



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

June 9, 2014

Christopher Sullivan
TMDL Program
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Mr. Sullivan:

The attachment to this letter documents the comments that the Rhode Island Department of Environmental Management (RIDEM) has regarding the Connecticut Department of Energy and Environmental Protection (CT DEEP) draft bacteria TMDL for the Pawcatuck River watershed. RIDEM thanks CT DEEP for addressing bacteria impairments in this shared resource.

Several of our comments are clarifications of Rhode Island Water Quality Standards, Assessments, and TMDL work in this area. More substantive comments include ensuring the fecal coliform water quality targets are protective of Rhode Island criteria and are protective of downstream uses. The 90th percentile criterion is not documented in this TMDL in the same manner that the geometric mean criterion is documented. We would recommend that the 90th percentile values be added to the relevant tables.

RIDEM has enjoyed working with CT DEEP over the last eight years in the Pawcatuck River Watershed. Working together, both states have conducted more monitoring and been more involved in this area than either state would have been on its own. We look forward to continuing working with CT DEEP to address the problems that have been identified in both the Rhode Island and Connecticut TMDL work.

If you have any questions on the RIDEM comments, please contact me at 401-222-4700, extension 7613 or heidi.travers@dem.ri.gov.

Sincerely,

A handwritten signature in cursive script that reads "Heidi Travers".

Heidi Travers, PE
Senior Engineer
RIDEM Office of Water Resources
Surface Water Protection Section



30% post-consumer fiber

RIDEM Comments

- Table 1, Pages 8-11 and Appendices 3 and 4: RIDEM evaluated the consistency of the impairments on adjacent waters in the two states. RI assessments are a little different. RI has its Freshwater Pawcatuck River segment (RI0008039R-18E) impaired for fish and wildlife habitat (lead, iron, non-native aquatic plants) and not assessed for fish consumption. Connecticut has both of these uses as fully supporting (CT10000-00_01). We would be interested in any data that Connecticut has used to assess this segment for fish consumption. RI has the lower estuarine Pawcatuck River (RI0008038E-01B) impaired for recreational uses, whereas Connecticut has not assessed its adjacent segment (CT-E1_002-SB) for recreational uses.

- Page 12, Text Edit: The 2014 updates to the 2011 RI Statewide Bacteria TMDL includes the segment of the freshwater Pawcatuck River that forms the Rhode Island and Connecticut border.

These new waterbody summaries address bacteria impairments to ~~its~~ two upstream freshwater Pawcatuck River segments, including not the segment that forms the Rhode Island and Connecticut border. The third summary addresses bacteria impairments on Spring Brook, a tributary to the furthest downstream freshwater Pawcatuck River segment.

- Page 12, Text Edit: RIDEM suggests deleting the criteria values in the bullets for each waterbody classification and using the following tables instead. The text as written does not reflect the Rhode Island recreational criteria. The information in the Table is directly from the Rhode Island Water Quality Regulations.

- Class SA waters are designated for shellfish harvesting for direct human consumption; primary and secondary contact recreational activities, and fish and wildlife habitat. ~~SA waters shall not exceed a geometric mean of 14 cols/100mls and not more than 10% of samples shall exceed an MPN value of 49 for a 3-tube decimal dilution.~~

- Class SA{b} have the same designations-criteria as SA waters, except that they are in the vicinity of marinas and/or mooring fields and therefore seasonal shellfish harvesting closures may occur in the segment.

- Class SB waters are designated for primary and secondary contact recreational activities, shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. ~~SB waters shall not exceed a geometric mean of 50 cols/100mls and not more than 10% of samples shall exceed an MPN value of 400 for a 3-tube decimal dilution.~~

- Class SB1 are-have the same criteria as Class SB waters, except that primary contact activities may be impacted due to approved wastewater discharges.

- Class B waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. ~~B waters shall not exceed a geometric mean of 200 cols/100mls and not more than 10% of samples shall exceed an MPN of 400 for a 3-tube decimal dilution.~~

Criterion	Class SA, SA{b} CLASS SB	Class SB, SB1, SB{a}, SB1{a}
Fecal Coliform Bacteria (MPN/100ml)	Shellfishing Criteria: - Not to exceed a geometric mean MPN value of 14 and not more than 10% of the samples shall exceed an MPN value of 49 for a three tube decimal dilution.	NA
	Primary Contact Recreational/Swimming Criteria - Not to exceed a geometric mean value of 50 MPN/100 ml and not more than 10% of the total samples taken shall exceed 400 MPN/100 ml, applied only when adequate enterococci data are not available.	
Enterococci	Primary Contact Recreational/Swimming Criteria Geometric Mean Density: 35 colonies/100 ml Single Sample Maximum*: 104/100 ml * Criteria for determining beach swimming advisories at designated beaches as evaluated by HEALTH.	

Criterion	Class A	Class B, B1, B{a}, B1{a}
Fecal Coliform Bacteria (MPN/100ml)	Primary Contact Recreational/Swimming Criteria- Not to exceed a geometric mean value of 200 MPN/100 ml and not more than 10% of the total samples taken shall exceed 400 MPN/100 ml, applied only when adequate enterococci data are not available.	
Enterococci	Primary Contact Recreational/Swimming Criteria Non-Designated Bathing Beach Waters Geometric Mean Density: 54 colonies/100 ml Designated Bathing Beach Waters Geometric Mean Density: 33 colonies/100 ml Single Sample Maximum*: 61 colonies/100 ml * Criteria for determining beach swimming advisories at designated beaches as evaluated by Health.	

- Page 13, Text Edit: Clarify that Rhode Island only applies the single sample maximum at designated bathing beaches.

Rhode Island utilizes ~~single sample maximum criteria of 61 cols/100mls and~~ a geometric mean of 54 cols/100mls ~~for at~~ non-designated bathing beaches.
- Page 26: RIDEM has two segments, not four segments on the Pawcatuck River estuary. All monitored stations on these two segments violate the geometric mean and/or 90th percentile criteria for fecal coliform in wet and dry weather conditions. The other two segments are located in Little Narragansett Bay and Watch Hill Cove. Several stations in these segments meet on or both parts of the criteria in dry weather. All segments violate Rhode Island criteria and a TMDL was completed in 2010.
- Stream Stats, Pages 26-27 and Appendix 2: Stream Stats may have value when comparing relative source strength, but RIDEM has concerns about applying Stream Stats in the manner that it is being applied here. RIDEM does agree with the document’s conclusion that due to the differential in flow, the loads from the tributary streams to the main stem Pawcatuck River are not likely the driving force of water quality exceedances. RIDEM would note that the tributary streams represent a bacteria source that should be addressed and that they can contribute to elevations in bacteria concentrations.

While RIDEM has not applied Stream Stats, we caution that when applied, it should be applied to watersheds within recommended watershed sizes and that it not be applied downstream of dams or other activities that impact flow. Selected flows from Stream Stats should be representative of flows on the monitoring day (i.e. low flows selected on dates where flows were low and higher flows selected on dates when flow were higher).

- Page 29: Why are point sources that violate criteria allowed to address these violations through voluntary reduction measures? Is compliance with applicable water quality standards a requirement of the CT permits?
- Page 36: See Section 5.5 of the 2010 RIDEM TMDL for CT Stormwater recommendations. In its TMDL, RIDEM included data on stormwater outfalls in Connecticut that was collected by CT personal in 2006 and by RIDEM personal following rain events. Can you confirm whether any additional monitoring or follow-up was completed on CT102 or CT400? Also, does Stonington implement their Phase 2 program town-wide or do they only implement it in the regulated areas.
- Tables 22-24, Pages 75-113: In Bi-State Waters, if states have differing numeric criteria for the same parameter, both states must be protective of the more stringent criteria. The Rhode Island fecal coliform geometric mean criterion for the Class SB estuarine Pawcatuck River is 50 MPN/100 mL, while the Connecticut criterion is a geometric mean of 88 MPN/100 mL. Connecticut should setting the geometric mean criterion for segments CT-E1_001-SB and CT-E1_002-SB to be protective of the Rhode Island waters. Similarly, the water quality goal for station 12-8/19.2 in lower Pawcatuck River is situated in Class SA Rhode Island waters. The goal for this station should be set to the Class SA geometric mean and 90th percentile criteria.
- Tables 22-24, Pages 75-113: The water quality goal for the monitoring station in SB waters closest to SA waters should be set to the Class SA criteria to be protective of the SA waters. This means the water quality goal for station 12-7 should be set to the Class SA criteria.
- Tables 22-24, Pages 75-113: RIDEM does not believe that two samples generate enough data to calculate geometric mean and 90th percentile statistics for a waterbody segment. While this data was available and was used to characterize wet weather sources, RIDEM did not use this data to set percent reductions from these waterbody segments.
- Tables 22-24, Pages 75-113: The 90th Percentile values are not shown in these tables. The footnote in the table mentions a fecal coliform single sample value, which is not part of the criteria evaluating shellfishing use. Is a single sample maximum being compared to the 90th percentile criterion? Cells are highlighted in such a way to indicate that they violate a single sample maximum.
- Tables 22-24, Pages 75-113: What does the last column in table (Reduction of Exceeding Samples) mean? Does this relate to the 90th percentile?

- Page 92, Appendix I: There is no applicable Rhode Island single sample maximum at any of these stations. The word load should be changed to concentration.
- In Appendices 3 and 4, Connecticut included information that it had regarding metals in the study area. The limited information that Connecticut has indicates that there may be some metal problems along some of the Connecticut freshwater streams, but that the main stem did not exhibit elevated metals concentrations with the limited data collected. RIDEM has a few notes regarding the metals data. RIDEM did not conduct a comprehensive review of all the Connecticut data. It appears hardness values are pretty low in this area. This results in very low detection limits, meaning that the detection limits from the data collected are above criteria for lead, cadmium, copper, etc. No conclusions can be drawn regarding violations, as the detection limits are too high for the hardness values. Also, the dissolved aluminum concentrations are compared to the aluminum criteria. The criterion is a total (not dissolved) criteria. This would result in many more violations than they previously state.
- Appendix 3, Page 100: Text Edit. Table 3A and 3B are below
- Appendix 4, Page 108: Text Edit: Table 4A and 4B are below.
- Appendix 4, Page 108: Can you provide more information concerning station locations for these samples?
- Appendix 4, Page 109: Can you double-check the NO₃ value for 17675 on 10/6/2011?
- **TMDL Fact Sheet Comment:** It is unclear what is meant by, “dealing with bacteria issues increases costs and potential risk from shellfishing.”