

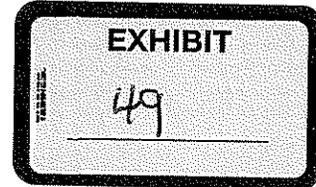
# STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

BUREAU OF ENVIRONMENTAL MANAGEMENT  
PLANNING & STANDARDS DIVISION

MAR 17 2010

March 17, 2010



Traci Iott  
Bureau of Water Protection and Land Reuse  
Planning & Standards Division  
Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106

Re: Proposed Amendments to Connecticut's Water Quality Standards

Dear Ms. Iott:

Enclosed please find comments from the Department of Public Health on the proposed Water Quality Standards. The Department is very appreciative of your cooperation and assistance in reviewing the proposed standards with our staff. DPH is available to discuss the attached in more detail if this would be useful.

Sincerely,

Ellen Blaschinski, Branch Chief  
Regulatory Services Branch



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**Proposed Water Quality Standards-Comments from DPH to DEP  
March 2010**

**Department of Public Health, Environmental Health Section (Suzanne Blancaflor, 860-509-7293)**

Standard 9:

Proposed language in Standard 9 would allow the Commissioner of DEP to authorize discharges of treated domestic sewage to Class A and SA surface waters in order to address pollution on currently developed sites that have no technically or economically feasible alternatives for sewage disposal available. The standard notes that the Commissioner of DEP would need to find that the discharge of treated sewage to these surface waters is protective of public health and the environment. The language should be expanded to note that the Commissioner of DEP shall consult with the Commissioner of DPH and the Local Director of Health on matters that require a finding that the discharge of treated sewage to Class A or SA surface waters is protective of public health. This would be warranted as it is recognized that some property owners utilize surface water bodies as a water supply source.

Further clarification should be provided as to how other sewage treatment and disposal alternatives would be reviewed to determine whether or not they are considered technically or economically feasible. Such a determination should not solely be based on whether or not a sewage treatment and disposal system can meet current design guidance utilized by DEP in the permitting of wastewater disposal systems for new construction projects. Pollutant renovation assessments for existing sewage discharges should take into account actual wastewater generation and off-site conditions that impact on-site wastewater renovation.

The proposed language also stipulates that authorized discharges of treated domestic sewage to Class A and SA surface waters shall not support new or increased growth or change in use. These terms should be further defined and further clarification should be provided on how this aspect of the standard is to be carried out. Historically, DEP has utilized funding restrictions to control induced growth that can result when public sewers are extended to an area to correct pollution problems caused by existing and deficient on-site sewage disposal systems. There are no state regulations that specifically govern wastewater intensification activities on sites that are served by public sewers or that are under DEP jurisdiction for on-site wastewater disposal. Induced growth guidance distributed by DEP in conjunction with sewer expansion projects that abate pollution in environmentally sensitive areas has been problematic in that it utilizes septic system codes to limit growth. DEP should develop regulations that govern wastewater intensification activities on sites that are authorized to discharge treated domestic sewage to Class A and SA surface waters, and on sites that are subject to induced growth restrictions that are tied to state funded wastewater projects.

**Department of Public Health, Drinking Water Section (Lori Mathieu, 860-509-7333)**

Revised March 5, 2010

**Introduction**

The Department of Public Health (Department) has the authority per Connecticut General Statutes (CGS) Section 25-32 to ensure the purity and adequacy of public drinking water supplies in Connecticut. The Department further has the authority per Connecticut General Statutes Section 25-32d to administer a procedure to coordinate the planning of public water supply systems to ensure that an adequate supply of potable water for domestic, commercial and industrial use is vital to the health and well-being of the people of the state. To fulfill these responsibilities, the Department aims to ensure public water suppliers in Connecticut maintain an adequate quality and quantity of water supply presently and throughout a fifty-year planning period. Safe, sustainable water supplies are necessary to protect public health, safety, and the economic prosperity of the state.

Connecticut is at a critical juncture with regards to water supply planning and water resource availability and we must plan together now for action to preserve this most precious natural resource for the future generations. With this in mind, the Department has instituted significant improvements to our water supply planning process pursuant to C.G.S. 25-32d.

The Department's reviews of water supply plans indicate that many of our largest water suppliers have supply deficits and do not currently have a minimum adequate margin of safety. Some of these supply deficient public water systems are large municipalities such as Danbury, Middletown, New London, Colchester, Southington, Putnam, and Berlin along with the University of Connecticut. The declaration of water supply emergencies across the state on a regular basis alone sends an alarming message to the businesses, municipalities, and residents of the state.

This, with the added uncertainty of what effect climate change will have on the quality and quantity of Connecticut's water supplies, necessitates that every effort be made to preserve existing and potential high quality sources of water supply for the people of Connecticut.

The Department believes that elements of the proposed changes to the Water Quality Standards, while making significant progress toward protecting Connecticut's water supplies, may impair the ability of water utilities to expand their safe yield through development of additional sources of supply and may, in some instances, impact the current safe yield of systems. The Department is also concerned that public water systems will be pressured to deviate from optimal treatment techniques, implemented to protect public health, to avoid POTW discharge non-compliance with the proposed, more stringent standards. Further, unintended outcomes might arise that concern water company land and source water protection.

The Department believes that, in all instances, there is ability to find a feasible, long-term solution that provides a balance between public health protection and environmental protection. By working collaboratively and developing long-term whole-watershed solutions, the Department believes the workable solutions can be attained.

The Department's comments are as follows, categorized by topic:

**Discharge to Class A Waters**

*(Page 2)*

Currently, the discharge of treated human sewage is allowed in GA and GAA groundwater if it is to resolve an existing pollution problem. DEP has proposed to allow such wastewater to be discharged into

Class A surface waters to resolve existing problems as well, and described a situation where an individual system may require treatment to alleviate an existing pollution problem due to a failed treatment system.

The Department is concerned that the proposed language permitting discharges to Class A waters is not specific enough to only allow AT repairs to existing, failing treatment systems (as DEP has indicated was the intent) and may permit activities beyond the intent of the modification. What “an existing pollution problem” is may be interpreted in different ways as well as the location where the treated wastewater may eventually be discharged. An example of this concern is as follows: the DEP has identified large areas of the Town of Clinton as “needs areas” where existing individual subsurface sewage disposal systems are not effective. The Town has proposed to sewer the needs areas and discharge to one or more very large subsurface sewage disposal systems that may or may not require treatment prior to discharging to the groundwater. Since this proposal is to resolve an existing pollution problem, proposed discharges to GA and GAA waters will be considered and may be allowed. In this case, much of the “prime” subsurface sewage disposal land is centrally located and also happens to be in Class GA and GAA water and Level A aquifer protection area within a sand and gravel aquifer which supplies a 1MGD well for the Connecticut Water Company.

The proposed changes, to allow discharges of equivalent scale into Class A surface water areas, would eliminate the affected A waters from consideration as future drinking water supplies as they would no longer be compliant with CGS 22a-417. Since much of the water available for public drinking water supplies is proposed to be allocated through the minimum streamflow regulations, further reducing the resources available for public drinking water source development may create a public health and safety crisis where there is no legally available water to serve existing human needs.

The Department recommends that if this provision is to be included in the proposed revisions to the Water Quality Standards, that additional language that explicitly outlines what scenarios that discharges to Class A waters would be permitted is also included. If the intent is only for existing discharges that exist today due to failing systems, the Department would recommend that that is clearly stated.

### **WQS Goal Classification Mapping**

*(Maps)*

Modification of the system for classifying the quality of surface and ground water from their exiting states to goal states could potential remove the ability of the Department and public water systems to accurately assess the current condition of the aquifer and/or surface water body when reviewing proposals for new sources of supply.

As an example, Lake Kenosia in Danbury is currently listed as a Class B/AA; the proposed map revision lists it as Class AA. Similarly, the groundwater classifications already reflect the change to goal classification. The Department uses this map information as a tool in every review of proposed sources of supply, and frequently as an assessment of existing public water supply sources. Removing this information would prevent the Department from conducting thorough reviews of proposed sites and determine the most appropriate locations for public drinking water supply sources.

The Department can support DEP’s modifications to the WQS maps to indicate goal classifications, provided an alternate means to investigate the current status is updated and maintained (such as CT

ECO), so that the Department and public water systems can accurately assess the current (not goal) classification and condition of proposed and potential sources of public water supply.

### **Potential Sources of Supply**

*(Page 6)*

The Department concurs that water company's water supply plans be actively utilized as a source for identifying potential future sources of supply. The Department believes that this information should only be gleaned from the most recent approved five year revision of the water supply plans. The Department suggests a wording change to reflect this:

21. Surface waters identified as potential drinking water supplies in the Long Range Plan for Management of Water Resources prepared and adopted pursuant to Section 22a-352 of the Connecticut General Statutes shall be designated Class AA. The Commissioner may designate, **with the concurrence of the Commissioner of Public Health**, other surface waters as Class AA including surface waters that (1) have been designated a proposed drinking water supply in Connecticut's Conservation and Development Policies Plan, (2) have been recommended for future use as a drinking water supply in **the current, approved revision of** a water company's water supply plan, **submitted and approved pursuant to 25-32d of the Connecticut General Statutes**, (3) the Commissioner has issued a Diversion Permit authorizing use as a drinking water supply, or (4) have been identified in a request from a municipality for designation as a drinking water supply at a public hearing concerning water quality classifications.

The Department would like to encourage active updates to the water quality standards maps based on information provided in water supply plans. Proposed updates that affect public drinking water supplies should be made with the concurrence of the DPH. The DPH would like to work with the DEP to identify and protect the state's potential future public water supplies. One noted exclusion from the current proposed map revisions is Miller's Pond in Waterford. It is listed as Class A in the proposed map revisions. It is currently indicated as a proposed water supply source in at least one approved water supply plan revision.

### **Copper**

*(Appendix D, Table 1)*

Some public water systems apply copper sulfate to control algal blooms in reservoirs. The Department is concerned that some water systems would no longer have the option to provide this treatment, should it become necessary, to maintain optimized treatment, prevent cyanobacteria outbreaks, etc., due to more stringent POTW discharge levels. An example of this concern being realized is a water treatment plant in eastern Connecticut. The water system is currently proposing to use Class 1 and Class 2 land immediately adjacent to the reservoir for backwash sludge drying and storage because the POTW will no longer accept the backwash via sanitary sewers because of the copper content.

An example of a whole-watershed solution, which would involve collaboration with both agencies and the utility, is as follows: aeration systems that rely on newer studies and technology can be an effective deterrent to algal blooms and cyanobacteria, and can also obviate the need for the introduction of copper sulfate to the reservoir. If there were no need to add copper sulfate to the raw water, the POTW could

conceivably continue to accept the backwash from the WTP, and there would not be the need to use a large section of Class 1 and Class 2 watershed land for backwash water infiltration lagoons and permanent sludge drying and storage areas.

The Department believes that thoughtful long-term planning and collaboration could enact better solutions to comply with Water Quality Standards, in this case preventing the construction of backwash sludge infiltration lagoons and drying and storage beds on Class 1 and Class 2 land.

The Department recommends that POTWs and public water systems be provided an opportunity to phase in solutions, and be allowed adequate time to work with the Department and DEP to enact the most appropriate long term solution that is protective of public health and the environment.

### **Aluminum, Phosphate, Zinc**

*(Appendix D, Table 1)*

To minimize leaching of lead and copper from pipes into the water supply, public water systems commonly use corrosion inhibitors, approved and monitored by the Department. In many instances, this is part of a treatment technique mandated due to previous lead and/or copper Action Level exceedances. Most of these inhibitors are phosphate-based and can include aluminum and/or zinc. Additionally, aluminum based chemicals are typically added during the conventional surface water treatment process to aid in coagulation. The Department is concerned that surface water treatment plants, especially when municipally owned along with a municipally owned POTW, may be pressured to deviate from the optimal treatment for public health protection to meet more stringent POTW discharge standards. The Department strongly supports reductions in aluminum, phosphate and zinc concentrations of discharges to Connecticut's waters, but would like to stress that a collaborative, long-term implementation, that includes a knowledge and consideration of the entire watershed, will ensure that water systems are not forced to abandon what may be the optimal treatment for reduction of lead, copper, pathogens, etc. in drinking water provided to the public.

The Department believes that the language in CGS Section 22a-426 ("Be consistent with the health standards as established by the Department of Public Health") is applicable here and should be considered whenever discharge standards are applied for those chemicals that are used to treat drinking water.

### **Temperature**

*(Pages 9-11)*

Changes, such as the new ranges of acceptable temperatures for discharges, could necessitate significant blending with potable or raw reservoir supply to adjust the temperature of discharges to the allowable range. The Department is concerned that this may have an impact on the safe yields and/or available supply for public water systems that may already be operating in a supply deficit. To that end, this is another area that the DPH can work with the DEP to develop a balanced approach and standard.

### **Summary**

As stated above, the Department is generally supportive of DEP's proposed revisions to the Water Quality Standards. We would like to stress the importance of utilizing a collaborative, long-term, whole-watershed approach for finding solutions for the surface waters and aquifers associated with public water systems, and maintaining a balance between public health protection and environmental protection.

The Department supports allowances to repair existing, failing treatment systems that may discharge to Class A water bodies, but would strongly recommend that the language be modified to ensure that only in those instances would discharges to Class A waters be allowed. As stated, it appears that the language could allow discharges to Class A waters in a broader sense, and thereby exclude some Class A waters from potentially being utilized as future water supply sources.

The Department believes that both agencies should exercise caution and ensure that more stringent discharge standards do not discourage use of those chemicals associated with optimized drinking water treatment so that the quality of drinking water provided to the public is not reduced.

The Department believes that a collaborative approach could provide balanced, long term, whole-watershed solutions for those waters in Connecticut associated with public water systems. To that end, DPH would like to work with the DEP concerning the above noted items.

Thank you for the opportunity to comment, and for meeting with us and outlining the proposed modifications to the Water Quality Standards.