

# **Statewide TMDL for Bacteria Impaired Waters**

## **Response to Public Comments Document**

**FINAL September 19, 2012**



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## **Background**

Connecticut Department of Energy and Environmental Protection (CT DEEP) published a draft of a Statewide TMDL for Bacteria Impaired Waters on June 29, 2012 and public noticed the availability of the document for review and comment in the CT Post, Danbury News Times, Hartford Courant, New Haven Register, New London Day, Norwich Bulletin, Waterbury Republican, and Willimantic Chronicle. The public comment period was open on the documents until August 2, 2012. The public notice was sent via email to 32 environmental groups, 83 municipal CEOs, 43 health districts and departments, and 303 permittees included in the TMDL. A hard copy notice was sent to an additional 431 permittees included in the documents. There was an informational session on the DRAFT documents held at CT DEEP HQ on July 17, 2012. Approximately 45 people attended the informational session. The attendees included municipal staff, environmental groups, consulting firms and CT DEEP staff.

Written comments were received from various entities covering a range of suggested changes from typographical and grammatical to erroneous data and information. All comments received are summarized in this document and followed by the official Agency response. Public comment letters and this final document will be posted on the CT DEEP TMDL webpage [www.ct.gov/deep/tmdl](http://www.ct.gov/deep/tmdl).

## Public Comments

- 1) *Just one question at the moment. Table 15 has, for instance, three (3) columns under WLA. The numbers are not the same, but the columns do not have headings to explain why. I didn't find anything in the text or footnotes that explained the variation in the column values. – Jim Clifton Simsbury Water Pollution Control*

This comment deals with the Farmington River Appendix #27 and is typographical in nature. A table row was not pasted correctly into the appendix and this row described each of the 3 designated recreational uses. The row is described in the footnotes for the table but the three values were not included in the table. This row is added to the FINAL version of this appendix to clarify that the WLA values are the different CT WQS criteria for each of the designated recreational uses.

- 2) *I just noticed that on Page 4 of the TMDL Draft Sandy Brook Watershed Summary, 2<sup>nd</sup> paragraph “Broad Brook” seems to be standing in for “Sandy Brook” “As shown in Figures 3 and 4, the **Broad Brook** watershed”.*  
*As shown in Figures 3 and 4, the Broad Brook watershed consists of 82% forest, 8% water, 6% urban, and 4% agriculture. The majority of the watershed is forested, particularly in the Algonquin State Forest in Colebrook. The area surrounding the impaired segment of Sandy Brook is predominately forested, though multiple agricultural operations are located adjacent to the brook on Robertsville Road and an urban area is located at Route 20 in Riverton near the end of the impaired segment (Figure 4). – Alisa Phillips-Griggs Farmington River Watershed Association*

This comment addresses a typographical error with mislabeling of a map description in the Sandy Brook appendix. The change to reflect the correct basin of Sandy Brook is added to the FINAL version of the appendix that will be sent to EPA for approval.

- 3) *On page 27 of 50 in the Five Mile River Watershed Summary it states that previous sampling of discharge from the New Canaan DPW has shown elevated levels of fecal coliform bacteria//Table 8. Looking at table 8 the WPCF is well within the 200/100ml Limit and Table 7 MS4 samples do show high E.coli colonies which most likely are attributed to geese/etc Please clarify. – Jim Rogers Superintendent New Canaan WPCF*

After reviewing the tables in the Five Mile River Appendix it appears that the submitted data is below the limit. This inaccurate description of the New Canaan WPCF discharge is removed from the FINAL version of the appendix that will be sent to EPA for approval.

- 4) *I don't see Windsor Locks listed in the fact sheet. Enfield, Suffield, Windsor, South Windsor, Glastonbury, Wethersfield, and Hartford are listed. – Gary J. Kuczarski Superintendent, Windsor Locks WPCF*

This comment refers to a table including the affected municipalities based on impaired segment locations. This table is 8-2 in the Core Document and the listing for appendix 22 the Connecticut River. Windsor Locks should be included in this table for segment CT4000-00\_03. This correction has been added to the table in the FINAL version submitted to EPA for approval.

- 5) *The Fairfield Shellfish Commission encourages the inclusion of “NA” in the List of Acronyms with a brief text explanation that the End Point Targets for % reductions to meet the TMDL are already being achieved. –Fairfield Shellfish Commission*

This comment refers to the List of Acronyms in the Core Document and this list has been updated to include “NA”, a footnote was also added to the table showing load reductions to explain the relevance of a “NA” rating in the FINAL version submitted to EPA for approval.

- 6) *I can't seem to find the location for what is listed as “Appendix 82” on page 25 of the Byram River Watershed Summary. It is supposed to be about evaluating Sanitary sewer systems. Can you confirm the location for accessing this document? – Richard Feminella, Wastewater Division Manager, Town of Greenwich Public Works*

This comment refers to the Byram Watershed Summary and an incorrect reference number. The correct Appendix number should be #74. The text has been revised in the FINAL version submitted to EPA for approval.

- 7) *It is the position of the Environmental Engineering Program (EEP) of the Department of Public Health, that the TMDL document does not adequately support decentralized sewage system (DSS) management. Comprehensive management as outlined in EPA guidance manuals would facilitate a more cooperative approach that would benefit Connecticut's environmental and health goals. – Bob Scully, CT Department of Public Health*

CT DEEP supports decentralized wastewater options when they are an appropriate management option for wastewater treatment. These systems can be a component of effective protection of water quality. DEEP also agrees that a more collaborative approach to wastewater management will result in the best outcomes for Connecticut waterways and human health. This TMDL considers all options for treatment of wastewater and numerous potential sources of bacteria loading to waterways. There are links to EPA guidance documents in section 6.2.2 additional resources section. In a document of this scope it is difficult to go into too much depth with any one treatment

option or loading source. The TMDL recommended actions reflect our existing regulatory structure and suggests other regulatory and non-regulatory actions that can be taken on the local or regional basis with existing state technical assistance and guidance. No changes have been made in the FINAL version submitted to EPA for approval.

- 8) *The list of bacterial contamination sources includes failing on-site wastewater treatment systems. Sub-standard, antiquated, and improperly sited on-site wastewater treatment systems can also be sources of bacterial impairment. – Bob Scully, CT Department of Public Health*

This comment refers to the Core Document and a listing of potential bacteria sources. The text has been revised to include on-site wastewater treatment systems as potential sources in the FINAL version submitted to EPA for approval.

- 9) *Another ingestion pathway is consumption of bacterial tainted water from a building's plumbing system, as many older residential buildings, mainly seasonal structures, still utilize surface water supplies as their water supply source, and rarely is proper treatment provided to ensure water is potable.- Bob Scully, CT Department of Public Health*

This comment deals with the Core Document and the background section. While it may be possible to be exposed to bacteria through this pathway, the TMDL doesn't currently cover any drinking water impairments and the recreation use for other segments does not include intentional consumption of water. No changes are made in the FINAL document submitted to EPA for approval.

- 10) *Illegal disposal of septage from septic pump trucks also represents an unauthorized point source discharge of untreated wastewater. – Bob Scully, CT Department of Public Health*

This comment refers to section 2.2.1 of the Core Document. Text describing illegal septage disposal as an unauthorized point source has been added to the FINAL version submitted to EPA for approval.

- 11) *Use of the term 'malfunctioning' to describe certain septic systems may cause confusion when referring to inadequate on-site sewage disposal systems. It is recommended that the term 'sub-standard' be utilized instead of malfunctioning. – Bob Scully, CT Department of Public Health*

This comment refers to section 2.2.2 in the Core Document. CT DEEP agrees that there could be some confusion when evaluating on-site sewage disposal systems. This term does not adequately address additional issues that may cause bacteria release to surface waterbodies. The term 'malfunctioning' will be replaced in the text. However, 'sub-standard' may also cause confusion to some owners, so the replacement phrase will be 'insufficient' in the FINAL version submitted to EPA for approval.

- 12) *Estimated bacteria impairment from on-site sewage disposal systems was not determined. In Connecticut, the majority of on-site sewage disposal system failures occur during late winter and early spring when groundwater levels are at their highest. Assessments of bacterial impairments from on-site sewage disposal systems should include considerations of seasonal fluctuations in ground water levels and system usage. – Bob Scully, CT Department of Public Health*

This comment refers to section 4.1 of the Core Document. Surface water samples were collected during wet and dry weather to determine if waterbodies are meeting CT Water Quality Standards. All sampling data from the ‘recreation season’ of May 1<sup>st</sup> through October 1<sup>st</sup> is utilized to calculate load reductions and TMDLs. Data outside of this time period does not have to meet the same recreation standards due to lower frequency of human contact and decreased survivability of bacteria in colder temperatures. The TMDL document only serves to set a goal for the impaired waterbody and gives recommendations of potential sources of bacteria. These documents are the “first step in the road to recovery” of water quality in affected segments. Conducting further assessment of specific sources contributing to bacteria loads can be discussed and planned in future watershed based plan documents that are developed based on the information provided in the TMDL for each impaired segment. Some clarifying text has been added to the Core Document detailing the most likely failure seasons for septic systems and consideration of these scenarios in the FINAL version submitted to EPA for approval.

- 13) *Watershed source detection programs can be more successful where impairment from on-site sewage disposal systems is suspected if more complete monitoring is conducted. It may be helpful if detergents and MBAS are included in the list of water quality parameters are tested. - Bob Scully, CT Department of Public Health*

This comment refers to section 5.5 of the Core Document. The addition of the suggested parameters to a monitoring plan would strengthen track down monitoring efforts and allow for connection to anthropogenic sources of bacterial contamination from on-site sewage disposal systems. The current list of parameters in the Core Document is linked with existing MS4 permit requirements and is a suggestion for any monitoring plan in addition to MS4 requirements. The suggested additional parameters have been added to the list with notes that detergents and MBAS are not current MS4 requirements in the FINAL version submitted to EPA for approval.

- 14) *It is recommended to include a watershed management plan that includes a proactive DSS management program in the examples of Watershed Based Plans. –Bob Scully, CT Department of Public Health*

This comment refers to section 6.1.1 of the Core Document. There are no current watershed management plans that include a proactive DSS management program, but this

information may be available in facilities management plans from municipalities as part of their sewer evaluation and expansion planning process. No changes were made in the FINAL version submitted to EPA for approval.

- 15) *The document includes discussion of Low Impact Development Strategies (LIDS) as a potential implementation. Typical LIDS include on-site stormwater disposal, which in certain cases can hydraulically overload the receiving soil that the proper operation of on-site sewage disposal is dependent upon. Proper stormwater management is essential to maintain properly functioning on-site sewage disposal systems. To assist with this management, outreach and communication between involved entities, including State agencies is essential for successful implementation projects - Bob Scully, CT Department of Public Health*

This comment refers to section 6.2.1 and stormwater Best Management Practices. CT DEEP agrees on the value of communication and coordination towards the successful implementation of LIDS projects and potential effects to on-site sewage disposal systems. Additional language detailing consideration of existing systems and the potential effects of altering site hydraulics were added to section 6.2.1. In addition a new document was added to the available resources section. The LID Appendix to the CT Stormwater Quality Manual was cited in the Core Document. These changes are reflected in the FINAL version submitted to EPA for approval.

- 16) *There should be a separate subsection detailing Alternative Treatment (AT) systems including discussion of how they can be a benefit for enhanced treatment of domestic sewage. - Bob Scully, CT Department of Public Health*

This comment refers to section 6.2.2 of the Core Document. Some additional text was added to section 2.2.2 that detailed the different types of systems. Additional clarifying language was also added to section 6.2.2 describing the jurisdiction over the various types of systems available in Connecticut. Finally, the weblinks included in the Additional Resources section of 6.2.2 give more detailed descriptions to any end user of the TMDL document. These changes are reflected in the FINAL version submitted to EPA for approval.

- 17) *The BMPs section should include that water softener and other water treatment wastewater should not be directed to the septic system. Additionally, no pet wastes should be added into the septic system. - Bob Scully, CT Department of Public Health*

The comment refers to section 6.2.2 of the Core Document and is a bulleted list of BMPs for septic system operation. There has been additional information on proper maintenance and operation of septic systems included in the Available Resources list of web sites at the end of section 6.2.2. Additional text describing the recommended substances to avoid in septic disposal has been added to the FINAL version submitted to EPA for approval.

- 18) *The CGS information provided in the Additional Resources section is incorrect. Chapter 103 does not refer to septic system rules. The weblink provided is only in reference to Old Saybrook's Decentralized Management District (DWMD). Comprehensive DSS management will be a benefit to DWMD. - Bob Scully, CT Department of Public Health*

The comment refers to the additional resources section of the Core Document 6.2.2. The CGS references were corrected and hyperlinked in the FINAL version submitted to EPA for approval. CT DEEP agrees with the commenter that comprehensive DSS management can be a benefit to DWMD.

- 19) *The utilization of Clean Water State Revolving Funds (CWSRF) for DSS management and upgrades to antiquated systems would provide valuable opportunities for implementing TMDLs. – Bob Scully, CT Department of Public Health*

This comment refers to section 7 of the Core Document and Funding Resources. CT DEEP agrees that upgrading applicable antiquated systems could provide benefits to impaired waterways affected by this TMDL. CT DEEP is supportive and does fund upgrades to antiquated septic systems in situations where it is part of a comprehensive evaluation, has been demonstrated to be the most cost-effective option to protect human health and the environment, and is part of the process of a municipality establishing a decentralized wastewater management district. CWSRF funds can be used in planning, design and construction however, the Regulations of Connecticut State Agencies (RCSA) that direct CT DEEP do not allow for funding of operation and maintenance of these systems. No changes have been made in the FINAL version submitted to EPA for approval.

- 20) *The Home Solutions Program of CT no longer offers septic repair and replacement programs through the CT DECD and Community Renewal Team so the link/information should be removed. – Bob Scully, CT Department of Public Health*

This comment refers to section 7 of the Core Document. The program description and link have been removed from the FINAL version submitted to EPA for approval.

- 21) *The Land Use section references 'leaking septic systems' as a source of nutrient and bacterial pollution impacting waterbodies. It may be more appropriate to reference failing and sub-standard on-site sewage systems. - Bob Scully CT Department of Public Health*

This comment refers specifically to the commenter's review of the Farm River and Little River Watershed summaries. However, the highlighted text is included in all watershed summaries. The new text is 'failing and insufficient' to replace the word leaking. The

text has been updated in all watershed summary FINAL versions submitted to EPA for approval.

- 22) *Connecticut has not developed a standardized inspection protocol for routine sewage system assessments. An appropriate action step is the development of standardized inspections protocols and template ordinances for local communities to use. Local communities typically don't have the resources to implement programs to eliminate cesspools and steel septic tanks. Encouraging local entities to develop septic system monitoring without state support is not the most effective way to address bacterial impairments of surface waters by on-site sewage systems. - Bob Scully CT Department of Public Health*

This comment refers to a recommended next step in the appendices to have municipalities develop a system to monitor septic systems. A more robust state level program for on-site system management is a goal CT DEEP shares with the commenter. Any further discussions on the development of recommended documents and guidance are welcome if and when future funding sources become available and are within other pollution management program priorities. In the meantime, the TMDL recommended actions reflect CT DEEP existing regulatory structure and suggests regulatory and non-regulatory actions that can be taken on a local or regional basis. The agency does currently provide technical assistance and guidance through the work of current staff. These same CT DEEP staff can also identify programs and potential funding and community resources.

- 23) *The Towns of Griswold and Lisbon are part of the Uncas Health District, so the district Director of Health is the health director for each member Town. – Bob Scully, CT Department of Public Health*

This comment refers to the Broad Brook (CT3716) Watershed summary. The text is updated to state that the district health director is the Director for the Towns in the FINAL version submitted to EPA for approval.

- 24) *The text references “properly managed septic systems”, which are not systems that are just periodically pumped. Properly managed systems are subject to all EPA guidance suggestions. – Bob Scully, CT Department of Public Health*

This comment refers specifically to the Broad Brook (CT3716) watershed summary. The text is also included in many, if not all, of the other summaries. Since EPA guidance documents are included in the Core Document under Additional Resources, the other guidance suggestions can be found through linked documents. The text of properly managed systems is not changed in the FINAL version of the summaries submitted to EPA for approval.

- 25) *The malfunctioning septic systems and illicit discharges section refers to certain properties that have access to sewers but are currently utilizing on-site sewage systems. A future action step for this watershed should include developing a sewer needs assessment tool at the state level so municipalities can determine sewerage needs. – Bob Scully, CT Department of Public Health*

This comment refers specifically to the Coginchaug Watershed summary but is broadly applicable. The evaluation of future sewerage needs is specific to each municipality and currently included in the facilities planning process for each sewage treatment plant. No change to the TMDL is proposed.

- 26) *The reference to table 11 should be changed to table 12. – Amy Siebert, Commissioner Greenwich Public Works*

This comment refers to the Byram River Watershed Summary. The table reference is a typographical error. The text has been changed in the FINAL version submitted to EPA for approval.

- 27) *The sample data utilized is from 2006-2009, would CT DEEP be willing to use more current sample data collected by the Town of Greenwich? – Amy Siebert, Commissioner Greenwich Public Works*

This comment refers to the Byram River watershed summary. CT DEEP staff utilized all available data at the time of document drafting to calculate the TMDL and associated load reductions. If the Town would like to submit additional data, it will be reviewed by CT DEEP staff for consideration of inclusion in a revised TMDL. No changes are made to the FINAL version of the document submitted to EPA for approval.

- 28) *Consider changing the title of Figure 5 to “Byram River Impaired Segment”. – Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to a map of the impaired segment in the Byram Watershed Summary. The suggested title is more accurate reflection of the image depicted in the figure. The text has been changed in the FINAL version of the document submitted to EPA for approval.

- 29) *Has any consideration of bacteria loads from Port Chester, NY been considered during evaluation of the Byram River? – Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Byram River watershed summary. No data was available for potential sources across the CT/NY border to identify additional contributors to the

Byram River during drafting of the TMDL documents. No changes have been made to the FINAL version submitted to EPA for approval.

- 30) *The Holy Hill Resource Recovery Facility is included in the Byram River appendix, but all drainage from the transfer station discharges directly to Long Island Sound. Any potential loading would not enter the Byram River. – Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Byram River Watershed Summary and inclusion of data from the Greenwich transfer station. Since the discharge doesn't enter the Byram watershed, it is erroneous to include data or references to the transfer station in this summary.

References to the transfer station have been removed in the FINAL version submitted to EPA for approval.

- 31) *How will private sector sources be educated about and required to participate in achieving stormwater goals? - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the private sector sources listed in the Byram River summary and indirectly to all of the summary documents. All private sector sources printed or included in maps within a watershed summary were contacted about the TMDL process. Any permit holders will also be informed during permit renewal process of any new implications for their receiving waters having TMDL reduction goals. Also, MS4 communities have the responsibility to conduct general public outreach regarding stormwater as part of their permit obligations. No changes have been made to the FINAL version submitted to EPA for approval.

- 32) *Certain areas of the Town are listed as being on septic systems but are actually connected to the Town wastewater collection system. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Byram River Summary. Recommended changes to the lists of entities on septic have been made in the FINAL version submitted to EPA for approval.

- 33) *The Town of Greenwich has no combined sewers in its wastewater collection system. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Byram River Summary and the references to CSOs in Greenwich have been removed from the text in the FINAL version submitted to EPA for approval.

- 34) *Reference to table 10 should be table 11 - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Byram River summary on pg 23 and the table reference is a typographical error that has been updated in the FINAL version submitted to EPA for approval.

- 35) *The Town of Greenwich is already evaluating their sanitary sewer system and has tracked down illegal sanitary connections and has not found evidence of illegal sanitary connections to the stormwater system in the Greenwich wastewater collection system. However in the Byram Watershed Coalition's report it does appear that Port Chester, NY does have cross connection issues. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Recommended Next Steps in the Byram River Summary document. This new information from the Town of Greenwich will be included in the FINAL document submitted to EPA for approval.

- 36) *How will CT DEEP be expecting improvements on private property to be implemented and who will have the authority to require these implementation steps? - Amy Siebert, Commissioner Town of Greenwich Public Works*

The TMDL does in some cases identify activities on private property which may contribute to the observed impairment. This information has been made available to the property owners through the public notice process. The TMDL generally recommends that further evaluation be conducted of the potential sources identified in the report to determine if there are indeed activities on the private property are contributing to the observed impairment. Information is also provided in the TMDL to identify opportunities for assistance in evaluating and addressing this concern.

- 37) *Pages are not numbered in the Appendix. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Greenwich/Stamford estuary summary. The pages have been numbered in the FINAL version submitted to EPA for approval.

- 38) *In Table 2 the Port Chester Pump Station is listed as belonging to Greenwich. This facility is operated by Port Chester, NY. Please clarify the ownership of this facility in the report. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Greenwich Stamford estuary summary and highlights an erroneous facility listing. The table has been updated in the FINAL version submitted to EPA for approval.

39) *The Greenwich WPCF has only exceeded permit limits twice in the 3 years of data presented in the report. The text states that both plants (Greenwich and Stamford) exceeded limits on several sampling dates. Please clarify the numbers of exceedances per plant. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Greenwich/Stamford estuary summary. The Greenwich and Stamford WPCF permit monitoring results are both listed in the same table. The text has been revised to reflect the numbers of exceedances of each plant in the FINAL version submitted to EPA for approval.

40) *The Belle Haven area is mostly served by sanitary sewers, please clarify this fact in the text. - Amy Siebert, Commissioner Town of Greenwich Public Works*

This comment refers to the Greenwich/Stamford estuary summary. The text has been revised to reflect the new information provided by Greenwich in the FINAL version submitted to EPA for approval.

41) *Will the TMDLs presented in the documents be water quality goals or specific limits when the documents are adopted? Can CT DEEP clarify how the proposed TMDLs should be interpreted? Is there another term that can be used if the proposed standards are truly goals and not permit limits?- Amy Siebert, Commissioner Town of Greenwich Public Works*

42) *Most frequently a TMDL is applied to point sources which can measure effluent quality. How can it be reasonably applied given the highly variable conditions that exist in a watershed from weather to private property practices? - Amy Siebert, Commissioner Town of Greenwich Public Works*

Response to comments 41 and 42: These comments are general in nature to the concept, effects and process of the TMDL. The goal is for each waterbody to meet the standards, criteria and designated uses established within the CT Water Quality Standards. For every waterbody in this TMDL this goal is not currently being met. The waste load allocations and load allocations established within the TMDL are the applicable standard or criteria for the affected water body. For example surface water within a freshwater designated swimming area must be below 235 cols/100ml of *E.coli* bacteria for a single sample maximum and 126 cols/100mls for a geometric mean. This value is for application to the ambient water body and is not a permit limit. However, the TMDL may inform the permit process. For facilities where there is direct control over the levels of bacteria within the water discharge such as at a municipal wastewater treatment plants which have treatment systems designed to remove bacteria, such facilities will have limits based on this TMDL incorporated into their permit as necessary. In general, these facilities already have such limits in their discharge permits. If a new or revised limit is

necessary based on TMDL recommendations, such new or revised limit will only become applicable once the permit is modified and reissued. For other discharges, such as stormwater, which may or may not be covered under a defined regulatory program, the TMDL does not recommend establishing end of pipe discharge limitations for bacteria. In most of these cases, there is no well defined and direct mechanism to treat such discharges to insure that bacteria levels remain below acceptable levels. However, there is an ability to reduce or eliminate sources of bacteria which contribute to the discharge through the imposition of Best Management Practices. For these and similar cases, the TMDL does not recommend including a discrete permit limit within any authorization but rather encourages the uses of Best Management Practices, either within a permitted program or voluntary effort, to reduce the amount of bacteria within the discharges to support eventual attainment of bacteria criteria and standards within the water body.

- 43) *When determining compliance with standards, sampling procedures should follow standard practices. How will CT DEEP address testing in terms of who is required to collect samples and how will the data collection be funded?* - Amy Siebert, Commissioner Town of Greenwich Public Works

This comment deals with monitoring efforts to determine the TMDL compliance and effectiveness of implementation efforts. Municipalities will continue with any existing monitoring obligations for wastewater treatment plant and MS4 permits. Other permittees will continue to monitor under their existing permit requirements. Some additional monitoring will be conducted by CT DEEP staff visiting the existing monitoring sites periodically to check on attainment of water quality goals. CT DEEP cannot provide funds for complying with monitoring requirements in permits or other authorizations. There may be additional grant monies available for conducting efforts to improve water quality on impaired segments, primarily utilizing 319 funds from EPA under certain circumstances, but not for complying with permit requirements.

- 44) *There are some substantial load reductions in certain waterbody segments, what is CT DEEP's timeframe for these locations to meet their goals?* - Amy Siebert, Commissioner Town of Greenwich Public Works

CT DEEP doesn't have a rigid schedule for attaining water quality goals in the waterbodies affected by the bacteria TMDL. The time frame for attainment of water quality goals will depend on the complexity of the problem and the level of effort needed to affect a change in practices or discharge quality.

- 45) *What authority does the Town have to require private property owners to comply with these standards? Will there be CT DEEP enforcement of standards with private property owners?* - Amy Siebert, Commissioner Town of Greenwich Public Works

The Town responsibilities are governed by local ordinances and permit requirements, etc. Identification of any private landowner within the TMDL is not necessarily a statement

of fact that there is a known impact to water quality based on current activities on the private property, unless data included in the TMDL demonstrates a specific contribution of bacteria to the surface water from that site. The TMDL only identifies a potential to contribute to water quality impairments based on the type of activity and land use. CT DEEP will work with private property owners through their commercial or industrial storm water permits in similar fashion to MS4 permits with towns. Private landowners for agricultural sites may also find assistance through their local soil and conservation districts as well as CT DEEP.

- 46) *How is CT DEEP working with New York State to address their contributions to the TMDL for Byram River? - Amy Siebert, Commissioner Town of Greenwich Public Works*

For shared water resources, CT DEEP will reach out to adjoining jurisdictions, New York in this case, for coordination on actions in support of achieving water quality goals.

- 47) *How will CT DOT be addressing its facilities to help municipalities to meet the TMDLs and load reductions? What are their requirements and is there funding for their potential implementation pieces? - Amy Siebert, Commissioner Town of Greenwich Public Works*

CT DEEP stormwater group will be issuing general permits for CT DOT in the future. Any TMDL recommendations will be considered in the permitting process.

- 48) *Will there be any grants or funding mechanisms to help municipalities implement the standards? - Amy Siebert, Commissioner Town of Greenwich Public Works*

Potential sources of funding are identified in Chapter 7 of the Core Document of the TMDL. However, additional funding sources may not be able to fund actions required under permitted authorizations.

- 49) *Emerging science and research has documented that there are genetic variations of E.coli that are unlikely to be harmful to humans. Standardized E.coli testing doesn't differentiate results at the genetic level. It would be prudent for CT DEEP to be actively involved in participating and applying new research to ensure sources will actually be harmful to human health. – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP agrees that following research and updates in technology is important in maintaining the best efforts to protect water quality in the State's waterbodies. The TMDL is developed for consistency with the bacteria water quality criteria which Connecticut adopted based on the federally promulgated standards. The Department agrees that there may be value in determining potential sources of bacteria loads through genetic testing. However, the *e.coli* is still an indicator of waste product present in the water column and this waste is likely to carry pathogens that pose a risk to human health.

This risk is the source of the impairment to the affected waterbody regardless of genetic type of indicator bacteria present in samples. No changes have been made in the FINAL submitted to EPA for approval.

- 50) *The role of “background bacteria” or bacteria from the natural environment needs further documentation and consideration. It would seem prudent to appropriately fund the necessary research and programs to use DNA to further determine bacteria origins. An additional resource of a Task Force specifically to apply the new research to realistic management goals should be created to provide additional assistance. – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP agrees that the best available science should be utilized and supports these research efforts. The Department works to remain current on scientific developments to improve data collection and quality and will consider use of new methods as funding is available to improve the data upon which decisions are based.

- 51) *CT DEEP states they are committed to providing technical assistance and monitoring planning and electronic submission, with limited funding available, what specific resources and timeframe is DEEP willing to commit to after adoption of this TMDL? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP has no rigid timeframe or schedule for implementation of the goals set forth in this TMDL. Department staff will continue to provide support as requested and within current staffing resources.

- 52) *Have any watershed management plans been implemented and subsequently resulted in delisting of impaired waters for bacteria? Does CT DEEP intend to offer templates or specific steps to follow that include meetings with staff to work toward delisting of impairments? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP is currently in discussions with EPA to make connections between the 303(d) Impaired Waters List and all Watershed Based Plans. These discussions include implementation of the NPS projects outlined in the WBPs. All successful projects will be published on the DEEP webpage as the final documentation of reductions are compiled into a useful format. CT DEEP staff remains available to help interested citizens and watershed groups to address water quality impairments and restore water quality. The TMDL provides a variety of guidance and opportunities to find information and assistance to help with that process. As stated in the TMDL, CT DEEP staff are available to meet with interested entities to assist in the watershed management process.

- 53) *What specific bacteria sources will be considered beyond a community's control to manage? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

The CT Water Quality Standards allows criteria to not apply to situations that are caused or brought about by natural conditions. An example is wildlife sources in a forest are natural versus congregating geese at a man-made pond. The latter condition is not considered natural as the geese have been encouraged to use the waterbody through anthropogenic measures and creation. There may be other situations, but without further information guidance cannot be offered here. Please contact CT DEEP TMDL staff if there are specific situations you would like to discuss.

- 54) *Many BMPs suggested for implementation have little teeth, education can only address so much and wetland commissions must deal with agricultural exemptions and health departments must establish a clear violation to take action. How should these issues be realistically addressed? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

This TMDL will help to initiate discussions on how best to address land uses and other actions which are not explicitly covered under existing state or federal regulatory programs. By identifying the issues, providing resources and highlighting solutions that have been helpful in other circumstances, it is hoped that partnerships and conversations will be initiated to address these challenging circumstances. CT DEEP continues to look for opportunities to work with stakeholders both within and outside of regulatory programs to address water quality issues.

- 55) *Will CT DEEP notify other state branches such as State parks that manage public areas of the impaired status for recreation due to bacteria? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP has communicated with other State agencies including CT DEEP Parks Division, Department of Public Health and Department of Agriculture Bureau of Aquaculture. Additionally, CT DEEP is working to identify and address any sources which may be contributing to observed impairments at state bathing beaches.

- 56) *Early Brook was originally referred to in draft versions of the Eightmile Watershed summary. It appears to have been removed for the DRAFT copy, yet still shows up in some maps and text. To reduce confusion please be sure to completely remove references to Early Brook. – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

This comment refers to the Eightmile River watershed summary. CT DEEP originally included Early Brook in the TMDL as it is in the Eightmile River watershed and

preliminary review of data implied an impairment. After conducting a full evaluation of the bacteria data set for Early Brook the data showed no impairment existed and so the stream was not included in the TMDL. Most references were removed from the summary, however one map was not updated. This map has been revised in the FINAL version submitted to EPA for approval.

57) *The impairment listing on the main stem of Eightmile River on a 12.22 mile long segment is based on one test point. We would suggest that this policy be explained so that communities that are affected understand that sources of impairment could come from any point that contributes to the testing point. – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

Streams and rivers are divided into linear segments measured in miles for assessments and impaired waters listing. Segments are made considering factors such as habitat, stream geomorphology, hydrology, biological condition, land use, and best professional judgment. The average segment length is approximately 3 miles long.

For stream segments that have been assessed, the assessments may contain one sampling station or multiple sampling stations although not all applicable designated uses (e.g. habitat for aquatic life, recreation) are necessarily assessed for a segment. For example, a segment could have an assessment for habitat for aquatic life based on the on a data from a single station that has water chemistry, macroinvertebrate community, fish community, but no recreation assessment because there is no indicator bacteria data. From time to time, recreational assessments are made when new data become available on longer segments that were created to assess habitat for aquatic life. This can result in a single bacteria sampling point representing a longer segment that was established while assessing habitat for aquatic life. No changes were made in the FINAL version submitted to EPA for approval.

58) *The report details specific potential bacteria sources within the Eightmile River watershed. Several of the listed potential sources are located downstream of the monitoring station used to list the segment. These specific sites would not be contributing bacteria loads to the monitoring station and therefore the source of the impairment listing. – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

This comment refers to the Eightmile River watershed summary although is generally applicable to all of the appendices. Each summary appendix is based on a subregional watershed. Landuse and source data are included for an entire watershed even if there is insufficient ambient water quality data to assess the quality of all waters within the watershed. This approach is consistent with EPA program goals to conduct TMDLs on a watershed basis. However, and more importantly, it provides for public education and engagement throughout a watershed. As stated in the TMDL, water body segments for which there are not data to allow assessment of water quality goals may or may not have

acceptable water quality. Areas within the watershed for which land uses and source information is similar to an impaired segment can be reviewed to determine if there are obvious potential sources which may need to be addressed even without the benefit of surface water monitoring data. Similarly, it is possible to surmise that sources upstream from the observed impairment may be contributing to that impairment. Also, the impairment may not end at the boundary of the monitored segment and so addressing downstream sources may be necessary for holistic water quality improvements. So, while not contributing pollutant loads directly to the monitored surface water segment, these additional sources throughout the watershed are potentially contributing to the overall water quality on the impaired segment and throughout the watershed and therefore warrant further investigation to fully address water quality issues and impairments on the listed segment and watershed.

- 59) *There are a number of activities that have been implemented by local communities that fall under some of the general recommendations for Eightmile River watershed. That being said, there are only so many resources that can be dedicated to bacteria issues. If goals are still not met after significant implementation has occurred in the watershed, what next steps can be expected? – Pat Young and Linda Birely, Eightmile River Wild and Scenic Coordinating Committee*

CT DEEP can appreciate concern over resource allocation and effectiveness of implementation steps. Achieving water quality goals is not always an easy or straightforward process. It may take an iterative process of implementing some actions, determining if any water quality improvements have been realized and then planning for future activities. The type and pace of implementation activities will be dictated by many factors including permit requirements and community resources. The end goal of the TMDL process is steady progress towards the eventual attainment of water quality goals for the water body.

- 60) *What are the additional segments that are referred to for inclusion in Appendix A? Can you clarify its purpose in the text of the document? – Steve Winnett, EPA Region 1*

This comment refers to the Core Document and multiple referrals to Appendix A. This appendix is reserved for future bacteria impairments that are added to the Statewide Bacteria TMDL. These segments could be impaired on new data unavailable at the time of the initial drafting of this TMDL document. Appendix A is primarily a tracking device for CT DEEP staff, but will also allow other end users of these documents to see when any specific segment was included in a TMDL process and document. The text was expanded upon and clarified in the Core Document FINAL version that was submitted to EPA for approval.

- 61) *Will the status of efforts and activities to fix or eliminate CSOs be included in the text or accompanying table? – Steve Winnett, EPA Region 1*

This comment refers to the Core Document and the section on CSO communities in Connecticut. Additional information about the status of upgrades and elimination of CSOs in the affected communities are available in various reports provided by each CSO community. These reports and activities are the primary source of any information on CSOs and should be relied on for the current status of CSO elimination efforts. Once a CSO is eliminated, the change will be noted in the status of the water body listing in the Integrated Water Quality Report which is prepared by CT DEEP every two years. The Core document of this TMDL can be updated as needed but in the future may be out of sync with more current reports referenced herein. No changes were made in the FINAL version submitted to EPA for approval.

62) *How are the three anti-degradation tiers different from each other and are the tiers subsets of tier 1? Please clarify the differences in water quality tiers. – Steve Winnett, EPA Region 1*

This comment refers to the Antidegradation section in the Core Document. The State’s Antidegradation policy and implementation guidance are contained in the Water Quality Standards which should be consulted for the original language. However, clarifying text explaining the goals and breakdown of the different evaluation tiers was added to the FINAL version submitted to EPA for approval. Also, the following table is offered as explanation:

| Category of Water                    | Tier of Antidegradation Review | Applicable Discharges or Activities | General Comment  |
|--------------------------------------|--------------------------------|-------------------------------------|--|
| All Waters                           | Tier 1                         | All                                 | Insure that the Water Quality Standards and criteria are applied in support of attainment of general water quality and use goals   |
| High Quality Waters & Wetlands       | Tier 1 and Tier 2              | New or Increased                    | In addition to the provisions for Tier 1 review, the goal is to make sure that surface waters with an existing quality better than the criteria established in the Water Quality Standards shall be maintained at their existing high quality unless otherwise provided for within the Water Quality Standards |
| Outstanding National Resource Waters | Tier 1 and Tier 3              | New or Increased                    |  |

63) *Please clarify that there are 180 impaired segments with 183 TMDLs since there are three saltwater segments that are impaired by two pollutants, Enterococcus and fecal coliform bacteria. – Steve Winnett, EPA Region 1*

Yes, this is correct. This comment refers to the Core Document and clarifying text has been added to the text anywhere the total number of impaired segments is included in the text. These changes were made in the FINAL version submitted to EPA for approval.

- 64) *Please clarify that the WLA and LA are part of the TMDL and the percent reductions are not the TMDL but are information about how much work is needed to achieve the TMDL targets. – Steve Winnett, EPA Region 1*

This comment refers to the Core Document and section 8.1.1 dealing with precipitation calculations. The corresponding text was clarified to better explain the relationship of the LA and WLA and the TMDL criteria in the FINAL version submitted to EPA for approval.

- 65) *Would it be possible to add units to the headings in the columns for the table? This will clarify which column is the TMDL and which is the load reduction percentage. – Steve Winnett, EPA Region 1*

This comment refers to the header row of table 8-2 and the End Point Target column in particular. The units (cols/100mls) have been added to the header row in the FINAL version submitted to EPA for approval.

- 66) *There is no mention of CT DEEP future monitoring plans on the impaired segments. It is also useful to include text detailing acceptance of volunteer monitoring data and information from other water groups and associations. – Steve Winnett, EPA Region 1*

This comment refers to section 5.5, the monitoring section. Additional text describing the DEEP monitoring and acceptance of volunteer data has been added to the FINAL version submitted to EPA for approval.

- 67) *The discussion of LID and stormwater infiltrative systems in this section is too narrow as it only accounts for the protection of surface water resources from bacteria loading, but DEEP's mandate is to protect the quality of both surface waters and groundwater. DEEP needs to promote LID practices that are appropriately designed to address pollutant loading and protect groundwater resources. – Michael Hart, Water Permitting and Enforcement Division, CT DEEP*

This comment refers to section 6.2.1 of the Core Document and the Best Management Practices for stormwater runoff. It is correct that the Department is concerned with the quality of both surface water and groundwater resources. The TMDL was developed in response to observed impairments in surface water quality and so that is the focus of the document, However, additional clarification and guidance language has been inserted in the section describing appropriate placement of stormwater BMPs and consideration of

potential pollutant loading to groundwater as well as surface water reductions. This text has been revised in the FINAL version submitted to EPA for approval.

- 68) *The statement “measures implemented to meet TMDL targets will reduce bacterial concentrations and daily loads” indicates that the measures will be implemented even though they are only recommended next steps. It is more accurate to say that the measures, if implemented will reduce bacteria loading. - Michael Hart, Water Permitting and Enforcement Division, CT DEEP*

This comment refers to section 5.3 and deals with seasonal conditions and reductions of bacteria loading that result from implemented next steps. The text in section 5.3 was revised to reflect that only implemented measures will result in bacteria load reductions in the FINAL version submitted to EPA for approval.

- 69) *The discussion of regulatory jurisdiction, as it refers to “design capacity of system” is inaccurate. Both designed flow and the type of treatment determine the regulatory authority. Adding clarifying definitions and language for the delineation of jurisdiction will help with understanding of jurisdictional, overlapping and collaborative roles. – Michael Hart, Water Permitting and Enforcement Division, CT DEEP*

This comment refers to section 6.2.2 and the discussion over jurisdiction and size of systems. Additional clarification language dealing with jurisdictional oversight and the potential for some systems to shift under different jurisdiction with new development has been added to the FINAL version submitted to EPA for approval.

- 70) *The introductory discussion in the TMDL describes how DEEP is responsible for assessing CT’s water quality and attainment of Water Quality Standards. There is further expansion of the assessment roles of DEEP and uses of monitoring data, however there is no similar expansion of the assuring attainment activities of DEEP. Including discussion of DEEP’s regulatory and planning roles will assist end users of the TMDL document with an understanding of coordination opportunities with DEEP. – Michael Hart, Water Permitting and Enforcement Division, CT DEEP*

This comment refers to the section 4.1 dealing with attaining Water Quality Standards. There are other sections of the TMDL Core document where various DEEP responsibilities are described in the text. Section 5.5 deals with permitting programs, 5.7 explains some detail about the Watershed Based Plans and 319 program, and section 6.2.2 details some of the jurisdiction over onsite sewage disposal systems. There are also multiple references to available resources which include links to more detailed DEEP publications and references. In general, the TMDL program works with known impairments in CT waterbodies and calculates the reduction goals, suggests potential sources of pollutant loads, and charts a path to attaining water quality standards. A TMDL document is really only the first step in the road to recovery for these impaired waterbodies. Once a TMDL is approved and any known pollutant sources are confirmed

the regulatory sections of DEEP will begin working towards attainment through regulatory responsibilities. Some additional clarifying text has been added to section 4.1 of the FINAL version submitted to EPA for approval.

- 71) *Section 2.2.2 dealing with NPS pollution provides an opportunity to clarify some of DEEP's regulatory role when dealing with subsurface sewage disposal systems and agriculture, particularly with a focus on collaboration with other entities. – Michael Hart, Water Permitting and Enforcement Division, CT DEEP*

There is additional text in other sections of the Core Document that explains some of the roles of DEEP. Section 6.2.2 deals with subsurface sewage disposal systems and 6.2.3 covers agriculture. However, some additional clarifying language and information was added to the Core Document under the agriculture and subsurface sewage disposal systems headings in the FINAL version submitted to EPA for approval.