

**CONNECTICUT RIVER WATERSHED COUNCIL***The River Connects Us*

deKoven House; 27 Washington Street; Middletown, CT 06457

December 13, 2013

Robert Hust  
Department of Energy and Environmental Protection  
Bureau of Water Protection and Land Reuse  
Planning & Standards Division  
79 Elm Street  
Hartford, Connecticut, 06106-512

**RE: Comments on the 2013 Initiation of the Triennial Review of CT's Water Quality Standards**

Dear Mr. Hust,

On behalf of the Connecticut River Watershed Council (CRWC) I am submitting comments on what we see as the top issues for CT DEEP in the present Triennial Review of CT's Water Quality Standards (WQS). Since 1952 CRWC has been the principal citizen advocate for the entire 11,000 square mile watershed from its source to the sea. We work to conserve, protect and restore water quality and quantity, habitat and recreational access within the Connecticut River watershed. Our work informs our vision of both ecological and economic abundance, and we enjoy stewarding resources that enhance the quality of life of watershed residents.

I regularly comment on planned development, permitted activities and standards affecting the health of the watershed. When evaluating individual permits within the watershed for public comment, one of the things I look for is their support of the WQS. We see the Triennial Review as an important opportunity to address issues thematically and hope that the public dialogue can help guide and support CT DEEP's making key changes throughout its standards & permits that will better protect all our state waters and those who benefit from them.

As the only advocacy organization created to act on behalf of the entire watershed, we want to work with diverse stakeholders to achieve strong water quality standards from source to sea. Through our One River Initiative we are asking simple and hard questions about the entirety of our watershed. The most important of these questions is whether the WQS in each of our watershed's states are ambitious enough and consistent enough to ensure the Clean Water Act is fully met.

**General Comments**

It is concerning that the Standards at present mention neither climate change nor sea level rise explicitly; nor do they meaningfully anticipate expected water quality impacts. With regional predicted trends of higher water temperatures, higher amounts of annual rainfall, variable streamflow and increased pressure on infrastructure and potable water supply, protecting the integrity of our waters will be more challenging, and the WQS need to reflect awareness of and respond to this overarching issue.

We ask that CT DEEP please clarify what it intends when it mentions potential "allowance for extended timeframes in permits for compliance with certain water quality based effluent limitations and requirements." While we acknowledge some things take longer than a 5 year permit window to implement, that should not be at the expense of diligence. It is important for us to understand DEEP's thinking on this issue.

We believe the following specific changes to the WQS are important to incorporate in order to ensure we are upholding our shared commitment to "maintain and restore the chemical, physical, and biological integrity of our Nation's waters.":

## Disinfection

The May 1-October 1 blanket timeline for disinfection north of Interstate 95 is not a realistic window to protect users, and we request an extended wastewater disinfection window that reflects the true recreation season and protects river users in a wider span.

There are numerous examples throughout the state of recreational users engaging in primary and secondary contact with our waters throughout the year and heavily so before May 1 and after October 1.

Here are a few:

- The Wesleyan Crew team out of Middletown begins practicing in February and is on the water until November. In spring 2014 both the [Women's](#) and [Men's](#) Crew Team have scheduled "home" meets in March and "away" meets with Hartford's Trinity College in April.
- Partner group Farmington River Watershed Association reports that rowers are on the Farmington from April 1 through November 30. Like the Connecticut, the Farmington actually sees recreational users all year.
- Here is a [Middletown Press article](#) about 18 student crew members falling overboard during the October, 2011 Head of the Connecticut Regatta.
- Riverfront Recapture's [Head of the Riverfront Rowing Regatta](#) usually takes place in early October. This year's Regatta was held October 6, 2013. Their season usually extends into late October.
- This year's Head of the Housatonic was scheduled for Oct 12 in Shelton.
- The [website](#) for Middletown High's Fall Crew lists their final day of practice as November 8.<sup>th</sup>
- The CT River Drifting Society annually paddles in March for Saint Paddles Day and in December for Winter Solstice.

As many of our state rivers see year round use and many viruses and other pathogenic microorganisms are able to remain viable in the cold weather, we see a compelling need for year round disinfection. However, we want to balance this with the dual concern of residual chlorine's impact to aquatic life.

1. Here is our ideal short-term solution: a standard that requires a minimum April 1–December 1 disinfection window.

2. Pertaining to our proposed short-term solution, we ask that the standard language be amended as follows (suggested text in blue):

Disinfection shall be required from **at least April 1-December 1 at all facilities** north of Interstate Highway 95 (I-95). Seasonal disinfection is intended to **help** protect the sanitary quality of bathing waters **and health of primary and secondary users and to** minimize adverse impacts to aquatic life associated with disinfection. An alternative schedule, including continuous disinfection, may be required if found necessary by the Commissioner to protect existing or designated uses **or aquatic life**.

3. We have seen DEEP's Nutrient Enrichment Analysis Watershed Overview, which covers a number of CT watersheds. If CT DEEP has an analysis available for the entire state, we request this information, so we can see the range and distribution of various disinfection methods currently used.

4. In the past we have noticed many permits require testing for Fecal coliform, when *Escherichia coli* was actually the indicator bacteria listed in the WQS for that class. DEEP has responded that they agree with the need to have the WQS and permits align. Please verify whether aligning the two when it comes to indicator bacteria is now the practice and, if so, whether this is done on a case by case basis as permits come up for renewal or in some other manner.

## **Biological Standards**

We applaud CT DEEP's progressive work to develop and implement the Biological Condition Gradient (BCG) and believe biological standards are one of the most important guides for meeting aspirations for our waters. Diverse life in rivers gives a sense of vitality and vibrancy of our community, and we are eager to support CT DEEP in their further implementation and use of biological standards. We are also encouraged that the BCG has potential to be an important tool when monitoring and responding to expected water quality impacts due to climate change.

It is positive but not sufficient that high quality waters are considered protected by the inclusion of biological condition considerations in the antidegradation standards. The BCG is one of the most progressive and potentially useful aspects of the standards, but we are not utilizing this tool effectively when we allow Class AA, A and B waters a range as wide as Gradient Tiers 1-4 in the Surface Water Quality Criteria. In order to truly protect high quality waters and improve threatened waters, we need to marry classifications and biological standards. We need to get to a standard of water quality such that we understand the Classes as being associated not just with ambient and use goals, but also certain biological indicators of health.

2. The BCG Tiers should be assigned to individual classes of waters in a more specific way, such that there is a much more defined and limited allowable range of change in biotic communities. For example, Class A waters might be required to maintain biological conditions within Tier 1-2. We understand that the Department is using its antidegradation standards in order to ensure that high quality waters are protected. We would welcome further discussion with CT DEEP to understand in more detail how particular BCG tiers are assigned to various waterbodies – either by type or classification. However, we believe that to be most effectively implemented biological conditions need to be aligned directly with classification. This is ultimately the most effective way to implement tiered aquatic life uses that provides a clear and obvious benchmark for the public.

3. We should be aggressive in developing and implementing management plans for any waters demonstrating biological responses as described by Tiers 5 and 6 and so do not the minimum standards of waters being fishable and swimmable as defined in Clean Water Act. These management plans should be able to restore waters back to their highest attainable aquatic life uses, and not simply lifted just above the “pass/fail” bar to Tier 4.

4. We support progressive and effective nutrient management strategies that protect the biodiversity, recreational and economic potential of our water resources and the systems of which they are a part. We support the department's use of the BCG based on a variety of indices for diatoms, algae, and other relevant aquatic life uses to inform nutrient criteria so that nutrient loading would neither impair the ‘maintenance or attainment of designated uses’ nor threaten to allow a waterbody to undergo cumulative stressors and degrade to an unacceptable biological condition. This integration of the BCG and a suite of response variables into nutrient management is a scientifically valid and reasonable approach to water quality beyond relying solely on numeric criteria, and, we believe, offer discharging facilities biofeedback that informs reasoned and fair nutrient management requirements.

## **Temperature and Dissolved Oxygen (DO)**

The current temperature criteria are insufficiently protective of the needs of the various life stages of cold water species and should be overhauled using the best available science. More scientifically valid temperature criteria would better align with the fisheries management and restoration priorities of the state.

The upper temperature limits of 83 and 85 degrees as well as the delta T of four degrees are coarse metrics that do not necessarily protect those critical life stages such as spawning and incubation which are essential to maintaining or restoring indigenous cold water fisheries. We would like to work with CT DEEP Water Quality and Fisheries experts, anglers and other stakeholders to achieve temperature standards that support diverse, indigenous aquatic life in our waters. We believe more nuanced temperature standards with protections for cold water fisheries should be a top priority for CT DEEP.

While the CT DEEP has recently revised its DO criteria, it is still not protective for cold water organisms. The current freshwater standard of 5mg/L is an acute standard that keeps things alive, but does not allow for growth

and reproduction of cold water species which are part of CT fisheries restoration and management plans. Higher concentrations and saturations need to be required; we would expect a level of at least 6.0 mg/L, with the added special condition of a higher concentration level and saturation for spawning and incubation.

The shortcomings of the current dissolved oxygen criteria is best illustrated by looking at watersheds that cross state boundaries that have cold water fish species. Why should a brook trout in the Connecticut portion of the Farmington or Housatonic be provided a minimal standard of 5.0 mg/L, but when it swims into Massachusetts it gets 6.0 mg/L?

Much fisheries restoration work has taken on a regional and watershed focus, it is time that water quality standards and classification follow that work and become regionally consistent and ambitious.

For both temperature and DO, differentiations need to be made for cold versus warm water fisheries. As related to the BCG asks above, standards for both should be set on limited allowable stress borne change within aquatic communities. A limit should be placed on allowable change from natural conditions, with the flourishing of diverse natural communities being both the goal and indicator.

We look forward to working with the CT DEEP and others in achieving strong standards that make sense for our state and are happy to discuss our comments at any time.

Thank you for providing the public with this important opportunity to comment on what they value in our waters. We appreciate your time and consideration and look forward to being an active part of this conversation into the future.

Sincerely,



Jacqueline Talbot  
Lower River Steward

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