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July 8, 2014

Ralph Abele
Chief
Water Quality Branch
U.S. Environmental Protection Agency, Region 1
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Re: Notice of Triennial Review of the Connecticut Water Quality Standards Completion

Dear Mr. Abele:

The Connecticut Department of Energy and Environmental Protection has completed a Triennial Review of the Connecticut Water Quality Standards in accordance with Section 303(c)(1) of the federal Clean Water Act.

The Department initiated the review on October 24, 2013 by posting the *Public Notice of Intent to Initiate Triennial Review of Connecticut Water Quality Standards* on the program website and the notice was sent to all interested persons. A copy of the public notice is found in Appendix A of the attached report.

The public comment period was open from October 24, 2013 until close of business on December 16, 2013. The Department received ten sets of comments during the public comment period. The comments can be viewed on our website at www.ct.gov/deep/wqsc. The attached report summarizes the issues raised and the Department's responses.

If you have any questions, please do not hesitate to contact Mr. Robert Hust, Assistant Director, Planning & Standards Division, Bureau of Water Protection and Land Reuse at (860) 424-3718. We will continue to keep EPA apprised as we move forward with the process.

Sincerely,

A handwritten signature in cursive script, appearing to read "Denise Puzich".

for Betsey Wingfield
Bureau Chief
Bureau of Water Protection and Land Reuse

Attachment

Cc: Ellen Weitzler, Water Quality Standards Coordinator, USEPA Region 1 / w attachment

Triennial Review of Connecticut Water Quality Standards

Final Report

Robert Hust
Assistant Director
Planning & Standards Division
Bureau of Water Protection and Land Reuse
Connecticut Department of Energy and Environmental Protection

June 30, 2014



Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106

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Notice of Intent to Amend Connecticut Water Quality Standards and to Hold a Hearing 10/24/2013 .21

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I. Introduction

The Triennial Review of the Connecticut Water Quality Standards Final Report is the culmination of the public process that the Connecticut Department of Energy and Environmental Protection (CTDEEP) initiated to review the Connecticut Water Quality Standards (WQS) in accordance with Section 303(c)(1) of the Federal Clean Water Act. The purpose of this report is to provide responses to those who provided comment on the WQS and to identify recommendations for future actions regarding revisions to the Connecticut WQS.

The Triennial Review Report is a representation of comments received as the result of the public review process. Throughout the Report, comments received from the public are identified and discussed. Comments are paraphrased for brevity; however, every effort has been made to preserve the original intent of the comment. Where several comments addressed similar issues, the comments are combined and addressed collectively. References to comments within this document include an identifying number found in Appendix B of this report, so that the reader may refer to the original text if desired.

The review process for the WQS incorporated a public participation process. Steps and key dates within the public process are identified in Table 1.

Table 1: Public Notice Activity for Triennial Review of the Water Quality Standards

Date	Public Notice Activity
October 24, 2013	Public Notice of Intent to Conduct a Triennial Review of WQS was published on CT DEEP's public notice web site and emailed to municipal, environmental and regulatory communities (See Appendix A for Notice)
October 29, 2013	CTDEEP web pages published regarding Triennial Review of WQS outlining both general process and notice of current Triennial Review public process
October 24, 2013 – December 16, 2013	Comment Period
January 2, 2014	Public Comments received during Triennial Review of WQS posted on CTDEEP web site

II. Water Quality Standards

The Connecticut WQS form the foundation of Connecticut's water management programs. The WQS articulate State policies regarding the designated uses and related classifications of

Connecticut's water resources, and the standards and criteria necessary to support such designated uses. The WQS provide the context and underpinnings for environmental programs, informing actions such as National Pollution Discharge Elimination System (NPDES) permit issuance, water quality certification programs, remediation programs, as well as state-led monitoring and assessment programs and Total Maximum Daily Load development, among other programs and activities. The Surface WQS are required by Section 303(c) of the federal Clean Water Act. Connecticut has also established Ground WQS under Section 22a-426 of the Connecticut General Statutes (C.G.S.). While Triennial Review of the Ground WQS is not required under federal law, both the Ground Water and Surface WQS were open for review during this Triennial Review process.

III. Triennial Review

Under federal law the WQS must be adopted in accordance with Section 40 CFR 131 of the federal Clean Water Act. States are required to review and revise, as necessary, state WQS at least once every three years. States must submit to the U.S. Environmental Protection Agency (EPA) either a statement that revisions to the WQS are not necessary based on a review of the current standards or submit a plan for revision to the state WQS with supporting materials to identify proposed changes, provide the methods used and analyses conducted to support the proposed revisions and identify the scientific basis for the proposed revisions. Additionally, the proposal must provide for water quality criteria that are sufficient to protect designated uses of the waters as well as an Antidegradation Policy consistent with federal requirements. A public process must be held to provide for public participation and input into the revision process. The final proposed revisions to the WQS that are submitted to EPA for review and approval must be accompanied by a certification in accordance with 40 CFR 131.6 that the WQS were adopted pursuant to state law.

IV. CTDEEP Review of Water Quality Standards

CTDEEP reviewed the existing WQS (October 10, 2013) and identified a number of focus areas for public input. These focus areas were outlined in the public notice as topics the CT DEEP was particularly interested in receiving comment on:

- Reclassification of certain shellfishing areas as needed to insure consistency with allowable shellfishing activities;
- Consistency of WQS with federal water quality criteria established in accordance with section 304(a) of the federal Clean Water Act;
- Potential revision of the low flow statistic currently used in the WQS from the 7Q10 flow to the Q99 flow for consistency between regulations;

- Potential extension of the wastewater disinfection period;
- Allowance for extended timeframes in permits for compliance with certain water quality based effluent limitations and requirements;
- Potential consolidation of the ground water and surface water antidegradation sections into one section;
- Clarification of statutory references to endangered species;
- Inclusion of “inland wetlands and watercourses” in the definition of surface waters;
- Inclusion of provisions for certain discharges in Class GAA, GAA_s and GA areas including discharges from private drinking water treatment backwash systems and clarification of “natural” & “clean water discharges” as they pertain to ground water;
- Potential changes regarding references to drinking water supply; and
- Organizational / editorial changes to improve clarity identified during the recently completed WQS regulation adoption process.

Additionally, CTDEEP is closely following federal actions to amend the federal regulations regarding water quality and may propose changes to Connecticut WQS for consistency with federal actions.

V. Specific Comments and Response thereto on the Proposed Revisions to the Water Quality Standards

1. ANTIDegradation Policy

Comment: CTDEEP should consolidate the ground water and surface water antidegradation sections into one section as there is a relationship between surface and ground waters. (6)

Response: *CTDEEP is considering changes to reorganize the WQS so that antidegradation provisions for surface water and ground water are in the same section, 22a-426-8, within the regulations.*

Comment: Identify high quality waters using consistent and credible criteria, such as the biological condition gradient, in order to provide protection from future degradation through implementation of Clean Water Act provisions. (8)

Response: *CTDEEP currently evaluates surface water bodies on a case-by-case basis for high quality water status as part of the authorization for regulatory activities. The Department will evaluate the potential to establish a state-wide classification system for surface waters to designate waters as High Quality Waters or Outstanding National Resource Waters with respect to each designated use. Once this evaluation is complete, CTDEEP will determine whether or not it is appropriate to identify waters statewide into antidegradation tiers or continue to make such evaluations on a case by case basis.*

Comment: *Amend the definition of “Outstanding National Resource Waters” to include high quality waters which are exceptional water bodies, regardless of location. (8)(9)(10)*

Response: *Designation of water bodies into antidegradation tiers is based on the existing quality of the water. Tier 2 or High quality water bodies have water quality which generally exceeds the levels necessary to support designated uses. Such higher water quality generally must be maintained although there are provisions for allowing some lowering of water quality if necessary to accommodate important social or economic development, providing reasonable efforts are made to prevent such lowering of water quality. Tier 3 or Outstanding National Resource Waters also have water quality which generally exceeds the levels necessary to support designated uses. The difference between Tiers 2 and 3 is that in Tier 3 waters, lowering of water quality is not allowed. There is a tension between these provisions and the ability to allow important social or economic development. Some states have established a state-specific Tier 2 ½ designation to allow for some protection beyond that accorded to High Quality Waters while still providing for critical social or economic development.*

The comments suggested that rivers which are designated under the National Wild and Scenic Rivers System should be designated as Outstanding National Resource Waters. The National Wild and Scenic Rivers System is a federal program established to protect and enhance important river systems. Rivers are classified as Wild, Scenic or Recreational, primarily based on the free-flowing characteristics of the water body and land use characteristics within the watershed. More information is available at the program’s website (<http://www.rivers.gov/index.php>). This designation is not made based on water quality and does not prohibit development within the designated areas. As such, the designation taken in isolation is not sufficient to assess water quality and determine the appropriate antidegradation tier for the surface water. Currently in Connecticut, two waters have been designated as Wild and Scenic Rivers: a 25.3 mile stretch of the Eightmile River (<http://www.rivers.gov/rivers/eightmile.php>) in the towns of Lyme, East Hadam, Colchester, Salem and East Lyme is designated as a scenic river while a 14 mile stretch of the Farmington River (<http://www.rivers.gov/rivers/farmington.php>) is designated as a recreational river.

As part of the review for potentially establishing antidegradation tiers on a statewide basis, CTDEEP will evaluate whether or not it is appropriate to establish a Tier 2 ½ designation to protect special high quality waters where development has or may occur or whether the existing antidegradation tier structure is sufficient to protect water quality.

Comment: Protection of aquatic habitat connectivity should be specifically addressed through the anti-degradation provisions of the WQS. (10)

Response: *The antidegradation implementation evaluation and review procedures provide a broad scope for review of potential impacts from discharges and activities on the attainment of designated use goals, including that for aquatic life. While habitat connectivity is not explicitly identified within the antidegradation implementation procedures in the WQS, CTDEEP evaluates impacts on physical habitat as necessary to make sure that a regulated discharge or activity is consistent with WQS. No changes to the WQS are necessary at this time to address habitat connectivity.*

Comment: Use of the Antidegradation provisions of the WQS is insufficient to provide protection to high quality waters. CTDEEP should revise the classification systems for waters to reflect existing water quality in addition to identifying designated uses. This will allow for better implementation of a tiered approach to protecting aquatic life uses and will provide more clarity for the public. (4)

Response: *Connecticut has established its water quality programs to clearly identify the water quality goals and designated uses through the WQS while reporting on attainment of those goals through the integrated water quality reporting process. This format provides a stable platform for implementation of water quality management programs. The Clean Water Act is based on establishing uses for the water bodies and protecting those uses. Having a water body classification system which focuses on designated uses accomplishes this objective. Related to the attainment of designated uses is the goal of meeting water quality objectives to support those uses. However, the Clean Water Act also requires protection of water quality which is better than necessary to support those uses and a process to accomplish that has been established through the antidegradation provisions of the WQS. Water quality within a water body can vary depending upon the activities and conditions within the watershed at any given time. The best means to evaluate water quality and determine if a water body should be designated as high quality or impaired or if water quality is changing is through the assessment process, which is reported biennially to the public through the Integrated Water Quality Report. This process allows for the site-specific assessment of water quality and a determination regarding whether or not the water body is meeting water quality objectives.*

A classification process which is related only to biological condition could reflect water quality relative to the attainment of aquatic life uses for the water body. However, water bodies have multiple designated uses. In addition to aquatic life uses, water bodies typically have uses including recreation, fish or shellfish consumption, industrial or agricultural supply, potentially drinking water, etc. Establishing a classification system based only on water quality conditions relative to attainment of aquatic life protection does not provide a sufficient structure to identify and protect these other designated uses. At this time, CTDEEP is not proposing to change the process for classification of water bodies and reporting on water quality conditions.

2. BIOLOGICAL STANDARDS

Comment: We support the inclusion of the Biological Condition Gradient into the WQS (4)

Response: *Comment noted.*

Comment: CTDEEP should be aggressive in developing and implementing management strategies for any waters which are determined to be in Tiers 5 and 6, not meeting the minimum standards of “fishable and swimmable” under the federal Clean Water Act. (4)

Response: *CTDEEP develops TMDLs and implements water-quality based management strategies for impaired waters, which includes those that have been designated as Tier 5 or 6. To date 376 TMDLs have been issued. Additionally, agency staff within water quality programs routinely collaborates with staff in implementation programs to make sure that regulatory requirements are consistent with WQS. Progress towards developing TMDLs is documented every two years within the Connecticut Integrated Water Quality Report and is updated regularly on the TMDL web page for CTDEEP, www.ct.gov/deep/tmdl.*

Comment: The use of the BCG should be extended to include indices for diatoms, algae and other relevant aquatic life to information development of nutrient criteria and loading. (4)

Response: *CTDEEP has calibrated Biological Condition Gradient models for the benthic invertebrate and fish communities in Connecticut. Data is routinely collected on the periphyton, algal and zooplankton communities as part of ongoing efforts to evaluate nutrients in state waters and establish appropriate water quality criteria and requirements. This data is evaluated as part of the on-going nutrient studies and considers community responses and nutrient conditions over a range of aquatic communities similar to the Biological Condition Gradient model concept.*

3. CLIMATE CHANGE

Comments:

- The WQS should be amended to explicitly address climate change and sea level rise (4)
- CTDEEP should evaluate the long term impacts of climate change related to the WQS. (9)(10)
- CTDEEP should review the standards developed to incorporate climate change impacts into water quality standards for the Great Lakes and Lake Champlain. (10)

Response: *CTDEEP understands that addressing climate change is critical to safeguarding our environment. Information on Connecticut’s actions and approaches to address climate change can be found on our web page at*

www.ct.gov/deep/climatechange. However, climate change is a complex issue and establishing specific recommendations to include in water quality standard regulations requires additional evaluation. CTDEEP will continue to evaluate the water quality implications of climate change.

4. COMPLIANCE SCHEDULES

Comments:

- CTDEEP should include language in the WQS to allow for extended time periods to comply with water quality based effluent limitations. Compliance timeframes should be allowed to extend up to the length of the permit term and should be based on the time needed to make the necessary operational changes for compliance. (3)
- Please provide additional information to clarify the potential allowance for extended timeframes within permits for compliance with certain water quality based effluent limitations and requirements. (4)

Response: CTDEEP will propose amendments to the WQS to provide for the use of compliance schedules to address water quality attainment concerns. Additional information will be available for public review and comment at the time such revisions are proposed.

5. DEFINITION OF “ENDANGERED SPECIES”

Comment: CTDEEP should expand the definition of endangered species within the WQS to make sure that it includes species which are designated as “endangered” and “threatened”. This guards against omission of a declining species that is overdue for re-classification or species for which we have too little data for precise classification. (8)

Response:

CTDEEP will propose revisions to the WQS to make sure that the references to endangered species are consistent with state and federal laws related to endangered species.

6. DEFINITION OF “SURFACE WATER”

Comments:

- Inclusion of the terms “inland wetlands” and “inland watercourses” into the definition of surface waters as stated within the WQS is unnecessary as the current definition is sufficient to include these water body types. Additionally such a change could be construed as expanding the jurisdiction of the WQS. (3)

- The terms “inland wetlands” and “inland watercourses” should be included in the definition of surface waters as they are critical components of watersheds and there is a hydraulic connection between these waters and other surface waters. (5)(6)(8)(10)
- Please provide more information on the implications of this change. (10)

Response: *While these waters are inherently part of the current definition of “surface water” in the WQS, CTDEEP will propose language to explicitly include the terms “inland wetland” and “inland watercourses” within the definition of surface waters to provide additional clarity. Additional information and details will be provided to the public for review and comment during the regulatory review process.*

7. DISINFECTION OF TREATED SANITARY DISCHARGES

Comments:

- The disinfection period for treatment plants which are located north of Interstate 95 should be extended. In the short term, Connecticut should adopt disinfection standards which require treatment of effluent from April 1 through December 1. Many recreational groups use the rivers during periods when disinfection is not currently required in Connecticut. The proposed standards prevent these individuals from safely using the river to its full capacity. (4) (8)
- The disinfection period for wastewater discharges should be extended beyond the current window of May 1 – Oct 1. (10)
- Provision should be made to require continuous disinfection to protect designated uses particularly at treatments plants located above popular recreational areas, while considering impacts to aquatic life. (4)(5)(8)(10)
- CTDEEP should evaluate the use of Ultraviolet disinfection to replace chlorine disinfection and reduce negative impacts to aquatic life. (5)(8)(9)
- In response to previous comments submitted to CTDEEP regarding the need to change the bacterial indicator used in NPDES permits to align more closely with the bacterial indicators identified in the WQS, please confirm that appropriate changes have been made in the permitting process to address this concern. (4)
- Please extend the wastewater disinfection period to include the paddle season and opening of fishing season: April through October. Some of the rivers that are used for recreation also receive treated effluent. Extending the disinfection period will better protect public health. (6)(9)

Response: CTDEEP will propose to revise the WQS to extend the disinfection period as necessary to protect designated uses within surface waters. Additional information and details will be provided to the public for review and comment during the regulatory review process.

8. DISSOLVED OXYGEN CRITERIA

Comments:

- The current dissolved oxygen criterion of 5 mg/l is insufficient to protect cold water fish species such as brook trout. CTDEEP should revise the dissolved oxygen criteria to protect cold water species and consider an allowable change from natural conditions to support health and diverse natural communities. Please review the Massachusetts criterion of 6 mg/L for dissolved oxygen for cold water streams. (4)
- Dissolved oxygen criteria should track the oxygen demands of organisms in cold, cool and warm waters. (8)

Response: Connecticut's water quality criterion for dissolved oxygen in fresh water surface water bodies is "not less than 5 mg/L at any time". This is consistent with the nationally recommended water quality criteria for dissolved oxygen (<http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm>). The national recommendations for water quality criteria for dissolved oxygen were published in 1986 in *Quality Criteria for Water 1986* (EPA 440/5-86-001) (available at http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/upload/2009_01_13_criteria_goldbook.pdf) EPA provides a matrix of recommended criteria which addresses both cold and warm water species as well as early life and other stages. EPA has identified that based on a 1-day exposure period, 5 mg/l of dissolved oxygen is protective of sensitive life stages for both cold and warm water species. Connecticut's criterion is consistent with this recommendation.

The WQS for Massachusetts were reviewed. Massachusetts has established dissolved oxygen criteria of not less than 6 mg/l in cold waters and not less than 5 mg/l in warm waters. At this time, CTDEEP is not proposing to change the dissolved oxygen criterion for fresh waters. However, as we complete our current evaluation of temperature criteria for Connecticut surface waters, we will evaluate whether or not modifications to the dissolved oxygen criterion would be appropriate at that time.

9. LOW FLOW STATISTIC

Comments:

- DEEP should conduct a thorough review of the potential effects of changing from a low flow statistic based on 7Q10 flows to that based on Q99 flows and provide it for public review prior to proposing revisions to the WQS. (3)

- We support the consideration of the Q99 flow rather than the 7Q10 flow. (8)

Response: *CTDEEP will complete our review of the use of the Q99 flow in place of the 7Q10 flow as the low flow statistic for non-tidal fresh waters and may propose regulatory changes to address this issue.*

Comment: CTDEEP should also consider establishing low flow criteria that incorporate biological response to successive low flow events over the course of a year as the biological community may be more affected by the cumulative impact of successive events than by extremes. (8)(9)

Response: *CTDEEP has adopted regulations to address stream flow (Sections 26-141b-1 to 26-141b-8 of the Regulations of Connecticut State Agencies). These regulations balance the various needs for water for human use with other uses such as recreation and aquatic life and ecosystem protection. The Stream Flow Regulations provide the mechanism to address the relationship between flow regime and aquatic community health. Information on these regulations can be found at www.ct.gov/deep/streamflow.*

10. NUTRIENTS

Comment: In 2009, comments were provided to the Department recommending a requirement that towns install phosphorus removal equipment in their waste treatment plants. CTDEEP failed to implement this proposal. This triennial review process provides an opportunity for CTDEEP to correct this omission or explain why such action will not be undertaken. (1)

Response: *CTDEEP has derived interim water quality based phosphorus limits for discharges to non-tidal fresh water surface waters and has been incorporating these limits into NPDES permits. Currently, 60% of these permits have been issued. Facilities located on tidal rivers are required to monitor for phosphorus at this time. Facilities install treatment technology for phosphorus as needed to address their permit limitations and conditions.*

Comment: If a nutrient enrichment analysis has been conducted for the entire state, extending beyond that presented in the Nutrient Enrichment Analysis Watershed Overview, please provide this information. (4)

Response: *CTDEEP maintains a website, [Phosphorus Reduction Strategy for Inland Non-Tidal Waters](#), to disseminate information on phosphorus. At this time, we have not published additional nutrient enrichment analysis. As additional studies become available, we will post the information on the CTDEEP web site.*

Additional information may be found on the USEPA web site: General Information on Nutrient Pollution: <http://www2.epa.gov/nutrientpollution>; Nitrogen and Phosphorus Data Access Tool: <http://www2.epa.gov/nutrient-policy-data/nitrogen-and-phosphorus-pollution-data-access-tool>
This is a searchable tool that provides information and a framework to estimate nitrogen and phosphorus loadings to surface waters.

Comments:

- In 2009, comments were provided to the recommend the elimination of CTDEEP's policy which permits such facilities to shut down their phosphorus removal equipment from October 1 through April 30 each year. DEEP failed to implement this proposal. This triennial review process provides an opportunity for CTDEEP to correct this omission or explain why such action will not be undertaken. (1)
- The WQS should be revised to provide numeric criteria for phosphorus. (1)
- While we support Connecticut's efforts to reduce nitrogen from point sources, we urge the state to expand these actions to address wide-spread non-point source nutrient pollution across the state. (5)(8)(9)
- We support the development of nutrient criteria informed by biological responses. (5)(8)
- CTDEEP should continue to develop phosphorus reduction strategies, including a review of enrichment factors and other approaches to discharge limits for phosphorus. (8)(9)
- We are participating in the Phosphorus Working Group deliberations under Public Act 12-155 as well as the update to the state Non-Point Source plan. Thank you for making these opportunities possible to continue the on-going discussion of nutrient pollution. (10)

Response: *Connecticut Public Act 12-155 mandated that CTDEEP collaborate with municipalities and the public to evaluate approaches to addressing non-point source phosphorus pollution strategies by which municipalities could comply with phosphorus requirements as well as an evaluation of scientific methods to measure phosphorus. This collaboration process is on-going and a report is due back to the legislature October 1, 2014. Concurrent with this effort, CTDEEP continues to monitor surface waters for nutrients, biological communities and other indicators of eutrophication to support future refinement of criteria, standards and policies related to nutrient control in Connecticut, as mentioned in the two other nutrient responses above. Amendments to the WQS are not being proposed at this time in order to allow further work to continue under the Public Act 12-155 process and supplemental monitoring studies. Information is provided to the public on the CTDEEP web page, available at [Phosphorus Reduction Strategy for Inland Non-Tidal Waters](#).*

11. PERMITTING REGULATIONS

Comment: With respect to Section 22a-430-4(p)(2)(B) of the Regulations of Connecticut State Agencies, I wish to express my appreciation to DEEP for retaining in this recent reissuance of the "General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction" section 5(e) which provides that permittees must comply with this general section of the regulations and incorporates it into the permit. This is a critical provision for stakeholders who are engaged in seeking to protect impaired waters from further degradation. (1)

Response: *Comment noted.*

12. TEMPERATURE CRITERIA FOR SURFACE WATERS

Comments:

- CTDEEP should establish interim criteria for temperature consistent with Appendix F, "Minimum Temperature Requirements for Cold, Cool, and Water Aquatic Habitats," of the CTDEP's December 2009 proposed revisions to the Connecticut WQS and provide information including a rough time estimate for when temperature criteria could be proposed. (1)
- The current temperature criteria in the WQS are insufficient to be protective of cold-water aquatic life species. Temperature criteria should be revised to better align with fisheries management and restoration priorities of the state. (1)(4)
- The upper temperature limits and the temperature difference of 4 degrees are insufficient to protect critical life stages for aquatic organisms. Development of more nuanced temperature standards with protections for cold water fisheries should be a top priority for CTDEEP. (4)
- Temperature limits for cooling water discharges are set too high to protect trout and other cold water fisheries. The temperature limits for discharges should be lowered to 70 degrees F or at least no greater than 75 degrees F. (7)
- CTDEEP should revise the criteria for temperature consistent with Appendix F, "Minimum Temperature Requirements for Cold, Cool, and Water Aquatic Habitats," of the CTDEP's December 2009 proposed revisions to the Connecticut WQS. (8)
- Temperature standards should be based on biological condition and should not allow the degradation of existing cold-water systems. Such criteria have been established by the state of Oregon. (10)

Response: *CTDEEP is evaluating potential updates to water quality criteria for temperature and strategies for implementing thermal criteria into regulatory requirements. Additionally,*

CTDEEP is conducting studies to evaluate the thermal regime in surface waters in state. Once sufficient information is available from these studies, CTDEEP will consider updates to the temperature criteria in the WQS. In the meantime, the Department will establish a web page for temperature associated with the WQS web page to disseminate information on water quality and temperature to the public and other stakeholders.

13. WATER SUPPLIES AND DRINKING WATER CONCERNS

Comment: The Department of Public Health (DPH) recommended formal concurrence or consultation on numerous sections of the WQS related to use of water for drinking or where the WQS reference health standards (Sections 22a-426-3(a)(3); 22a-426-3(a)(8); 22a-426-4(c)(2); 22a-426-4(e)(3) and 22a-426-4(n)). (11)

Response: *The Water quality standards are established in accordance with federal and state law. In most of these instances, the WQS rely on the standards DPH sets for drinking water supplies so coordination is already built into the regulations and does not have to be explicitly stated.*

Comment: The DPH recommended several changes to elevate or highlight protection of surface water quality for drinking water purposes. (Sections 22a-426-3(a)(2) and 22a-426-4(a)(1)) (11)

Response: *In implementing the standards, CTDEEP is committed to working with DPH, water supply utilities and NPDES permittees to collaboratively resolve environmental issues such as the need to maintain a viable and safe public drinking water supply while protecting aquatic ecosystems in Connecticut. The goal is to protect, maintain, and restore all established uses of Connecticut waters by working together to find solutions and balance necessary actions to supporting these varying uses. Consistent with the Federal Clean Water Act, the goals are to provide water quality for all designated uses including the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water.*

Comment: DPH recommended consideration of exemptions for certain water supply dams that may impede use attainability (Section 22a-426-4(a)(3)); where bottom sediments in a reservoir may be impacted by pollutants but water quality is unimpaired (22a-426-4(a)(6)); and for de-stratification systems (22a-426-9(a)(1)). (11)

Response: *CTDEEP will discuss these exemptions further with DPH and consider potential changes to the WQS to address these.*

Comment: DPH proposed modification to the language of the WQS with respect to future or potential drinking water supplies.(Sections 22a-426-4(b)(2); 22a-426-4(e)(3); 22a-426-7(a)(4)(C); and 22a-426-7(b)(2)(C)). (11)

Response: *These proposed changes will be discussed further with DPH and changes to the WQS in response may be considered.*

Comment: DPH proposed adding language to clarify that ground waters with naturally occurring contaminants, like Uranium, can still be classified GAA, GAAs or GA. (Sections 22a-426-7(a)(2) and 22a-426-7(c)(2)). (11)

Response: *CTDEEP is considering changes to clarify the definitions of “natural” and “clean water discharges” as they pertain to ground water that should address this concern.*

14. WATER QUALITY CRITERIA

Comment: CTDEEP should consider adoption of water quality criteria for copper based on the use of the Biotic Ligand Model. (2)

Response: *CTDEEP does not have a sufficient amount of water quality data to evaluate and potentially propose the adoption of copper criteria based on the use of the Biotic Ligand Model. The statewide and Connecticut site specific criteria currently contained in the WQS will be maintained at this time.*

Comment: The Connecticut WQS should be consistent with federal water quality criteria established according to Section 304(a) of the federal Clean Water Act. (5)(10)

Response: *CTDEEP will consider revisions to the Connecticut criteria for consistency with federal guidance.*

Comment: CTDEEP should adopt standards that follow EPA’s 2013 criteria update for ammonia in freshwaters as well as the equations to calculate ammonia criteria contained in notes 8a, 8b, and 8c to the criteria table in the December 2009 proposed revisions to the Connecticut WQS. (8)

Response: *CTDEEP is reviewing the 2013 recommended Water Quality Criteria for ammonia published by EPA and will consider revisions to the Connecticut criteria for consistency with federal guidance.*

Comment: CTDEEP should ensure criteria for bacterial contamination follow EPA’s 2012 recommendations. (8)(10)

Response: *CTDEEP is reviewing the 2012 Recreational Water Quality Criteria published by EPA and will consider revisions to the Connecticut criteria for Indicator Bacteria.*

VI. Plan Forward

CTDEEP has solicited and considered public comment on potential changes to the WQS through the Triennial Review process. As a result, CTDEEP will propose amendments to the Connecticut WQS which will address the following:

- Maintain consistency of the Connecticut WQS with federal water quality criteria established in accordance with section 304(a) of the federal Clean Water Act including criteria for toxics, bacteria and ammonia;
- Change the low flow statistic currently used in the Connecticut WQS from the 7Q10 flow to the Q99 flow for consistency between regulations;
- Provide for an extension of the wastewater disinfection period;
- Provide for extended timeframes in permits for compliance with certain water quality based effluent limitations and requirements;
- Consolidate the ground water and surface water antidegradation sections into one section;
- Clarify statutory references to endangered species;
- Include “inland wetlands and watercourses” in the definition of surface waters; and
- Organizational / editorial changes to improve clarity identified during the recently completed WQS regulation adoption process.

Additionally, CTDEEP will:

- Establish a web page to disseminate information on the development of temperature criteria and implementation strategies for Connecticut;
- Complete an evaluation of surface water classification of certain shellfishing areas as needed to insure consistency with allowable shellfishing activities, coordinating with the Department of Agriculture, Bureau of Aquaculture as appropriate;
- Coordinate with the Department of Public Health regarding concerns pertaining to drinking water resources and WQS;
- Continue to monitor actions to amend federal regulations regarding WQS; and

- Consider proposing provisions for certain ground water discharges in Class GAA, GAA, and GA areas from private drinking water treatment backwash systems and clarification of “natural” and “clean water discharges” as they pertain to ground water.

CTDEEP will follow state requirements to propose regulatory changes to address the topics identified above. Other topics may be included in the proposed WQS for regulatory change if sufficient information is available to support a change. CTDEEP expects to bring these changes to the public during the 4th quarter of 2014. Other concerns raised during this review process will be pursued as noted in the responses throughout this document.

VII. Conclusion

CTDEEP has completed the triennial review of the Connecticut WQS. Regulatory changes to the WQS have been identified and will be pursued during 2014 and 2015.



Robert Hust, Assistant Director

7/3/14
Date

VIII. Appendices

Appendix A

Notice of Intent to Amend Connecticut Water Quality Standards and to Hold a Hearing 10/24/2013

PUBLIC NOTICE OF INTENT TO INITIATE TRIENNIAL REVIEW OF CONNECTICUT WATER QUALITY STANDARDS

In accordance with Section 303(c)(1) of the federal Clean Water Act, the Connecticut Department of Energy and Environmental Protection hereby gives notice of its intent to initiate a review of Connecticut's Water Quality Standards ("WQS"). This review is being conducted to evaluate the need to update or revise the WQS in order to remain consistent with state and federal law. The review will also ensure that Connecticut's WQS continue to reflect the best available science and support sound water quality management policies to improve and protect the water resources of the state.

With this notice the Department is soliciting comments from interested parties on any aspect of the WQS that a person believes the Department should consider for potential revision. Comments should include the matter at issue, whether it is currently covered by the WQS, and if so where, any suggested revision and the basis for the suggested revision. Any technical information or reports supporting the comment should be included.

While the Department will accept comments on any provision of the WQS, the Department is particularly interested in comments on the following areas, which are currently being evaluated for revision:

- Reclassification of certain shellfishing areas as needed to insure consistency with allowable shellfishing activities;
- Evaluate consistency of WQS with federal water quality criteria established in accordance with section 304(a) of the federal Clean Water Act;
- Potentially change the low flow statistic currently used in the WQS from the 7Q10 flow to the Q99 flow for consistency between regulations;
- Potential extension of the wastewater disinfection period;
- Allowance for extended timeframes in permits for compliance with certain water quality based effluent limitations and requirements;
- Potentially consolidate the ground water and surface water antidegradation sections into one section;
- Clarify statutory references to endangered species;

- Include “inland wetlands and watercourses” in the definition of surface waters.
- Include provisions for certain discharges in Class GAA, GAA_s and GA areas including discharges from private drinking water treatment backwash systems and clarification of “natural” & “clean water discharges” as they pertain to ground water;
- Potential changes regarding references to drinking water supply; and
- Organizational / editorial changes to improve clarity identified during the recently completed WQS regulation adoption process.

In addition to the topics identified above, there are other water quality issues which the Department is currently working on, but are not considering for revision at this time. These include the temperature criteria and associated surface water classifications, nutrient criteria development, water body designations with regard to the implementation of the Antidegradation Policy, and revised numeric criteria for toxic pollutants. These are important but complex issues which must be more thoroughly evaluated and developed before potential changes to the WQS could be considered. The current provisions of the WQS will continue to provide a basis for addressing these issues until such time as changes to the WQS are proposed and adopted. While these topics are not expected to be addressed in the WQS in the near-term, the public is also welcome to provide comments on these topics.

Comments should be submitted to deep.wqsreview@ct.gov. **Comments should include the name of the commenter and the organization which they are representing, if appropriate, and be submitted no later than December 16, 2013** for consideration during this triennial review. The Department will post any comments received as part of the triennial review process to www.ct.gov/deep/wqsc.

The Department expects to complete its review of the WQS, including any comments received in response to this notice, by January 31, 2014. The results of the triennial review will be communicated to the public through the web site. Based on the results of the review, the Department may propose changes to the WQS. Any proposed changes will take place through the regulatory adoption procedures in Chapter 54 of the Connecticut General Statutes and Section 426(b) of the Connecticut General Statutes. Prior to adoption, notice will be published and a public hearing will be held to receive formal comment on the proposed WQS revisions. Final action to adopt any revisions and submission of those revisions to the U. S. Environmental Protection Agency is anticipated by the end of 2014.

Additional information on the Water Quality Standards and Classifications and the Triennial Review process is available on the Department’s website at: www.ct.gov/deep/wqsc. Anyone requiring more information may contact the Department by email at deep.wqsreview@ct.gov or by phone at 860-424-3020.

Appendix B

List of Persons Providing Comment in Response to the Notice of Intent to Revise Water Quality Standards

Notice of Intent to Revise Water Quality Standards	
Comment Number	Comments Provided by:
1	Mr. Richard J. Weisberg
2	Dr. Robert W. Gensemer, GEI Consultants, Inc
3	Ms. Pamela F. Faggert, Dominion Resources Services, Inc.
4	Ms. Jacqueline Talbot, Connecticut River Watershed Council
5	Mr. Frogard Ryan, the Nature Conservancy
6	Ms. Mary Mushinsky, State Representative 85 th District
7	Ms. Mary Mushinsky & Mr. Bill Lanzoni, Hammonasset Chapter, Trout Unlimited
8	Ms. Eileen Fielding, Farmington River Watershed Association, Inc.
9	Mr. Len DeJong, Pomperaug River Watershed Coalition
10	Mr. Michael S. Jastremski & Ms. Lynn Werner, Housatonic Valley Association
11	Connecticut Department of Public Health