

May 4, 2005

Ms. Yvonne Bolton, Acting Chief
Bureau of Water Management
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Ms. Bolton:

Thank you for your submittal of the final **Total Maximum Daily Load Analysis for the Mill River, Rooster River, and Sasco Brook** for indicator bacteria (*Escherichia coli*). The Mill and Rooster Rivers are included on Connecticut's 2004 303(d) list as priority waters for TMDL development. Sasco Brook has a prior TMDL approval. **A Total Daily Maximum Load Analysis for Sasco Brook, Fairfield and Westport, Connecticut** for indicator bacteria (fecal coliform) was previously approved by EPA on June 9, 2000. The 2002 revision of the CT Water Quality Standards identified *Escherichia coli* as the most current indicator bacteria the State would use for this type of assessment. The TMDL for Mill River, Rooster River, and Sasco Brook consequently addresses impairments of primary contact recreational use caused by exceedances of the applicable indicator bacteria criteria (*Escherichia coli*) specified in the CT 2002 Water Quality Standards.

The U.S. Environmental Protection Agency (EPA) hereby approves Connecticut's TMDL dated March 3, 2005 and received by EPA on March 16, 2005. EPA has determined that this TMDL meets the requirements of Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations (40 CFR Part 130). Attached is a copy of our approval documentation.

This TMDL was prepared using CT's cumulative distribution function method. This approach is a unique way to address recreational impairments in urban waters resulting from the presence of indicator bacteria in excess of the State's criteria. Appendix B of the TMDL, *Development of TMDLs for Indicator Bacteria Using the Cumulative Distribution Function Method* prepared by Lee Dunbar, details the methodology. An important component of this approach is CT's commitment to

8/2/2005

conduct representative ambient monitoring and comparison to Water Quality Standards (WQS) Criteria as the final test for determining compliance with WQS. I am pleased to be able to approve the first of these TMDLs prepared using this approach. My staff and I continue to look forward to working with CTDEP in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA.

If you have any questions regarding this approval, please contact Steve Silva at (617) 918-1561 or have your staff contact Mary Garren at (617) 918-1322. Thank you very much.

Sincerely,

Linda M. Murphy, Director
Office of Ecosystem Protection

Attachment

cc with Attachment:

Betsey Wingfield, CT DEP

Lee Dunbar, CT DEP

Kelly Streich, CT DEP

Steve Silva, EPA

Lynne Hamjian, EPA

Mary Garren, EPA

EPA NEW ENGLAND'S TMDL REVIEW

TMDL: A Total Maximum Daily Load Analysis for the **Mill River, Rooster River and Sasco Brook**, Connecticut

CT Waterbody Segments on the State of Connecticut 2004 List of Connecticut Water Bodies Not Meeting Water Quality Standards (303(d) of the Federal Clean Water Act):

Mill River ID# CT7108-00_02

Rooster River ID# CT7106-00_01

Sasco Brook ID# CT7109-00_01 and ID# CT7109-00_02

All four waterbody segments are located within Fairfield County, Connecticut

STATUS: Final

IMPAIRMENT/POLLUTANT: Impairment of primary contact recreation due to indicator bacteria. The Total Daily Maximum Loads (TMDL) are proposed for indicator bacteria - *Escherichia coli*.

BACKGROUND:

The Connecticut Department of Environmental Protection (CTDEP) submitted to EPA New England the final Mill River, Rooster River and Sasco Brook TMDL Analysis for indicator bacteria with a transmittal letter dated March 10, 2005 and received by EPA on March 16, 2005. CTDEP discussed the content of this TMDL analysis during its year and a half of development. Consequently EPA New England concurs with the content of TMDL analysis.

The following review explains how the TMDL submission meets the statutory and regulatory requirements of TMDLs in accordance with §303(d) of the Clean Water Act, and 40 CFR Part 130.

REVIEWER: Mary Garren (617-918-1322) garren.mary@epa.gov

REVIEW ELEMENTS OF TMDLs

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. § 130 describe the statutory and regulatory requirements for approvable TMDLs. The following information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation.

1. Description of Waterbody, Pollutant of Concern, Pollutant Sources and Priority Ranking

The TMDL analytical document must identify the waterbody as it appears on the State/Tribe's 303(d) list, the pollutant of concern and the priority ranking of the waterbody. The TMDL submittal must include a description of the point and nonpoint sources of the pollutant of concern, including the magnitude and location of the sources. Where it is possible to separate natural background from nonpoint sources, a description of the natural background must be provided, including the magnitude and location of the source(s.) Such information is necessary for EPA's review of the load and wasteload allocations that are required by regulation. The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as: (1) the assumed distribution of land use in the watershed; (2) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources; (3) present and future growth trends, if taken into consideration in preparing the TMDL; and, (4) explanation and analytical basis for expressing the TMDL through surrogate measures, if applicable. Surrogate measures are parameters such as percent fines and turbidity for sediment impairments, or chlorophyll a and phosphorus loadings for excess algae.

Assessment:

Mill River, Rooster River and Sasco Brook are water bodies along the Connecticut coast that discharge to Long Island Sound. Each is impaired for primary contact recreation due to the presence of elevated levels of indicator bacteria (E.coli.) Mill River and Rooster River were listed in 2004 as priority "T" and scheduled for TMDL development, if warranted, within 2 years (Table 1, main document.) A Total Daily Maximum Load Analysis for Sasco Brook, Fairfield and Westport, Connecticut for indicator bacteria (fecal coliform) was previously approved by EPA on June 9, 2000. There are no permitted point source discharges into any of these surface waters (Table 2, main document.) All of the communities within the watersheds are MS4 urban communities subject to the Phase II Stormwater General Permit (page 1, main document.) The potential sources of bacteria are identified for each waterbody (Table 2, main document.) Urban runoff and storm sewers are common influences in each watershed.

The 4.0 mile-impaired segment of the Mill River flows from the Easton Reservoir (Easton) to the upper end of Samp Mortar Reservoir (Fairfield.) Land use within the 24.89 square mile watershed is comprised of 54.0 % forested, 29.4 % urban/developed, 11.2 % open space, 4.3 % water/wetland and 1.1 % agricultural. The Mill River is a Class A water as defined by the CT DEP Water Quality Standards (WQS), effective December 17, 2002. (Appendix A-1)

Rooster River is a 5.4-mile waterbody flowing from its headwaters in Fairfield to its mouth at Ash Creek (Fairfield-Bridgeport.) The Rooster River is a Class A water from its headwaters down to the Post Road. Below the Post Road and downstream to Ash Creek, the water is Class B/A. The drainage basin for the river is 15.33 square miles. Of the land within that watershed, 8.9% is forested, 87.0 % is urban/developed, 2.2% is open space, 1.6% is water/wetland and 0.3% is agricultural. (Appendix A-2)

Sasco Brook flows 6.1 linear miles from its headwaters in Fairfield to the Bulkley Pond Dam in Westport. Both impaired segments of Sasco Brook are classified as Class A water. The land within the 10.21 square-mile watershed is 41.2% forested, 36.9% urban/developed, 19.8% open space, 1.2% water/wetland and 1.0% agricultural.

(Appendix A-3)

EPA concludes that the TMDL report sufficiently describes the pollutants of concern, pollutant sources, and priority rankings of Mill River, Rooster River, and Sasco Brook.

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribe water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the anti-degradation policy. Such information is necessary for EPA's review of the load and wasteload allocations that are required by regulation. A numeric water quality target for the TMDL (a quantitative value used to measure whether or not the applicable water quality standard is attained) must be identified. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, usually site specific, must be developed from a narrative criterion and a description of the process used to derive the target must be included in the submittal.

Assessment:

Appendix B of the TMDL is entitled “Development of TMDLs for Indicator Bacteria using the Cumulative Distribution Function Method.” This Appendix details the entire methodology for this TMDL analysis. Water Quality Criteria supporting “all other recreational use” (excluding swimming) are applicable to all three waters. The geometric mean density of indicator bacteria must be less than 126 colonies/100 ml and the single sample maximum is limited to 576 colonies/100 ml to comply with CT’s bacteria criteria (pages 2 and 3, Appendix B.) Connecticut’s anti-degradation policy (Appendix E of the State’s 2002 WQS) is referenced (page 8, main document) in the context that this and any future modification of the TMDL must be consistent with that policy.

CTDEP began discussions with EPA New England in January 2004 on a proposed method for bacteria TMDLs in urban watersheds with recreational use impairments. “Development of TMDLs for Indicator Bacteria using the Cumulative Distribution Function Method” (Appendix B) was written with input from EPA New England. CT DEP requested comment from colleagues within and outside New England during development of this methodology. This approach is limited to waters in urban watersheds identified as having impaired recreational use due to the presence of excess indicator bacteria (*E. coli*.) A TMDL for waters that include a designated bathing area is not appropriate using this methodology. Representative ambient water quality monitoring data taken on a minimum of 21 sampling dates between May 1–September 31 is a requirement for use of this method. Indicator bacteria density and precipitation data are necessary. Decisions regarding to listing or delisting of a waterbody pursuant to Section 303(d) of the Clean Water Act will not be made based on this methodology. CTDEP will continue to make an assessment as to whether a waterbody is supporting its designated use according to its 2004 guidance document, Connecticut Consolidated Assessment and Listing Methodology (CALM) (page 1, Appendix B.)

This TMDL analysis proposes using a cumulative distribution function method to determine the reduction in the density of bacteria needed to allow the waterbody to meet its water quality criteria. CT’s Water Quality Criteria for Bacterial Indicators (geometric

mean 126 col/100 ml and single sample maximum 576 colonies/100 ml of E. coli) are presented statistically as a distribution with a geometric mean of 126 colonies/100 ml and a log standard deviation of 0.4. Appendix B (page 2-3) contains a detailed explanation of this cumulative frequency distribution curve, or criteria curve as it is called. The cumulative frequency distribution curve expressing the water quality criteria is shown graphically in Figure 1 (Appendix B.) Analytical data from the waterbody is also plotted on the same graph (Figure 2, Appendix B) to form a second cumulative relative frequency curve. The average reduction in E. coli needed to move the data points from the sample data curve to the criteria curve determines the necessary average percent reduction of indicator bacteria. This percentage of needed reduction becomes the TMDL.

EPA concludes that the TMDL report sufficiently describes the applicable water quality standards and numeric water quality targets.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

As described in EPA guidance, a TMDL identifies the loading capacity of a waterbody for a particular pollutant. EPA regulations define loading capacity as the greatest amount of loading that a water can receive without violating water quality standards (40 C.F.R. § 130.2(f).) The loadings are required to be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. § 130.2(i).) The TMDL submittal must identify the waterbody’s loading capacity for the applicable pollutant and describe the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In most instances, this method will be a water quality model. Supporting documentation for the TMDL analysis must also be contained in the submittal, including the basis for assumptions, strengths and weaknesses in the analytical process, results from water quality modeling, etc. Such information is necessary for EPA’s review of the load and wasteload allocations that are required by regulation.

In many circumstances, a critical condition must be described and related to physical conditions in the waterbody as part of the analysis of loading capacity (40 C.F.R. § 130.7(c)(1).) The critical condition can be thought of as the “worst case” scenario of environmental conditions in the waterbody in which the loading expressed in the TMDL for the pollutant of concern will continue to meet water quality standards. Critical conditions are the combination of environmental factors (e.g., flow, temperature, etc.) that results in attaining and maintaining the water quality criterion and has an acceptably low frequency of occurrence. Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards.

Assessment:

The TMDLs are calculated using the detailed methodology in Appendix B of the document. The TMDLs are average percent reductions of indicator bacteria (E. coli) needed to meet the applicable Water Quality Standard. The numeric water quality targets are therefore the Average Percent Reduction of Indicator Bacteria. The TMDLs (Table 4, main document) are:

Mill River	ID# CT7108-00_02	
	Upstream (monitoring station M2S)	19%
	Downstream (monitoring station M3)	55%
Rooster River	ID# CT7106-00_01	
	(monitoring station R1)	91%

Sasco Brook ID# CT7109-00_02
Upper segment (monitoring station S2) **33%**

Sasco Brook ID# CT7109-00_01
Lower segment (monitoring station S1) **58%**

Critical conditions for these watersheds are identified (page 5 and Table 1, Appendix B.) Dry weather flows from stormwater collection systems, illegal storm-sewer connections, combined sewer overflows (CSOs) would contribute to critical conditions. Critical conditions could also be influenced by inadequate disinfection of NPDES discharges, improper wildlife and pet waste management and poorly functioning septic systems. The management goal for these potential sources is elimination or adequate control as appropriate.

EPA concludes that the TMDL report sufficiently determines the loading capacity and links water quality and pollutant sources

4. **Load Allocations (LAs)**

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity allocated to existing and future nonpoint sources and to natural background (40 C.F.R. § 130.2(g).) Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. § 130.2(g).) Where it is possible to separate natural background from nonpoint sources, load allocations should be described separately for background and for nonpoint sources.

If the TMDL concludes that there are no nonpoint sources and/or natural background, or the TMDL recommends a zero load allocation, the LA must be expressed as zero. If the TMDL recommends a zero LA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero LA implies an allocation only to point sources will result in attainment of the applicable water quality standard, and all nonpoint and background sources will be removed.

Assessment:

Load Allocations (LAs) for the three water bodies are summarized in Table 4 (main document) and calculated in the appendices (A-1, A-2 and A-3.) Using the cumulative distribution function method, the percent reduction needed to achieve Water Quality Criteria during dry weather is assigned to the LA (page 5, Appendix B.) “Dry” data is collected at any time when precipitation is less than 0.1” per 24 hours, 0.25” per 48 hours, or 2.0” per 96 hours (footnote in tables within Appendices A-1, A-2 and A-3.) The LA is based on the average bacteria loading reduction needed in nonpoint sources to comply with the criteria. The Mill River LAs, for the two sampling stations with proposed TMDLs are found in Appendix A –1. The Mill River LA equals a 57% reduction based upon 20 dry samples at M3, the more northern monitoring site (pages 3 and 4, Appendix A-1.) The LA for the southern monitoring site, M2S, equals an 11% reduction based upon 16 samples (pages 5 and 6, Appendix A-1.) Data for the Rooster River is presented in Appendix A-2. An average reduction of 91% is needed in the LA for the Rooster River based on 17 samples (pages 3 and 4, Appendix A-2.) Calculations for Sasco Brook are presented in Appendix A-3. At the northern monitoring site S2, the LA is 26% based upon 29 samples (pages 5 and 6, Appendix A-3.) The LA for Sasco Brook at monitoring site S1, the more southern site, is 54% based on 31 samples (pages 3 and 4, Appendix A-3.)

EPA concludes that the TMDL report sufficiently addresses the calculation of a load allocation.

5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources (40 C.F.R. § 130.2(h).) If no point sources are present or if the TMDL recommends a zero WLA for point sources, the WLA must be expressed as zero. If the TMDL recommends a zero WLA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero WLA implies an allocation only to nonpoint sources and background will result in attainment of the applicable water quality standard, and all point sources will be removed.

In preparing the wasteload allocations, it is not necessary that each individual point source be assigned a portion of the allocation of pollutant loading capacity. When the source is a minor discharger of the pollutant of concern or if the source is contained within an aggregated general permit, an aggregated WLA can be assigned to the group of facilities. But it is necessary to allocate the loading capacity among individual point sources as necessary to meet the water quality standard.

The TMDL submittal should also discuss whether a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. In such cases, the State/Tribe will need to demonstrate reasonable assurance that the nonpoint source reductions will occur within a reasonable time.

Assessment:

Waste Load Allocations (WLAs) for the three water bodies are summarized in Table 4 (main document) and calculated in the appendices (A-1, A-2 and A-3.) Using the cumulative distribution function method, the percent reduction needed to achieve Water Quality Criteria during wet weather is assigned to the WLA. “Wet” data is collected when precipitation is greater than 0.1” per 24 hours, 0.25” per 48 hours, or 2.0” per 96 hours. The WLA is based on the average bacteria loading reduction needed in point source stormwater loadings to comply with the criteria (pages 4 and 5, Appendix B.) The Mill River WLAs, for the two segments with proposed TMDLs are found in Appendix A-1. The Mill River WLA equals a 52% reduction based upon 11 wet samples at M3, the more northern monitoring site (pages 3 and 4, Appendix A-1.) The WLA for the southern monitoring site, M2S, equals a 31% reduction based upon 10 samples (pages 5 and 6, Appendix A-1.) Rooster River is addressed in Appendix A-2. An average reduction of 92% is needed in the WLA for the Rooster River based on 10 samples (pages 3 and 4, Appendix A-2.) Calculations for Sasco Brook are presented in Appendix A-3. At the northern monitoring site S2, the WLA is 44% based upon 21 samples (pages 5 and 6, Appendix A-3.) The LA for Sasco Brook at monitoring site S1, the more southern site, is 65% based on 19 samples (pages 3 and 4, Appendix A-3.) All three waters are located in MS4 urban communities subject to the Phase II Stormwater General Permit (page 1, main document.) CSOs are being phased out in MS4 communities and permitted point source discharges not located in any of these watersheds. The WLAs in these urban communities can be assessed using only wet weather data because of the absence of CSOs and permitted point sources.

EPA concludes that the TMDL report sufficiently addresses the calculation of a wasteload allocation.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1).) EPA guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Assessment:

An implicit Margin of Safety (MOS) is relied upon in the TMDL report (page 5, main document.) EPA's indicator bacteria criteria, adopted by CT and used in this TMDL analysis, were developed from data taken at high use bathing beaches. Mill River, Rooster River, and Sasco Brook are urban waters designated for non-swimming contact recreation. Reliance upon data from swimming beaches to assess the data from these CT waters is a conservative comparison.

Appendix B (page 6) offers additional factors contributing to a MOS that are inherent to the cumulative distribution function method. Sample results from waters with lower level of bacteria as compared to bacteria criteria are assigned a percent reduction equal to zero. A negative value would suggest that the water could assimilate additional bacteria and still meet the criteria. Assigning a zero percent reduction is more conservative. Another factor is that compliance with CT's MS4 Permit requires elimination of high loading sources (illegal connections, dry weather storm sewer overflows, etc.) This permit, separate from the TMDL, will greatly reduce bacteria loading to these waters and contribute the MOS. Best Management Practices (BMPs), whether implemented for wet or dry weather sources, will also add to the MOS. BMPs designed to target a particular weather condition, most often contribute to load reductions during all conditions.

EPA concludes that the TMDL report sufficiently addresses the need for a Margin of Safety.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The method chosen for including seasonal variations in the TMDL must be described (CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1).)

Assessment:

The TMDL relies upon samples obtained during the summer recreational season (May 1-September 30.) Bacteria densities are highest during warm months in waters impacted only by nonpoint sources. Data taken during the recreational season represents "worst-case" conditions. Restricting data to samples taken during the warm months is therefore conservative and an acceptable approach to considering seasonal variation (page 5, main document.)

EPA concludes that the TMDL report sufficiently considers season variation.

8. **Monitoring Plan for TMDLs Developed Under the Phased Approach**

EPA's 1991 document, Guidance for Water Quality-Based Decisions: The TMDL Process (EPA 440/4-91-001) recommends a monitoring plan when a TMDL is developed under the phased approach. The guidance recommends that a TMDL developed under the phased approach also should provide assurances that nonpoint source controls will achieve expected load reductions. The phased approach is appropriate when a TMDL involves both point and nonpoint sources and the point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. EPA's guidance provides that a TMDL developed under the phased approach should include a monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of water quality standards.

Assessment:

A comprehensive monitoring plan for improvements in water quality is presented for Mill River, Rooster River, and Sasco Brook (pages 6-8, main document.) The TMDL presents recommendations for how communities can implement successful water quality monitoring programs. Analytical parameters and methods required by the MS4 Permit are listed in the TMDL. CTDEP commits to investing funding sources for local communities and to providing educational and technical assistance. Monitoring plans should be crafted so as to provide the data necessary to assess use support in accordance with CT's CALM (page 1, Appendix B.)

EPA concludes that the TMDL report provides sufficient detail in the monitoring plan.

9. **Implementation Plans**

On August 8, 1997, Bob Perciasepe (EPA Assistant Administrator for the Office of Water) issued a memorandum, "New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)," that directs Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired solely or primarily by nonpoint sources. To this end, the memorandum asks that Regions assist States/Tribes in developing implementation plans that include reasonable assurances that the nonpoint source load allocations established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. The memorandum also includes a discussion of renewed focus on the public participation process and recognition of other relevant watershed management processes used in the TMDL process. Although implementation plans are not approved by EPA, they help establish the basis for EPA's approval of TMDLs.

Assessment:

CT DEP presents a plan for how these TMDLs will be effectively implemented (pages 5 and 6, main document.) Effective nonpoint source watershed management and NPDES Stormwater Management Plans are highlighted as the primary mechanisms by which nonpoint and point sources of *E. coli* will be reduced. DEP's watershed coordinator will provide technical and educational assistance for nonpoint source management, as well as help investigate funding sources for local communities. Stormwater Management Plans required by the NPDES MS4 Permit will address minimum control measures and BMPs appropriate to regulated stormwater management.

EPA acknowledges that the TMDL report includes an implementation plan. EPA does not approve this component of any TMDL submission.

10. **Reasonable Assurances**

EPA guidance calls for reasonable assurances when TMDLs are developed for waters impaired by both point and nonpoint sources. In a water impaired by both point and nonpoint sources, where a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur, reasonable assurance that the nonpoint source reductions will happen must be explained in order for the TMDL to be approvable. This information is necessary for EPA to determine that the load and wasteload allocations will achieve water quality standards.

In a water impaired solely by nonpoint sources, reasonable assurances that load reductions will be achieved are not required in order for a TMDL to be approvable. However, for such nonpoint source-only waters, States/Tribes are strongly encouraged to provide reasonable assurances regarding achievement of load allocations in the implementation plans described in section 9, above. As described in the August 8, 1997 Perciasepe memorandum, such reasonable assurances should be included in State/Tribe implementation plans and “may be non-regulatory, regulatory, or incentive-based, consistent with applicable laws and programs.”

Assessment:

Mill River, Rooster River, and Sasco Brook are impaired solely by stormwater discharges and nonpoint sources. Urban point sources of stormwater were not given a less stringent wasteload allocation (WLA) based on an assumption that nonpoint source load reductions (LA) would occur, so a reasonable assurance is not required. However, CTDEP addresses reasonable assurances that point and NPS reductions will occur by providing the following information.

Nonpoint source loading from unregulated sources are partitioned into the LA for these TMDLs (page 4, Appendix B). The TMDL report states that DEP’s watershed coordinator will provide assistance to local municipalities and stakeholders as part of the DEP’s nonpoint source program. BMPs that address nonpoint sources (e.g. septic systems, nuisance wildlife, and pet waste) are highlighted for consideration within local watershed management plans (page 6, main document.)

Connecticut’s MS4 Permit provides assurance that reductions in *E. coli* loading will occur in urban point sources of stormwater through the implementation of the NPDES Program. These point sources are reflected in the TMDL analysis within the WLA. The MS4 permit requires that communities identify minimum control measures in a Stormwater Management Plan that is submitted to CTDEP. The control measures must include identification of appropriate BMPs and a schedule for implementation before January 8, 2009 (pages 5 and 6, main document.) The MS4 permit is a legally enforceable mechanism by which CTDEP can mandate, if necessary, that communities reduce stormwater point sources (page 8, main document).

EPA concludes that the TMDL report offers reasonable assurances that the TMDLs will be implemented.

11. Public Participation

EPA policy is that there must be full and meaningful public participation in the TMDL development process. Each State/Tribe must, therefore, provide for public participation consistent with its own continuing planning process and public participation requirements (40 C.F.R. § 130.7(c)(1)(ii) .) In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval must describe the State/Tribe’s public participation process, including a summary of significant comments and the

State/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment (40 C.F.R. § 130.7(d)(2) .)

Inadequate public participation could be a basis for disapproving a TMDL; however, where EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for either by the State/Tribe or by EPA.

Assessment:

The Notice of Intent to Adopt the A Total Daily Maximum Load Analysis for the Mill River, Rooster River, and Sasco Brook was sent to interested parties and communities to notify them of the public comment period. No comments were received during the one-month comment period that closed on December 30, 2004. A copy of the public notice and the mailing list were submitted along with the TMDL.

EPA concludes that the TMDL report documents a sufficient public participation process.

12. Submittal Letter

A submittal letter should be included with the TMDL analytical document, and should specify whether the TMDL is being submitted for a technical review or is a final submittal. Each final TMDL submitted to EPA must be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final submittal, should contain such information as the name and location of the waterbody, the pollutant(s) of concern, and the priority ranking of the waterbody.

Assessment:

The letter of submission accompanying the Mill River, Rooster River, and Sasco Brook TMDL report is dated March 10, 2005. The letter specifies that the TMDL report was established as final on March 8, 2005. CTDEP clearly states that the Final TMDL report has been submitted to EPA for approval in accordance with Section 303(d) of the Clean Water Act. The submittal letter along with the attached public notice provide all the required identifying information for Mill River, Rooster River, and Sasco Brook..

EPA concludes that the TMDL submittal letter provides all the necessary information.

13. Other Comments:

Appendix A provides all the identifying information and data relied upon to develop the TMDL for each waterbody. The data and graphs depict how the cumulative distribution function method (Appendix B) was applied for each of the waters. Summaries of the TMDLs (last pages, Appendices A-1, A-2, and A-3) provide helpful narrative explanations of the existing conditions and the specific improvements needed for the impaired *segments of Mill River, Rooster River, and Sasco Brook.*

Data for entry into EPA's National TMDL Tracking System

TMDL Name	A Total Maximum Daily Load Analysis for the Mill River, Rooster River and Sasco Brook Mill River ID# CT7108-00_02 Rooster River ID# CT7106-00_01 Sasco Brook ID# CT7109-00_01 Sasco Brook ID# CT7109-00_02
Lead State	CT
TMDL Status	Final
Pollutant ID	<i>E. coli</i> (227)
TMDL End Point	<p style="text-align: right;">Average percent reduction in <i>E.coli</i></p> <p>Mill River ID# CT7108-00_02</p> <p style="padding-left: 40px;"><u>upstream</u> 19%</p> <p style="padding-left: 40px;"><u>downstream</u> 55%</p> <p>Rooster River ID# CT7106-00_01 91%</p> <p>Sasco Brook ID# CT7109-00_02 33%</p> <p>Sasco Brook ID# CT7109-00_01 58%</p>
TMDL Type	Nonpoint Source
List ID (from system)	
Impairment ID	Primary contact recreation
Cycle (list date)	2004
Date (approval)	May 4, 2005
EPA developed	No