

# Connecticut H<sub>2</sub>O Operator

The Connecticut Department of Public Health Drinking Water Section

Volume 1 Issue 2

A Newsletter for Certified Operators

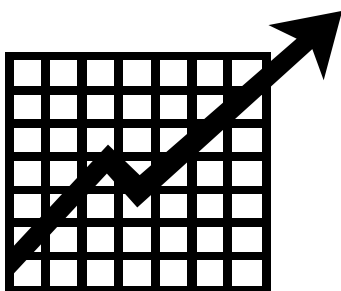
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## Rising Demand for Contract Operators Anticipated

By: Vicky Carrier, P.E., Sanitary Engineer 3, Operator Certification Program



The percentage of conditional grandfathered water system operators who have failed to renew by the end of the first three-year renewal cycle stands at fifty percent. All operators with a conditional status expired on September 30, 2005, unless they renewed their conditional status. It is anticipated that there will be a rising demand for contract operators, due to the failure of conditional water system operators to review their certification/ status. The Drinking Water Section

(DWS) issues violation letters to public water systems for failure to have a certified operator. This includes cases when the operator's certificate expires. Systems serving less than one thousand persons who lack an operator face potential fines of \$500.00 per day per violation. Penalties rise in proportion to the population being served, with systems serving over 10,000 persons facing fines of up to \$5000.00 per day for each violation.

CONNECTICUT DEPARTMENT OF  
PUBLIC HEALTH

Keeping Connecticut Healthy  
www.dph.state.ct.us  
Governor M. Jodi Rell  
Commissioner J. Robert Galvin, M.D., M.P.H.

The Operator Certification Program is encouraging people in trades related to water system operation to become certified via examination. Examinations are typically held twice a year in June and November. Exam applications, information on exam reference materials and the required education, and experience and training requirements are available on the DWS website. The State of Connecticut is a member of the Association of Boards of Certification (ABC). The ABC website ([www.abccert.org](http://www.abccert.org)) also offers useful information on reference materials and "need-to-know" criteria for operators.



Training is available through various organizations including the DWS Operator Certification Program (see DWS website, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>) and trade associations, such as the New England Water Works Association, the Connecticut Section of the American Water Works Association and the Atlantic States Rural Water and Wastewater Association. All of these organizations have training calendars on their respective websites. Gateway Community College is currently the only community college in the State of Connecticut that offers a certificate program in Water Management.



## CAPACITY DEVELOPMENT

### So what is capacity and why should I care?

By: Cameron Walden, Supervising Sanitary Engineer, Capacity Review and Standards Unit  
Michael Maynard, Water Resource Specialist, RCAP Solutions



Capacity is the ability of a public water system to successfully manage, maintain, and finance its infrastructure and comply with all applicable regulations. Picture “capacity” as a three-legged stool- a technical leg, a financial leg and a managerial leg. All three legs are needed for the stool to stand, yet many small systems often do not adequately address financial and managerial capacity by failing to plan and budget for needed upgrades and regulatory monitoring costs. There are ways for small systems to improve their “capacity”. A useful and eye-opening exercise is to list all your physical assets (wells, tanks etc.) and their age next to the expected useful service life of each item and compare the two numbers. Many small systems may realize that their system is running on luck and borrowed time. To properly finance these upcoming infrastructure improvements a public water system must have reserve funds available and build funding for this reserve account into their rate structure. The Environmental Protection Agency has a useful handbook titled *Asset Management: A Handbook For Small Water Systems* that explains many of these infrastructure-planning concepts and also provides a guide for estimating the useful service life of water system components. This handbook can be found on the following website:

[http://www.epa.gov/safewater/smallsys/pdfsguide\\_smallsystems\\_asset\\_mgmnt.pdf](http://www.epa.gov/safewater/smallsys/pdfsguide_smallsystems_asset_mgmnt.pdf)

The DWS also recommends contacting Rural Community Assistance Program (RCAP) Solutions is a comprehensive nonprofit community development organization providing direct services and community consultations to rural communities throughout the United States. RCAP Solutions’ field specialists have a breadth of technical expertise, including water system operations, community development, engineering, hydrogeology, grant writing, source protection, sanitary survey, consumer confidence reports and monitoring and reporting.

Assistance from RCAP is always just a phone call away. For more information regarding specific program opportunities and assistance, please call Michael Maynard, CT water resource specialist at 860-599-2760.

### Picture Quiz

What’s wrong with this picture of a well casing?

The owner called his pump specialist with odor complaints. The pump specialist examined the well, which happened to have a dog kennel built around it. The corrosion was caused by the dogs using it as “hydrant” to relieve themselves.



## ***E. coli* in Drinking Water**

By: Vicky Carrier, P.E., Sanitary Engineer 3, Operator Certification Program

With the large amounts of rainfall the State has recently received, *E. coli* has been detected in some public water systems. *E. coli* is a fecal coliform bacteria commonly found in the intestines of animals and humans. The presence of *E. coli* in a drinking water supply is an indication of recent sewage or animal waste contamination. During rainfalls or snowmelts, *E. coli* may be washed into unprotected creeks, rivers, streams, lakes, or groundwater. When these waters are used as sources of drinking water and is not treated or poorly treated, *E. coli* and other waste related organisms may get into the drinking water. This can lead to severe illness in people who consume such contaminated water. The DWS is always working to ensure *E. coli* contamination incidents throughout the State are resolved quickly and the public's health is protected. To date, the DWS has issued twelve violations of the *E. coli* Maximum Contaminant Level to public water systems in Connecticut this year. Twenty-three such violations were issued last year. As a public water system operator, the most important thing for you to remember is to NOTIFY this office, the local health department and the public AS SOON AS POSSIBLE in the event of an *E. coli* detection. Prompt notification to this office is not only required by regulation, but ensures that we can guide you through the steps necessary to protect the health of the your consumers and resolve the violation. You can find more details about *E. coli* in drinking water on the DWS website, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>.



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*“Certified Operators are the Department of Public Health’s front line in maintaining the purity and adequacy of the state’s public drinking water. A well-trained, committed and ethical operator workforce working to assure regulatory compliance is essential for the security and safety of our public supplies. I am grateful to the men and women who assist public water systems and the Drinking Water Section in serving the public.”*

Gerald R. Iwan, PhD  
Section Chief

## Well Site Suitability Review

By: Sara Rossetti, Environmental Analyst 2, Source Water Protection Unit

The DWS reviews the suitability of proposed new well sites for public water systems. If your public water system needs a new well, the first step is to complete and submit a general application form, along with the well site application form. These forms are available on the DWS's web page (<http://www.dph.state.ct.us/BRS/Water/DWD.htm>). If a general application form or well site suitability certification application form is incomplete, the application will not be reviewed until all information is received.

These applications are reviewed and a site visit is scheduled to ensure compliance with the Regulations of Connecticut State Agencies (RCSA) Section 19-13-B51d, which specifies various horizontal separating distances from sources of pollution, surface water bodies, and drain lines. These regulations, as well as the separating distances, are also available on the DWS's web page.

Depending on the pumping rate of the well, separating distances must be met for closest surface water body and wetland boundary, high water mark above any surface water body, one hundred year flood elevation contour per 19-13-B102(d), a foundation drain or drains carrying surface water, and systems for disposal of sewage or other sources of pollution.

Make sure you review and take into account the following items before submitting an application, as they are commonly overlooked: the proposed well site location must be on a relative high point on the premises; wells that are greater than 50 gpm and new public water systems that fall under the Certificate of Public Convenience and Necessity need proof of ownership/easement, including a map of the land owned by the public water system (PWS), must be included with the application. If the PWS does not have full ownership or control of the sanitary radius, it must indicate how ownership or control will be obtained; if the proposed well location is within a GA impaired area (an area of degraded groundwater), detailed information about the contaminated area should be provided with a justification for the need of a well in this area.

If the well site suitability application is complete, a DWS staff person will schedule a field visit to inspect the proposed well site location. The local health directors are invited to participate in the field visit. The presence of active or inactive public/private wells and general topography of the well site are also reviewed during the field visit. Final determination of the well site suitability certification will be based on information from the PWS application, field observations and overall conformance to applicable sections of the RCSA. If you have any questions regarding the well site suitability review, please contact Sara Rossetti of this office.



## Common Pitfalls for Water Quality Monitoring of Total Coliform Bacteria

By: Ryan Tetreault, Sanitary Engineer 3, Compliance Unit



Listed below are examples of common mistakes which lead to water quality or monitoring/reporting violations associated with the collection of total coliform samples:

- 1. Disinfecting the well before compliance samples are collected** - If your public water system does not have an approved disinfection system, you must not have a chlorine residual in the water when you collect your bacteria samples. If there is a chlorine residual reported with the sample results, they will be invalidated. You can check the chlorine residual by using an approved field test kit or ask your state certified laboratory to do this for you. If you need to disinfect your well following maintenance work, it is important to ensure all the chlorine has been flushed out of the water system before your compliance samples are collected. Keep in mind that samples must be collected in appropriate timeframes. The disinfection of the water system should only take place after all required samples have been collected.
- 2. Improper water system disinfection** - After all required samples have been collected, the water system is often disinfected to kill the bacteria in the pipes. Pouring a cup of chlorine in the well is not enough. The DWS provides a detailed disinfection procedure on our website (<http://www.dph.state.ct.us/BRS/Water/DWD.htm>) for the appropriate actions to take to ensure a thorough disinfection of the entire water system.
- 3. Failure to correct infrastructure deficiencies** - Many water quality violations for total coliform bacteria can be attributed to well construction violations. Examples include wells that are located in well pits that are prone to flooding and/or not equipped with certified watertight well caps. These wells would be candidates for total coliform positive samples. Failure to adequately correct infrastructure violations almost assures that total coliform positive results will occur again the next month.
- 4. Failure to notify** - Failure to notify the Department of Public Health and the local health department in a timely fashion of an exceedance of the Maximum Contaminant Level (MCL) as required by law is another thing that water systems often fail to do. For smaller water system, exceeding the MCL for total coliform bacteria is having two (2) or more positive samples in a single month.



If you do not know if you have exceeded the MCL for total coliform bacteria or have questions on what to do next, please call the Drinking Water Section Compliance Unit of the Department of Public Health and ask for technical assistance.

**Save the Date!****TRAIN** Connecticut

Since July 1, 2005, all training registrations have been completed on the Training Finder Real-time Affiliate Integrated Network (TRAIN). TRAIN is a learning resource for professionals who protect the public's health. Visit the TRAIN web page, <https://ct.train.org/DesktopShell.aspx>, to create a free user account and view upcoming certified operator events.

Also be sure to check out the DWS's web page, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>, for the latest information regarding certified operator training and exam dates. Dates are subject to change.

This newsletter has been prepared by the DWS Operator Certification Program (OCP). If you have any questions or would like to contribute to the newsletter, please contact Vicky Carrier or an OCP staff person listed below.

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