other pollution sources) planning in the future.

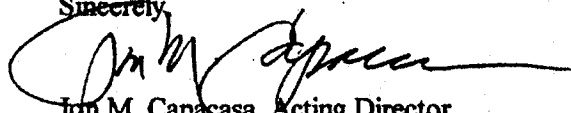
Given the above, the citizens of the District of Columbia, expressed through the D. C. Department of Health, have to decide how much CSO control is necessary and affordable, given knowledge available today. WQS should not drive a community to implement a LTCP without a means of meeting the intended goal of the plan. As we understand, DC has no current plans to modify the designated uses or overarching goals of their water quality standards.

Implementation of the current proposed LTCP is estimated to eliminate 96% of the CSO volume on an annual basis, and 98% of the discharge to the Anacostia River. The remaining overflows are not expected to be raw, first flush discharges of untreated sewage but secondary discharges from the tunnels when they are full due to repeat storm conditions. And, current TMDL estimates place the CSO contribution to bacteria loading in the Anacostia at 61% of the total load. Clearly, any remaining overflows will not be the controlling factors in the attainment of water quality standards for bacteria on the mainstem of the River.

The cost of the present plan is estimated at \$1.26 billion. If the WQS require the elimination of all CSO (for conditions such as were studied in the LTCP), the LTCP estimates that the cost will be higher, at \$2.24 billion. If the WQS require the elimination of all CSO's under all conditions, which would require the separation of the sanitary and storm sewers, the cost would be even more, at \$4.46 Billion. Those higher levels of control may well be beyond the affordable means of the District of Columbia. Time is also an important issue, and is inextricably tied to cost. Clearly, the citizens of the District of Columbia should be concerned about the cost benefit decision, a matter to be decided in large part through WQS choices by the District of Columbia.

It is my hope, given our many common interests, that we can join forces to support the early implementation of the LTCP and work in partnership to realize the full potential of source controls in the area. I have taken the initiative to schedule a conference call with you September 11, 2002 to discuss these and other points and to answer your questions.

Sincerely,



Jon M. Capacasa, Acting Director  
Water Protection Division

cc: Jerry Johnson, WASA  
Jim Collier, DCDOH

*Earthjustice  
Anacostia Riverkeeper  
Audubon Naturalist Society  
Friends of the Earth  
Natural Resources Defense Council  
Sierra Club, District of Columbia Chapter*

November 21, 2001

BY e-mail: [Mohsin\\_Siddique@dcwasa.com](mailto:Mohsin_Siddique@dcwasa.com)

Dr. Mohsin Siddique  
CSO Control Program Manager  
D.C. Water and Sewer Authority  
5000 Overlook Avenue, SW  
Washington, DC 20002

RE: Combined Sewer System Long Term Control Plan, Draft Report, June 2001

Dear Dr. Siddique:

We have the following comments on the above-referenced plan. These comments supplement the comments submitted by the Clean Water Campaign, in which we also participated.

Compliance with water quality standards:

The draft LTCP does not ensure compliance with water quality standards as required by the Clean Water Act and EPA's CSO policy. The recommended alternative would still allow numerous sewage overflows every year, comprising hundreds of millions of gallons of untreated sewage mixed with runoff. WASA's own modeling shows that these discharges would cause violations of the District of Columbia's numeric criteria for bacteria and dissolved oxygen. Moreover, such discharges would violate the District of Columbia's narrative prohibition on the discharge of untreated sewage and litter. 21 DCMR 1104.3. They would also violate other D.C. narrative water quality standards, including 21 DCMR 1104.1 and 1104.4.

The LTCP analysis focuses primarily on compliance with: 1) the District's monthly geometric mean standard for fecal coliform; 2) the District's daily minimum criteria for dissolved oxygen. The LTCP acknowledges that the recommended alternative would not produce compliance with these standards at all times. In the "average" year, CSOs alone would continue to cause violations of the fecal coliform standard on all three rivers, and would continue to contribute to dissolved oxygen violations on the Anacostia. In wetter years or more severe rain events, the number of instances in which CSOs cause or contribute to violations of these standards would certainly be greater, due both to

greater CSO frequency and volume, and less favorable receiving water conditions (due to heavier wet weather pollution loads from other sources).<sup>1</sup>

The LTCP implies that compliance with the above-referenced numeric criteria for fecal coliform and dissolved oxygen should be the principal measure of whether various CSO control strategies are worthwhile. Although any LTCP must certainly assure compliance with these criteria, such compliance is plainly not sufficient to comply with all of the District's standards. Among other things, D.C. quality standards also require that Class A waters (which include all of the CSO receiving waters) "shall be free of discharges of untreated sewage." 21 DCMR 1104.3 (emphasis added). Thus, the District's standards prohibit raw sewage discharges even where those discharges do not cause an exceedance of the monthly geometric mean of 200 n/mL fecal coliform, or a violation of dissolved oxygen criteria.

District standards also require surface waters to be free from substances attributable to point or nonpoint sources discharged in amounts that cause injury to or produce adverse physiological changes in humans. 20 DCMR 1104.1(d). The standards further require protection of designated uses, which for all of the affected D.C. waters include primary contact recreation. These standards are not met solely by limiting fecal coliform levels to a 200 n/mL geometric mean, or by meeting dissolved oxygen criteria. For example, a geometric mean standard for bacteria does not protect against high, short term bacteria levels that are typical of CSO events. A person who swims or kayaks near a CSO outfall during or immediately after a CSO event is not exposed to the monthly geometric mean level of bacteria, but to the much higher levels associated with the CSO discharge.

According to the CSO monitoring reports prepared by Greeley and Hansen, bacteria levels in individual CSO discharges far exceed levels that are safe for human exposure. For example, Greeley and Hansen reports that the "typical" range of E. Coli levels in WASA's CSO discharges is 2,000 – 1,600,000 mpn/100ml. These levels far exceed EPA water quality criteria for single sample maximum bacteria levels. Under EPA criteria, the maximum allowable E.Coli level in a single sample for primary contact recreation waters is 576 mpn/100 mL. This assumes only infrequent use and still leaves a risk of gastroenteritis. EPA, Quality Criteria for Water 1986, EPA 440/5-86-001 (5/1/87). EPA criteria are even more stringent to protect waters for moderate use - 298 mpn/100 mL. A monthly geometric mean limit for fecal coliform does not prevent bacteria levels that exceed these single sample EPA criteria.

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<sup>1</sup> In this regard, the LTCP does not appear to provide separate projections of water quality impacts from CSOs in the design "wet" year, or in years with more rainfall (or more intense events) than the design wet year. Although not entirely clear from the text, it appears that the water quality projections in the LTCP assume receiving water quality conditions in an "average" year – meaning an average of conditions over the 3 design years. If our assumption on this score is incorrect, please explain the assumptions concerning receiving water conditions that underlie the water quality impacts projected in Appendices B, C, and D of the LTCP. In any event, to demonstrate that the plan will assure compliance with water quality standards, WASA must project water quality impacts under all potential weather conditions, not just the design years. We call upon WASA to provide such projections.



For all the foregoing reasons, continued CSO discharges would also unlawfully interfere with designated and existing uses on the Anacostia, the Potomac and Rock Creek. The extremely high levels of bacteria and other pathogens in CSO discharges are completely incompatible with primary contact recreation such as swimming and kayaking. See, e.g., 21 DCMR 1104.6; EPA, Ambient Water Quality Criteria for Bacteria - 1986. All three of the foregoing rivers are designated for primary contact recreation, and such recreation is an existing use on the Potomac and the Anacostia. See attached affidavits. High pathogen levels in CSO discharges also interfere with secondary contact recreation, which is both a designated and an existing use on all three rivers. No adjustment in D.C. water quality standards can allow interference with existing uses.

For the same reasons, the Plan's proposal to revise DC water quality standards would not be legally acceptable under the Clean Water Act. The Act requires water quality standards to always protect existing uses. 40 C.F.R. §§131.10(g), 131.12(a)(1). Allowing the discharge of raw sewage into waters currently used for primary and secondary contact recreation would violate that mandate. Moreover, WASA's specific proposal would establish waste transport or assimilation as the designated use of the receiving waters whenever combined sewer system flows exceeded the capacity of the CSS system. Such a result is prohibited by the Clean Water Act and EPA rules. 40 CFR §131.10(a).

We are aware that the D.C. Department of Health (DOH) has recently proposed revisions to D.C. water quality standards. We contend that the proposed revisions are unlawful and unacceptable, for reasons set forth in the attached comments dated November 13, 2001. Further, even if these revised standards are adopted, approved by EPA, and allowed to stand, the LTCP would not be sufficient to assure compliance with water quality standards. As noted above, combined sewer overflows impair existing and designated uses in all 3 rivers, and this would still be true regardless of whether DOH revises numeric and narrative criteria. Moreover, the LTCP does not assure compliance with the proposed numeric criteria for enterococci. Although the LTCP does not have data for enterococci, it shows that the recommended alternative would continue to produce unsafe levels of fecal coliform and e coli. There is every reason to expect similar results with respect to enterococci. See EPA, Ambient Water Quality Criteria for Bacteria - 1986. Even under the scenario apparently assumed by DOH in proposing the standards revisions – a system designed to achieve 12 overflows per year on the Potomac, and zero overflows on the Anacostia and Rock Creek in the design "dry" and "average" years – compliance with the numeric criteria is not shown. With respect to at least the Anacostia and Rock Creek, the DOH analysis apparently looked only at the impact on water quality of CSOs alone. Although that it certainly a necessary analysis to assure compliance with standards, it is not sufficient. In the real world, there will be pollutant contributions from other sources such as separate storm sewer discharges. The LTCP monitoring documents this. The plan must therefore assume that CSO loads will be additive to pollutant loads from other sources. Given that these other pollutant loadings are sometimes significant, CSOs can and will contribute to violations of standards even in situations where CSOs alone would not.

Moreover, the DOH analysis apparently assumes rainfall no greater than that in the design "wet" year. The reality is that there have been and will be more intense rain storms, and wetter years, than experienced in the design year. As noted above, compliance with standards has to be shown at all times, not just in the design years. For all these reasons, compliance with water quality standards has not been shown, even under the scenario assumed by DOH.

#### Model under prediction of overflows

We are very concerned about instances in which the CSO system model predicted no overflows at times when overflows in fact occurred at various CSO outfalls. These instances are shown in Table 5-8 of Study Memorandum LTCP-5-4: Combined Sewer System Model Documentation, Draft, August 2001 (prepared for WASA by Greeley and Hansen). Outfalls showing actual overflows where the model predicted none include numbers 10, 19 (swirl by-pass), 20, 21 and 49. In a number of instances the actual overflows at these times were very substantial. For example, event number V19 involved an overflow of more than 10 million gallons at outfall 019 (swirl by-pass) when the model predicted no overflow at all. Such instances raise very serious questions about whether the model is accurately predicting the number and volume of overflows under various scenarios. WASA must explain if and how it can rely on the model under these circumstances. If WASA intends to rely on the model despite these inaccuracies, we ask WASA to explain how it has or will account for model under prediction in its design of CSO control strategies relevant to the affected outfalls. Where the model under predicts overflows, WASA must provide additional storage or other CSO control measures to compensate for that under prediction.

#### Reducing system inflow

According to recent WASA studies, there is up to 118 mgd of extraneous flow in the sewage system consisting of wasted potable water, pumped foundation dewatering, and conventional sewer line infiltration and inflow. WASA, Wastewater Flow Reduction Plan, September 1999, at 1-1 (Prepared for WASA by PEER Consultants, P.C.). That amounts to more than 2/3 of the total daily District flow to Blue Plains. Reduction of these extraneous flows would reduce base flow and thereby reduce CSOs. Unfortunately, the draft LTCP does not contain any measures to reduce wastewater flows, even though the cost of doing so is relatively modest. The plan appears to assume a reduction of approximately 12 mgd through flow reduction measures, but does not actually commit to implement any specific such measures as part of the LTCP.

WASA's refusal to include an aggressive flow reduction program in the plan is indefensible. WASA's own water conservation plan shows that base flows could be reduced by 10% with a very modest conservation program. WASA, Water Conservation Plan, Water Conservation and Flow Reduction Program, Task 1, DCFA #357-WSA, September 2000, at 7-4 (Prepared by PEER Consultants). The maximum annual cost of

this program is \$2.6 million, a very modest amount compared with most other measures in the plan. Moreover, substantial additional flow reductions are achievable through a more aggressive program. New York City has achieved flow reductions of 17% through a conservation program, and expects to achieve another 10% in the next 5-8 years. Among other things, New York offered much higher rebates for low flow fixtures than proposed by WASA. WASA's Water Conservation Plan itself also identifies numerous additional strategies that could achieve significant further reductions. Id. Table 6-5, Group 2 and 3 measures. WASA could also achieve substantial savings by adopting conservation billing, and approach already used by WSSC. The LTCP offers no reasons for failing to include all of the above-described measures as part of the CSO control strategy.

Substantial savings could also be realized through an aggressive inflow reduction program. WASA's own Wastewater Flow Reduction Plan identifies the following potential reductions (daily average reduction over an entire year):

- \* 8.6 mgd from eliminating pumped groundwater from the system
- \* 3.5 mgd through targeted storm sewer disconnects from the combined system
- \* 4.1 mgd through infiltration and inflow (I&I) reduction.

Wastewater Flow Reduction Plan at 9-1. Moreover, the above estimates represent only average daily reductions. During peak flows of the type that produce CSOs, the reductions from targeted storm sewer disconnects and I&I controls would be much more substantial. Assuming rainfall approximately once every 5 days, it is reasonable to expect flow reductions 5 times the above estimates (i.e., 5 times the average) during a peak event. That would translate to a wet weather flow reduction of 38 mgd from just two of the above measures, an extraordinary reduction in flows that would otherwise contribute to CSOs. The cost of all three of the above measures is estimated to be about \$106 million – a relatively modest expense compared with other more intensive engineering approaches – and a cost that will also produce non-CSO related benefits in terms of reduced-base flow treatment costs.

All together, the potential wet weather flow reductions from just some of the measures recommended in the above-referenced WASA plans total more than 56 mgd. Plainly, the LTCP must include much more substantial wastewater flow reduction measures.

#### Failure to comply with CSO Policy

The draft LTCP fails to satisfy the following requirements of EPA's CSO Policy, 59 Fed. Reg. 18688 (April 19, 1994):

a. "The selected controls should be designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS, including existing and designated uses." Id. at 18691/2. WASA's plan does not meet this requirement. WASA has not even considered how it would expand or retrofit the recommended system if additional controls are later found to be necessary to meet water quality standards. This is a critical deficiency in the plan that must be fully corrected before EPA can approve it.

b. "The Plan should also include both fixed-date project implementation schedules (which may be phased) and a financing plan to design and construct the project as soon as practicable." Id. at 18691/3. The draft LTCP does not have fixed-date implementation schedules for each of the measures included in the plan. The LTCP does include projected time frames for some of the measures, but these are stated in terms of months or years after approval of the LTCP. Moreover, WASA has not shown that its plan provides for design and construction as soon as practicable. As noted elsewhere, the 20-year time frame for this plan is grossly excessive, and has not been rationally justified by WASA either on financial or technological grounds. Atlanta has proposed a comparable CSO LTCP with a 7 year completion schedule. City of Atlanta, CSO Remedial Measures Report, April 2001 (CH2Mhill). The Atlanta plan includes substantial sewer separation, 2 very large tunnels, construction of new treatment facilities, and other features. Moreover, WASA has failed to justify the extraordinarily long times frames for individual components of this plan. For example, the plan provides 6 years to rehabilitate the Potomac Pump station and 8 years for the Main and O station. There is no reason that these projects could not be completed in the half the time.

c. "Eliminate or relocate overflows that discharge to sensitive areas wherever physically possible and economically achievable, except where elimination or relocation would provide less environmental protection than additional treatment." 59 Fed Reg. at 18692/2. The Policy defines "sensitive areas" as including "waters with primary contact recreation" and "waters with threatened or endangered species and their habitat." As indicated above, both the Anacostia and the Potomac are waters with primary contact recreation. Rock Creek is home to an endangered species. Accordingly, WASA must eliminate or relocate the CSO outfalls on these rivers, unless WASA can demonstrate that this is not physically possible or economically achievable, or that it would provide less environmental protection than additional treatment. WASA has not made such a demonstration here.

Even if WASA were able to credibly make such a demonstration, the CSO Policy requires that WASA then "provide the level of treatment for remaining overflows deemed necessary to meet WQS for full protection of existing and designated uses." Id. WASA has not met this requirement because its recommended control alternative provides no level of treatment for remaining overflows to these rivers, and treatment would be necessary for full protection of existing and designated uses. Among other things, the remaining overflows under the recommended alternative will contain extremely high levels of bacteria that will make these rivers unsafe for primary and secondary contact recreation. Treatment of such overflows would be necessary to protect existing and

designated uses. We believe the CSO policy requires such treatment for any remaining overflows, whether to sensitive areas or elsewhere. This treatment must include primary treatment or better, including solids removal and disinfection to the degree necessary to fully protect existing and designated uses, and removal of harmful chemical residuals. See 59 Fed. Reg. at 18692-94. High rate physical chemical treatment would provide even more effective protection of water quality standards than traditional primary treatment and disinfection/dechlorination, and is included in the Atlanta CSO Plan.

d. The plan should include a post-construction water quality monitoring program adequate to verify compliance with water quality standards and protection of designated uses as well as to ascertain the effectiveness of CSO controls. This program should include a plan that details the monitoring protocols to be followed, including the necessary effluent and ambient monitoring and, where appropriate, other monitoring protocols such as biological assessments, whole effluent toxicity testing, and sediment sampling. WASA's draft LTCP does not meet these requirements. Although the plan states that post construction monitoring will be conducted, it provides almost no details on how, when, and where such monitoring will be conducted. To comply with the CSO policy, the monitoring provisions of the plan must identify the specific outfalls and instream locations that will be monitored, the parameters that will be measured, the frequency of monitoring, the manner in which results will be reported, the monitoring methods to be used, and similar details. The plan must also specify schedules for commencing such monitoring, as individual components of the LTCP are completed. The plan must also show how the chosen monitoring program will be adequate to verify compliance with water quality standards, protection of uses, and the effectiveness of CSO controls.

We support the proposal to provide a visual notification system, as discussed on page ES-15. However, there must be a schedule for installing and implementing this system. Given that the need for notification is a current one, the schedule should require completion of the notification system within the next 12 months.

Other measures: A majority of dry weather flow and a significant portion of wet weather flow in the WASA sewer system comes from outside District – all of this is from separate sanitary sewers. A substantial part of this gets dumped into the District's combined system lines. According to Greeley and Hansen, 17% of the combined sewer overflow volume District-wide is attributable to flows from Maryland and Virginia. Greeley and Hansen states that, if flows from Maryland and Virginia were stopped, CSO volume would be cut by 12% in the Anacostia, 27% in the Potomac, and 8 % in Rock Creek. WASA must consider the option of requiring the Virginia and Maryland jurisdictions to build new interceptors to carry that sanitary flow directly to Blue Plains, thereby relieving loading on the combined system. Alternatively, Virginia and Maryland jurisdictions must be required to pay the cost of reducing overflows by these amounts. Virginia and Maryland jurisdictions must also be required to institute stronger measures to reduce peak flows through infiltration/inflow control programs.

WASA has sometimes asserted that it is obligated under the Inter-municipal Agreement (IMA) to handle and treat flows from Maryland and Virginia up to the maximum allocations under that agreement. However, the IMA also specifically obligates Maryland and Virginia jurisdictions to "take all reasonable precautions to exclude surface water, rain water and groundwater" from their sewer systems. IMA §3.B.7. Moreover, the flow allocations under the IMA expire in 2010. IMA §3.A. Now is therefore an apropos time to re-evaluate the handling of these flows, and consider whether WASA should propose off-loading some or all of the suburban flows from the Blue Plains system.

Sincerely,

Earthjustice  
David S. Baron

Anacostia Riverkeeper  
Damon Whitehead

Audubon Naturalist Society  
Neal Fitzpatrick

Friends of the Earth  
Brent Blackwelder

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