

Connecticut Department of Public Health

Drinking
Water
Section

Communicating PFAS: Interagency Collaboration and Community Outreach

Lori J. Mathieu, Public Health Section Chief

CT DPH – Drinking Water Section

EPA Region 1 Community Engagement
Exeter, NH

June 26, 2018

CONNECTICUT DEPARTMENT *of* PUBLIC HEALTH

DPH



Overview

Drinking
Water
Section

- PFAS Public Water Testing History in Connecticut
- CT DPH Drinking Water Section PFAS Strategy
- Pilot testing the PFAS Strategy: Greenwich CT
- Community Outreach
- Lessons Learned

DPH



Connecticut Public Water Systems

- 2,550 Public Water Systems, serving 2.9 million people
 - 550 community water systems
 - 600 non-transient non-community systems
 - 1,400 transient systems
- 150 reservoir systems
- 4,000 wells
- CT Department of Public Health (CTDPH)
 - Regulates public drinking water under its Drinking Water Section (DWS)
 - Primacy of the Safe Drinking Water Act

Drinking
Water
Section

DPH



PFAS Drinking Water History in Connecticut

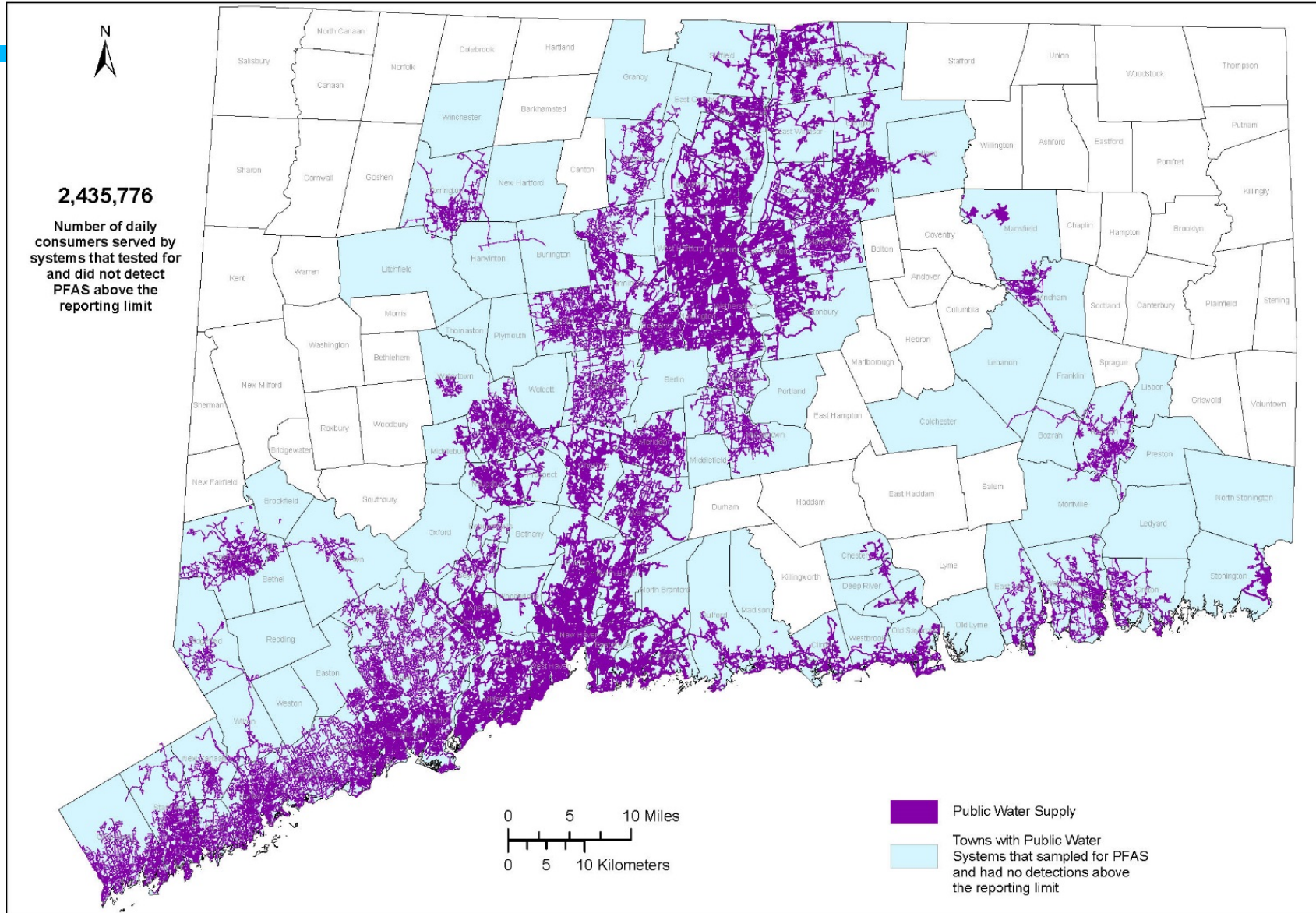
2010-2015 Safe Drinking Water Act UCMR3

- EPA – Third Unregulated Contaminant Monitoring Rule ([UCMR 3](#))
- Under the UCMR3 - No Public Water System in Connecticut that tested for PFAS had detections above the minimum reporting limits
- These Public Water Systems serve over 2,400,000 people

2016

- EPA issues Health Advisory for PFOA and PFOS
- DWS issues a “**Circular Letter**” to public water systems and local health departments informing them of the Health Advisory and UCMR 3 results.
- Other Drinking Water Issues

Connecticut Towns Served by Public Water Systems that have Tested for PFAS



Drinking Water Section

DPH



Drinking Water Section PFAS Strategy

- CT DPH DWS worked with Dept. of Energy and Environmental Protection (DEEP) Remediation on strategy development
 - Identify areas where PFAS may have been released to the environment
 - Identify public drinking water supplies that may be vulnerable to PFAS contamination
 - Develop web pages ([DWS](#) and [DEEP](#)) and public information
 - Propose actions if PFAS is found
- EPA Boston Region 1 developed a GIS Mapping Tool to assist states - identify areas that are vulnerable to PFAS Contamination

Drinking
Water
Section

DPH



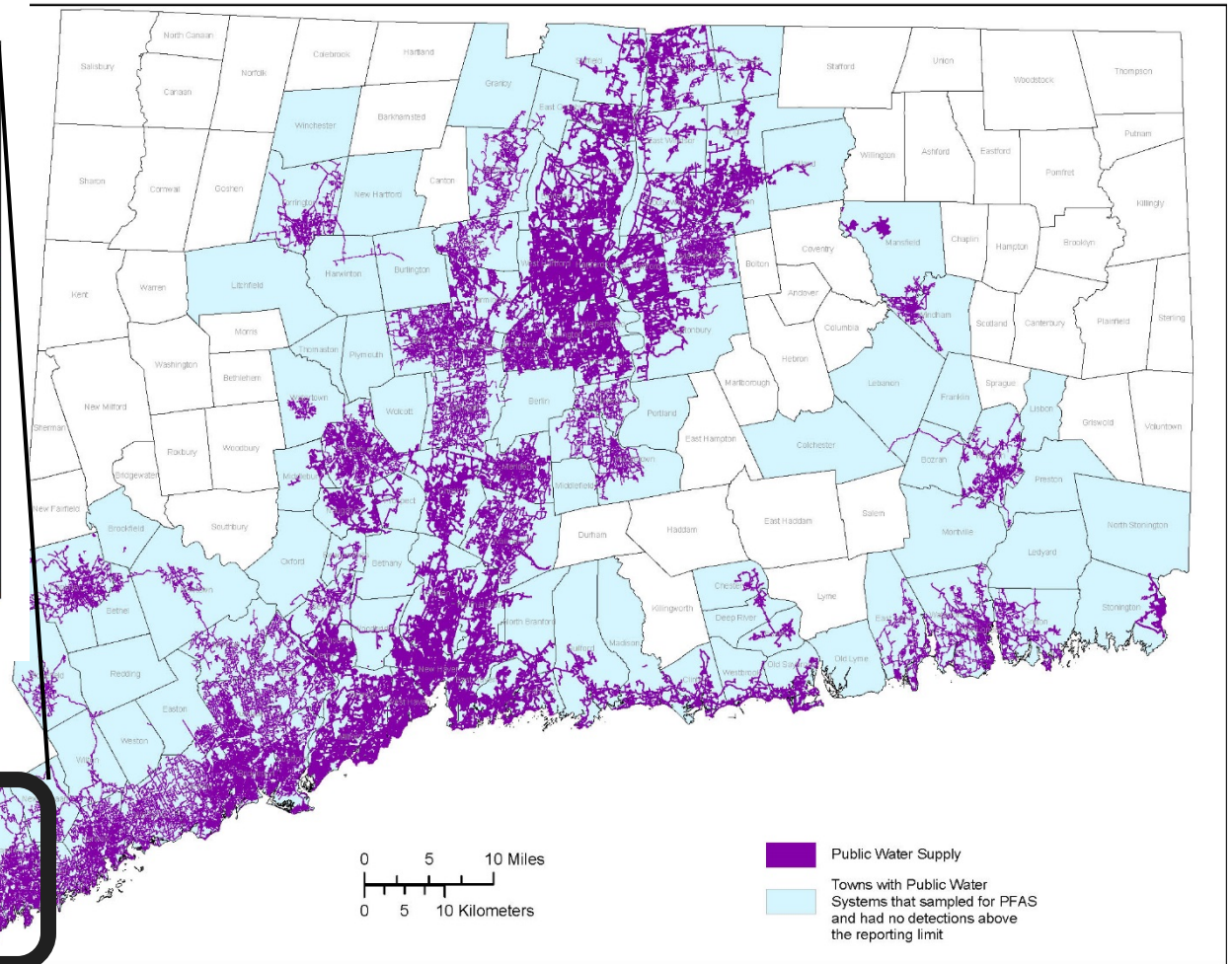
Drinking Water Section PFAS Strategy

- Analysis identified focus areas where PWS sources may be vulnerable to PFAS.
 - **Tier 1 Focus Area:** Areas within a one-mile radius of known PFAS contamination.
 - **Tier 2 Focus Area:** Areas within a one-mile radius of a facility that is known to have used or released PFAS
 - **Tier 3 Focus Area:** Areas within a one mile radius of types of facilities that may have used or released PFAS.
- CT DPH receives call from New York Dept. of Health: PFAS contamination is identified in PWS wells on the NY/CT border in New York

Tier 1 Focus Area

Connecticut Towns Served by Public Water Systems that have Tested for PFAS

PWS at Risk for PFAS near NY Border



Drinking
Water
Section

DPH



Greenwich Approach

Drinking
Water
Section

DPH

- Receive direct support, involvement and direction from DPH Commissioner's Office
- Focus on Health
- Work with, involve, and listen to Local Health Department
- Work with Team of agency experts including EPA
- Use PFAS strategy to identify who will be sampled,
- Use DPH developed Action Level for PFAS (sum of 5 PFAS)
- Request EPA Chelmsford Lab assistance
- Provide educational information to all parties; treatment, health
- Make direct contact with the people to be sampled, phone calls and letters
- Hold informational session in community following receipt of results
- Provide updates



PFAS Team Approach - PFAS Strategy

- Gathered and Partnered with a Team of Experts from within the CTDPH and Locally
 - **Environmental and Occupational Health Assessment Program**- Private Well [Drinking Water Action Level](#) (70 ppt for Σ five PFAS) and [Public Messaging](#) toxicologists
 - **Katherine A. Kelly Public Health Laboratory**-Train sample team and collect samples from public water systems
 - **Private Well Program**-Private well identification and treatment advice
 - **Environmental Laboratory Certification Program**-Publish list of laboratories registered in CT
 - **Greenwich Local Health Department** – detailed knowledge of local area, guide public interaction/engagement, a wealth of experience with local water quality

Drinking
Water
Section

DPH





Perfluoroalkyl Substances (PFASs) in Drinking Water: Health Concerns

Environmental & Occupational Health Assessment

What are These Chemicals?

Perfluoroalkyl substances (PFASs) are a family of man-made chemicals with many useful properties including the ability to repel water, prevent staining and increase heat resistance. PFASs have many industrial and consumer uses including the coating of fabrics and non-stick cookware, in food packaging (e.g., microwave popcorn bags), as a mist suppressant in chrome plating, and firemen to put out petroleum fires, but not typically in home products.

The most studied PFASs are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). While we know the most about the harmful effects of these two PFASs, several others of high concern are also discussed: perfluorononanoic acid (PFNA), perfluorohexane sulfonate (PFHxS), and perfluorodecanoic acid (PFDA). PFOS and PFOA have been phased out of production, but they have not. Further, these are very persistent chemicals which can remain in the environment for long periods after being removed from the market.

How do PFASs get into drinking water?

The way in which these chemicals reach groundwater is still being studied. Contamination has occurred near industries manufacturing consumer products. PFAS use at chrome plating facilities is a source of groundwater contamination. Because of their use in fire fighting, PFASs are found at fire training schools, airports and sites where there was a fire. Once on the ground, these chemicals can gradually seep into the ground and affect groundwater.

Connecticut Department of Public Health
PO Box 340308, Hartford, CT 06134-0308
<http://www.ct.gov/dph>

STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH



Raul Pino, M.D., M.P.H.
Commissioner

Dannel P. Malloy
Governor
Nancy Wyman
Lt. Governor

Questions & Answers on PFAS Drinking Water Sampling in Public Water Supply Wells

What are PFAS? What are the potential sources of PFAS? Per- and Polyfluoroalkyl Substances (PFAS) are a class of man-made chemicals that are used in a variety of products and applications including non-stick cookware, upholstered furniture, clothing, food packaging, and firefighting foam used to extinguish petroleum fires. PFAS release to groundwater may come from use or disposal at factories, airports, fire training academies, landfills, and other industrial facilities. The United States Environmental Protection Agency (USEPA) has a site devoted to [Basic Information about Per- and Polyfluoroalkyl Substances](#). The Connecticut Department of Public Health (CTDPH) Environmental and Occupational Health Assessment (EOHA) Program has developed a fact sheet entitled ["Perfluoroalkyl Substances \(PFASs\) in Drinking Water: Health Concerns"](#) (Attached).

Why is the State of Connecticut conducting this water sampling? Currently there are no enforceable drinking water standards for PFAS. However, emerging information shows a health concern which has prompted the development of a drinking water health advisory level. Under the [USEPA's Unregulated Contaminant Monitoring Rule](#), all public water systems in Connecticut that serve over 10,000 people were tested between 2013 and 2015. PFAS were not detected in the water from these systems that serve over 2.4 million people. We are now further sampling wells in a section of Greenwich because of recent detections in a nearby area.

Who will be conducting the water sampling? A sampling team consisting of representatives from the State of Connecticut Department of Energy and Environmental Protection (CTDEEP) Remediation Division Potable Water Program and the CTDPH Drinking Water Section (DWS), Private Wells Program and Katherine A. Kelley State Public Health Laboratory have been trained in the collection of PFAS samples. Representatives of one or more of these agencies will be involved in the sampling.

Will I need to be present during the sampling? Yes. Someone will need to meet the sampler to show them where the raw water tap is for each public water supply well. In addition, each well must be purged for 20 minutes before sampling, and it would be most helpful if that were completed before the sampler arrives.



Phone: (860) 509-7333 • Fax: (860) 509-7359
410 Capitol Avenue, MS#12D WS, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

Affirmative Action/Equal Opportunity Employer



Drinking Water Section

DPH



Team Approach - PFAS Strategy

Drinking
Water
Section

DPH

- Coordinate with sister Environmental Agency (DEEP)
 - **Remediation Division Western Region**
 - **Potable Water Program**
- Request Assistance - EPA Region 1
 - **EPA Region 1 Laboratory** in Chelmsford, MA provides analytical services on an as-available basis
 - **EPA contractor** collects one round of samples at up to ten private homes with assistance from DEEP staff.
- Team – took 2 rounds of samples (5 PFAS) at private and public water systems, communicated results to entities, worked together on educational information, no funding available
- Learned and gathered information from other States and EPA

Team Approach - PFAS Strategy

- Town of Greenwich Local Health Department - Community Outreach and Engagement
 - Knows the Community that they serve
 - Provided valuable input and guidance on the best way to communicate with their community
 - Provided cover letters and was a point of contact for the community
 - Organized a “public availability session” once verified results were available
 - Lead the local media interaction
- *Provided invaluable support*

Drinking
Water
Section

DPH



CONNECTICUT DEPARTMENT of PUBLIC

WELCOME TO GREENWICH CONNECTICUT

NEWS GOVERNMENT MEETINGS CALENDAR TOWN HALL SERVICES FORMS CONTACT US

Greenwichct.org / News / Departments / Health Department / Results of Local Water Testing in Northwest Greenwich

Results of Local Water Testing in Northwest Greenwich

The Connecticut Department of Public Health (DPH), in cooperation with the Connecticut Department of Environmental Protection (DEEP) and the U.S. Environmental Protection Agency (EPA), initiated a survey to determine if polyfluoroalkyl substances (PFAS) migrated into the ground water supply servicing public and private wells in the northwest section of Greenwich. PFAS, which are a class of man-made chemicals, were detected in several public well water supplies in a nearby area within New York State. As a result, the DPH, DEEP and EPA initiated precautionary sampling of drinking water at seven (7) public drinking water systems and eight (8) private wells in Greenwich during the month of February, 2018. All drinking water samples were analyzed for six PFAS.

PFAS are used in variety of products and applications including, but not limited to, clothing, food packaging and firefighting foam used to extinguish petroleum fires. These chemicals are not found naturally and remain in the environment for long periods when introduced. Several PFAS, Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) which are the most studied, and also Perfluorohexanesulfonate (PFHxS), Perfluorooctanoic Acid

FIRST SELECTMAN:
Peter Tesel
Welcome to the Town of Greenwich Web site. It is our goal to provide you with an online one-stop shop for all information about the Town of Greenwich... [Read more](#)

Office of the First Selectman

FEATURED SECTIONS OF OUR SITE:
Representative Town Meeting
Town Employees
Find your Polling Place, Local Districts
View or Pay Taxes

Community Outreach: Public Availability Session

- Held in the impacted community
- Provided Personal invitations plus press releases
- Facilitated by Local experts
- Staffed tables with hand-outs and display boards
- Guests were free to circulate and choose the programs to visit
- Convenient locations for confidential consultation
- Team Presentation at end of session
- Team members stayed to answer any and all questions

greenwich time <https://www.greenwichtime.com/local/article/Residents-ask-questions-on-well-water-in-12914107.php>

Residents ask questions on well water in northwestern Greenwich

By Robert Marchant Updated 6:00 pm, Tuesday, May 15, 2018



Residents of the King Street area meet with health and water-safety officials at an informational event at the Harvest Time Church.

Drinking
Water
Section

DPH

Lessons Learned From the Public Availability Session

Drinking
Water
Section

DPH

- Hold the public session as soon as practical
- Directly and consistently Communicate with all entities sampled
- Work with Local Health Department
- Involve the team of experts in the session
- Format allowed for individual attention; affirmed that guests' concerns were taken seriously
- Take the time to make sure that questions are answered satisfactorily
- Admit what you don't know
- Important involvement from all levels, State, Local and Federal
- Assure the guests that you will continue to share information and engage
- Provide understandable, updated, science based information
- Trust important at all levels



Thank You

Lori.mathieu@ct.gov

Patricia.bisacky@ct.gov

860-509-7333

CTDPH

Drinking Water Section