

Public Information Session Firefighting Foam Release to the Farmington River

Windsor Town Hall July 2, 2019



- Overview of PFAS chemicals
- Timeline of events
- DEEP and DPH response
- DEEP Transition from Emergency Response Division to Remediation Division
- Health advisories
- Next steps



What Are PFAS?

PFAS = <u>P</u>er- and <u>P</u>oly<u>f</u>luorinated <u>A</u>lkyl <u>S</u>ubstances

- Over 4,700 "forever chemicals"
- Developed in the 1940s
- Ubiquitous in consumer products and industry
- PFOA and PFOS most well-known





<u>Perfluorooctanoic</u> <u>a</u>cid <u>Perfluorooctane</u> <u>sulfonic</u> acid



Air emissions a source of soil & groundwater pollution



Some PFAS Uses



Connecticut Department of Energy and Environmental Protection: Remediation Division

Image sources: Bing Creative Commons



Places Where We Might Find PFAS





Aqueous Film-Forming Foam (AFFF)



The Problems with PFAS

Possible health effects

- Developmental effects to fetuses and infants
- Kidney and testicular cancer
- Liver, thyroid, cholesterol, immune system effects
- Present in human blood worldwide
- Have polluted drinking water supplies worldwide
- Discovery in wastewater treatment plants, biosolids, landfills, soil, surface water, fish tissue, animals, cow's milk, and plants

Replacement chemicals also a problem (GenX)

CONNECT/COP

Timeline of Events: June 8th



- Approx. 2 pm, malfunctioning fire suppression system at a private hangar at Bradley Airport caused discharge of AFFF for 6 minutes
 - Total foam released: ~40,000 gallons
 - Total AFFF concentrate: ~1,500 gallons
- CT DEEP onsite within 45 minutes, Signature Flight immediately took responsibility
- Emergency Contractor onsite 40 minutes later
- ~15,000 gallons foam captured onsite



Timeline of Events: June 8th



- Path of remaining foam solution:
 - Floor Drain → Oil-Water Separator →
 Sewer System → MDC Wastewater
 Treatment Plant → Farmington River
- MDC notified of release
- Approx. 7:30 pm, foam observed exiting sewer manholes on Rainbow Road
- Emergency Contractor called to remove foam from 2 manholes



Timeline of Events: June 9th



- Foam entered MDC Plant and the Farmington River in the early morning (5:30-7:30 am)
- Booms deployed to contain as much foam as possible
- ~5,000 gallons of contained foam vacuum-pumped out of the river
- Surface water samples collected
- DPH advises no contact with foam/do not eat fish



Surface Water Sampling

- 3 sampling events
 - June 9
 - June 11 (outfall only)
 - June 21
- 4 locations
 - Upstream
 - Treatment plant outfall
 - Downstream-1 at I-91(0.6 mi.)
 - Downstream-2 at boat launch/Palisado Ave. (3 mi.)





Surface Water Sampling Results

Summary of Total PFAS Concentrations

Location	June 9	June 11	June 21
Upstream	38 ppt		18 ppt
Outfall	1,515,700 ppt	90,899 ppt	331 ppt
Downstream-1	13,300 ppt		50 ppt
Downstream-2	10,253 ppt		40 ppt

Total = sum of 18 individual PFAS

Primary chemical is PFOS (1,300,000 ppt at outfall on 6/9, 86% of total PFAS)

Total PFAS at the outfall decreased by more than 4,000 times over 12 days



Surface Water Sampling Results



Concentration at Plant Outfall





Surface Water Sampling



Latest Concentrations (6/21)



Farmington River Health Advisories

Initially – no contact with foam, no fishing

- The Farmington River is safe for recreational uses (swimming/boating).
- DO NOT EAT FISH caught between MDC wastewater treatment plant outfall near Phelps Brook, downstream to the Connecticut River.
- Catch & release fishing is allowed.

Note: there is an existing fish consumption advisory statewide based on mercury.

Next Steps for DEEP Response

- Testing at MDC this week
- Fish testing planned for week of July 8
 - Downstream and upstream locations, 2 fish species
 - Additional sampling in September
- Additional ecological assessment of Farmington River – sediment
- Remediation at Signature Flight hangar and grounds
- Assessment of impact to sewer system and surrounding areas

Connecticut Department of Energy and Environmental Protection: Remediation Division

Next 2

Weeks

Summer



PFAS Resources on the Web

DPH Drinking Water Section PFAS webpage

DEEP Emerging Contaminants webpage

EPA PFAS webpage

EPA PFAS Action Plan

Interstate Technology and Regulatory Council (ITRC) PFAS Fact Sheets



Thanks for your attention!

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