

Connecticut H₂O Operator

The Connecticut Department of Public Health Drinking Water Section

Volume 2 Issue 1

A Newsletter for Certified Operators

March 2006

Inside this Issue

- Is the training I am taking approved?	2
- Screening Application for Water Companies	3
- Water Company Land: Thinking Beyond the Water Line	4
- Float Switches and the Mercury Ban	4
- Arsenic Rule Revision	5
- Sanitary Surveys: 2006 Outlook	6
- ABC Seeking Volunteers for Water Treatment	6
- Why should septic systems be maintained?	7
- Photo Quiz	7

“Who you gonna call?”

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



If you attended the Drinking Water Section program at ATCAVE 2006, you should recall the emphasis placed on notifying the Drinking Water Section **and** the local health department of violations of drinking water standards, security threats or suspicious activities, and other emergencies. The Drinking Water Section can be reached at 860-509-7333 during business hours and at 860-509-8000 at all other times.

A reporting form to assist public water systems in documenting reports of violations and incidents is available on the DWS web page, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>. This reporting form will help you confirm and document that you are in compliance with the reporting requirements of Sections 19-13-B46 and 19-13-B102(h) of the Regulations of Connecticut State Agencies. It is important, however, to note that **submitting this form is not a substitute for reporting emergencies promptly via telephone.**



The Department of Public Health’s website has a directory of all local health departments at the following link: https://www.han.ct.gov/local_health/localmap.asp?bar=1.

If you are a contract operator who runs systems in multiple towns, it is recommended that you download the entire directory and keep the document in a binder in your truck. It is always best to be prepared. You never know when you may get a call about an incident that occurred, which requires an almost immediate notification to customers and the proper authorities.

“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

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.

To Report a water-related emergency...

CALL (860) 509-7333

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

OR...

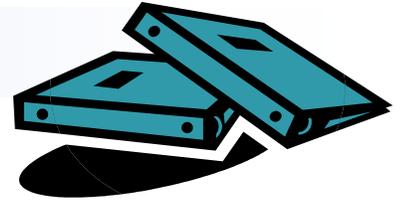
CALL (860) 509-8000

(After Hours)



Is the training I am taking approved?

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



The Operator Certification Program (OCP) answers many questions about which training courses are approved for meeting the training hour requirements for renewal of operator certificates. There are also many questions about whether classes from an “Approved Training Provider” or an accredited college meet the training requirements.

This article is intended to provide answers to those questions and is based on the Drinking Water Section’s (DWS) Guidance Document for Operator Certification Training Approval. This document, as well as the approved training lists, are available on the OCP page on the DWS web site, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>. Any class listed under the *Approved Training Courses* is approved to meet renewal requirements. The list is updated periodically as new courses are added or course approvals expire.

Any drinking water training class that is given by an *Approved Training Provider* is approved for operator renewal. The three training organizations that are presently approved as *Approved Training Providers* are:

- American Water Works Association (AWWA)
- Atlantic States Rural Water and Wastewater Association (ASRWAA)
- New England Water Works Association (NEWWA)

A class does not have to be listed separately under *Approved Training Courses* to be accepted toward meeting training renewal requirements. Nevertheless, some classes given by *Approved Training Providers* are listed due to special circumstances, such as additional approvals for Conditional Operators or backflow personnel.

In addition, the Department of Public Health accepts credits from any accredited college for any courses listed in the following topic areas:

- Biology - General, Microbiology, Biochemistry, Ecology
- Business Administration - Utility Management
- Chemistry - General, Organic, Environmental
- Civil, Chemical, Environmental, and Mechanical Engineering - Hydraulics, Water Treatment, Fluid Mechanics, Environmental Remediation and other related courses

- Geology - Ground and Surface Water Hydrology
- Math - Algebra, Trigonometry, Geometry, Calculus
- Natural Resources - Management and Conservation
- Public Health - Epidemiology, Toxicology

One college credit equals 15 training hours, therefore a typical three-credit class would count for 45 training hours. Training hours needed by the operator vary depending on the plant or system’s class level. Please visit The DWS web site for training hours needed for each class. It should be noted that Gateway Community College offers a Water Management Certificate Program that entitles an individual, who has successfully completed the program, to qualify to take any Water Treatment Plant or Distribution System Operator Exam. The classes offered by Gateway under this program can qualify an operator for certification renewal and also allow an operator to potentially qualify to take an operator examination, at a classification higher than their existing certification.



Screening Application for Water Companies



By: Sara Ramsbottom, P.E., Sanitary Engineer 2, Capacity Review & Standards Unit

Are you planning to develop a piece of property? Where will the drinking water come from? Will the development need an on-site water supply? Is there a large public water system nearby that could supply water to the property?

These are just some of the questions that can be answered by completing the newly developed “Screening Application for Water Companies” form. You can find this form by going to the Drinking Water Section’s webpage: <http://www.dph.state.ct.us/BRS/Water/DWD.htm>; look for “DWS Program Pages” on the right-hand side, and click on “Certificate of Public Convenience and Necessity”. A ‘Water Company’ is defined as “a corporation, company, association, joint stock association, partnership, municipality, other entity or person, or lessee thereof, owning, leasing, maintaining, operating, managing or controlling any pond, lake, reservoir, stream, well or distribution plant or system employed for the purpose of supplying water to fifteen or more service connections or twenty-five or more persons on a regular basis.” The form is used to identify proposed water company projects or developments early, so that the water needs of the project can be addressed and the best options utilized. Often a new water company project is proposed and the building construction and/or site work begins before the proposed location of the well is inspected. It is important to site the well **prior** to any construction activities. Activities on the site may impair potential well sites. If there are no acceptable well site locations on the property, you may have to look elsewhere to obtain drinking water for the development.

The goal in the use of this form is to identify proposed water companies and determine the appropriate manner in which water is provided to the site. Submitting information to the DWS early will help avoid delays in the future. The Drinking Water Section (DWS) has had a number of instances where a commercial construction project is complete and a business is ready to open, but it cannot because we were not aware of the project in the beginning and a review of the water system was never conducted.

When new water companies are created, these projects require that a Certificate of Public Convenience and Necessity (CPCN) be obtained prior to any local planning and zoning approval or construction activities. The Screening Application for Water Companies form can be used as a preliminary first step in that process to determine CPCN requirements. The information submitted with the form can determine if there is a need for an on-site water supply. There may be water available from a larger nearby water company that could supply the project by extending a water main to the property. And, if the project location is within a Water Utility Coordinating Committee (WUCC) management area, there are restrictions to creating a new water company that you need to be aware of prior to construction.



Keep in mind that owning and operating a public water system is a lot of responsibility and hard work! It can also be expensive! Knowing if a development project will result in the creation of a new public water system (PWS) early in the process will allow you to begin to understand your regulatory obligations so that you maintain compliance with all applicable regulations. Generally, one of the most frequent complaints is cost – but there is help out there! For instance, the regional affiliate of the Rural Community Assistance Partnership (RCAP), RCAP Solutions (Resources for Communities and People), is just one of the organizations that can help. They offer free technical and asset management assistance. Visit their website at www.rcapsolutions.org for more information. Another source of financial help is the Drinking Water State Revolving Fund (SRF) program. Existing public water systems may be eligible to receive low-interest loans. See the DWS website for information. Finally, the brochure “Intro to the Water Business” includes information on what it takes to be a water system and list resources you can contact for help. This brochure and the Screening Application are also available on the DWS website.

Water Company Land: Thinking Beyond the Water Line

By: Paula Pendleton, M.P.H., R.S., Lead Planning Analyst, Source Water Protection Unit
Jennifer Pagach, Environmental Analyst 2, Source Water Protection Unit

All Community Public Water Systems (CPWS) meet the definition of a water company found in Connecticut General Statutes (CGS) Section 25-32a. Whether their sources are wells or reservoirs, these water companies or CPWS that serve 25 or more persons on a year round basis are responsible for owning, maintaining, operating, managing and/or controlling the land on which their drinking water sources are located. For a small water system, this means the wellhead or parcel of land surrounding the well. Activities on the land closest to the drinking water source (wellhead) has a high risk to negatively impact the drinking water source. Class I land is known as land that poses the highest risk. Classifications are assigned by the water company according to the parameters and criteria found in Regulations of Connecticut State Agencies (RCSA) Section 25-37c-1, available at the following link: http://www.dph.state.ct.us/phc/docs/155_Establishment_of_Criter.doc. Certified operators, responsible to protect the purity and adequacy of their drinking water sources, are responsible to identify and protect this land. Drinking water source protection is an operator duty and responsibility. System owners depend on operators to be aware of the boundary lines and keep records of the source water protection areas. If you do not already have a detailed map, obtain one or create one now. In the event your water company plans to make a change to water company owned land, a water company land application is required to obtain a permit. Changes may occur in various transactions, such as a construction project, a sale, lease, easement, a demolition, road realignment or storm water drainage impact.



Contact the Source Water Protection Unit for more information. We are available to assist you with the crucial task of protecting and maintaining your drinking water quality.

Float Switches and the Mercury Ban

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



The Drinking Water Section (DWS) technical standards for new atmospheric water storage tanks, which will soon be available on our website, <http://www.dph.state.ct.us/BRS/Water/DWD.htm>, prohibit the use of float switches containing mercury due to potential health concerns, including kidney damage. Float switches are used in atmospheric water storage tanks to control pump operation. Additionally, Public Act 02-90, An Act Concerning Mercury Education and Reduction, contains a ban on the sale of certain products containing mercury, including mercury float switches.

The sale of products containing more than 1 gram or greater 250 parts per million of mercury was phased out on July 1, 2004. The sale of products containing more than 100 milligrams or greater 50 parts per million will be phased out on July 1, 2006. More information on this new law can be obtained on the Connecticut Department of Environmental Protection website, <http://dep.state.ct.us> or by calling the hotline at 1-877-537-2488.

Public water systems that use float switches containing mercury should consider making plans to replace them with a non-mercury switch. According to a report compiled by the Idaho Department of Environmental Quality, there are other products that can contain mercury, including switches, relays, meters, and pressure gauges. The Maximum Contaminant Level (MCL) for mercury in water is 0.002 mg/L. You should contact your regular plumbing supplier to get additional information about mercury-free replacement products.

Arsenic Rule Revision

By: Carissa Madonna, Sanitary Engineer 2, Monitoring, Reporting, and Enforcement Unit

On February 22, 2002, the Environmental Protection Agency (EPA) revised the Arsenic Rule to protect consumers against the effects of long-term, chronic exposure to arsenic in drinking water.

Compliance Information

- Arsenic Rule – Compliance Date 1/23/2006
- The Arsenic maximum contaminant level (MCL) has been lowered from 0.050 mg/l to 0.010 mg/l, with a maximum contaminant level goal (MCLG) to 0 mg/l
- All Community and Non-Transient Non-Community (NTNC) Public Water Systems (PWS) must comply with the Arsenic Rule
- Beginning with the 2005-2007 compliance period, PWS that have detected Arsenic >0.010 mg/l will be required to begin quarterly monitoring.
- Compliance with the MCL will be based on a running annual average (RAA) of quarterly samples.

The Drinking Water Section held a technical assistance meeting on the Arsenic Rule on January 27, 2006. Twenty Community and NTNC PWSs that had previously detected arsenic at or above 0.010 mg/l were invited to attend. These water systems are primarily located in the northeastern corner of the state. The other water systems that had previously detected arsenic at or above 0.010 mg/l are located in the north central, eastern, and the western part of the state.

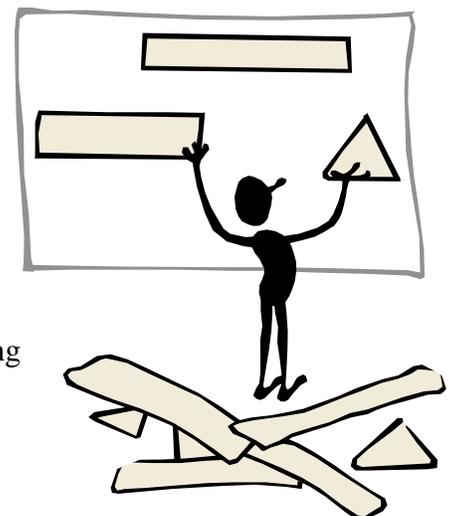
PWSs that may have to take corrective action to ensure that the 0.010 mg/l arsenic standard is met should consider the following options:

- Treatment for arsenic removal. This option may require a discharge permit from the Connecticut Department of Environmental Protection (CT DEP)
- Source Replacement
- Interconnecting with another PWS

The EPA has identified Best Available Treatment Technologies (BAT)s for arsenic removal in drinking water. The Final Rule document is available at the following website, http://www.epa.gov/safewater/ars/arsenic_finalrule.html, describes each BAT in detail. Briefly, they include:

- Activated Alumina
- Coagulation/ Filtration
- Ion Exchange
- Lime Softening
- Reverse Osmosis
- Electrodialysis
- Oxidation/ Filtration

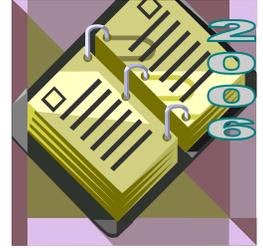
Please contact Carissa Madonna at (860) 509-7333 with any questions regarding the Arsenic Rule.



Sanitary Surveys: 2006 Outlook

By: Steve Messer, Supervising Sanitary Engineer, Implementation & Response Unit

The Implementation & Response Unit (IRU) within the DWS is responsible for conducting sanitary surveys for all of Connecticut's public water systems (PWS). Sanitary surveys are required by regulation every three years for Community PWS and every five years for Non-Transient Non-Community PWS and Transient Non-Community PWS. Surveys are performed in a consistent manner for all types of systems by the following teams:



COMMUNITY PWS

David Cooley
Cindy Sek
Brian Salus

NON-TRANSIENT NON-COMMUNITY PWS

Ryan Tetreault
Robert Kokoszyna
Mandy Smith

TRANSIENT NON-COMMUNITY PWS

Henry Adams

IRU staff members will always ask the PWS' administrative contact to alert their certified operator to a state conducted sanitary survey. It is essential that the certified operator participate in the sanitary survey as the operator is considered to be in direct responsible charge of the water system and its operating condition. All certified operators must be knowledgeable of all state and federal PWS regulations to ensure compliance at the PWS. A happy owner is one that does not receive any violations on his state conducted sanitary survey report due to the excellent work performed by his paid operator. Once a sanitary survey has been conducted, the PWS will receive a sanitary survey report from the DWS that identifies any deficiencies that may have been found during the survey. This is the PWS's opportunity to take corrective actions to resolve the deficiencies before they become a problem and possible public health hazard in the future. Please contact our office at (860) 509-7333 if you have any questions regarding your PWS' sanitary survey or report. The DWS staff are here to assist you.

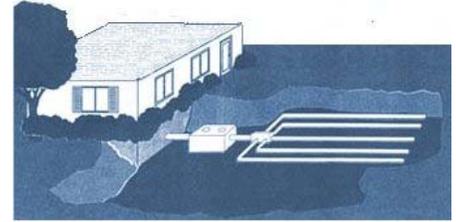
ABC Seeking Volunteers for Water Treatment Operator Survey

The Association of Boards of Certification (ABC) is seeking currently certified water treatment operators to complete an online job analysis survey. In the survey, operators will be asked to read and rate a list of job tasks and their associated knowledge and abilities for frequency of performance and seriousness of inadequate or incorrect performance. The results of this survey will be used to determine what is covered on water treatment certification exams that are developed by ABC. Visit ABC's website, www.abccert.org, for more information.



Why should septic systems be maintained?

By: Vicky Carrier, P.E., Sanitary Engineer 3, Operator Certification Program
Amanda Crovo, Environmental Sanitarian, Environmental Engineering Program,
Environmental Health Section



Maintaining a septic system in proper working order is important to preserving groundwater quality. That's why operators, while not directly responsible for septic system maintenance, should be aware of proper septic maintenance and be ready to educate property owners if needed. Improperly maintained septic systems can cause environmental and public health concerns. Poorly treated or untreated effluent can contaminate groundwater and surface water resources.

Signs of a potentially failing system may include:

- Patches of lush grass in the area of the septic system.
- Pooling of wastewater on the ground surface
- Slow draining plumbing fixtures (could also be due to clogged plumbing which should be investigated first)
- Foul septic odors in storm drainage piping, catch basins, footing drain piping or curtain drain discharges may indicate that sewage from your or an adjacent property is entering groundwater

The most important maintenance required for a septic system is pumping your septic tank to remove solids and cleaning the effluent filter. The State of Connecticut recommends pumping your septic tank every 3-5 years. More frequent pumping should occur if you use a garbage disposal or have a large family. In Connecticut, it is mandatory for homeowners to hire a licensed septic pumper to service the system. This requirement is primarily for homeowner safety, since septic systems produce harmful fumes and can be dangerous to clean for those not adequately prepared. Using qualified professionals also reduces the chance of improper monitoring or possible damage to the system during pumping.

Septic system repairs can be very costly so it's best to prevent a failure by properly maintaining the system. It's also a good idea to keep records of septic system maintenance activities.

If you want to obtain more information about septic systems you can visit the webpage for the Environmental Engineering (Sewage) Program at: www.dph.state.ct.us/BRS/Sewage/sewage_program.htm.

Picture Quiz

This is the overflow from an atmospheric water storage tank. How did the bird get in there? Could it have anything to do with screening of the vents? What does the Public Health Code say about vents and overflows?



Answer
PHC Section 19-13-B102(f)(5)
(A) ... vents and overflows shall be provided
and suitably protected and screened to
prevent entry of insects, birds or other
foreign matter...

Training Registration Information



Since July 1, 2005, all training registrations have been completed on the Training Finder Real-time Affiliate Integrated Network (TRAIN). TRAIN is a training 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.

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 was prepared by the DWS Operator Certification Program (OCP) and Programs Unit. If you have any questions or would like to contribute to the newsletter, please contact Vicky Carrier or another OCP staff person listed below.

- Robert Rivard, P.E.- Supervising Sanitary Engineer- Program Supervisor
- William Sullivan - Sanitary Engineer 2- Operator Certification, Cross Connection Control
- Joseph Higgins - Engineer Intern- Cross Connection Control
- Oluseye Akinkunmi - Connecticut Careers Trainee- Operator Certification
- Carol Martin - Office Assistant

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Regulatory Services Branch
Drinking Water Section
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P. O. Box 340308
Hartford, Connecticut 06134-0308
Phone: 860-509-7333
Emergency After-hours: 860-509-8000
Fax: 860-509-7359

<http://www.dph.state.ct.us/BRS/Water/DWD.htm>

