

Connecticut H₂O Operator

A Newsletter for Certified Operators

The Connecticut Department of Public Health Drinking Water Section

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CONNECTICUT DEPARTMENT OF
PUBLIC HEALTH

Keeping Connecticut Healthy

To Report a Water-Related Emergency...

CALL (860) 509-7333

(M-F 8:30a.m.-4:30p.m.)

OR...

CALL (860) 509-8000

(After Hours)



Construction Projects May Require DPH Review and/ or a Source Permit

By Jennifer Pagach, Environmental Analyst, Source Protection Unit

Winter has ended and the ground has thawed. Now is often the time to start new construction projects at public water systems. However, we want to remind you that certain projects involving or located near groundwater and surface water sources may require approval from the Department of Public Health's Drinking Water Section prior to initiation. When in doubt, contact us at (860) 509-7333 in the early stages of planning to be sure that the purity and adequacy of any nearby drinking water sources are protected. The following are the types of construction activities that would require our review:



- ◆ Construction projects of any type at community and non-community public water systems. These projects may have the potential to impact the purity and adequacy of the system's public drinking water sources.
- ◆ Projects in proximity to existing groundwater sources that could result in the creation of violations of Regulations of Connecticut State Agencies Section 19-13-B51d regarding the separating distances to sources of pollution.



Atlantic Hurricane Season Begins June 1st: Be Prepared!

By Rachel Nowek, Health Program Associate, Programs Unit

The Connecticut Department of Public Health (CT DPH) Drinking Water Section (DWS) recommends that public water systems (PWS) across the State take precautions against the potential for



severe natural disasters and emergency events, such as a major hurricane. Please review the DWS's "Drinking Water Natural Disaster Preparedness Guide" at http://www.ct.gov/dph/LIB/dph/drinking_water/pdf/Guidelines.pdf for information on how you can prepare your PWS for a natural disaster. Also, please visit the National Weather Service National Hurricane Center website, <http://www.nhc.noaa.gov/>, frequently during Atlantic hurricane season (June 1st through November 30th) to track potential storms that could affect the region.



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Disinfection “CT” Technical Guidelines for Groundwater Sources of Supply

By Tom Chyra, P.E., Sanitary Engineer 3, Capacity Review and Standards Unit

The Department has recently developed *Technical Guidelines for Determining Disinfection “CT” When Using Chlorine for Chlorination of Groundwater Sources of Supply* to help public water systems (PWS) provide effective disinfection when using chlorination. Section 19-13-B102(e)(7)(M) of the Regulations of Connecticut State Agencies (RCSA) requires that when groundwater sources of supply (i.e. wells) not under the direct influence of surface water are continuously chlorinated, a minimum free chlorine residual of 0.2 mg/L after 10 minutes of contact time or equivalent be provided. A better way of looking at this requirement is the concept of “CT”, which is the product of chlorine residual and contact time (i.e. C x T). Therefore, a minimum “CT” of 2 mg-min/L (0.2 mg/L x 10 minutes = 2 mg-min/L) is required. This can be achieved by any reasonable combination of free chlorine residual and contact time. Obviously a higher contact time will require a lower free chlorine residual and vice versa. Section 19-13-B102(a)(17) of the RCSA also requires that “CT” be achieved before or at the first customer.

The first step, therefore, is to determine the contact time at the peak flow rate from the point of chlorine injection to the first customer. Contact time can be achieved in pipes and storage tanks, and the technical guidelines provide a step-by-step procedure for calculating contact time. It is important to note that a baffling factor is applied to storage tanks to account for short-circuiting, and storage tanks with a common inlet and outlet are not given credit for contact time. Once contact time has been calculated the next step is to determine the minimum free chlorine residual required in order to achieve the minimum “CT” of 2 mg-min/L. It is important to take into consideration Disinfection Byproduct formation potential, as well as any taste and odor issues that may arise from increasing free chlorine residual. If adequate “CT” cannot be provided, PWSs can modify existing or add more storage tanks or even provide a pipe loop to increase contact time.

The last step important step is to demonstrate that “CT” is continuously achieved after chlorination is in active service. Section 19-13-B102(e)(7)(M) of the RCSA requires that daily free chlorine residual readings be taken once chlorination is in active service. Free chlorine residual readings must be taken from a location that is representative of the minimum contact time that is required to achieve “CT”. Sample lines can be used to collect free chlorine residual readings if it is demonstrated that contact time equivalency has been achieved in the sample line. For more detailed information on calculating “CT”, please refer to the technical guidelines on the DWS website, www.ct.gov/dph. PWSs should also be aware that the recently promulgated Ground Water Rule may require 4-log inactivation of viruses (equivalent “CT” of approximately 6 mg-min/L) for those PWS that fall into the requirements of the Rule. Therefore, PWSs planning chlorination treatment and even PWSs with existing chlorination treatment systems should consider the impacts of the Rule and any changes to treatment that may be required. Please contact Tom Chyra at (860) 509-7333 if you have any questions.



Upcoming Events



June 4th, 2008- Correcting Common Sanitary Deficiencies & Understanding the Groundwater Rule:

The Connecticut Department of Public Health Drinking Water Section and the CTAWWA Education Committee developed this class cooperatively. This class will take the operator through appropriate sanitary correction steps and provide an effective tool to understand the Ground Water Rule. Water system operators will learn how to identify and correct common sanitary deficiencies, prevent deficiencies before they happen; hear about new raw water monitoring techniques, the outcome of case studies, the nuts and bolts of the Groundwater Rule; and will find out how to make it all work together! The class is *free* so please register soon and join us at the Prospect Firehouse on June 4, 2008 by consulting the CT AWWA website: <http://www.ctawwa.org/education.htm>.

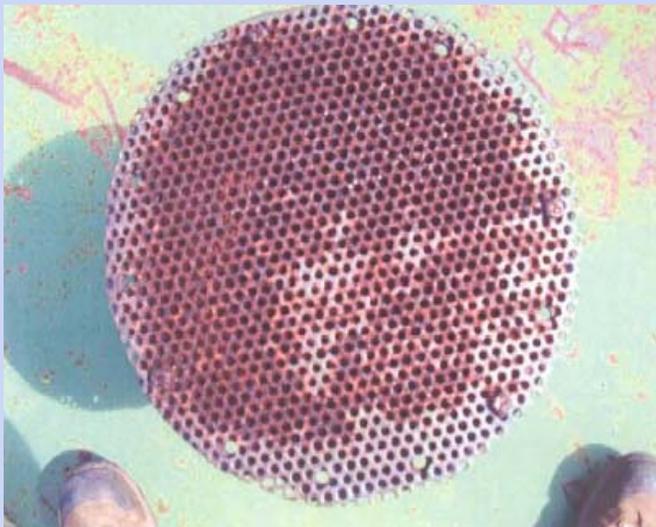
Picture Quiz

By Vicky Carrier, P.E., R.S., M.B.A., Sanitary Engineer 3, Capacity, Review and Standards Unit



Question:

Your tank vents are out of sight but should they really be out of mind? Properly constructed and screened vents are critical to maintaining safe drinking water in your distribution system. Yes, the tank is vented so it probably won't collapse, but could rain wash bird droppings into the drinking water in this tank? What Public Health Code violations do you think are possible from looking at the photo?



Answers
 The Regulations of Connecticut State Agencies Section 19-13-B102(f)(5)(A) in relevant part states that: "...vents and overflows shall be provided and suitably protected and screened to prevent entry of insects, birds or other foreign matter." This means that tank vents should end in an inverted 'J' or have a protective cover or shroud (mushroom-type vent) and be properly screened (note the screen corrosion in the photos).
 You should also consult the "STORAGE TANK DESIGN AND CONSTRUCTION GUIDELINES" on our website at the following link:
http://www.ct.gov/dph/LIB/dph/drinking_water/pdf/Storage_Tank_Design_and_Construction_Guidelines.pdf.

Consumer Confidence Report (CCR) Compliance Requirements



By: Gary Johnson, Supervising Environmental Analyst, Monitoring, Reporting & Enforcement

July 1, 2008, may be a few months away, but it comes quickly for Community Water Systems (CWSs) which are required to provide information to consumers about their annual drinking water quality and to give them the opportunity to participate in protecting and conserving it. Therefore, it is time for all CWSs to start thinking about putting together their 2007 Consumer Confidence Report (CCR). CWSs need to make sure they distribute it to all the consumers located within their service area.

All CWSs, regardless of population served, must no later than **July 1st, 2008**, mail or directly deliver the report to its customers, mail three (3) copies of the CCR to the Connecticut Department of Public Health (CT DPH), and mail one copy to the local director of health of each city, town, borough, or district served by the water system.

Also, all CWSs must by **August 9, 2008**, certify in writing to the CT DPH a certification that the report has been distributed or, when applicable, made available to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the department. The certification must be on the form provided by the Department. In addition, a CWS that sells water to another CWS was required by April 1st, 2008 (40 CFR 141.153) to deliver the applicable information to the buyer.

More specific information on CCR content, distribution requirements, CCR guidance documents and CCR Certification forms can be found on the Drinking Water Section web page, <http://www.ct.gov/dph>. If you have any questions regarding your PWS's CCR, please contact Mira Lami at (860) 509-7333.

Training Registration Information



All training registrations must be completed on the Training Finder Real-time Affiliate Integrated Network (TRIN). TRIN is a training resource for professionals who protect the public's health. Visit the TRIN web site, <https://ct.train.org/DesktopShell.aspx> to create a free user account and view upcoming certified operator events.

Be sure to check out the DWS's web site, www.ct.gov/dph, for the latest information on trainings, events, and more!

If you have any questions or would like to contribute to the newsletter, please contact Vicky Carrier or another OCP staff person listed below.

- William Sullivan - Sanitary Engineer 2- Operator Certification, Cross Connection Control
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