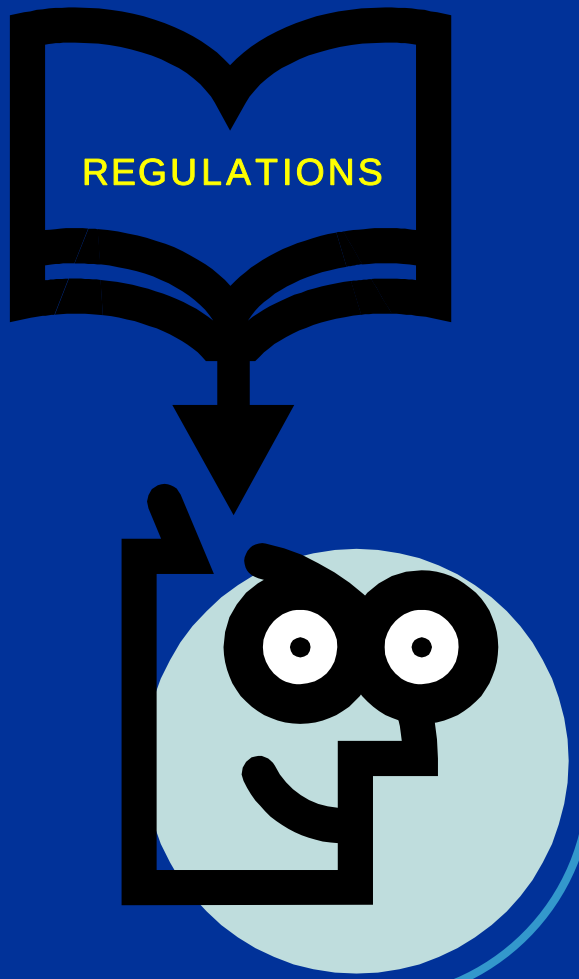
CONNECTICUT DEPARTMENT OF
PUBLIC HEALTH

Keeping Connecticut Healthy

Overview of Regulations



Ryan Tetreault, Sanitary Engineer 3
Connecticut Department of Public Health
Drinking Water Section
Implementation & Response Unit

Purpose and Authority

The Regulations of Connecticut State Agencies (RCSA) are implemented and enforced by the Department of Public Health to ensure the safety and adequacy of public drinking water supplies in the State of Connecticut. The statutory authority for these regulations is derived from Sections 25-32, 25-33, 25-37, 19a-37 and 19a-38 of the Connecticut General Statutes.

RCSA Section 19-13-B32
Sanitation Of Watersheds

- Regulations apply to land and watercourses tributary to a public water supply including both surface and ground water sources
- Provide criteria for protection of the watershed area that recharges both groundwater and surface waters

RCSA Section 19-13-B37
Cross Connections Between Water Supplies Prohibited

- No physical connection between the distribution system of a public water system and that of any other water supply shall be permitted, unless such other water supply is of safe sanitary quality and the interconnection of both supplies is approved by the State Department of Public Health.

RCSA Section 19-13-B38a

Permissible Arrangements For Connections To Public Water Supply Lines

- Outlines types of backflow prevention devices and where they must be installed
  - Air Gap
  - Reduced Pressure Principe Backflow Preventer (RPD)
  - Double Check Valve Assembly (DCVA)
  - Vacuum Breaker
- Installation and maintenance of devices
- Civil Penalties for violations of this Section

RCSA Section 19-13-B39

Quality of Water Supplies Made Available For Public And For Employees

- No water supply shall be used or rendered available for drinking and for other personal or domestic purposes in any industrial plan, mercantile establishment, hotel, lodging or boarding house, tenement house, hospital, theatre, park or public building, or on any outdoor or construction work, unless such supply is of safe sanitary quality approved by the state department of health. If a water supply for industrial or fire protection purposes is obtained entirely or in part from a source not approved for drinking purposes, this supply shall be distributed through an independent piping system having no connection with the systems for drinking and for other domestic use.

RCSA Section 19-13-B45
Minimum Requirements for Drainage and Toilet systems

- Plumbing and drainage systems shall be so constructed as to avoid contamination of safe drinking water supplies in houses or buildings. There shall be no cross connections between such safe water supplies and unsafe water supplies nor shall such safe supplies be piped to refrigeration, air conditioning or other mechanical equipment provided with direct connections to drains or constructed in such a manner as to permit contaminated water to be siphoned or drawn into the water supply pipes.

RCSA Section 19-13-B46
Notification by Water Officials in Water Supply Emergencies

- Whenever the security of a public water system is threatened or suspicious activities are observed on or near water company land or the treatment of a public water supply is interrupted or the source of supply is damaged so as to impair the quality or the sufficiency of the supply, the person, firm or corporation in charge of such public water system shall immediately notify the state department of Public health and the local directors of health of all cities, towns and boroughs where water from such systems is supplied. Such notification shall be made immediately either by telephone or messenger or whatever other means of rapid communication is available.

RCSA Section 19-13-B47

Disinfection of Water Mains, Valves and Structures

- In the case of construction of or repairs to any system of water supply furnished to the public, precautions shall be exercised in the handling, laying or installing of water pipe, valves or other structures through which water for potable purposes is delivered, so as to reduce to a minimum the entrance of foreign material and contamination, before such pipe, valves or other structures are placed in service. After said date no new main, standpipe, reservoir, tank or other pipe or structure through which water is delivered to consumers for potable purposes shall be put into service on any system of water supply furnished to the public, nor shall the use of any such structure or main be resumed after it has been cleaned or repaired, until such structure or main has been effectively disinfected; provided this shall not apply to mains, tanks, reservoirs or structures, the waters from which are subsequently adequately treated or purified.

CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

Keeping Connecticut Healthy

RCSA Section 19-13-B51
Water Supply Wells and Springs

- Definitions
- Interconnections
- Location
- Precautions
- Construction
- Covering
- Well Pits
- Well Pit Drains
- Permanent Appurtenances
- Post-Construction
- Testing
- Well Permits

RCSA Section 19-13-B80
Chemical Substances In Public Water Supplies

- No chemical substances other than those used on September 1, 1964, with the approval of the commissioner of health shall be added to public water supplies designed for human consumption whether in the course of filtration, for control of plant or animal life, or for any other purpose without prior approval by the commissioner of health. Before installation of equipment for such addition, plans and specifications shall be submitted to and approved by the commissioner of health. These plans shall provide procedures necessary for the satisfactory operation of the installation, including the proper testing of the water for chemical content, which procedures shall be followed by any person, firm, corporation or municipality having jurisdiction over the supply.

RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

Section a: Definitions

- 98 Definitions of terms

Section b: Watershed Survey Requirements

- A public water system using surface water as an active source of supply shall make a sanitary survey of the watershed to the intake at least annually.

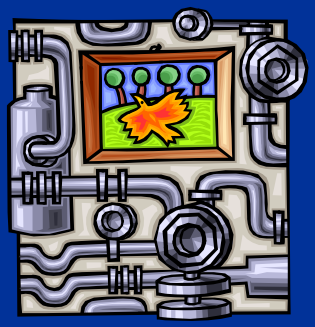
Section c: Standards for Quality of Untreated Water prior to Treatment

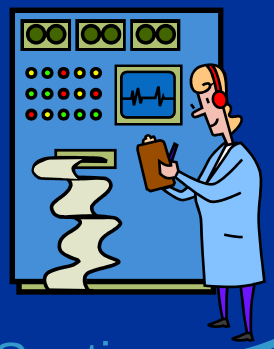
- Requirement for raw water testing of surface water systems

Sanitary Survey Frequency

- Community PWS: Every 3 years
- NTNC PWS: Every 5 years
- TNC PWS: Every 5 years

- "Sanitary survey" means an onsite inspection of the water source, treatment, distribution system, finished water storage, pumping facilities and controls, monitoring and reporting data, system management and operation, and operator compliance with department requirements. Components of the sanitary survey may be completed as part of a staged or phased review process by the department within the established frequency.

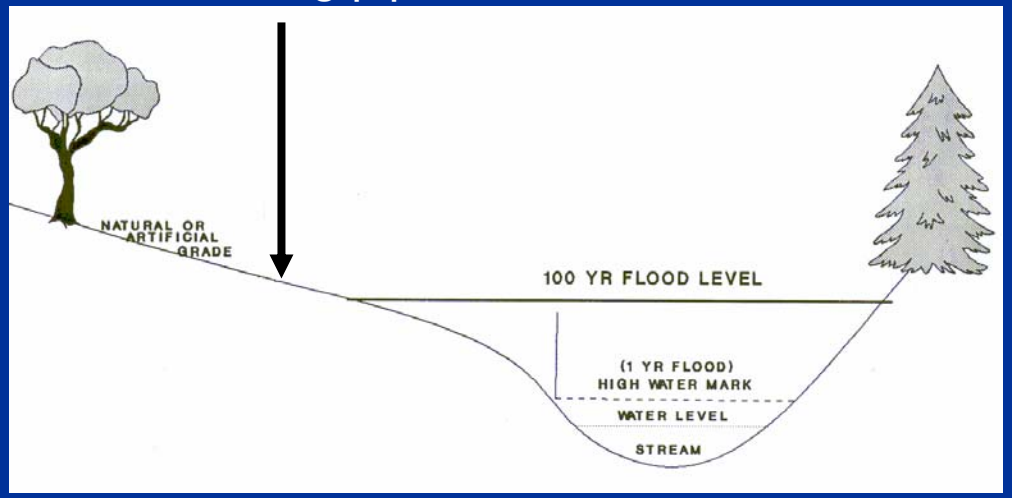




Facility Location

RCSA Section 19-13-B102d(1): New Facility Locations

- Wells, treatment plants, pumping stations, storage tanks, etc are to be located above the level of the one hundred year flood. This does not include water intakes and connecting pipelines.



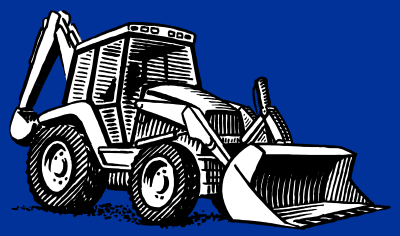
300 feet

- Where chlorine gas will not be stored or used within three hundred feet of any residence.
- Where the facility is not likely to be subject to fires or other natural or manmade disasters.

DPH Approval First

RCSA Section 19-13-B102d (2):

The state health department must be notified before entering into a financial commitment for a new public water system or increasing the capacity of an existing public water system, and the approval of the state health department must be obtained before any construction is begun. This includes construction of supply and treatment works, transmission lines, storage tanks, pumping stations and other works of sanitary significance. It does not include the routine extension of laterals or tapping of new service connections.



RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

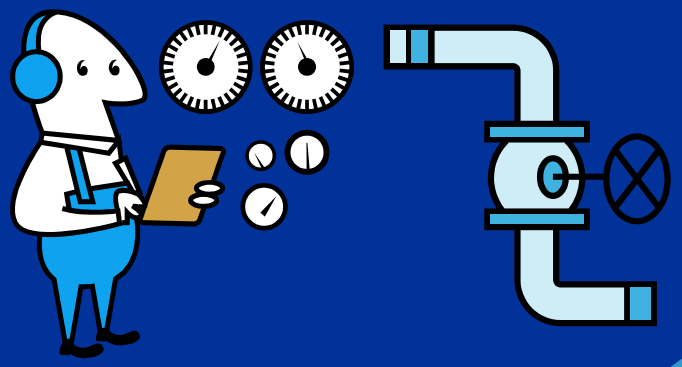
Section e: Water Ready for Consumption

- Physical Tests and standards that must be met
- Inorganic Chemicals and their limits (MCLs)
- Pesticides, Herbicides, and PCB's and their limits (MCLs)
- Organic Chemicals (VOCs) and their limits (MCLs)
- Radioactivity standards
- Total Coliform bacteria
- Monitoring Requirements
- Monitoring for Lead and Copper in Tap Water
- Monitoring Requirements for Water Quality Parameters
- Monitoring Requirements for Lead and Copper in Source Water
- Monitoring Requirements for Disinfection Byproducts, Residuals, and Precursors

RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

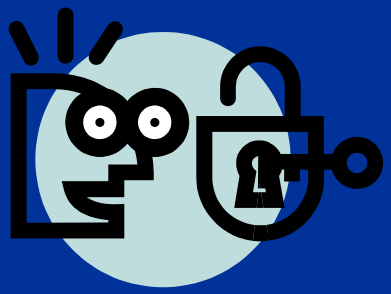
Section f: Protection of the Distribution System

- Water Pressure – minimum 25 lbs at the water main
- Consumer Premises – categories of concern
- Cross connection survey inspection of consumer premises
- Finished Water Storage Tanks, Basins and Clearwells
- Flushing of Distribution Systems



Finished Water Storage Tanks

- RCSA Section 19-13-B102f (5) (A)
- In general the tank shall be constructed and located to protect the water from contamination.
- The tank shall be constructed to prevent stormwater and precipitation from entering.
- The tank shall have vents and overflows that are suitably protected and screened to prevent the entrance of insects, birds or other foreign matter.



Finished Water Storage Tanks

RCSA Section 19-13-B102f (5) (B)

- In-Ground Finished Water Storage Tanks shall be located at least:
  - 50 feet from any part of the nearest subsurface sewage disposal system
  - 25 feet from the nearest watercourse or storm drain or other source of pollution
  - 50 feet from the nearest sanitary sewer unless the sewer is constructed in accordance with the Technical Standards for Subsurface Sewage Disposal in which the tank must be at least 25 feet from the sewer.

RCSA Section 19-13-B102f (5) (C)

- Atmospheric storage tanks shall minimally be inspected once every 10 years for sanitary and structural integrity. The inspection report shall be retained for reference and be made available on request.

RCSA Section 19-13-B102f (5) (D)

- Uncovered finished water tanks, basins and clear wells are prohibited.

RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

Section g: Laboratory and Operating Tests
Section h: Reporting of Tests

- Reporting water quality test results
  - The system shall ensure the department receives a report no later than nine calendar days following the end of each month. The report shall be in a format prescribed by the department (Electronic Data Interchange) and shall contain the results of the required samples collected during the month.
- Reporting MCL Violations in required time frames
  - MCL violations for total coliform shall be reported to the department and local director of health by the end of the next business day in which the system learns of the violation and notify the public.
  - Failure to comply with any other MCL shall be reported to the department and local director of health within 48 hours.

RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

Section i: Public Notification of Variances, Exemptions and Noncompliance with Regulations

- Tier I, II, III Public Notice Requirements
- Consumer Confidence Reports

Section j: Treatment Techniques

- Corrosion Control Treatment Steps following a Pb/Cu exceedance

Section k: Variances and Exemptions

Record Keeping Requirements

RCSA Section 19-13-B102(l)

Item to maintain on record	Time frame
Total coliform bacteria test results	Five years
Chemical test results	Ten years
Actions taken to correct violations	Three years
Sanitary survey reports and responses to such	Ten years
Records concerning a variance granted to the water system	Five years
Maps and records showing location of mains, hydrants and other facilities (community water systems)	Integrated map to be filed and updated every five years
Complaint log (community water systems)	Three years following resolution
Lead and copper records	Twelve years
Cross-connection control records	Five years
Consumer confidence reports (community water systems)	Five years
Filter turbidity measurements (typically for larger community water systems served by surface water)	Three years
Public notices issued and certification forms	Three years
Meter readings (community water systems)	Readings taken weekly from each source of supply

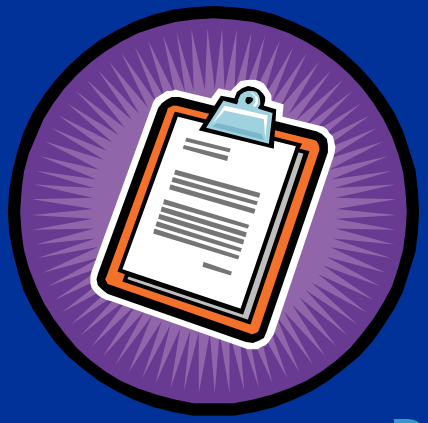
RCSA Section 19-13-B102
Standards for Quality of Public Drinking Water

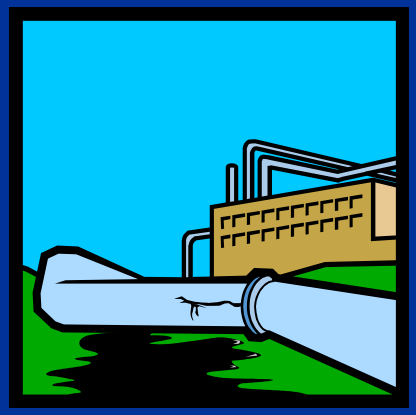
Section m: Emergency Powers

- The state commissioner of public health may, upon receipt of information that the security of a public water system is threatened or suspicious activities are observed on or near water company land or the treatment of a public water supply is interrupted or the source of supply is damages so as to impair the quality or the sufficiency of the supply or a contaminant is present in or is likely to enter a public water system which constitutes an imminent and substantial danger to health, take such actions and issue such orders as the commissioner may deem necessary in order to protect the health of any persons that may be affected.

RCSA Section 19-13-B102n: Water Use Monitoring

Meters shall be provided at all sources of water supply for community water systems so that the amount of water delivered to the distribution system can be measured. Representative weekly readings of instantaneous flow rate and total quantity of water delivered over the previous week shall be taken, recorded and retained for reference.





Supply vs. Demand

RCSA Section 19-13-B102 o: Supply Capacity Planning

- The supply capacity of each community water system shall be maintained in excess of the demand of the system, with sufficient margin of safety to properly allow for:
  - (1) Sudden increases in consumption which may occur during a dry period.
  - (2) The time required to bring new sources of supply on line.
  - (3) Increases or growth in the service area which may be reasonably expected.
- The plan for the Community PWS shall relate the safe yield and available water of the sources of supply to the existing and projected demands of the service area. The plan must be updated regularly.
- If it becomes evident that the demand of the service area will exceed the supply, measures to reduce consumption shall be promptly put into place and a program to supply sufficient supply capacity shall be implemented.

Supply vs. Demand

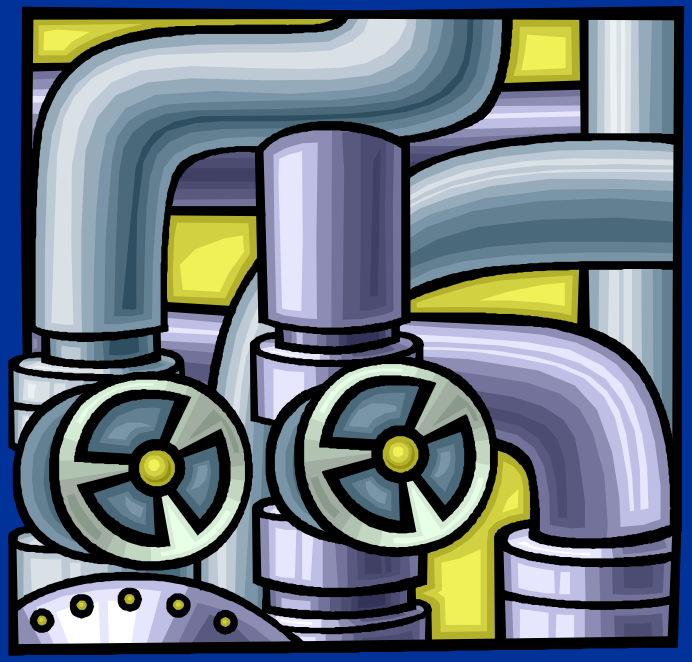
RCSA Section 19-13-B102 p: Maintaining Facility Capacity

- Sources of supply, treatment, pumping, transmission and storage facilities of sufficient capacity shall be maintained to provide flows in excess of the maximum flows experienced in the community water system, and in individual service zones within integrated systems.
- Whenever peak period consumption interrupts water service to consumers under normal conditions conservation measures that effectively reduce consumption shall be promptly instituted for the community water supply, and a program to provide sufficient supply, treatment, pumping, transmission and storage capacity to meet existing and projected peak period consumption shall be implemented.

Distribution System Maintenance

RCSA Section 19-13-B102 q: Valve Operations

- Essential water supply valves shall be maintained in operating condition.



PWS Contact Updates

RCSA Section 19-13-B102 r

- All customers served by a community water system shall be notified at least annually of an emergency telephone number which is continuously available for personal contact and reporting service problems.
- A crew shall be available to deal with emergencies within each community water system or a working arrangement or contract shall exist with others, such as pump installers, pipe layers, electricians or another water system for such coverage. Sufficient spare parts and clean up and disinfectant equipment shall be available.
- On or before January 1 of each year, or upon any change, the continuously available emergency telephone number and other methods of contact shall be reported in writing to the department.
- PWS Contact Update Form

RCSA Section 19-13-B102s

- Unaccounted for Water - Reduction Program

RCSA Section 19a-37a-1
Notification of Sprinkler Installation

- Any person engaged in the installation or modification of an automatic fire extinguishing system in any building served by a public water system, as defined in subsection (a) of section 25-33d of the General Statutes, shall notify that public water system of such installation. Such persons shall be subject to all applicable rules of such public water system.

CONNECTICUT DEPARTMENT OF
PUBLIC HEALTH

Keeping Connecticut Healthy

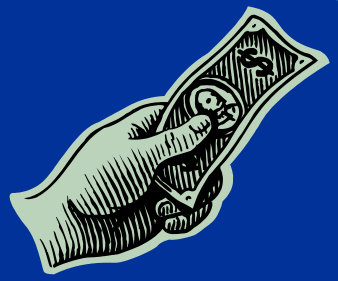
RCSA Sections 25-32-7a through 25-32-14
Certification of Water Treatment Plant Operators

Drinking Water Section

Certified Operator Requirements

- RCSA Section 25-32-9a: Every Community and Non-Transient Non-Community Public Water System must have an operator who is certified at the plant's class or higher and who shall be designated by the system as the chief operator.

- Chief Operators shall have “Direct Responsible Charge”
- “Direct Responsible Charge" means active, daily responsibility for the operation of a plant, distribution system, or small water system.



RCSA Section 25-32e-1

- Civil Penalties For Violations Of Certain Drinking Water Laws

RCSA Sections 25-33b-1 through 25-33b-5

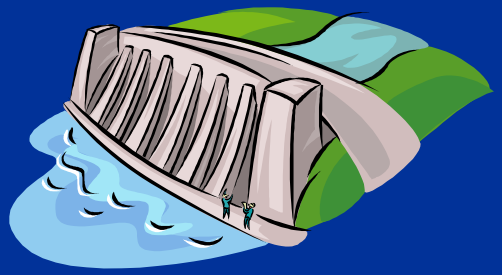
- Program Of Loans And Grants To Private And Municipal Water Companies

RCSA Section 25-33h-1

- Connecticut Plan for Public Water Supply Coordination

RCSA Sections 25-37c-1 and 25-37c-2

- Classification Of Water Company Lands



RCSA Sections 25-37d-1 through 25-37d-9

- Review Of Disposition and Use Of Water Company Lands