

Connecticut H₂O Operator

A Newsletter for Certified Operators

The Connecticut Department of Public Health Drinking Water Section

Volume 2 Issue 2

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Well Water Quality and Quantity Suitability Application

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

The owner of a water system may ask an operator for assistance when going through the process of siting and activating a new well. Therefore, it is important for operators to be familiar with the process.

The Drinking Water Section has recently developed and made available for use the *Well Water Quality and Quantity Suitability Application* (WWQSA). This application was developed to streamline the submission and review of well water quality results and yield test data following the development of a new well. The approval process for a proposed well consists of four phases.

- **Phase 1** – Well site suitability review is performed. This phase determines if a proposed well site location is suitable for development.
- **Phase 2** – Well water quality and quantity review. This phase determines if the well has adequate capacity and suitable water quality. It is during the second phase of the approval process that a public water system (PWS) should thoroughly complete a WWQSA and submit it to the Drinking Water Section for review.
- **Phase 3** – Review of the well transmission piping and bedding, pitless adapter, location of sample tap, meter, and shut-off valve, treatment, etc.
- **Phase 4** – Issuance of a Well Use Approval. First three phases must be approved prior. This allows the PWS to activate the well for use.

It is important to note that all **four** approval phases must be followed in sequence, and a PWS may not activate a new well for public use until a Well Use Approval is issued. A PWS that is seeking to reactivate a well, which has been inactive for an extended period of time, may need to submit a WWQSA form. Please call the Drinking Water Section if you have any questions on the approval process for new or inactive wells. The WWQSA is available at <http://www.dph.state.ct.us/BRS/Water/utility/Forms/Forms.htm>.

Do you know what the DWS **WEAR Team** does?
Find out on page 4!



Do You Know Your SWAP Scores?



By: Lori Mathieu, Supervising Environmental Analyst, Source Water Protection Unit

The Drinking Water Section encourages all public water systems (PWS) to know and review their PWS's Source Water Assessment Program (SWAP) scores. Each source of public drinking water in the State of Connecticut has a SWAP score and report, which can be found on the Drinking Water Section's web page http://www.dph.state.ct.us/BRS/water/source_protection/Assessments/Assessments.htm.

Source water assessment reports are available for both community and non-community public water systems. Each SWAP report contains valuable information concerning the susceptibility of public water sources to potential contamination. Information concerning a source's sanitary condition, surrounding land use and land cover, identified potential sources of pollution, surrounding land ownership, and local community controls are contained in a brief report. Also, each source receives a high, medium or low SWAP score. This score will easily tell the PWS if there are any issues that may need to be reviewed.

Public water systems that are required to produce annual Consumer Confidence Reports (CCR) must summarize their SWAP information and provide the DPH web-site address within the CCR. SWAP report information can be updated by the public water system or certified operator by contacting Lori Mathieu at (860)509-7333.

Detailed information regarding the Connecticut SWAP program can be found on-line at http://www.dph.state.ct.us/BRS/water/source_protection/SWAP/SWAP.htm.

Picture Quiz

The two photos below show the side of a deteriorated concrete storage tank on the left and the inside of a steel tank on the right (note the tuberculation). A storage tank cannot improve your water quality, but it sure can worsen it. That's why it's important to properly maintain your storage tanks. An operator's responsibility would include periodically inspecting tank vents to make sure they are still properly shielded and screened and to address any obvious defect on the exterior of the tank. Hatch conditions are also important and should be inspected regularly. A hatch should be elevated 4-6" above the top of a concrete tank and have a watertight, locked and overlapping cover. Another item potentially detrimental to your water quality is the accumulation of sediment or excessive tuberculation (in a steel tank) which can cause aesthetic complaints and encourage bacterial growth. That's why it's important to periodically inspect your tanks on the interior, as well. What does the Public Health Code say about atmospheric tank inspections?



Answers
 19-13-B102(f)(5) states: "All atmospheric finished water storage tanks, basins and clearwells shall be inspected at a minimum of once every ten years for sanitary conditions and structural integrity. The inspection report shall be retained for reference and submitted to the department upon request."

Filling Out the Operator Verification Form

By: Bill Sullivan, Sanitary Engineer 2, Operator Certification Program

Each Community and Non-Transient Non-Community public water system (PWS) is required to designate a certified operator, with the appropriate certification type and class level, as the “Chief Operator” for its classified treatment plant, distribution system or small water system. In the event that the chief operator is not available, the system shall place an appropriately certified operator in direct responsible charge to serve in the interim. It is the PWS’s responsibility to report these changes to the Drinking Water Section (DWS) immediately. In order to comply with these requirements, a PWS must complete an *Operator Verification Form (OVF)* and submit the completed form to the DWS. A copy of this form can be found on the Operator Certification Program’s page on the DWS’ web site <http://www.dph.state.ct.us/BRS/Water/DWD.htm>. The OVF is also used to assign certified operators who have operational responsibilities with the PWS and can be used to report any change in operator staffing to the DWS. The OVF is to be signed by the PWS owner or administrative contact, as well as the certified operator(s) designated on the OVF.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER DIVISION

OPERATOR VERIFICATION FORM

General Information:
Each Community Public Water System (CWS) or Non-Transient Non-Community Public Water System (NTNCS) regulated treatment plant, distribution system and small water system is required to have a certified operator. A certified operator is an individual who has been certified by the Drinking Water Division (DWS) and has met the education, experience and examination requirements specified in sections 20-32-7a to 20-32-7d of the regulations of Connecticut State Agencies.

The CWS or NTNCS must designate a "chief operator" for each of its water treatment plants, distribution systems and small water systems. A chief operator is a certified operator who has direct responsible charge (daily daily responsibility) for the operation and maintenance of a treatment plant, distribution system, or small water system.

You may obtain a list of certified operators who are available for contact with from the web site <http://www.dph.state.ct.us/BRS/Water/DWD.htm> or by contacting this office.

CWS and NTNCS should use this form to notify the DWS of any certified operator changes for its system. A representative of the Public Water System and the certified operator of record must sign this form.

CERTIFIED OPERATOR VERIFICATION:
I certify that the following information is true, accurate and/or deletion is correct.

FW: _____ FWS ID#: _____ TOWN: _____

Signature: _____ Title: _____ Date: _____

(Print Name) (Print Title) (Print Town)

CERTIFIED OPERATOR VERIFICATION	I certify that I am the certified operator for the PWS named above.	Signature by certified operator(s)	Certification Number	Chief Operator (Y, N)
Add (Y), Delete (N) or Change (C)	Certified Operator Name			

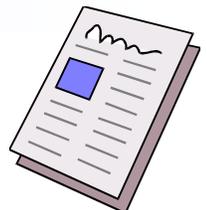
I certify that the "certified operator" is not required if the operator is being rotated from the system. Phone: (860) 306-7333
Telephone Device for the Deaf: (860) 306-7333
410 Capital Avenue • 350-833/837
P.O. Box 149588 Hartford, CT 06114
An Equal Opportunity Employer

OVFs that are not correctly completed are returned to the PWS. Submitting a correct OVF will save time and effort for all concerned. The following are common errors found on OVFs submitted to the DWS.

1. The OVF is not signed by the certified operator being designated as Chief Operator or is not signed by the current Owner or Administrative Contact of the listed PWS.
2. The individual designated on the OVF as Chief Operator is not currently a certified operator.
3. The operator designated on the OVF as Chief Operator is not certified at the appropriate class level. The classification level of the designated Chief Operator must be at or above the class level of the treatment plant or distribution system listed.
4. The certification type of the operator (Water Treatment Plant or Distribution System Operator) designated on the OVF is not consistent with the classification type of the listed water system facility (Treatment Plant or Distribution System).

REMINDER: 2005 Consumer Confidence Reports Due July 1st, 2006

- By **July 1, 2006**, CWSs must distribute the CCR to customers, mail three (3) copies of the report to the Connecticut Department of Public Health Drinking Water Section (DWS) and mail one (1) copy to the Director of Health of each city, town, borough or district served.
- By **August 9, 2006**, CWSs also must submit a signed CCR Certification Form to the DWS, indicating that the information contained within the CCR is correct and consistent with monitoring data previously submitted to us and that the report was delivered to consumers by the July 1 deadline.



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

WEAR Team : We're There When You Need Us!



By: David Cooley, P.E., Sanitary Engineer 3, Implementation and Response Unit

The Connecticut Department of Public Health assumed an expanded and critical role in the areas of homeland security, public health preparedness and emergency response following the attacks of September 11, 2001. The Department has evolved into a 24/7 ready operation, with the ability to respond to any incident, ranging from a bio-terrorism attack to a shortage of flu shots. Included in this response capability is the Drinking Water Section's Water Emergency Assessment and Response (WEAR) Team. The WEAR Team was formed to act in support of the Commissioner of the Department of Public Health and the Chief of the Drinking Water Section, operating within the overall response structure of the Department to respond to any water emergency in the state.

The WEAR Team is comprised of sanitary engineers and environmental analysts. All members have a baseline of security and emergency response training and each has a specific skill set, such as surface water treatment, Geographical Information System (GIS) operations and water system operations. The Team also gains considerable experience in participating in various drills and exercises that allow for the practice of response capabilities and procedures. The WEAR Team can be deployed to any public water system security threat or emergency to provide technical assistance to system personnel and assist in risk communication efforts with the public and media outlets. The Team will also conduct water quality sampling for analysis at the Department of Public Health Laboratory and assess regulatory compliance status when applicable. Once deployed, the WEAR Team maintains communications between the field and the Drinking Water Section or Department of Public Health Command Center. Information is passed back to the Department and further instructions, commands or changes to the scope of operations are transmitted out to the deployed team members through the chain of command.

Examples of WEAR Team responses during water system security threats and emergencies range from Acute Total Coliform Rule Maximum Contaminant Level (MCL) violations, to security breaches at finished water storage tanks. Two prime examples of responses to Acute Total Coliform Rule MCL violations involved the (1) Bristol Water Department and the (2) Ellington Acres Company. In both cases the WEAR Team was deployed to investigate possible causes of the violations through the inspection of water system infrastructure and water quality sampling. The Team also assisted in the initiation of public notification requirements. The WEAR Team was also deployed to the Durham Center Division public water system to investigate a security breach and the tampering of one of their finished water storage facilities. The Team inspected the facilities with water system operations staff and collected water quality samples for analysis to determine if there was any potential impact to public health. As standard procedure dictates, the Team also alerted the Connecticut Department of Emergency Management and Homeland Security, which is directly linked to the Federal FBI, Homeland Security and intelligence agencies.

So don't forget, the Department of Public Health, the Drinking Water Section and the WEAR Team are all there when you and the public needs us the most. However, it all starts with effective communication! Report all security threats and water system emergencies to the Department of Public Health – Drinking Water Section at 860-509-7333 (business hours 8AM-4:30PM) or at 860-509-8000 (after hours), as required and to initiate the appropriate public health response. Hopefully, you will never see the WEAR Team and witness our response capabilities; but you will be glad to see us in your time of need.

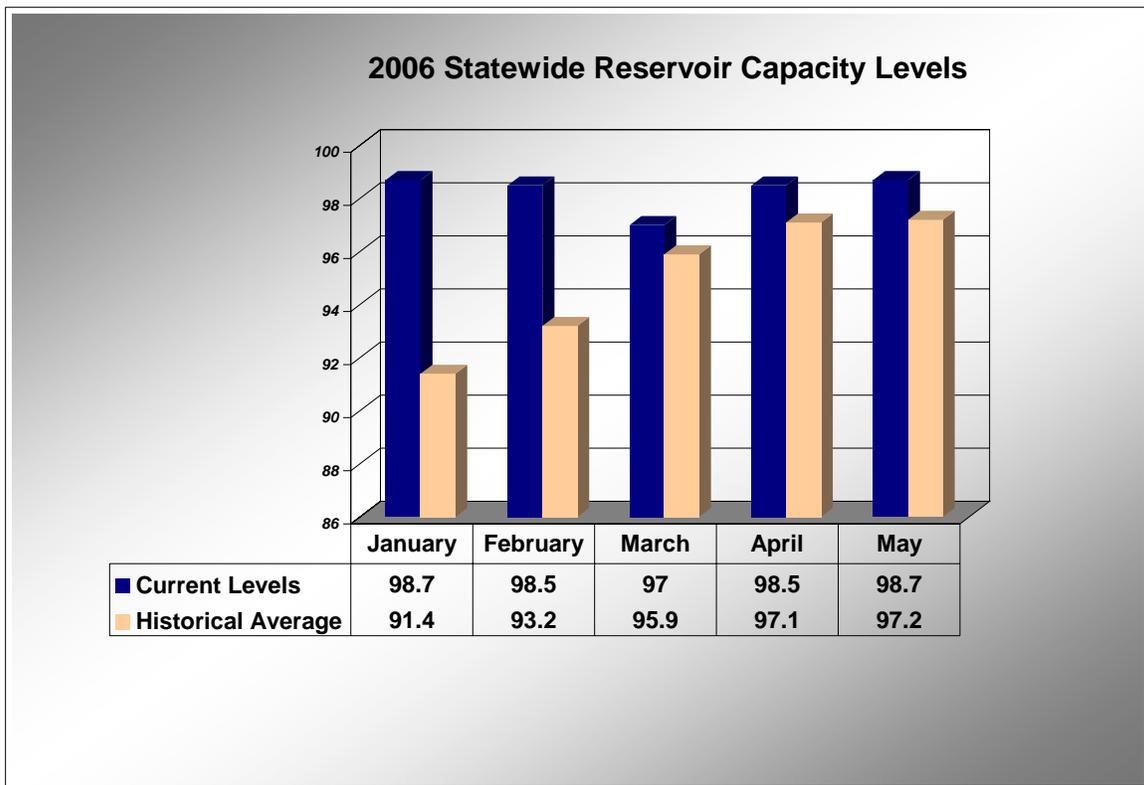


Mention the Word *DROUGHT* and Connecticut is Prepared!

By: Jason Sirois, Environmental Analyst 2, Planning Unit

With summer quickly approaching, water demands will begin to increase dramatically. Pair increased demands with an irregular precipitation pattern and the word *drought* comes to mind. A drought is characterized as a period of time with less-than-normal rainfall.

Droughts have occurred periodically in Connecticut during the years of 1964-1968, 1981, 1987, and 2002. Since the Spring 2002 drought, Connecticut now has a Connecticut Drought Preparedness and Response Plan in place. This plan takes a proactive approach to drought management through continuous monitoring of factors that are indicative of the onset and extent of drought conditions. The Drinking Water Section monitors current reservoir capacity levels and compares them to historical records, noting any trends that may indicate approaching drought conditions. The 2006 Statewide Reservoir Capacity Level chart below represents such a comparison.



We cannot control a drought's occurrence, location, or duration but we can control or manage some of a drought's impact on our activities and communities. While droughts cannot be forecasted with any degree of accuracy, communities can anticipate the potential for a drought and can develop plans to minimize its effects. As we approach the summer season, local communities need to be made aware of measures that can be taken to reduce a drought's effect, such as:

- ◆ **DO YOUR PART TO CONSERVE WATER!**
- ◆ **LEARN ABOUT WATER RESOURCES**
- ◆ **SUPPORT AND PARTICIPATE IN COMMUNITY EFFORTS TO PREPARE FOR DROUGHT**

The Royal Treatment



By Rich Iozzo, Environmental Analyst 2, Monitoring, Reporting and Enforcement Unit

All public water systems (PWS) using chlorine addition, pH adjustment, phosphate and/or fluoride addition, must monitor and report these particular analyte(s) to the Drinking Water Section (DWS) using the *Treatment Effluent Monitoring and Reporting Form*. This form can be found on the DWS web page at <http://www.dph.state.ct.us/BRS/Water/Utility/Forms/Forms.htm>. Effective January 1, 2006, all PWS are required to submit all applicable water quality data, including the *Treatment Effluent Monitoring and Reporting Form*, via Electronic Data Interchange (EDI).

It is very important that operators be familiar with the water quality testing schedules of the public water system(s) they manage. Every PWS in the state has its own testing schedule posted on the DWS web page, <http://www.dph.state.ct.us/BRS/Water/Utility/WQ/WQ.htm>. All the information needed to adequately submit all water quality testing results is included with every schedule, including the Public Water System ID (PWSID), Water System Facility ID (WSFID) and the required parameters for monitoring analytes, such as the range of those listed above.

All treatment effluent monitoring requirements are listed on the PWS testing schedule under the section heading, “Monthly Water System Facility (WSF) Level Monitoring Requirements”. Here you will find what analyte(s) must be reported, a description of the operating limit for those analytes and the required number of samples that must be collected per month. All PWSs must submit the required number of readings, unless the PWS is offline and not serving water to the public. In that event, an offline status must be shown in Section 3 of the reporting form. Those days must then be subtracted from the total number required for that given month.

This information will also be repeated in Section 4 of the reporting form, titled, “Summary Information”. A figure of the form is shown to the right. Section 4 should contain information regarding only those analytes being monitored, with the appropriate “Summary Type” boxed checked. All information must be completed for this section, including compliance with the number of samples required and completed, the highest daily reading, the lowest daily reading, the monthly average and compliance with the specific range of the analyte being monitored. All *Treatment Effluent Monitoring and Reporting Forms* must be received by the 9th day of the month following the previous monitoring period. As mentioned above, all submittals must be received electronically. Monthly Treatment Monitoring Forms must be submitted via the DWS’s e-mail address, drinking.water@po.state.ct.us. If you have questions regarding the completion of the form, please contact Rich Iozzo at 860-509-7333 or richard.iozzo@po.state.ct.us. If you have questions regarding submittal of these forms or any water quality results via Electronic Data Interchange (EDI), please contact Tom Reed at (860) 509-7333 or tom.reed@po.state.ct.us.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER SECTION
TREATMENT EFFLUENT MONITORING AND REPORTING FORM

1. Public Water System (PWS) Information:
 PWS ID: _____
 PWS Name: _____
 City/Town: _____

2. Compliance Information:
 Water System Facility ID: _____
 Month: _____ Year: _____
 Certified Operator: _____

3. Analytical Results:

Day	Status ¹	Chlorine Residual (mg/L)	pH (pH units)	Phosphate (mg/L)	Fluoride (mg/L)	Day	Status ¹	Chlorine Residual (mg/L)	pH (pH units)	Phosphate (mg/L)	Fluoride (mg/L)
1						17					
2						18					
3						19					
4						20					
5						21					
6						22					
7						23					
8						24					
9						25					
10						26					
11						27					
12						28					
13						29					
14						30					
15						31					
16											

4. Summary Information (Check all summary types that are applicable regardless of Status):

Summary Type	Treatment Summary Name	Monitoring Requirements		Compliance (Y/N) ²	Highest Daily Reading	Lowest Daily Reading	Level Compliance (Y/N) ³
		Number of Days Required ⁴	Completed				
<input type="checkbox"/>	CHLR Monthly Chlorine Log						
<input type="checkbox"/>	PHRD Monthly pH Log						
<input type="checkbox"/>	PHOS Monthly Phosphate Log						
<input type="checkbox"/>	FLRD Monthly Fluoride Log						

1 Status indicates a Water System Facility was offline on any particular day of the month. Fill with "offline" when applicable.
 2 The Number of Samples Required is contingent on the number of days the Water System Facility or treatment process was online. If the facility or treatment process was not online but monitoring is normally required Number of Days Required = "0" and the Summary Type must be checked.
 3 The M&R (Monitoring & Reporting) Complied field is an indicator ensuring Number of Samples Taken ≥ Number of Samples Required.
 4 The Level Complied field is an indicator ensuring that the Highest and Lowest Readings are within required ranges for treatment effluents. Operating Limits are provided in the current Schedule of Water Quality Monitoring Requirements.

Date Revised: 1/1/2006 For DWD Use Only: Entered By: _____ Date: _____

What is F.O.G.?

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



External Grease Trap

F.O.G. stands for fats, oils and grease that occur in food preparation facilities. In a press release dated October 6, 2005, the Department of Environmental Protection (DEP) announced that a new general permit for F.O.G. has been issued. Food preparation facilities have until July 1, 2011 (or sooner if renovations are undertaken) to comply with the conditions of the permit by installing either an external grease trap or an internal automatic grease recovery unit (AGRU). The requirement applies to facilities that are served by municipal sewers. The full text of the general permit can be found on the DEP web page: http://www.dep.state.ct.us/pao/download/watrdwn/fog_gp.pdf

So, why should Connecticut certified operators be aware of this issue? If you operate a public water system that includes a licensed food service establishment (e.g. restaurant within a strip mall, or a school with a cafeteria), there is a chance that an external grease trap will have to be installed. Since it is an operator's responsibility to maintain the public water systems they operate, you want to make sure that this new grease trap does not get installed within the sanitary radius of the well that serves the facility. This means that the grease trap must be a *minimum* of 75 feet away, with larger separating distances being required if the pumping capacity exceeds 10 gallons per minute. If the water system you operate is served by an on-site well and public sewers, it would be proactive to educate the owner of the facility about the importance of maintaining the integrity of the sanitary radius.



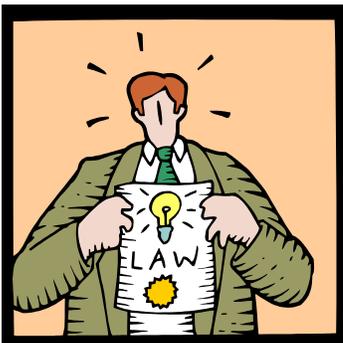
Internal Grease Trap

Regulations! Regulations! Regulations!

WHAT: Public Water System
Operator Regulations Course
WHERE: The MDC Training Center
WHEN: August 2, 2006
TIME: 8:30 a.m.– 12:45 p.m.
CEU's: 0.4

The Drinking Water Section (DWS) is planning a half-day regulation overview course for public water system operators. The class will focus on a broad overview of regulations with a special emphasis on often misunderstood sections of the Public Health Code. The first of recurring sessions will be on August 2, 2006 at the Metropolitan District Commission training facility in Hartford, Connecticut, from 8:00 a.m. to 12:45 p.m. Attendees will receive 0.4 continuing education units (CEU). Please contact Vicky Carrier, at vicky.carrier@po.state.ct.us,

if you have any questions regarding this course. Visit the DWS web page at <http://www.dph.state.ct.us/BRS/Water/DWD.htm> to get more information on this course and other training opportunities. You can register for this course on *TRAIN Connecticut*, <https://ct.train.org/DesktopShell.aspx>.



Training Registration Information



Since July 1, 2005, all training registrations have been 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 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

State of Connecticut
Department of Public Health
Regulatory Services Branch
Drinking Water Section
410 Capitol Avenue– MS #51WAT
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>

