

Farmington River Firefighting Foam Discharge

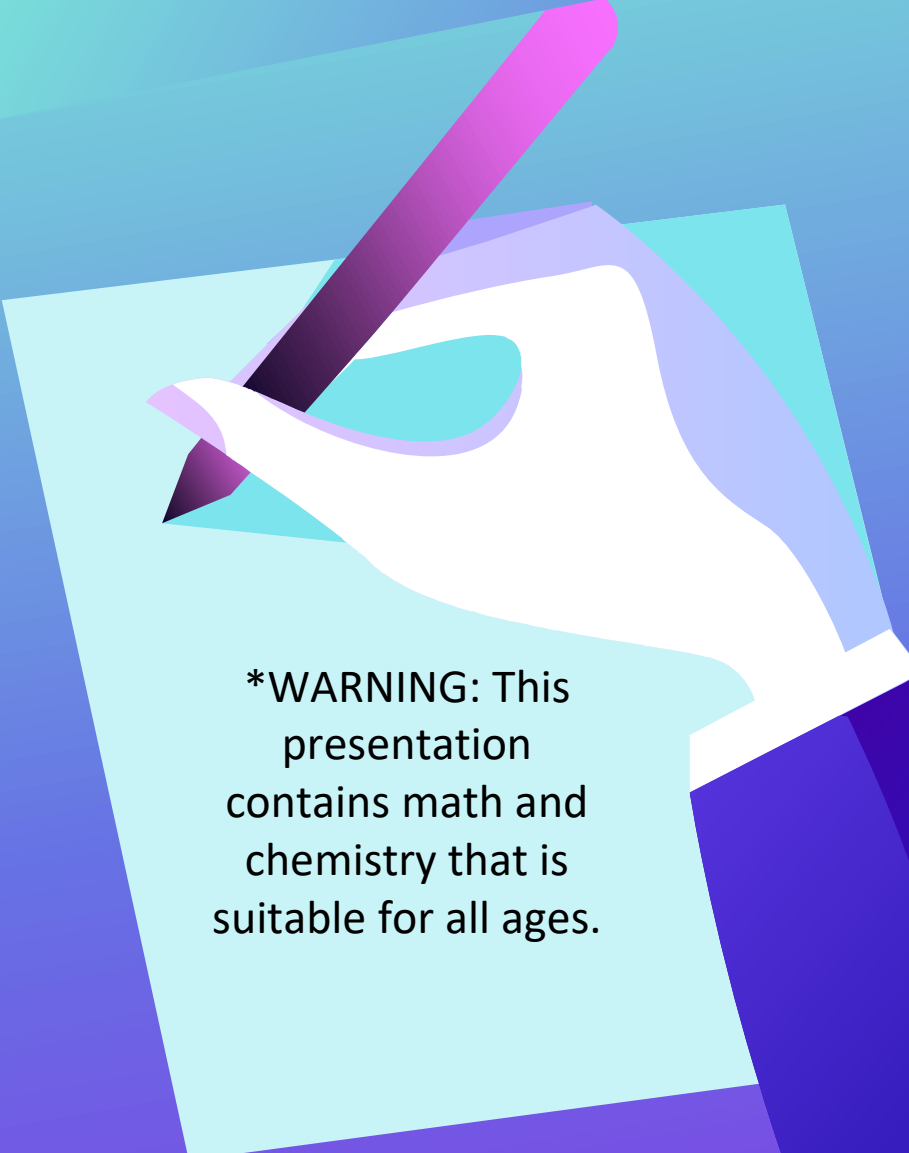
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Presented
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Public Forum
Windsor Town Hall

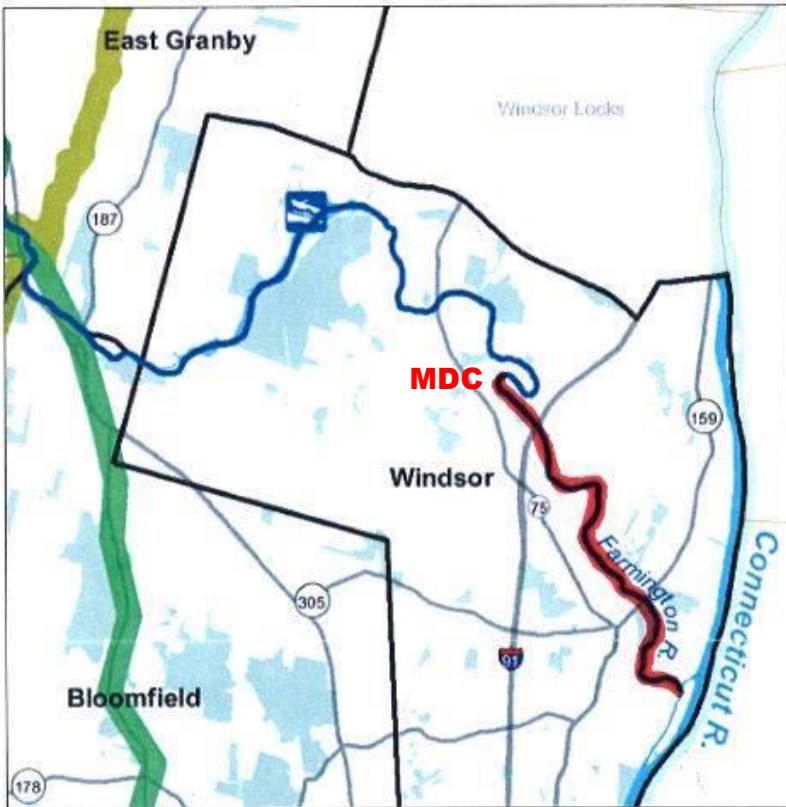
Five Minute Overview*

- What happened?*
- Why should you care?*
- What's next?*
- What can you do?*



*WARNING: This presentation contains math and chemistry that is suitable for all ages.

What Happened?



Map source: Farmington River Watershed Association

Timeline

6/8/19 2:06 PM Initial Alarm
Estimate of 50,000 gallons
firefighting foam released into
Signature Flight Support's hangar

1. BDL Fire on scene 2:10 PM
2. Life safety check/foam shutoff
3. BDL Fire begins containment
4. BDL Dispatch notifies DEEP
5. Signature contacts ESI for cleanup
6. Windsor Police officer notices foam coming from sewer system
7. Windsor Fire dispatched
8. MDC becomes aware of foam in their Poquonock Ave. facility
9. Foam enters Farmington River via MDC outfall pipe
10. Collection by ESI at BDL, MDC outfall
11. 6/9/18 First water samples taken by ESI
12. 6/10-6/11 Second set of samples collected

Cast

(in order of appearance)

- Signature Flight Support
- Bradley Emergency Dispatch
- Bradley Airport Fire Department
- CT Department of Energy & Environmental Protection (DEEP)
- Environmental Services, Inc. (ESI)
- Metropolitan District Commission (MDC)
- Windsor Police
- Windsor Fire
- National Parks Service Wild & Scenic Rivers Program
- CT Council on Environmental Quality (CEQ)
- Farmington River Watershed Association (FRWA)
- Windsor Climate Action (WCA)

Why should I care?
It's just foam!

Aqueous Fire Fighting Foam
(AFFF) Mandated by FAA

Contains PFAS



San Jose Mercury News, 11/18/2016

Here comes the chemistry!



Per- and Polyfluoroalkyl Substances

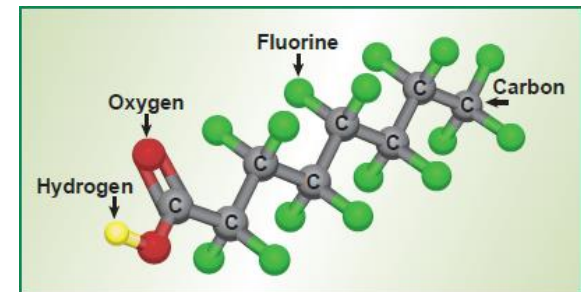
Introduced in 1940s by Dupont & 3M

AFFF: PFAS formulation required by FAA

Reformulated {
Water repellent clothing (Scotchgard™)
Non-stick cookware (Teflon™)
Stainmaster™ carpet



“A forever chemical”



PFAS Risks

U.S. Centers for Disease Control & Prevention

In tiny quantities there's increased risk for cancer, liver damage, decreased fertility, asthma, thyroid disease, elevated cholesterol

In drinking water, toxic compounds are frequently expressed in quantities like:

Parts per million (PPM)

Parts per billion (PPB)

Parts per trillion (PPT)

Example MDC Water Quality Standards

Nitrate 10 PPM = 10,000,000 PPT

Copper 1.3 PPM = 1,300,000 PPT

Lead 15 PPB = 15,000 PPT

PFAS Measured in PPT. What is 1 PPT?

1 part per trillion = 1 grain of sand in Olympic-sized swimming pool

Barkhamsted Reservoir Capacity = 30 billion gallons

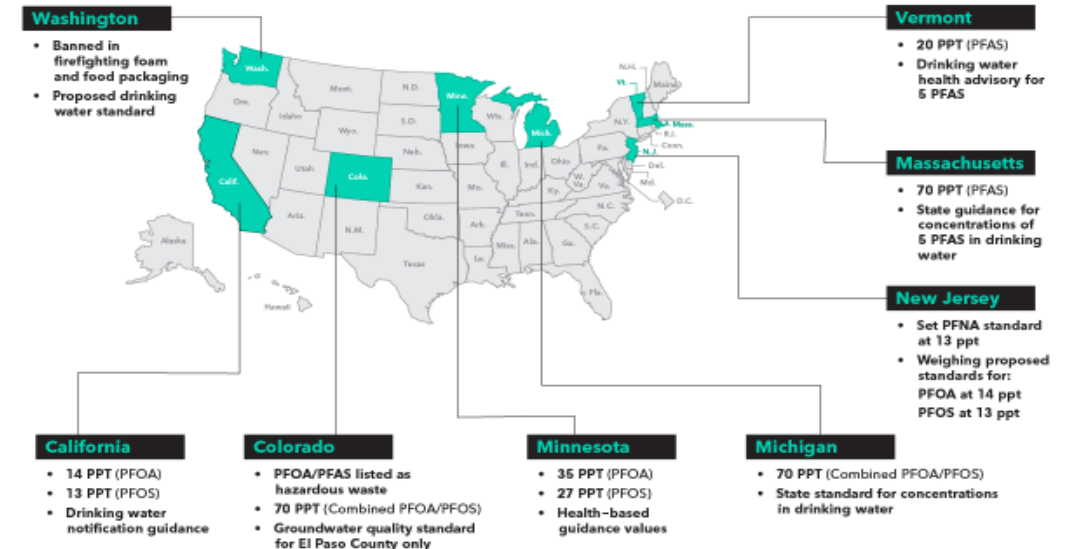
1 gallon in 33 Barkhamsted Reservoirs = 1 part per trillion

Sample Date	Location	Value PPT
June 9	Outfall	1,515,700
June 9	Boat Launch	10,253
June 10&11	Outfall	90,900

Nearby State Limits (PPT)		
NJ	VT	MA
13	20	70

Important Note: Contaminated section of river is NOT a source of MDC-supplied drinking water

States With Numerical PFAS Limits



Source: Bloomberg Environment 10/2/2018

Bloomberg Environment

What's next?



1

2

3

4

Testing

Water, sediment, macroinvertebrates, fish. More locations. Be aware of bioaccumulation.

BDL Firefighting

90 day renewable waiver to allow capping of drains in CAA run airports

River Users

Don't eat the fish

Government

Implement PFAS standards
Change FAA rules
Clean up

What can you do?



Lobby for Legislation

Blumenthal, Murphy, Larson
EPA
State of CT

PFAS in Home

Read up on PFAS containing household items
For example, throw away old (before 2013) peeling Teflon pans

River Users

Warn people fishing not to consume their catch
Help those who rely on fishing to feed their family

Government

Demand improved communication
Single point ownership of these types of events