Final PFAS National Primary Drinking Water Regulation, DoD PFAS Cleanup Actions, Maine Interim Maximum Contaminant Levels for PFAS Compounds

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Retired State of Maine Epidemiologist; Member of Restoration Advisory Board for the Former Naval Air Station Brunswick, Superfund Site; Member of Brunswick Area Citizens for a Safe Environment (BACSE)

February 24, 2024

Brunswick Area Citizens for a Safe Environment

Key Messages

- PFAS exposure over a long period of time can cause cancer and other illnesses that decrease quality of life or result in death
- PFAS exposure during critical life stages such as pregnancy or early childhood can also result in adverse health impacts
- PFAS pollution can have disproportionate impacts on small, disadvantaged, and rural communities already facing environmental contamination
- As the lead federal agency responsible to protect drinking water, EPA is using the best available science on PFAS to set national standards

Key Messages

- EPA is issuing this rule after reviewing extensive research and science on how PFAS affects public health, while engaging with the water sector and with state regulators to ensure effective implementation
- EPA also considered 120,000 comments on the proposed rule from a wide variety of stakeholders
- The final rule will reduce PFAS exposure for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious illnesses

Summary of Final Rule

> EPA is taking a signature step to protect public health by establishing legally enforceable levels for several PFAS known to occur individually and as a mixture in drinking water.

- **Jennifer McLain,** Director
Office of Ground Water and Drinking Water

Regulatory Levels: Maximum Contaminant Level Goals

- EPA is taking a signature step to protect public health by establishing legally enforceable levels for several PFAS known to occur individually and as mixtures in drinking water
- For **PFOA** and **PFOS**, EPA is setting a **non-enforceable health-based goal** of **zero**. This is called a Maximum Contaminant Level Goal (MCLG).
  - This reflects the latest science showing that there is no level of exposure to these two PFAS without risk of health impacts
- For PFNA, PFHxS, and HFPO-DA (GenX Chemicals), EPA is setting MCLGs of **10 parts per trillion**.

Regulatory Levels: Maximum Contaminant Levels

- EPA is setting enforceable Maximum Contaminant Levels (MCLs) at **4.0 parts per trillion** for PFOA and PFOS, individually
  - This standard will reduce exposure from these PFAS in our drinking water to the lowest levels that are feasible for effective implementation
- For PFNA, PFHxS, and HFPO-DA (GenX Chemicals), EPA is setting MCLs of **10 parts per trillion**

Regulatory Levels: Hazard Index

- EPA is also regulating, through a **Hazard Index** (HI) **MCL**, mixtures of four PFAS— **PFNA**, **PFHxS**, **HFPO-DA (Gen X)**, and **PFBS**
- Decades of research show some chemicals, including some PFAS, can combine in mixtures and have additive health effects, even if the individual chemicals are each present at lower levels
- PFAS can often be found together and in varying combinations as mixtures

Regulatory Levels: Hazard Index

- Hazard Index MCL applies to any mixture containing two or more of PFHxS, PFBS, GenX Chemicals (HFPO-DA), and PFNA
- Water systems use sampling results as inputs into a formula comparing them to their **Health-Based Water Concentration** (HBWC)
- These are the level below which no health effects are known or expected for that PFAS and allow for an adequate margin of safety
- The **final HBWCs** for each of the four PFAS are below

Compound	Health-Based Water Concentration (ppt)
PFHxS	**10**
GenX Chemicals	**10**
PFNA	**10**
PFBS	**2000**

Regulatory Levels: Hazard Index

- The Hazard Index is a long-established approach that the EPA regularly uses, for example in the Superfund program, to determine the health concerns associated with exposure to chemical **mixtures**

- The Hazard Index is calculated by adding the ratio of the water sample concentration to a Health-Based Water Concentration

Regulatory Levels: Summary

Chemical	Maximum Contaminant Level Goal (MCLG) Non-Enforcable	Maximum Contaminant Level (MCL) Enforcable
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
Mixture of two or more: PFHxS, HFPO-DA, PFNA, and **PFBS**	Hazard Index of 1	Hazard Index of 1

*Compliance is determined by running annual averages at the sampling point

Costs and Benefits

- By reducing exposure to PFAS, this final rule will:
  - Save **thousands of lives**
  - Prevent **tens of thousands of serious illnesses**, including cancers, liver disease, heart attacks, and strokes
  - Reduce immune impacts and developmental impacts to pregnant women, children and babies
- The benefits are quantified by considering the costs of illness such as **lost wages**, **medical bills**, and the **value of every life lost**
- The **quantifiable** health benefits of this rule are estimated to be **$1.5 billion** annually in the US
- There are also many other substantial health impacts that will be avoided which EPA does not have data to quantify

Costs and Benefits

- Compliance with this rule is estimated to cost approximately $1.5 billion annually. These costs include
- water system monitoring
- communicating with customers, and if necessary
- obtaining new or additional sources of water or
- installing/maintaining treatment technologies to reduce six PFAS in drinking water
- EPA considered all available information and analyses for costs and benefits, quantifiable and non-quantifiable, of this rule and determined that the **benefits justify the costs**

Implementation

Under the rule requirements, public water systems must:

- Conduct initial and ongoing compliance monitoring for the regulated PFAS
- Implement solutions to reduce regulated PFAS in their drinking water if levels exceed the MCLs
- Inform the public of the levels of regulated PFAS measured in their drinking water and if an MCL is exceeded

Implementation: Timeframes for Water Systems

Within **three years** of rule promulgation (2024 – 2027):

- Initial monitoring must be complete

Starting **three years** following rule promulgation (2027 – 2029):

- Results of initial monitoring must be included in Consumer Confidence Reports (i.e., Annual Water Quality Report)
- Regular monitoring for compliance must begin, and results of compliance monitoring must be included in Consumer Confidence Reports
- Public notification for monitoring and testing violations

Starting **five years** following rule promulgation (starting 2029)

- Comply with all MCLs
- Public notification for MCL violations

Implementation

- EPA's final rule does not dictate how water systems remove these contaminants. The rule is flexible, allowing systems to determine the best solutions for their community.
- Drinking water utilities can choose from multiple proven water treatment options to remove PFAS from drinking water including
  - granular activated carbon (GAC)
  - reverse osmosis
  - ion exchange systems
- In some cases, systems can close contaminated wells or obtain new uncontaminated source of drinking water.

Memo: Prioritization of DoD Cleanup to Implement Federal Drinking Water Standards for PFAS (Sept 2024)

- …recognizes the need to take quick actions…to ensure cleanup begins as quickly as possible,
- …**will initiate removal actions** to address **private drinking water wells impacted by PFAS** from **DoD activities** where **at or above three times the MCL** (i.e., *PFOA = 12 ppt; PFOS = 12 ppt; PFHxS = 30 ppt; GenX = 30 ppt; PFNA = 30 ppt; HI = 3*)
- This **prioritizes action** where PFAS levels from **releases are the highest** rather than delay action via CERCLA process
- Will use a CERCLA "Time Critical Removal Action" for these efforts

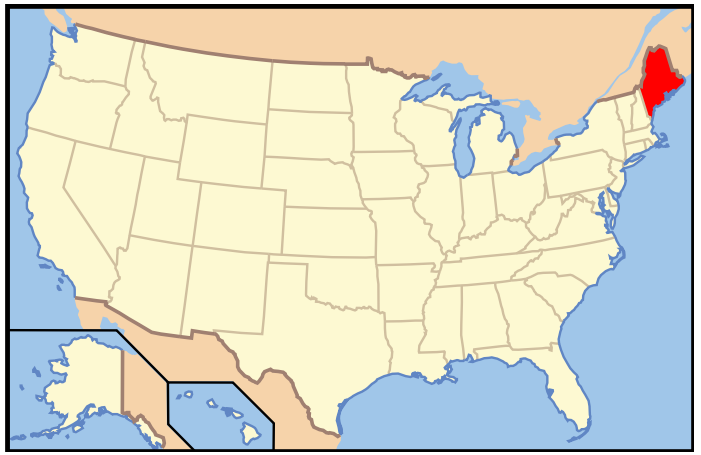
US States May Develop Their Own Clean-up Standards

- **Primacy agencies** must have regulations for contaminants regulated under National Primary Drinking Water Regulations (NPDWRs) that are **no less stringent** than the regulations promulgated by the EPA
- States have up to **two years to develop regulations** after the date of rule promulgation to apply for approval (by April 2026)

State of Maine Draft MCLs

In June 2021 Maine **promulgated interim standard of 20 ppt** for the six PFAS (alone or in combination) which is currently still in effect

USEPA Maximum Contaminant Level - PFAS	**Maine Interim Drinking Water Standard - PFAS**
PFOA	PFOA
PFOS	PFOS
PFNA	PFNA
PFHxS	PFHxS
PFBS	**PFHpA**
HPFO_DA (GenX) chemicals	**PFDA**



Questions?

Drinking Water Regulations

US EPA (Federal)

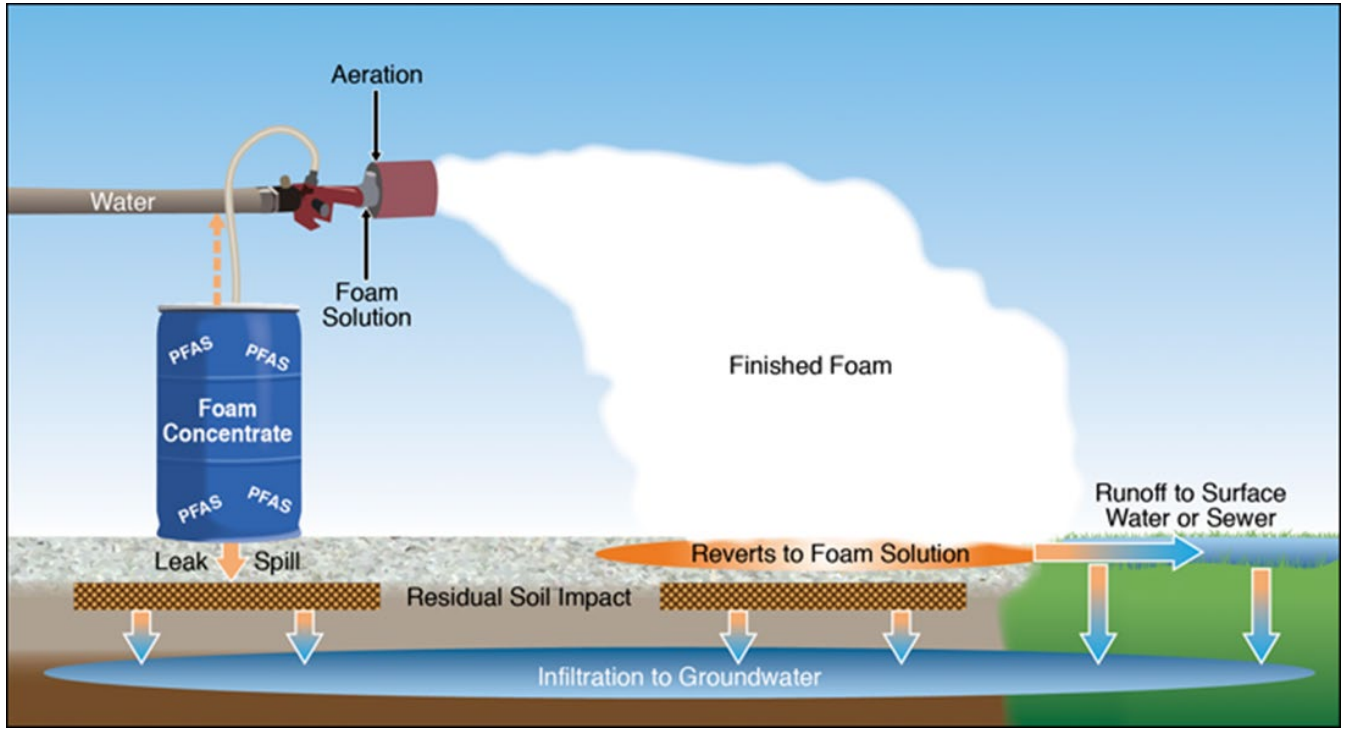
Applies to public water systems only (not private wells) and five years (until 2029) to comply

Compound	Maximum Contaminant Levels (MCLs)
PFOA	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	4.0 ppt
PFHxS	10 ppt
PFNA	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index

Maine DEP

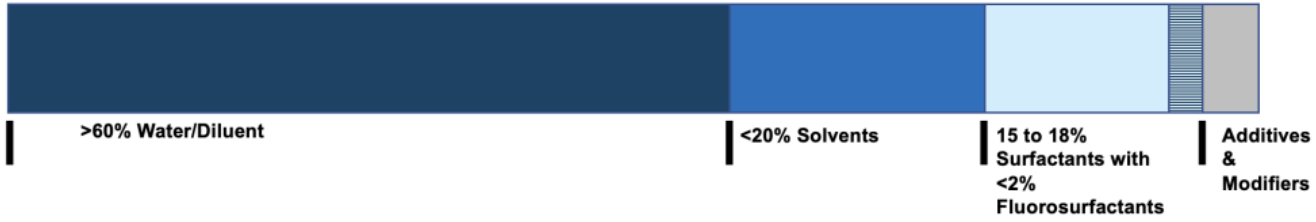
Compound	Interim drinking water standard
Sum of 6 PFAS (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA)	20 ppt

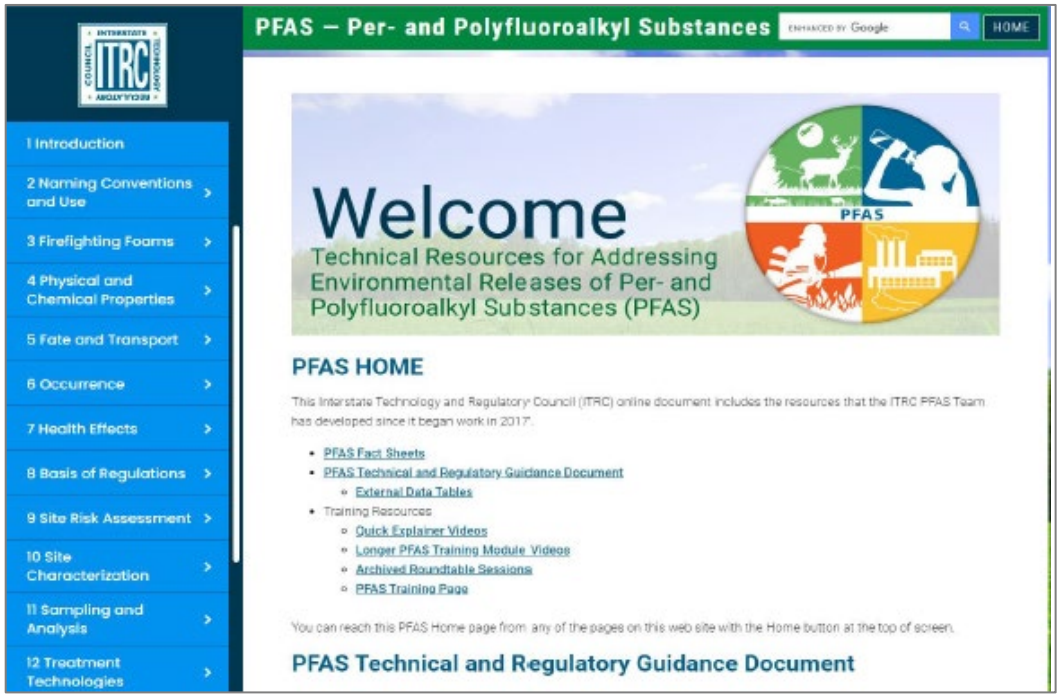
State and Federal Drinking Water Standards do not apply to private wells!

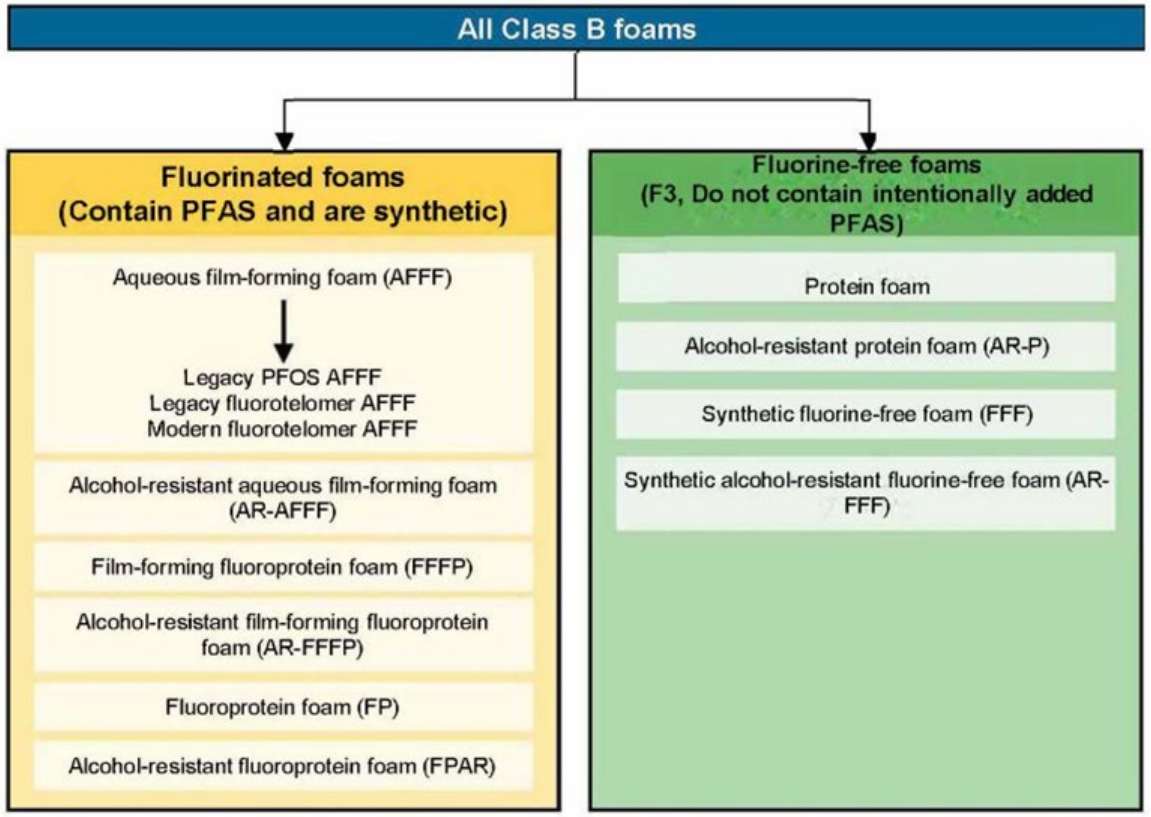


AFFF

Aqueous Film-Forming Foam







CLASS B Foams- Used to fight fires involving flammable and combustible liquids and gases; petroleum greases, tars, oils and gasoline; and solvents and alcohols

Legacy PFOS AFFF

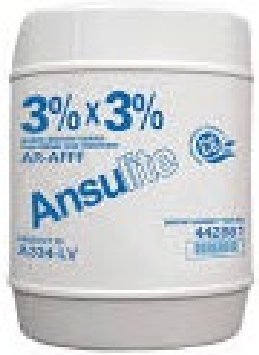
PFAS composition mostly PFOS (3M Lightwater)

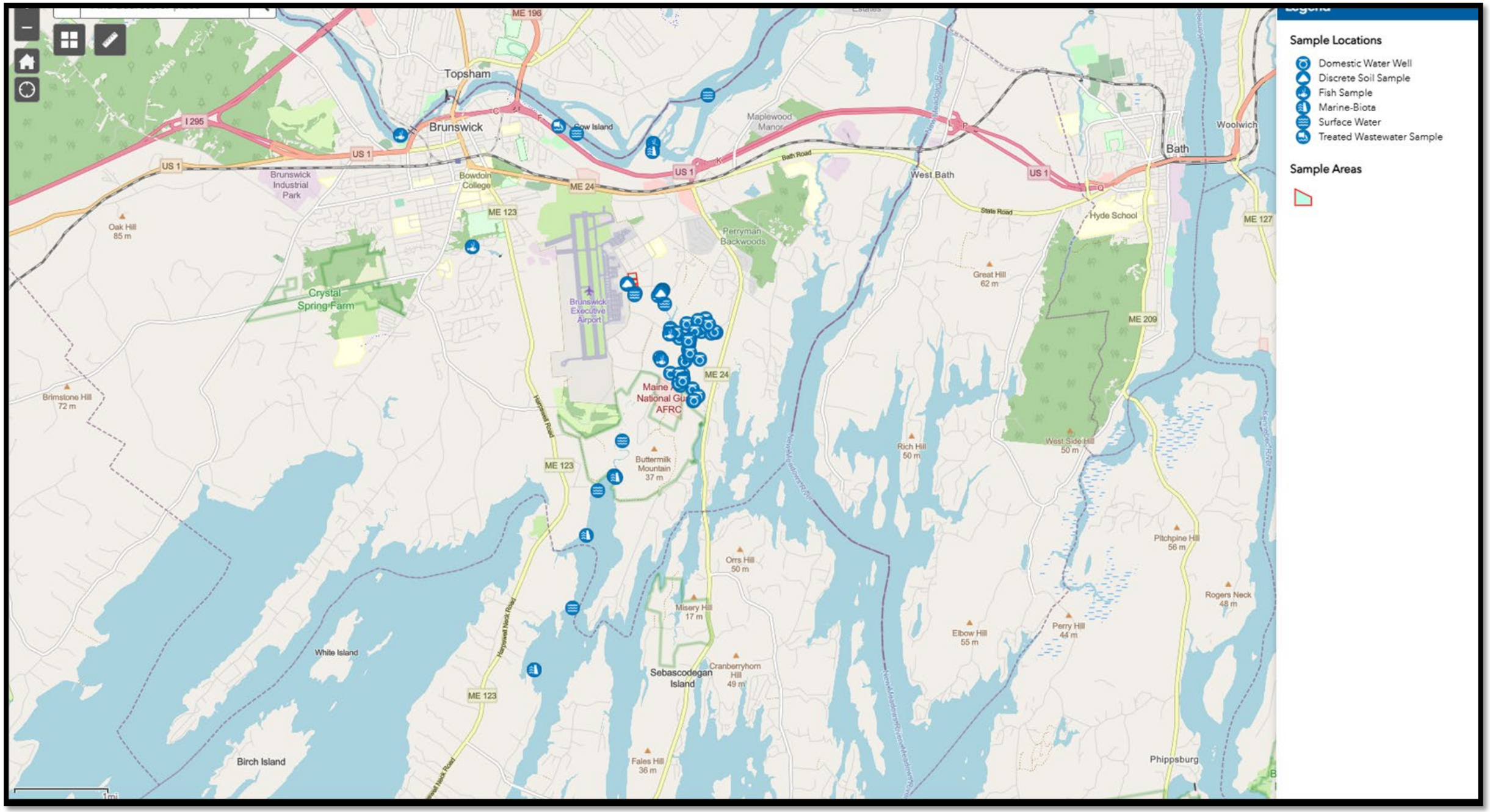
Legacy Fluorotelomer AFFFs

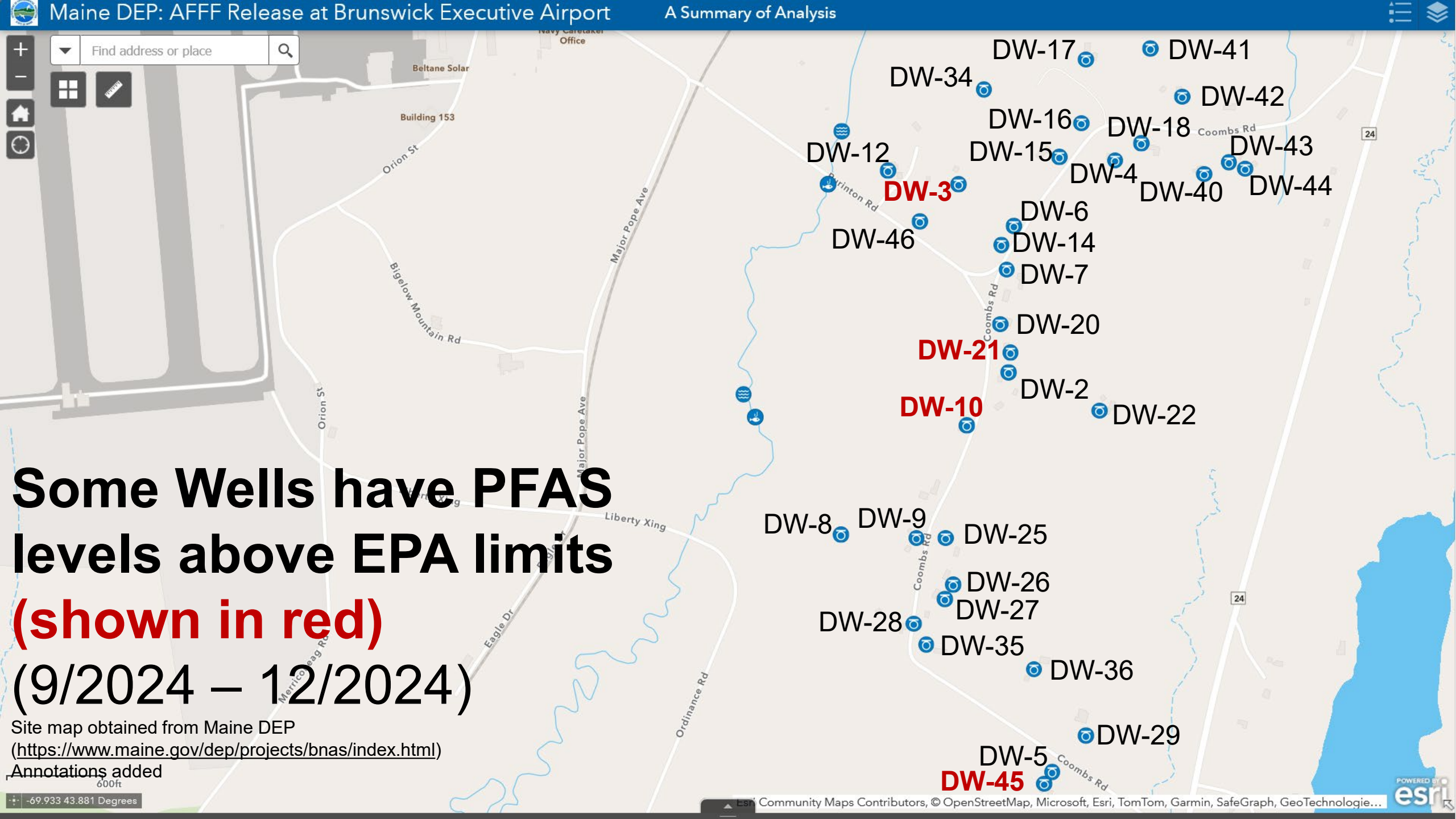
Contain polyfluorinated PFAS which can transform to PFCAs, Contain no PFOS and cannot transform to PFOS. (Ansulite)

Modern Fluorotelomer AFFFs

Developed in response to PFOA/PFOS phaseout, contains short chain PFAS(C6), may have trace amounts (ppb) PFOA, may transform to PFCAs.

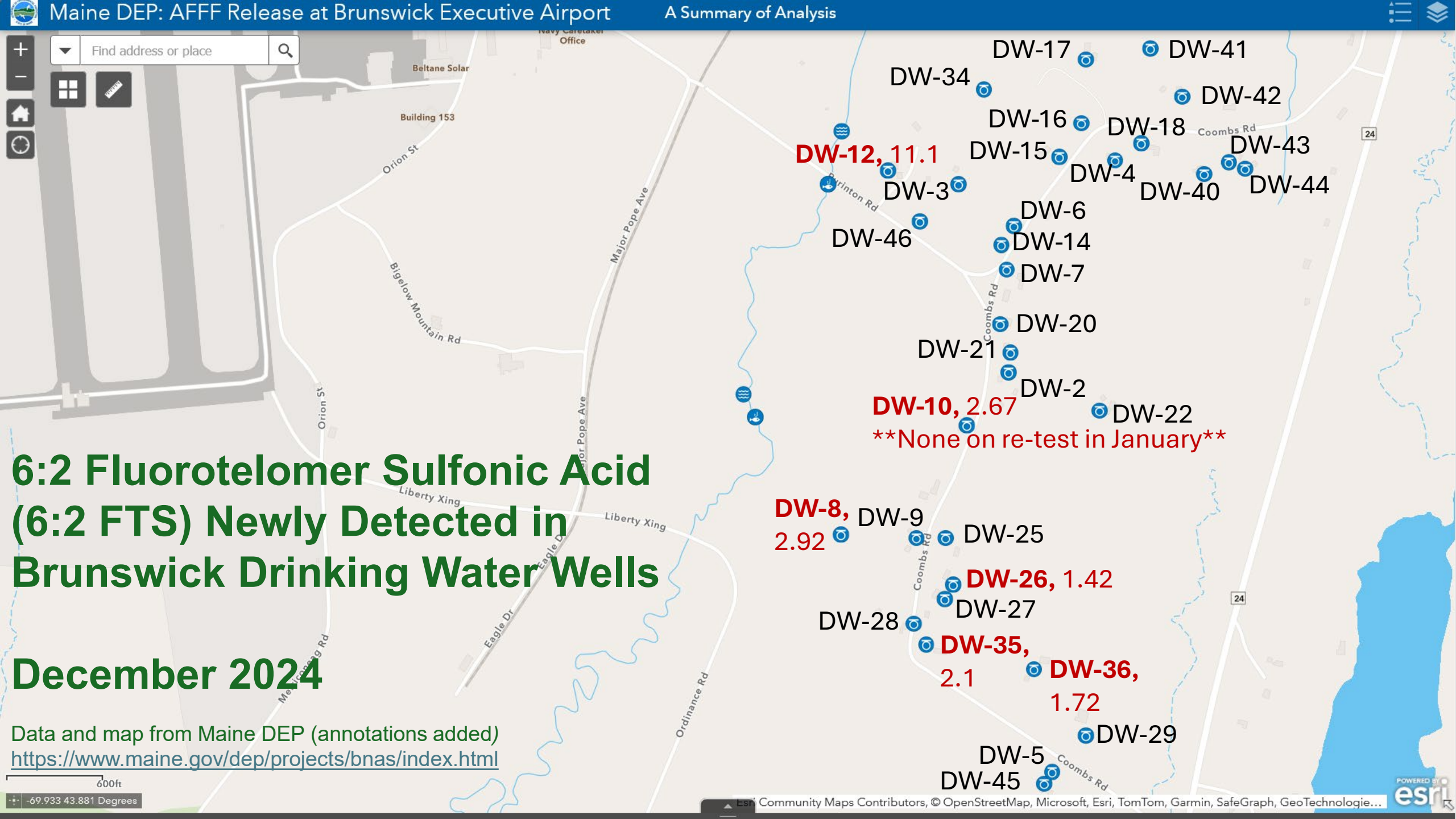



Legend
Sample Locations
Domestic Water Well
Discrete Soil Sample
Fish Sample
Marine-Biota
Surface Water
Treated Wastewater Sample
Sample Areas
Topsham
Brunswick
Cow Island
Maplewood Manor
Woolwich
Bath
West Bath
Bowdoin College
Brunswick Industrial Park
Perryman Backwoods
Hyde School
Crystal Spring Farm
Brunswick Executive Airport
Great Hill 62 m
Oak Hill 85 m
Brimstone Hill 72 m
Buttermilk Mountain 37 m
Rich Hill 50 m
West Side Hill 50 m
Pitchpine Hill 56 m
Rogers Neck 48 m
Orrs Hill 50 m
Misery Hill 17 m
Elbow Hill 55 m
Perry Hill 44 m
Cranberryhorn Hill 49 m
Sebascodegan Island
White Island
Birch Island
Fales Hill 36 m
Phippsburg
I 295
US 1
ME 196
ME 24
ME 123
ME 209
ME 127
Bath Road
State Road
Harpswell Road
Harpswell Neck Road
New Meadows River

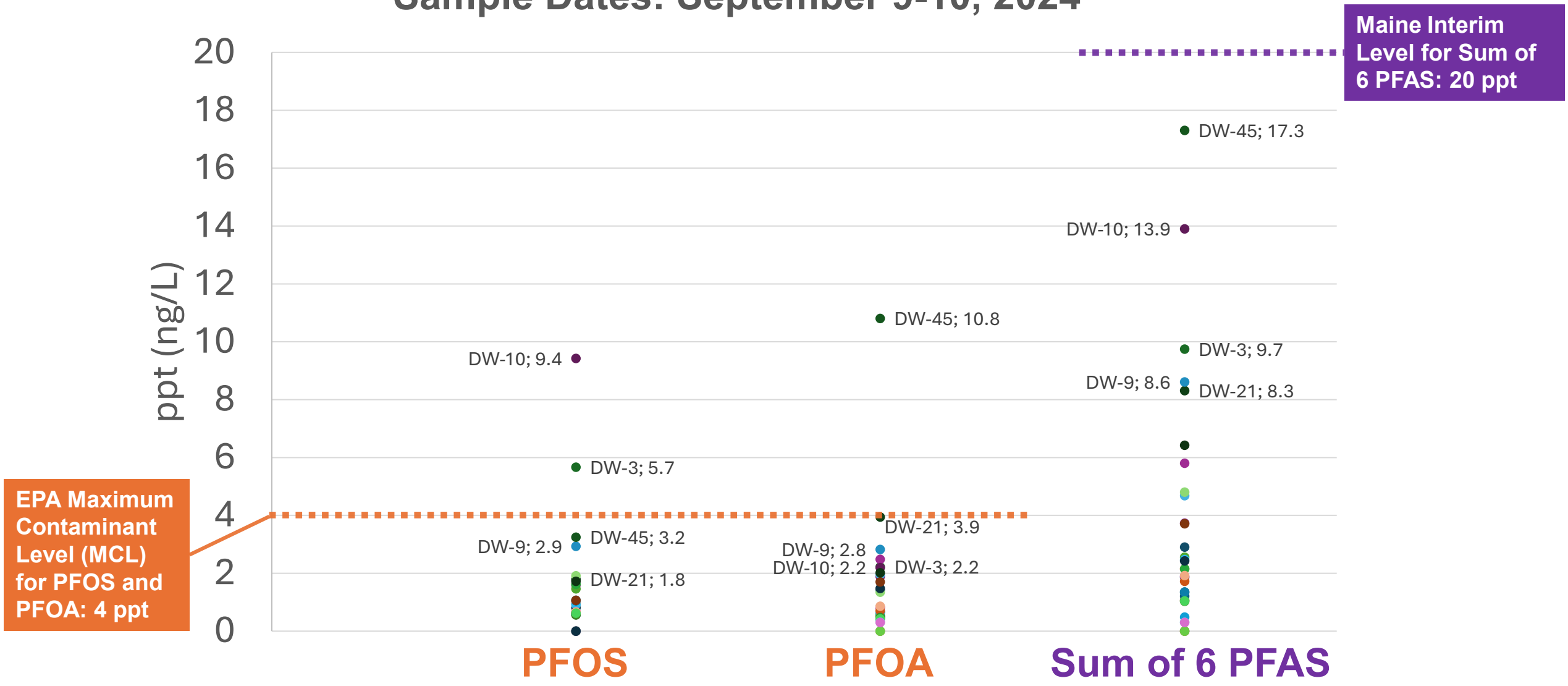


Some Wells have PFAS levels above EPA limits (shown in red) (9/2024 – 12/2024)

Site map obtained from Maine DEP (https://www.maine.gov/dep/projects/bnas/index.html)
Annotations added

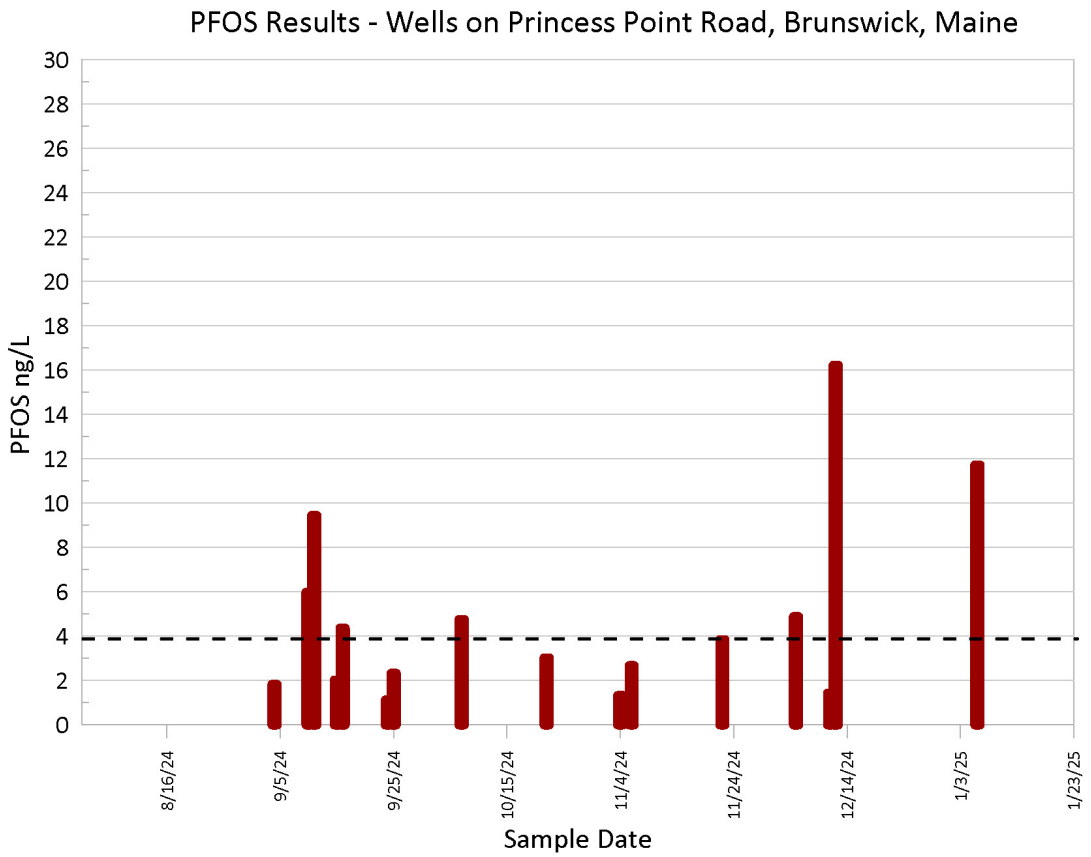

Maine DEP: AFFF Release at Brunswick Executive Airport
A Summary of Analysis
Find address or place
Beltane Solar
Building 153
Orion St
Bigelow Mountain Rd
Major Pope Ave
Liberty Xing
Eagle Dr
Ordinance Rd
Coombs Rd
Barrington Rd
DW-17
DW-41
DW-34
DW-42
DW-16
DW-18
DW-12, 11.1
DW-15
DW-43
DW-4
DW-3
DW-40
DW-44
DW-6
DW-46
DW-14
DW-7
DW-20
DW-21
DW-2
DW-10, 2.67
DW-22
None on re-test in January
DW-8, 2.92
DW-9
DW-25
DW-26, 1.42
DW-27
DW-28
DW-35, 2.1
DW-36, 1.72
DW-29
DW-5
DW-45
6:2 Fluorotelomer Sulfonic Acid (6:2 FTS) Newly Detected in Brunswick Drinking Water Wells
December 2024
Data and map from Maine DEP (annotations added)
https://www.maine.gov/dep/projects/bnas/index.html
600ft
-69.933 43.881 Degrees
Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologie...
esri

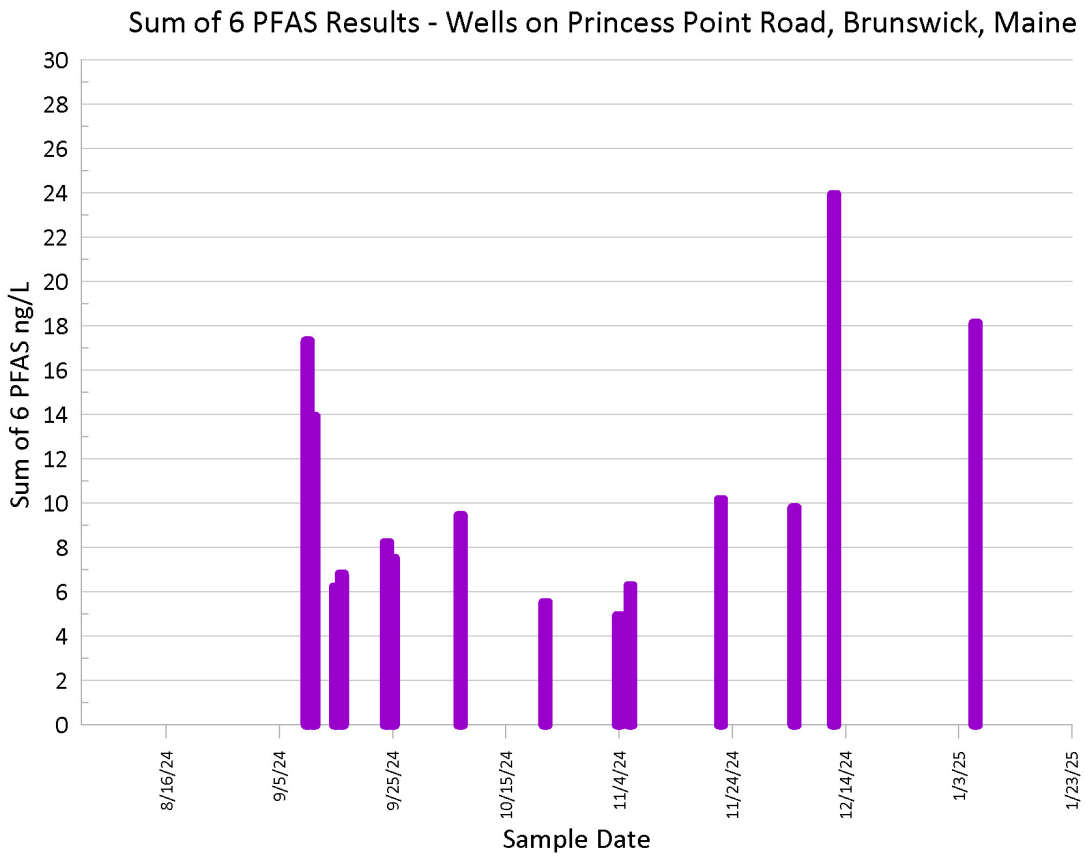
Brunswick Water Wells
Tested by Maine DEP
Sample Dates: September 9-10, 2024



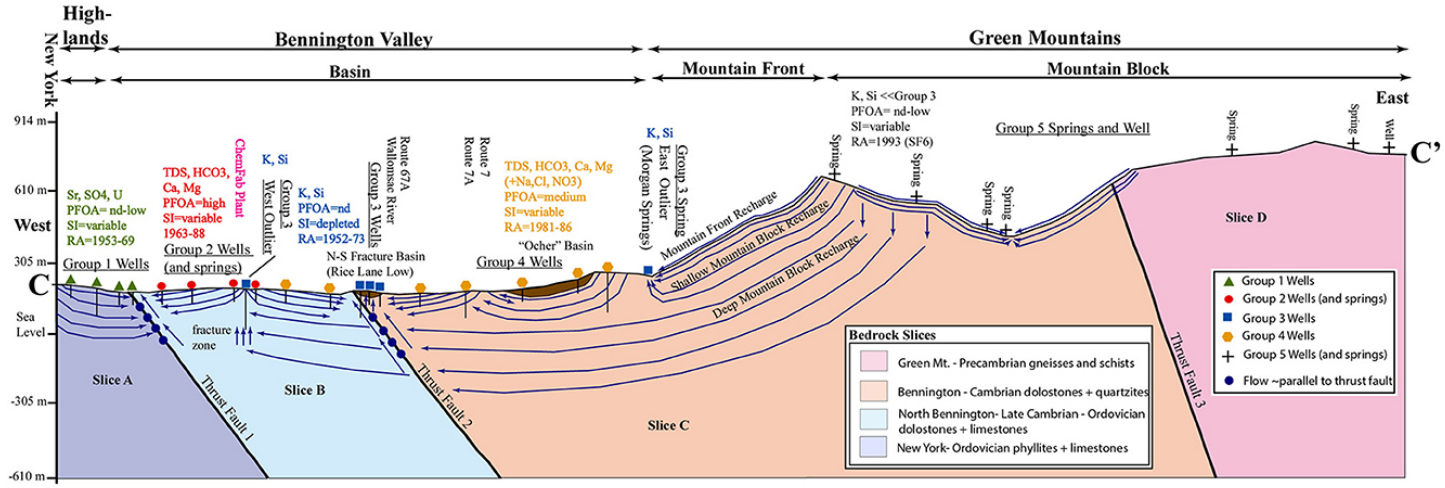
Data obtained from Maine DEP: https://www.maine.gov/dep/projects/bnas/index.html. Plot prepared by Brunswick United for a Safe Environment (11/11/2024).

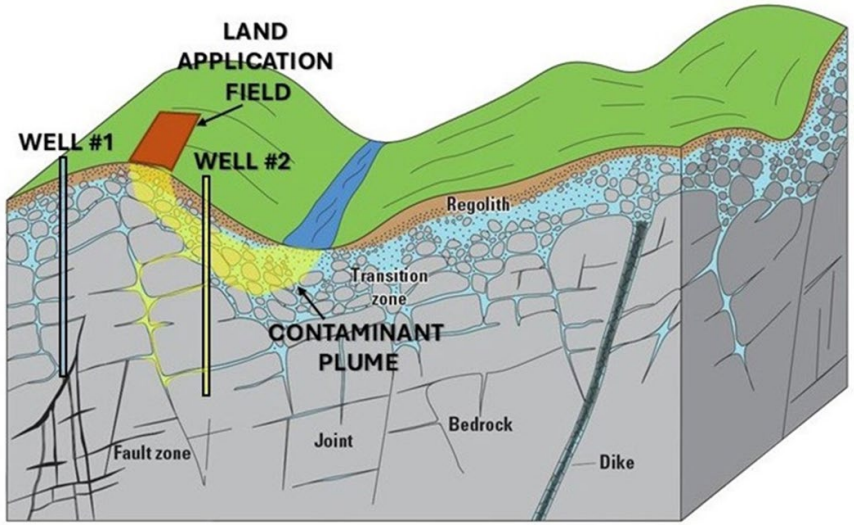
PFAS Results from Princess Point Road Wells

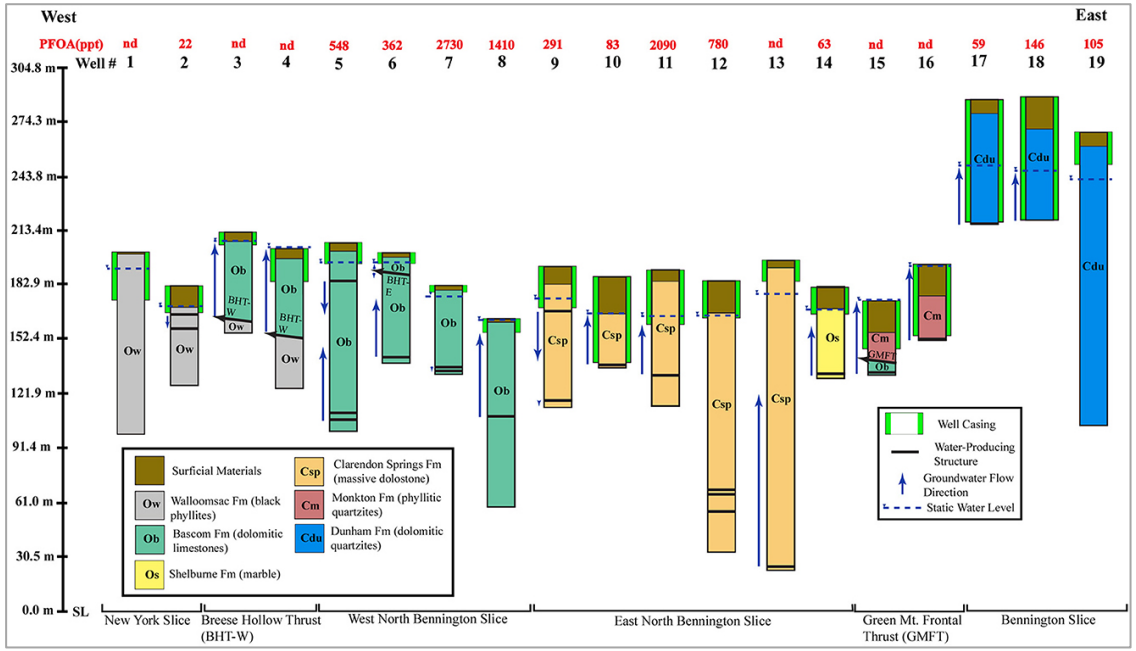




Groundwater flow and PFAS transport in fractured bedrock aquifers is *very complex*







Maine Department of Health and Human Services
Center for Disease Control and Prevention
Drinking Water Program

Private Well Technical Assistance

The Drinking Water Program can provide free help to private well owners who have questions about their wells, water sampling, and water treatment. (A "private well" being any well that is not regulated by the DWP as a Public Water System.)
This service offers property owners assistance with…

•**General well questions** – Specialty Well applications, ideal well location, and potential threats to wells and water quality.

•**Drinking water and well drilling rules, best practices, and construction standards** such as casing requirements and setbacks to septic systems.

•**Sampling** – help with sample collection, explanation of test results, and follow-up testing. Guidance on laboratories is also available.

•**Water Quality Review** – contaminants and the need for treatment.

•**Treatment** – exposure risk assessment and treatment types to consider.

•**Disinfection advice** on proper methods and products.

•**Potential conflicts** between homeowners and drillers, abutting land owners, and local officials.

There is no charge for private well technical assistance. This is a free service of the Maine CDC Drinking Water Program.

To learn more, please contact **Alex Pugh:** Email, or phone (207) 287-2070.

Water Treatment Options

EPA **FACT SHEET**

Reducing PFAS in Your Drinking Water with a Home Filter

In April 2024, the U.S. Environmental Protection Agency (EPA) finalized the first-ever national drinking water standards for several PFAS in drinking water. If you learn there are PFAS in your drinking water, then you may consider installing a home filter. A home filter could be an effective way to reduce PFAS levels, and there are a variety of types of filters available at many different price points.

What are PFAS?

PFAS are a category of chemicals that have been used in industry and consumer products since the 1940s. PFAS repel oil and water and resist heat, making them useful in a variety of products, including nonstick cookware and food packaging, waterproof clothing, stain-resistant furniture, and firefighting foam. People can be exposed to PFAS in a variety of ways, and PFAS in drinking water can be a significant portion of a person's total PFAS exposure. Exposure to PFAS may lead to health problems, so reducing your exposure to PFAS lowers your risk for these health problems.

Learn About PFAS in Your Water and Decide if a Filter is Right for You

Many public water systems already have test results for PFAS available. First, contact your local water provider to find out which PFAS, if any, are in your drinking water. You can also search EPA's database of PFAS water system test results or EPA's map-based PFAS Analytic Tools to see if your water system has been tested as part of EPA's monitoring program. If PFAS have not been measured in your water, or if PFAS have been measured but are below federal limits, a filter may not be useful to you.

Your state environmental protection agency or health department may also have more information about PFAS in your drinking water and recommendations for actions you can take.

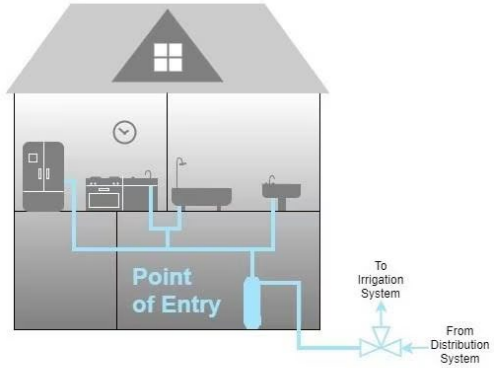
Types of Filters

There are many water filters on the market, but not all filters address PFAS. If you choose to use a filter, be sure to get one that is certified to remove or reduce PFAS in drinking water. As of April 2024, filter certifications focus on removing the chemicals PFOA and PFOS, which are two specific types of PFAS. A filter can cost as little as $20 or more than $1,000 (not including maintenance costs), with variations between types, brands, and whether they are pitcher filters, installed on your faucet, or for your entire home. There may also be maintenance- and disposal-related costs that also vary between filters. Here are some of the types of filters that are currently available and can be effective at reducing PFAS:

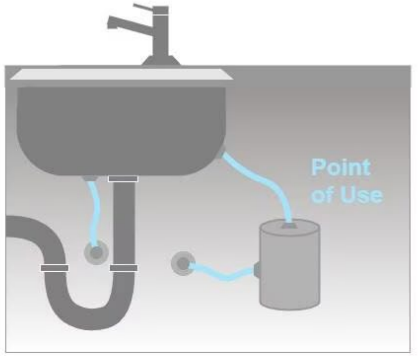
- **Charcoal (Granular Activated Carbon or GAC)**: These filters use carbon to trap chemicals as water passes through them.
- **Reverse Osmosis (RO) Systems**: Reverse osmosis is a process that forces water through an extremely thin barrier that separates chemicals from the water.
- **Ion Exchange Resins**: Resins are tiny beads that act like powerful magnets that attract and hold the contaminated materials from passing through the water system.

Check for Certification

Certification by an independent entity is an assurance that the filter works as the manufacturer says it does. To



Point of Entry (POE) Treatment



Point of Use (POU) Treatment

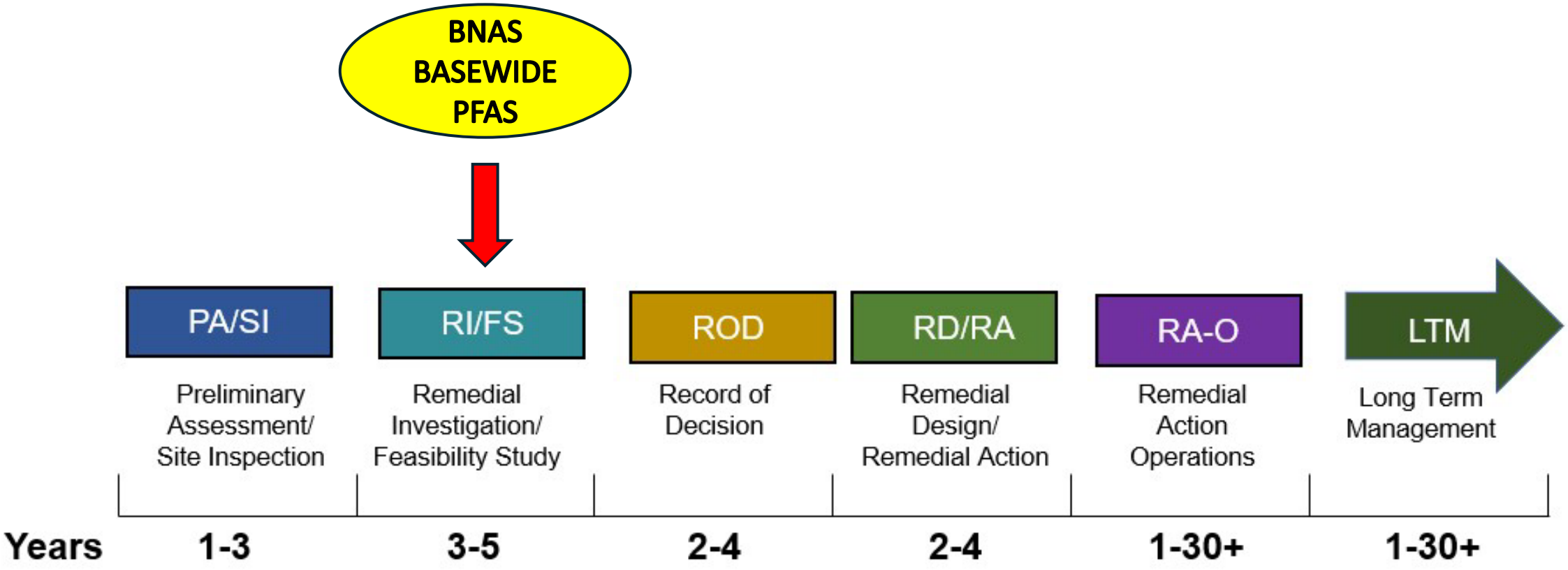
Table 9: Average Costs of Filtration System Installations Per Individual System	
Filter System Installation (One time)	**$3,545**
Pre-Treatment Systems (One time only as needed)	**$3,875**
Sheds† (One time only as needed)	**$8,500**
Filter Changeouts* (Annual cost per changeout)	**$1,535**
Routine Sampling ** (Annual cost)	**$3,500**

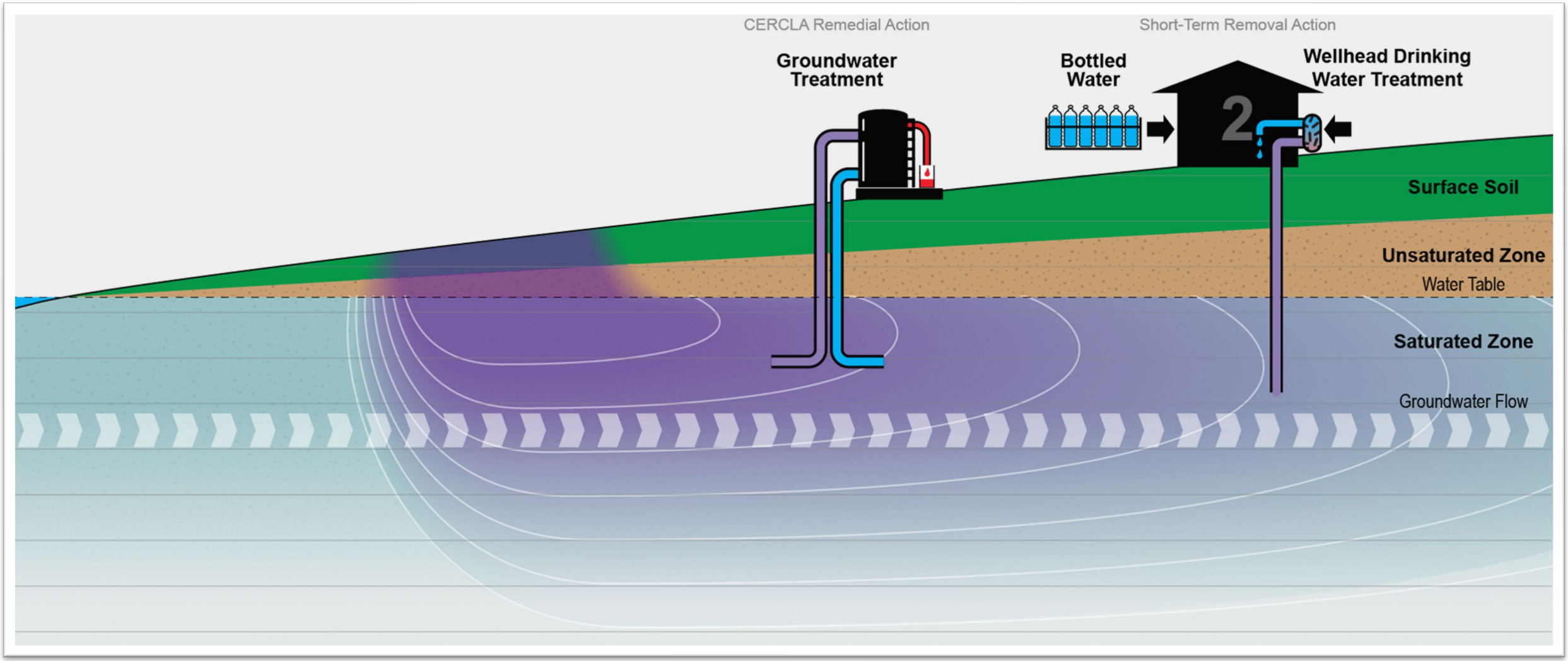
** The frequency of filter changeouts varies based on the levels of PFAS detected in a well and how the system is functioning. It can be as little as once a year, or as much as four times a year.*

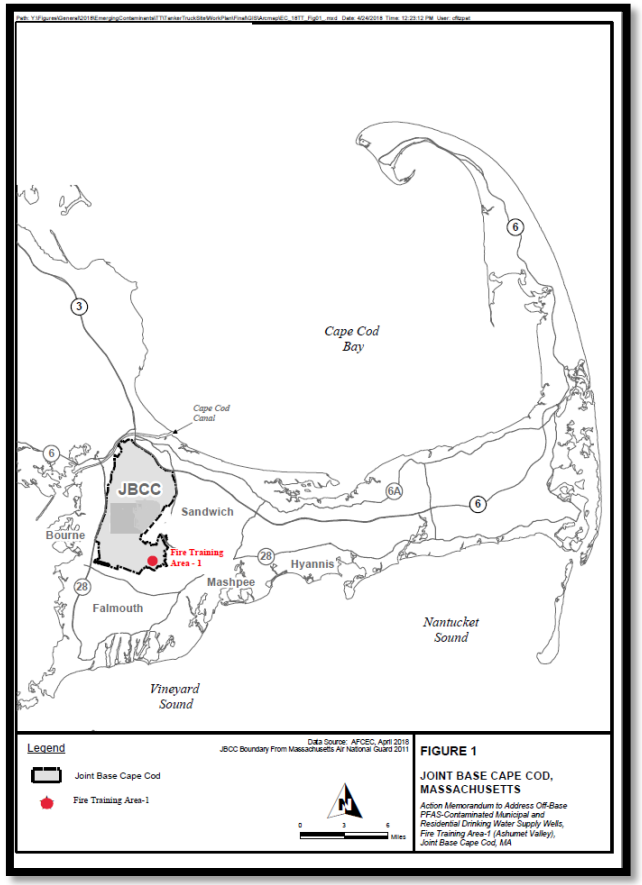
*** This is dependent on contractor rates. Some are higher than this per residence, and some are lower. The frequency of sampling is determined once the system is confirmed to be working effectively and may be as frequent as monthly or as little as once or twice a year. The range of costs is between $2,500 to $4,500 per year.*

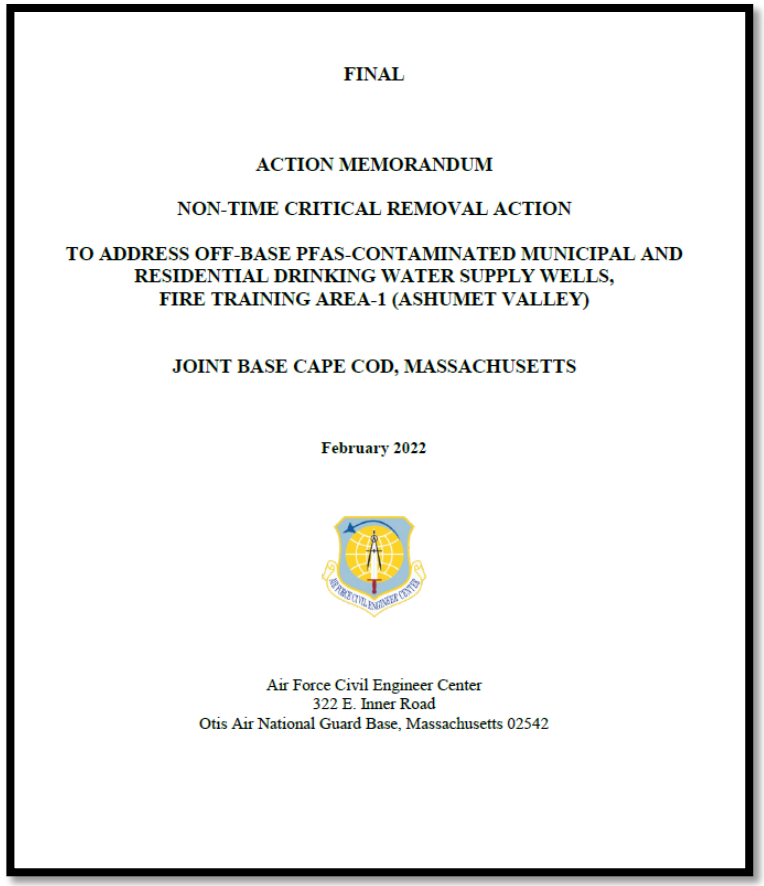
†Installation of sheds is relatively uncommon. Since the beginning of the investigation just under 20 sheds have been installed.

The CERCLA Investigation and Cleanup Process




CERCLA Remedial Action
Short-Term Removal Action
Groundwater Treatment
Bottled Water
Wellhead Drinking Water Treatment
2
Surface Soil
Unsaturated Zone
Water Table
Saturated Zone
Groundwater Flow





FINAL

ACTION MEMORANDUM

NON-TIME CRITICAL REMOVAL ACTION

TO ADDRESS OFF-BASE PFAS-CONTAMINATED MUNICIPAL AND RESIDENTIAL DRINKING WATER SUPPLY WELLS, FIRE TRAINING AREA-1 (ASHUMET VALLEY)

JOINT BASE CAPE COD, MASSACHUSETTS

February 2022

Air Force Civil Engineer Center
322 E. Inner Road
Otis Air National Guard Base, Massachusetts 02542

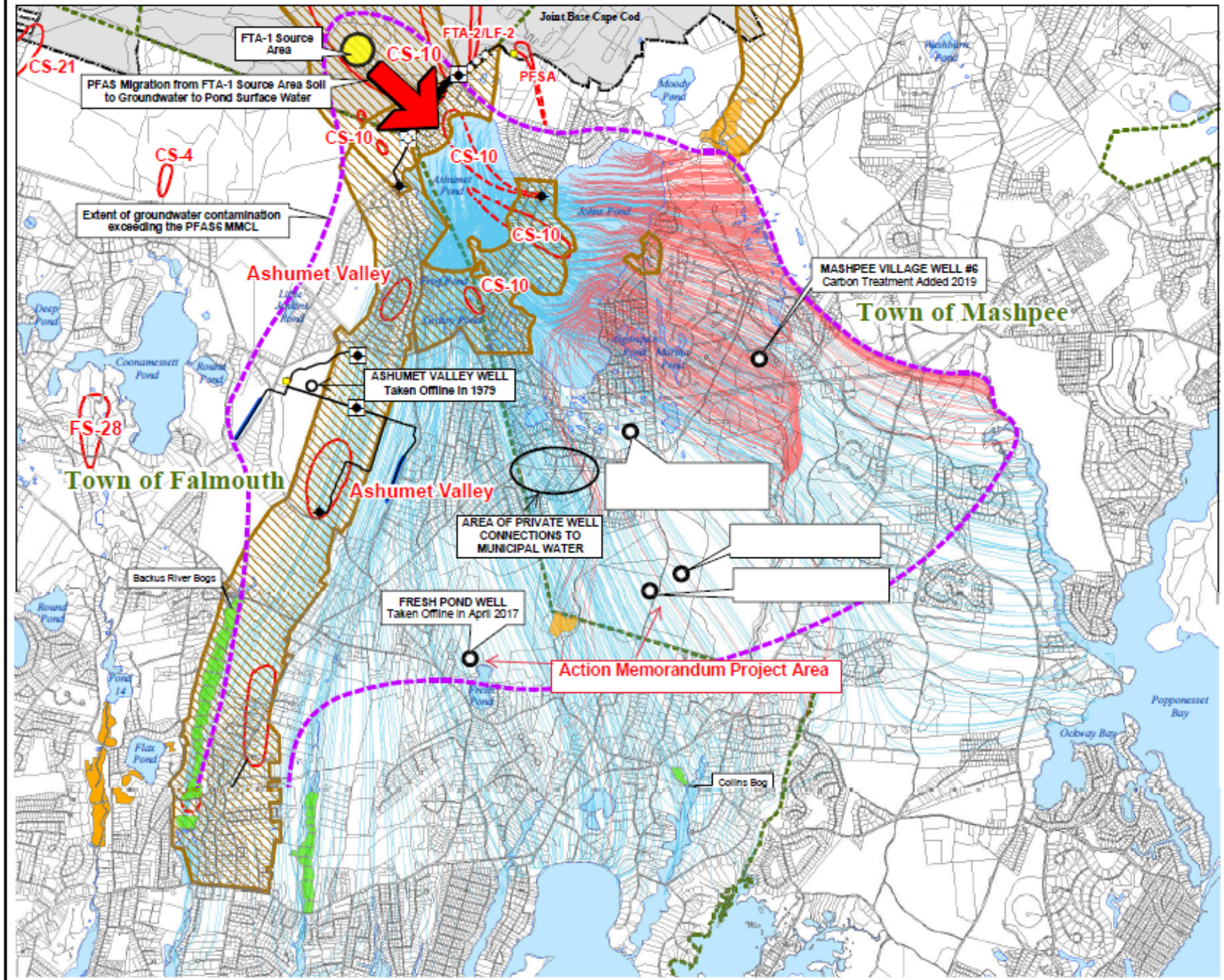
CERCLA and the NCP along with EPA Office of Solid Waste and Emergency Response (OSWER) guidance equate "threat" and "danger" with "unacceptable risk"

(see 42 United States Code (USC) § 9604(a)(1) and (b)(1)), 40 CFR § 300.430(d) and OSWER 9355.0-30, Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, 22 April 1991).

From Action Memorandum

Typically, under the NCP, an unacceptable human health risk is present when cumulative human health cancer risk exceeds 1×10-4 and the non-cancer hazard index exceeds one. The EPA lifetime HAs are the concentration of PFOA and PFOS in drinking water at which adverse health effects are not anticipated to occur over a lifetime.

As sampling results for PFOS and PFOA show exceedances of the EPA lifetime HA in drinking water wells with the same hydrogeological conditions as the drinking water wells that exceed the PFAS6 MMCL but are below the EPA lifetime HA, there are sufficient grounds to find that an imminent and substantial danger to human health may exist.



Legend

- Registered Community and Non-Community Water Supply Wells
- Extraction Well (On)
- Reinjection Well (On)
- Extraction Well (Off)
- Reinjection Well (Off)
- Treatment Facility
- Plume Boundary (Dashed Where Inferred)
- Town Boundary
- Infiltration Trench/Gallery
- Treatment System Pipeline
- Joint Base Cape Cod
- Land Use Control Area
- Cultivated Cranberry Bog
- Cranberry Bog No Longer In Production
- Approximate Ashumet Valley Area of PFAS6 Contamination

Particle Tracks

- Johns Pond Particle Tracks
- Ashumet Pond Particle Tracks

MassDEP PFAS6 MMCL (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA, and PFDA) = 0.02 µg/L
MMCL = Massachusetts Maximum Contaminant Level

Note: Particle tracks represent approximate groundwater flow paths and do not represent areas of contamination. Particle tracks generated with the AFCEC IRP Regional Groundwater Flow Model by starting particles in each model cell that represents Ashumet Pond and Johns Pond. It is noted that detailed hydrogeologic data for areas within the regional model domain beyond the existing IRP plume footprints, including the areas of Mashpee and Falmouth south and east of Ashumet Pond and Johns Pond, is limited. Therefore, the particle tracks illustrated provide only a general estimate of the groundwater flow field downgradient of these ponds and should be interpreted with caution.

0 1,400 2,800 Feet

Data Source:
AFCEC, June 2021
JBCC Boundary from Massachusetts Air National Guard 2011

FIGURE 2

FTA-1 (ASHUMET VALLEY) APPROXIMATE PFAS6 EXTENT

Action Memorandum to Address Off-Base PFAS-Contaminated Municipal and Residential Drinking Water Supply Wells, Fire Training Area-1 (Ashumet Valley), Joint Base Cape Cod, MA

The former Naval Air Warfare Center (NAWC) Warminster, an 824-acre facility in Warminster Township, Ivyland Borough, Bucks County, Pennsylvania, is located in a populated suburban area surrounded by private homes, various commercial and industrial activities, and a golf course. The base is now closed and has been redeveloped for nonmilitary use by the Bucks County Federal Lands Reuse Authority

Sound Familiar ?

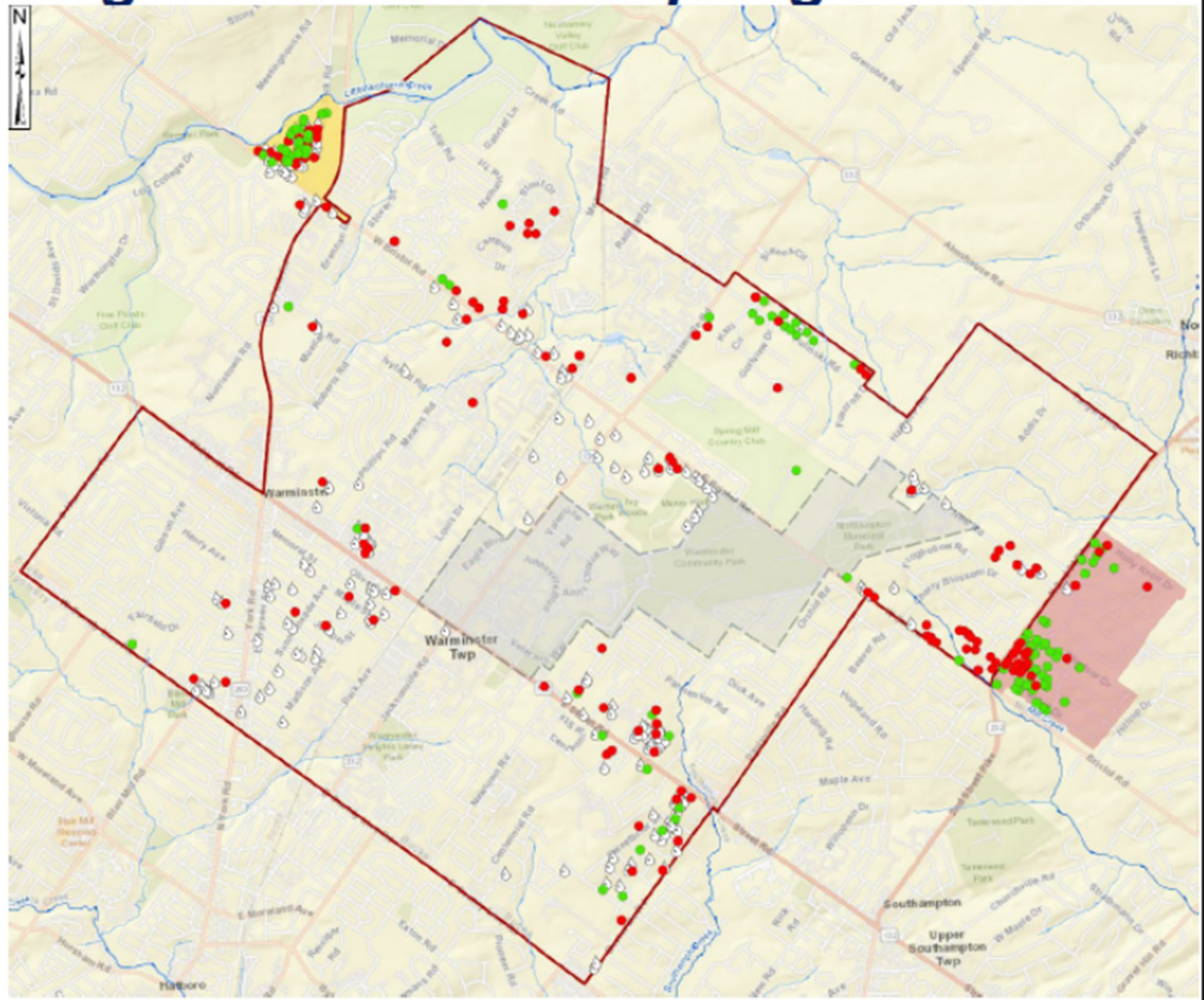
Private Drinking Water Well Sampling Area

Private drinking water well sampling for PFOA/PFOS and provision of bottled drinking water is being performed by Tetra Tech, a U.S. Navy contractor.

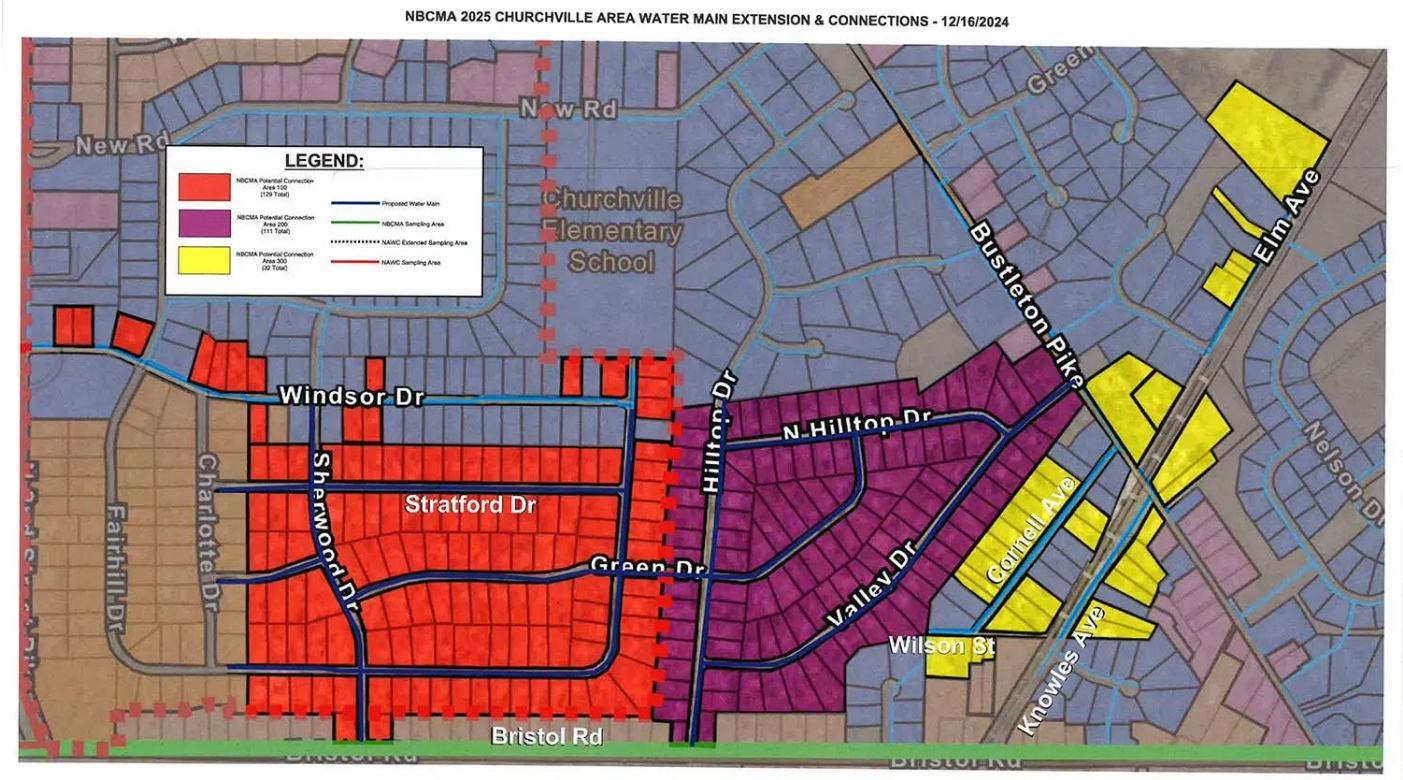
Point of contact is:
Coleman Nelson
Tetra Tech Sampling Coordinator
E-mail: coleman.nelson@tetratech.com
Phone: (610) 491-9688

Legend

- PFOA or PFOS Concentration > PA MCL: 111
- PFOA or PFOS Concentration < PA MCL: 74
- Public Water Connection (Some not by Navy): 185
- Creek
- Tributary
- NAWC Sampling Area
- NAWC Expanded Sampling Area
- Hartsville Area



NORTHAMPTON, BUCKS COUNTY
MUNICIPAL AUTHORITY



What is the Navy doing to protect our community?
The Navy is currently identifying private wells that may be affected and has committed to remediation for those found contaminated.

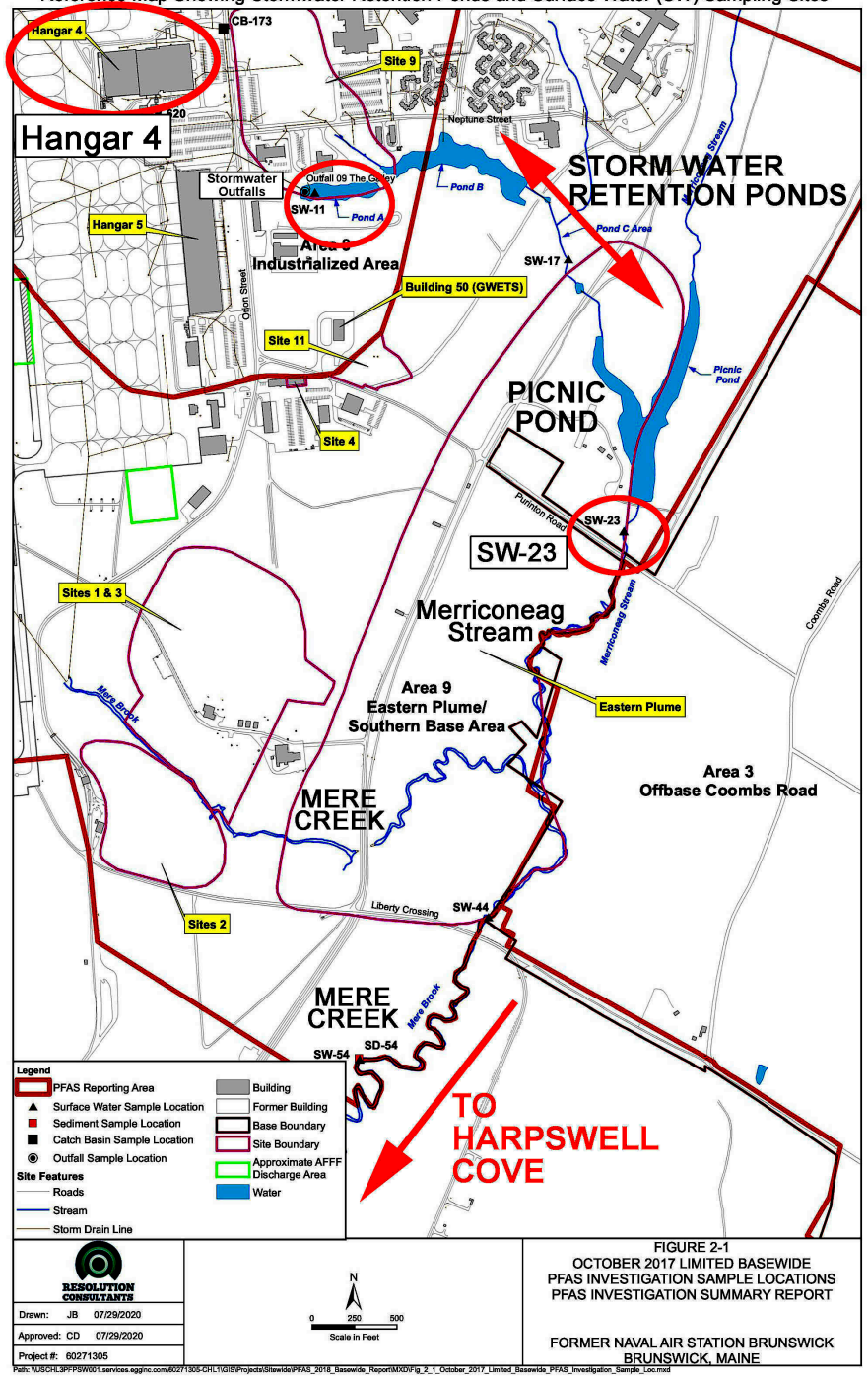
However, the Township with NBCMA believe these efforts are insufficient and urges the Navy to enhance its communication and support for residents impacted by this issue.

Questions?

PFAS from Ongoing Operations

1. The HANGARS 4 & 6
2. Surface Water
3. Harpswell Cove

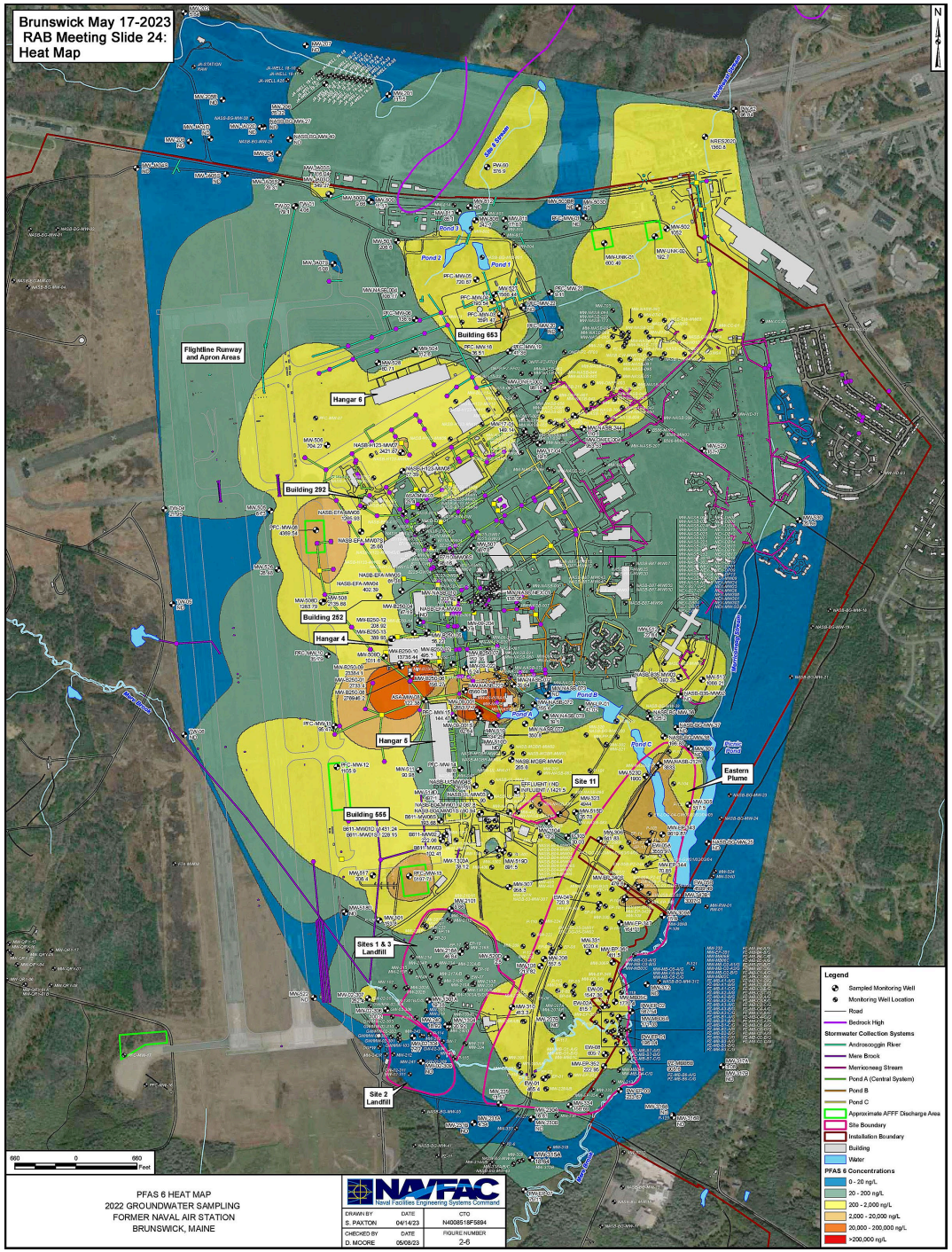
Reference Map Showing Stormwater Retention Ponds and Surface Water (SW) Sampling Sites



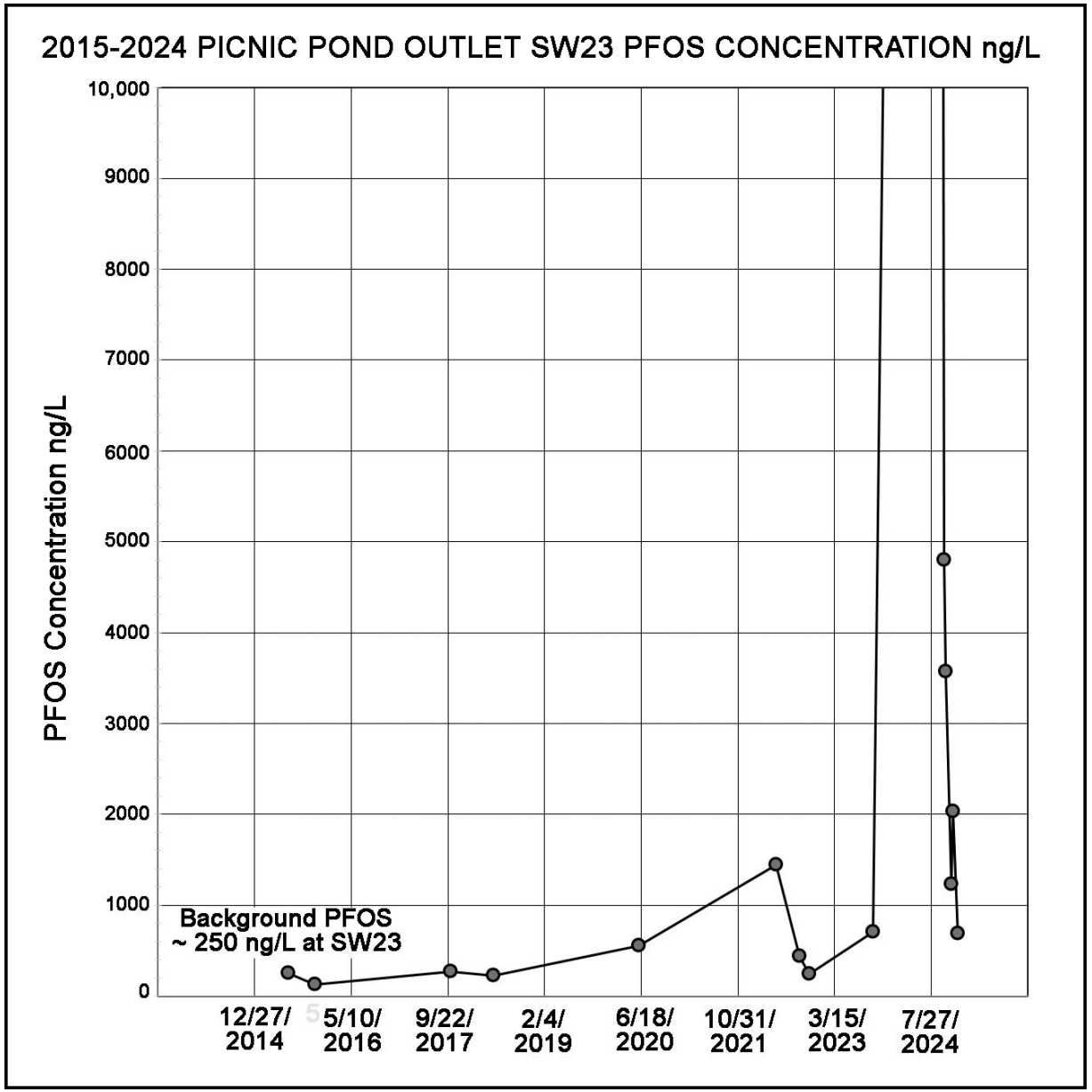
Hangar 4 and Hangar 6

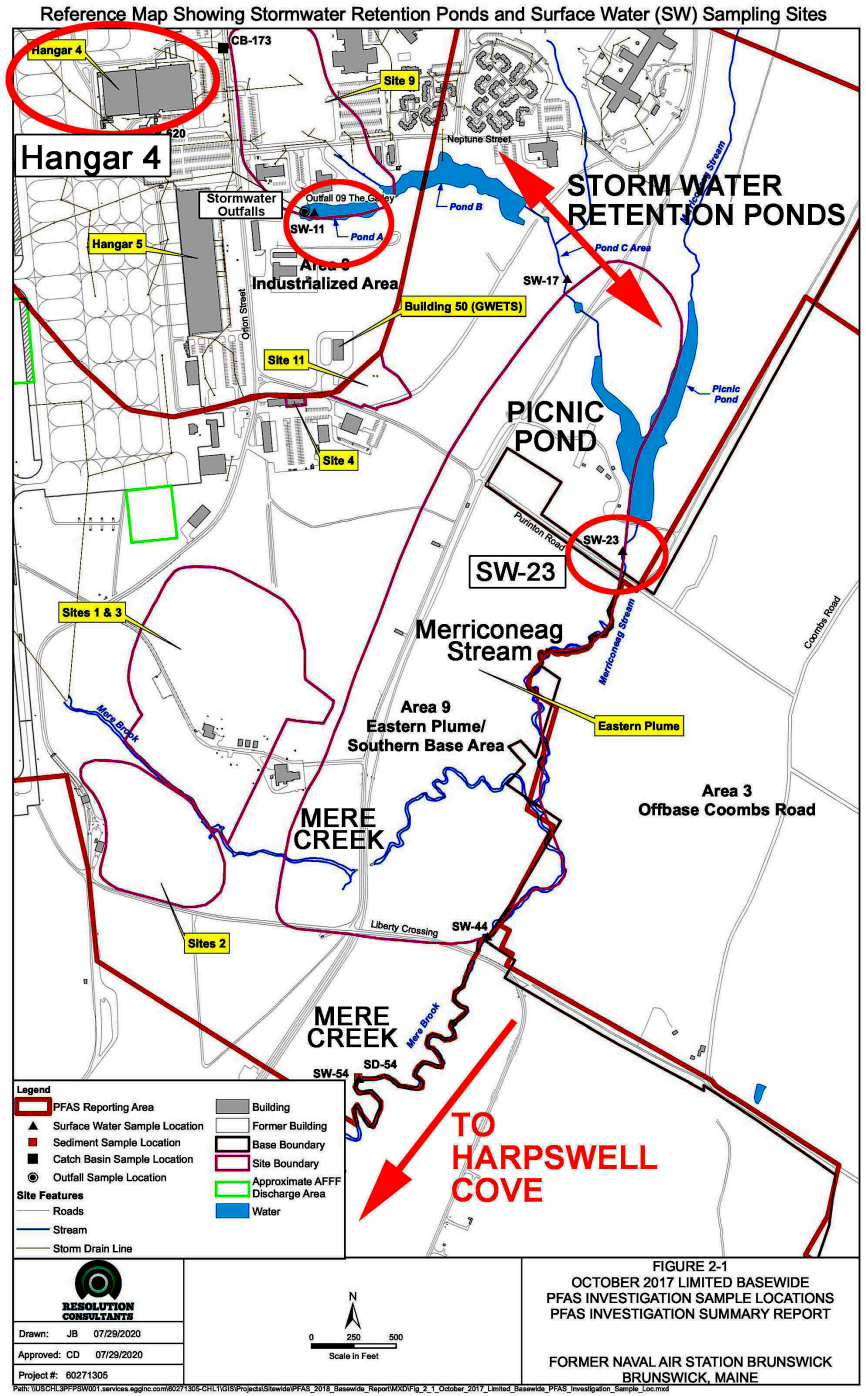
1) **Hangar 4** built 1956
   a) Many AFFF spills: PFOS Ground Water hotspot
2) **Hangar 6** built 2006
   a) Currently contains ~800 gal PFOS-based AFFF.
   b) Variable leakage of AFFF materials from Hangar into sewer system

PFAS 6 Ground Water Conc : Blue 0-20 ppt; Green 20-200 ppt; Yellow 200-2,000 ppt; OrangeYellow 2,000-20,000 ppt; Orange 20,000-200,000 ppt; RED >200,000 ppt



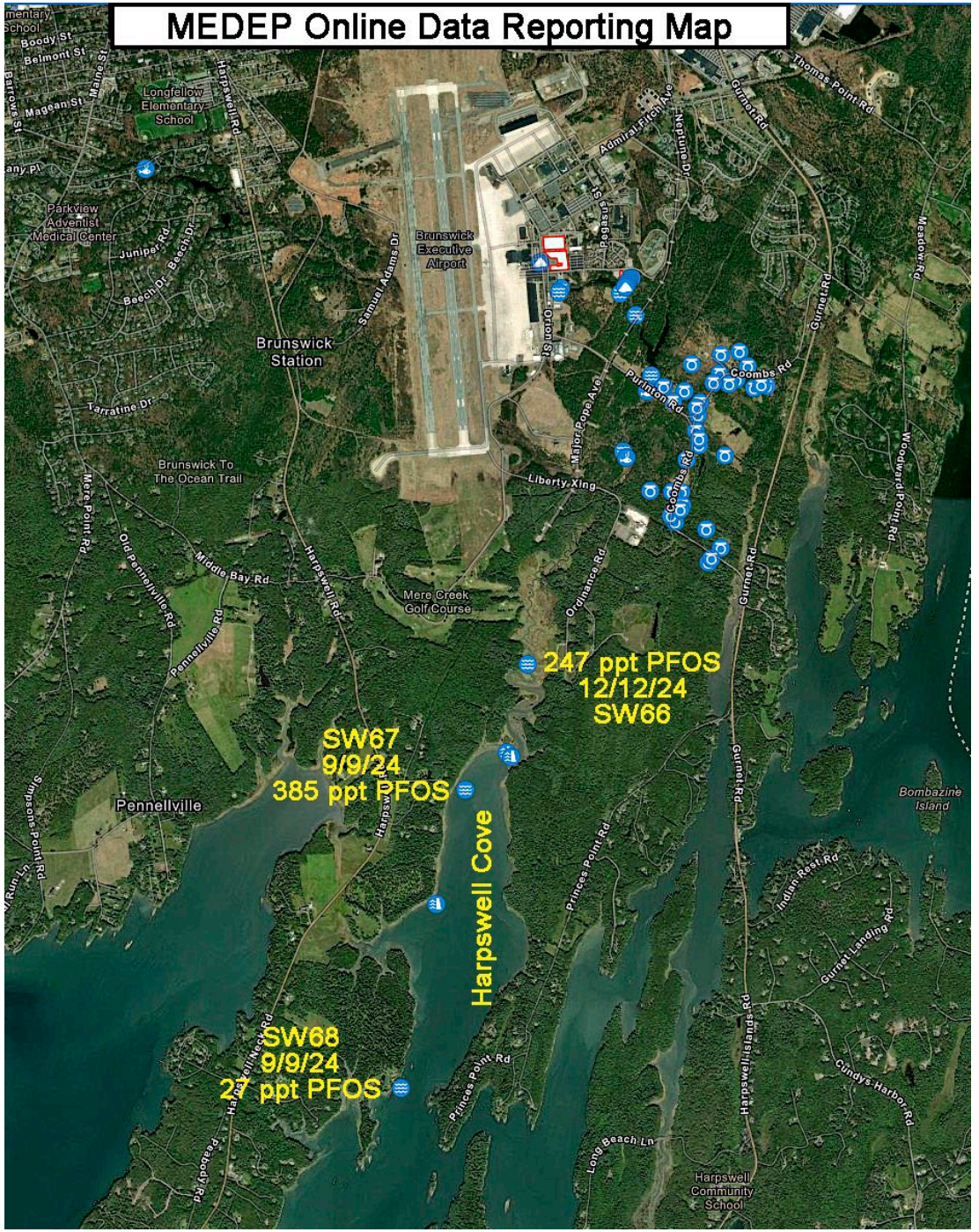
SURFACE WATER





Harpswell Cove

- MEDEP found high levels of PFOS in the marine surface waters of Harpswell Cove 3 weeks post-spill.
- SW67 at the head of Harpswell Cove had a PFOS concentration of 385 ppt on 9/9/24. This compares to Navy data for the same station of 5.5 ppt in 2022.
- MEDEP still found high levels of PFOS in Mere Creek surface waters on 12/12/14, 4 months post-spill of 247 ppt.
- EPA Region 1 has a child recreator screening level for PFOS of 203 ppt. Anything above this children should not swim in.

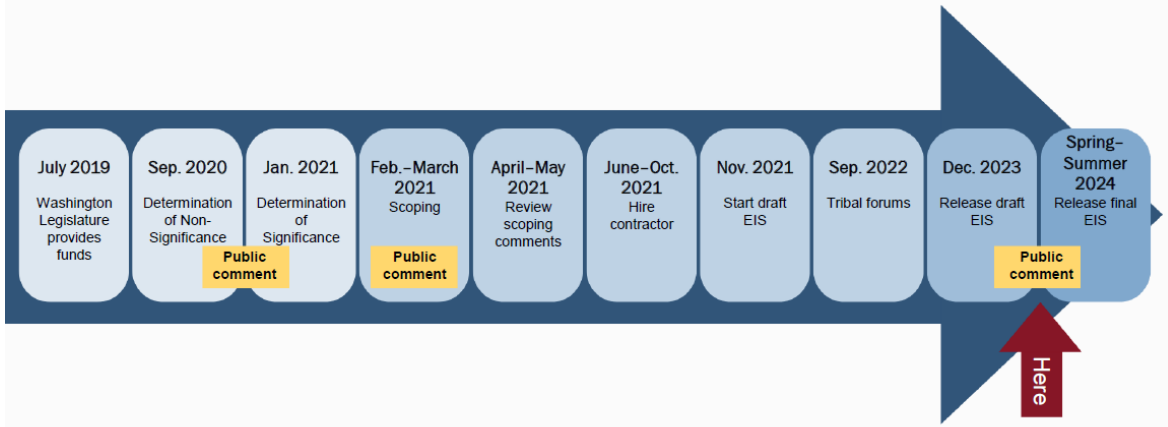


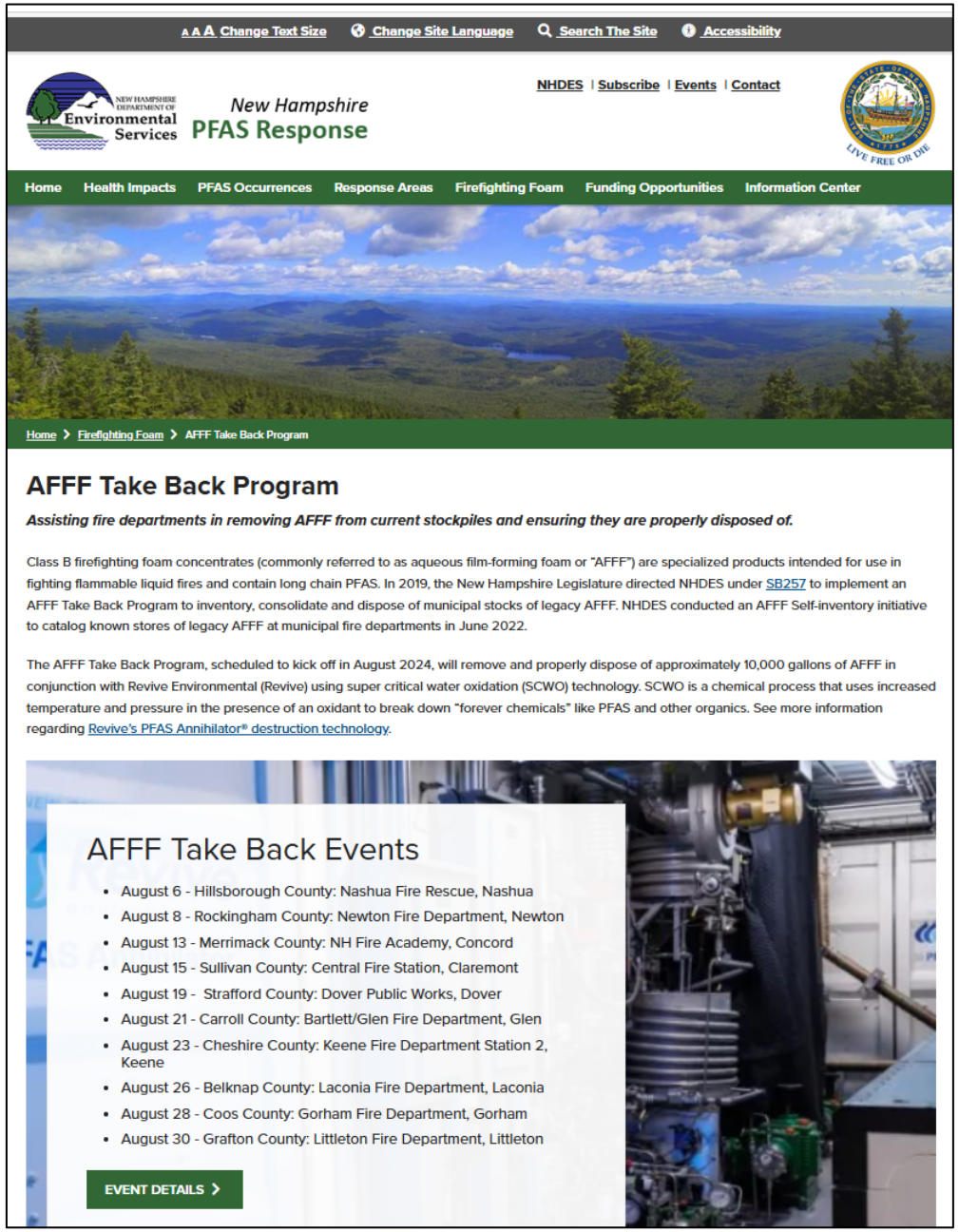
Questions?

Foam Stockpiles

- More than 100 departments.
- Up to 59,000 gallons of AFFF.
- Drafted guidance and provided resources.

What's the Disposal Program Timeline?

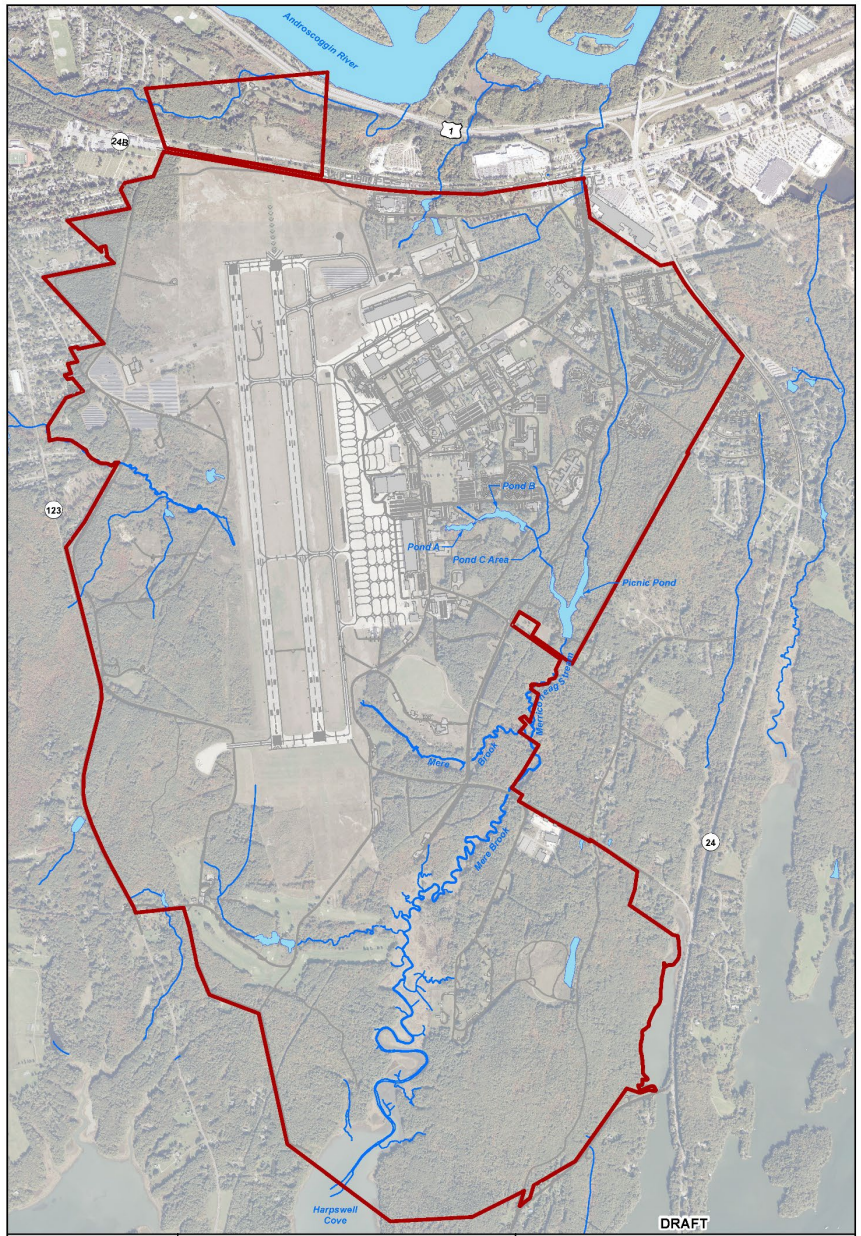




New Hampshire's AFFF Take Back Program is open to all New Hampshire fire departments, local governments and government-owned airports. It is not open to private entities.

Questions?

Extra slides



Legend
Building
Waterbody
Stream
Road
Installation Area

N
0 700 1,400
Scale in Feet

Source Orthoimagery from NOAA, 2021.

NAVFAC Naval Facilities Engineering Systems Command

Drawn:	JB	01/27/2025
Approved:	CD	01/27/2025
Project #:	60708191	

FIGURE 10-1
SITE LOCATION MAP

SAMPLING AND ANALYSIS PLAN
PFAS DRINKING WATER WELL SAMPLING
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

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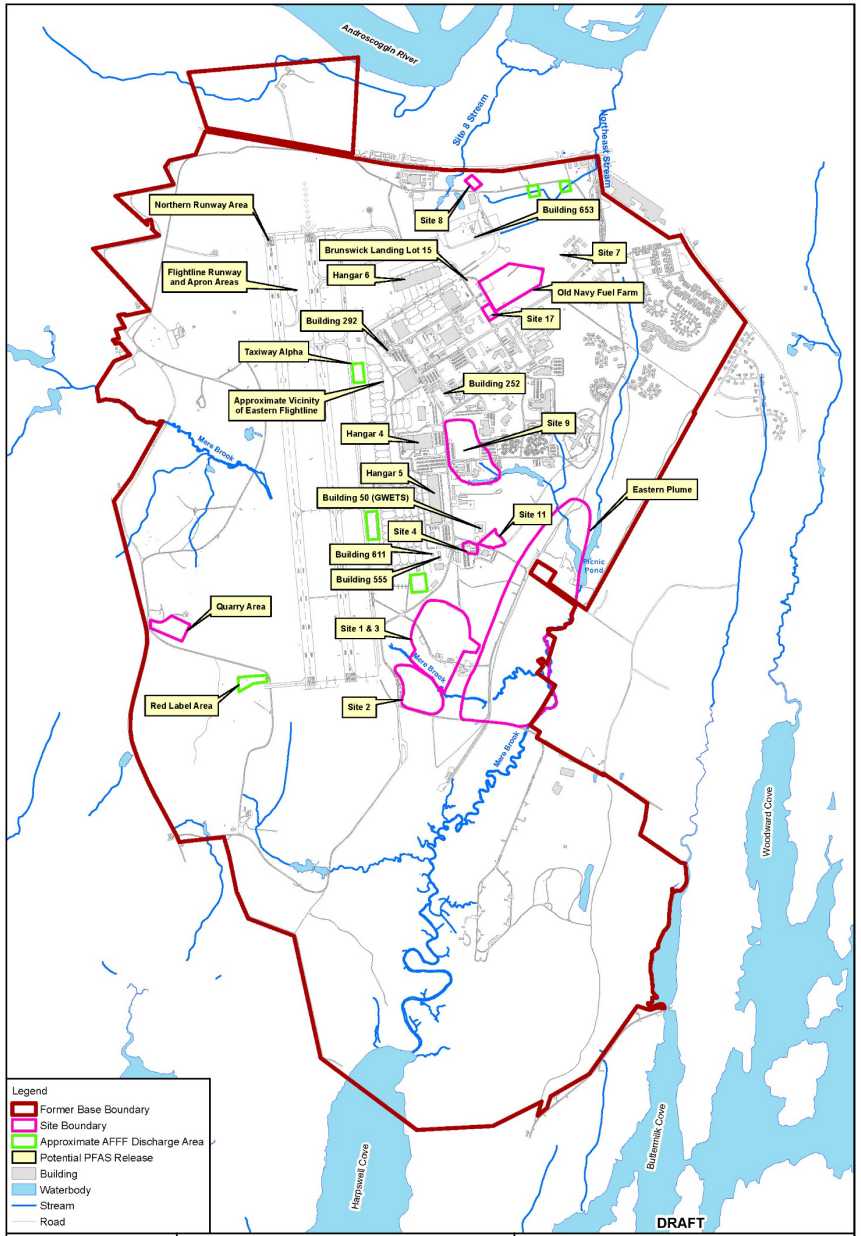

Legend
Former Base Boundary
Site Boundary
Approximate AFFF Discharge Area
Potential PFAS Release
Building
Waterbody
Stream
Road

N
0 900 1,800
Scale in Feet

NAVFAC Naval Facilities Engineering Systems Command

Drawn:	JB	01/27/2025
Approved:	CD	01/27/2025
Project #:	60708191	

FIGURE 10-2
SITE MAP WITH SIGNIFICANT PFAS CONCERNS

SAMPLING AND ANALYSIS PLAN
PFAS DRINKING WATER WELL SAMPLING
FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

Path: M:\ATLCLEAN\NASB\Projects\InstallationWide\Private_Well\SAP\MXD\Fig_10_2_Site_Map_and_Significant_Areas.mxd

Maine DEP Testing Plans – Drinking water Wells

- Maine DEP Commissioner Loyzim (https://tv3hd.brunswickme.org/CablecastPublicSite/show/5874?site=1, beginning around 26:20)
- Do not expect wells to be impacted immediately: "*quite a bit of time for any contamination to…reach Coombs Rd*"
  - First wall of defense: 10 extraction wells (West side of Picnic pond and stream)
  - Streams – water flows strongly south to Harpswell cove
- DEP plans to test "*before any time when we think that the contamination could reach there and then continue to do quarterly sampling after*"
- Additional testing if there are changes

PFAS in AFFF Released From Hangar 4