

Town of North
Attleborough
Department
of Public
Works

**Polyfluoroalkyl
Substances (PFAS)
Public Information**

Topics

- PFAS Background
- Drinking Water Standard for PFAS
- Overview of Drinking Water System
- Timeline and Actions Taken
- Current Testing Results
- Next Steps

What is PFAS/Where is it Found?

PFAS are man-made chemicals that have been used in the manufacturing of certain fire-fighting foams, moisture and stain resistant products, and other industrial processes.

“PFAS” => Per- and Polyfluroalkyl Substances
So called “forever chemicals”

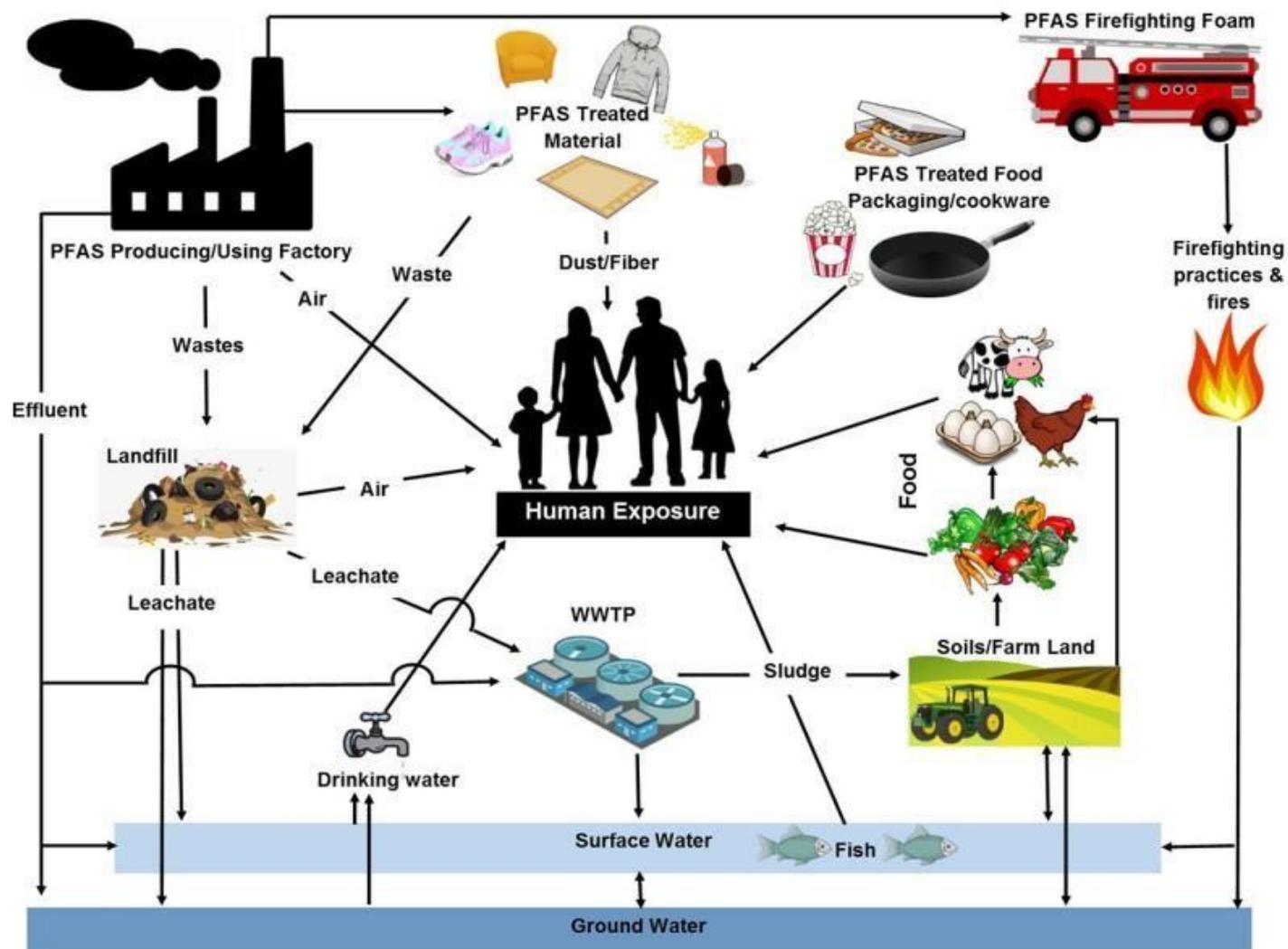
- Food
- Stain- and water-repellent fabrics
- Nonstick products (e.g., Teflon)
- Fire-fighting foams (AFFF)
- Living Organisms
- Landfills
- Wastewater
- Drinking Water



Where is PFAS Used?

- Fluoropolymer coatings Plastics/polymers
- Oil, stain, water repellent (Stainmaster® carpets, Scotch Gard™ and Gore-Tex®)
- Surfactants used in firefighting foams
- Mist suppressants for metal plating operations
- Photo-microlithography process to produce semiconductors Photography and film products
- Some grease-resistant paper
- Fast food containers/wrappers (**27 fast food chains**)
- Microwave popcorn bags
- Pizza boxes
- Candy wrappers
- Non-stick cookware such as Teflon™-coated pots/pans
- Used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Adhesives
- Aviation hydraulic fluids
- Cleaning products
- Personal care products such as shampoo, dental floss, and cosmetics (nail polish, eye makeup)
- Paints, varnishes and sealants

The PFAs Cycle

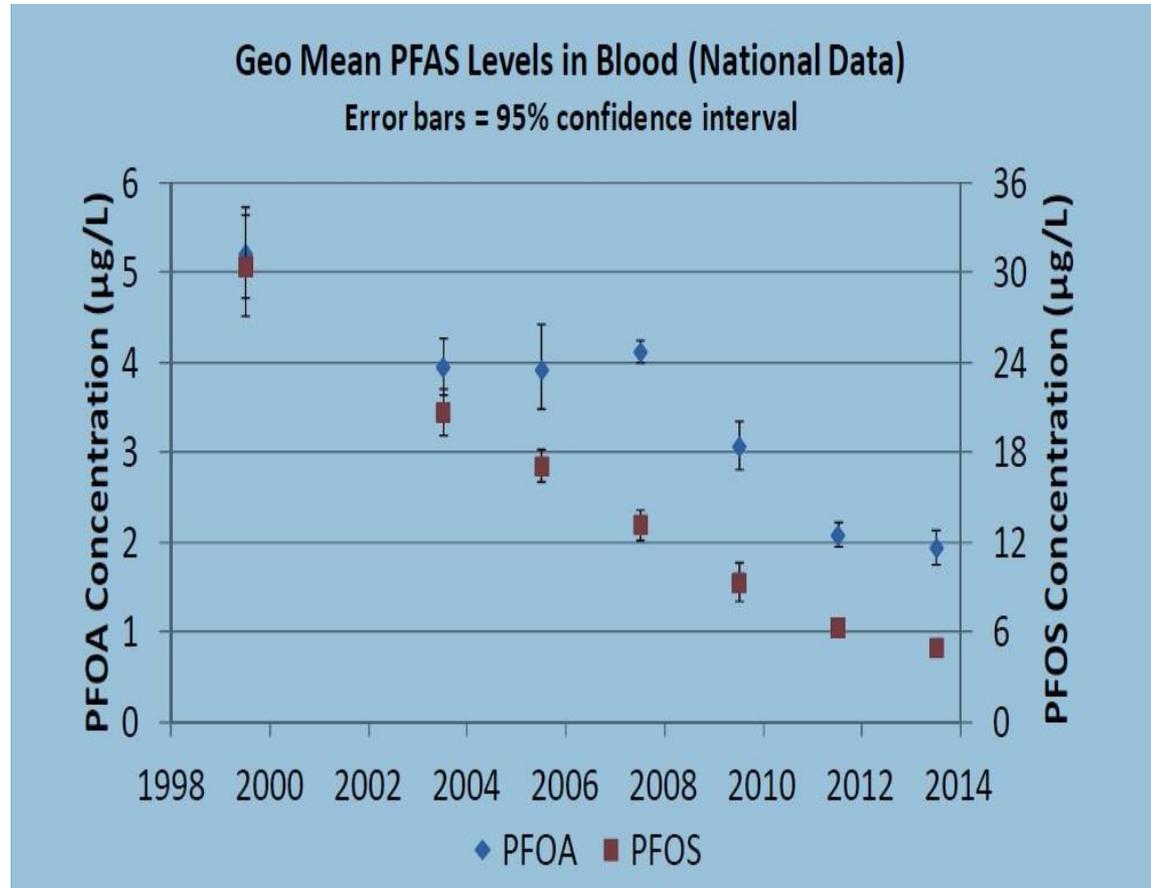


*Human Exposure and sources of PFAS
Image: DWP, adapted from Oliaei et al. 2013.*

Decreasing Trend In U.S. Blood Levels

Due to widespread use and persistence in the environment, almost everyone has small amounts of PFOS in their body, but this does not necessarily indicate a risk to your health.

Large-scale biomonitoring programs show that PFOS levels in people's blood are declining since PFAs has been banned in U.S. production. Still used in foreign products.



MA Drinking Water Standards

- MassDEP created the regulations for PFAS in October 2020

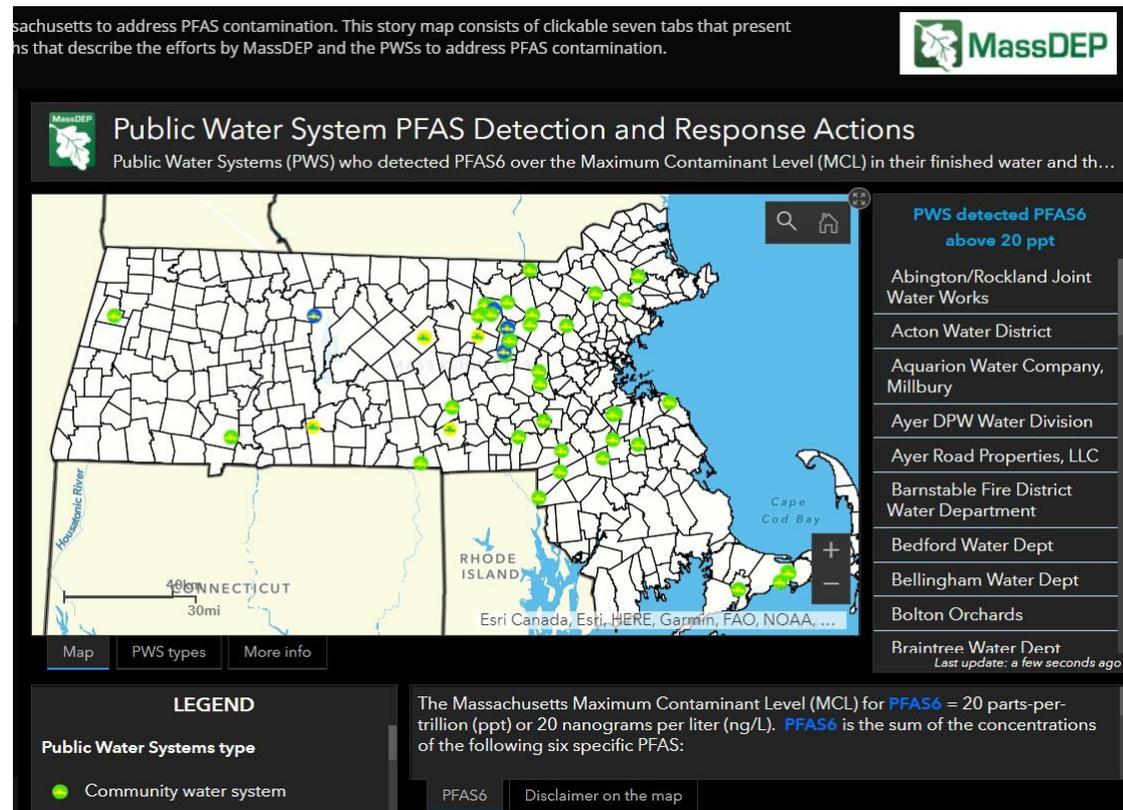
- MassDEP Maximum Contaminant Level (MCL) of 20 nanograms per liter (ppt = parts per trillion)

- MCL violation is based on a monthly **quarterly average** exceeding 20 ppt

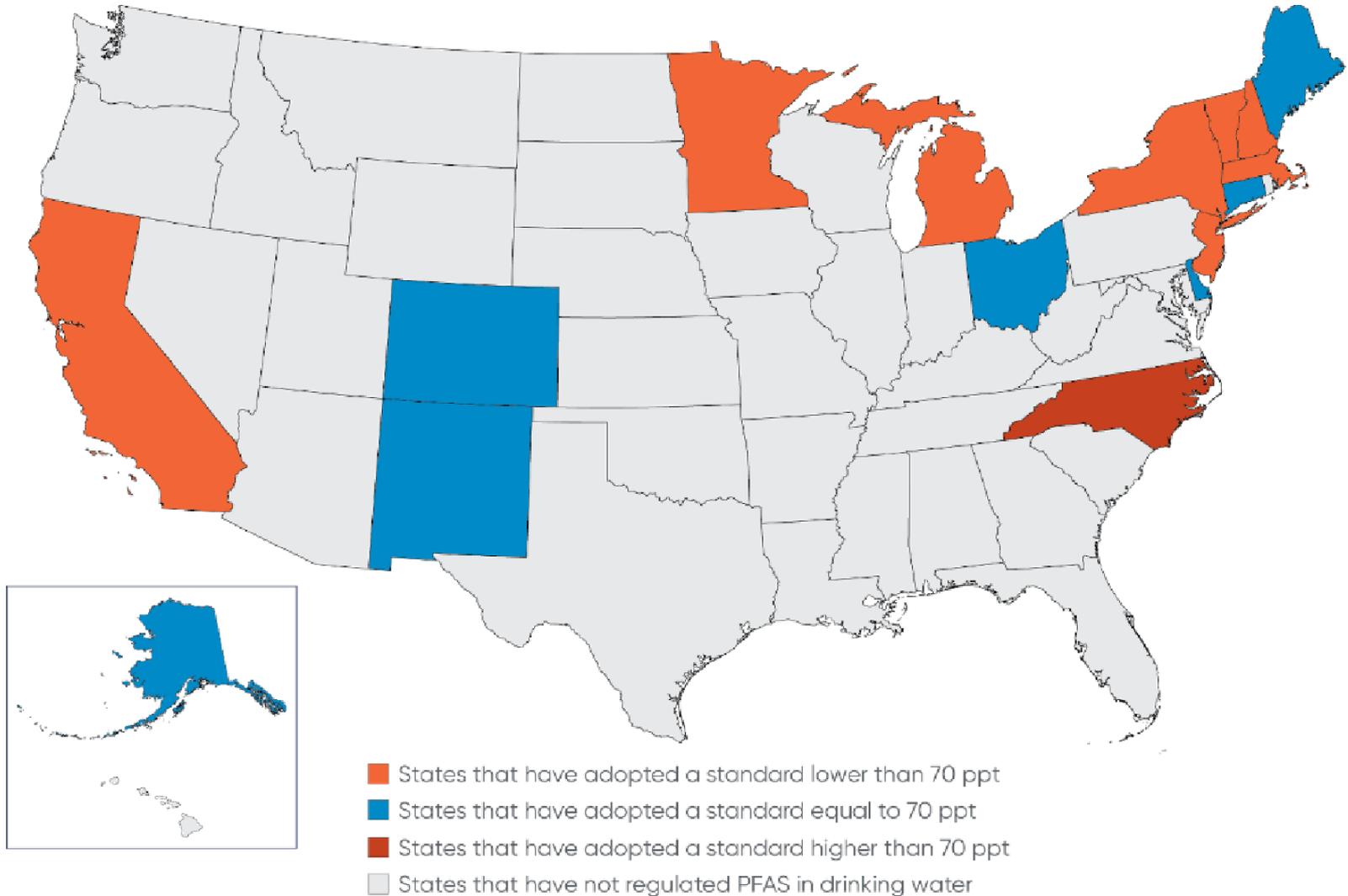
- MCL is for 6 PFA substances

- U.S. EPA Federal Drinking Water Guidance **70 ppt**

- No sudden change in North Attleborough's drinking water quality



PFAS Regulation Status



PFAs Detected Mass Water Systems (60 to Date)

Abington/Rockland Joint Water Works

Acton Water District

Aquarion Water Company, Millbury

Attleboro Water Department

Ayer DPW Water Division

Ayer Road Properties, LLC

Barnstable Fire District Water Department

Bedford Water Dept

Bellingham Water Dept

Bolton Orchards

Braintree Water Dept

Brockton Water Department

Carriage House Condominium

Centerville Osterville Marston Mills Water Department

Chatham Water Department

Cindy's Drive In

Cohasset Water Department

Danvers Water Dept

Devens/Mass Development

Dudley Water Department

Duxbury Water Department

Easton Water Div

First Congregational Church of Princeton

Foxboro Water Department

Gleason Public Library

Harvard Forest

Hudson Water Supply

Hyannis Water System

Lakeside Estates

Lanesborough Fire & Water District

Littleton Water Department

Mansfield Water Division

Mashpee Water District

MCI Shirley

Millis Water Dept

Miscoe Hill Middle School

Monson Fitness Club

Natick Water Department

North Attleboro Water Department

North Reading Water Dept.

Pepperell Water Division

Pilot Grove Apartments I

Princeton Town Campus

Randolph/Holbrook Water Board

Raynham Athletic Club

Sharon Water Department

Sheraton Four Points

Stillwater Fasteners

Stow Center School

Stow Industrial

Stow Municipal Center

Stow, Hale Middle School

Strawberry Hill Apartments

Sutton Center Store

Swift River Elementary School

The Appleworks

Topsfield Water Department

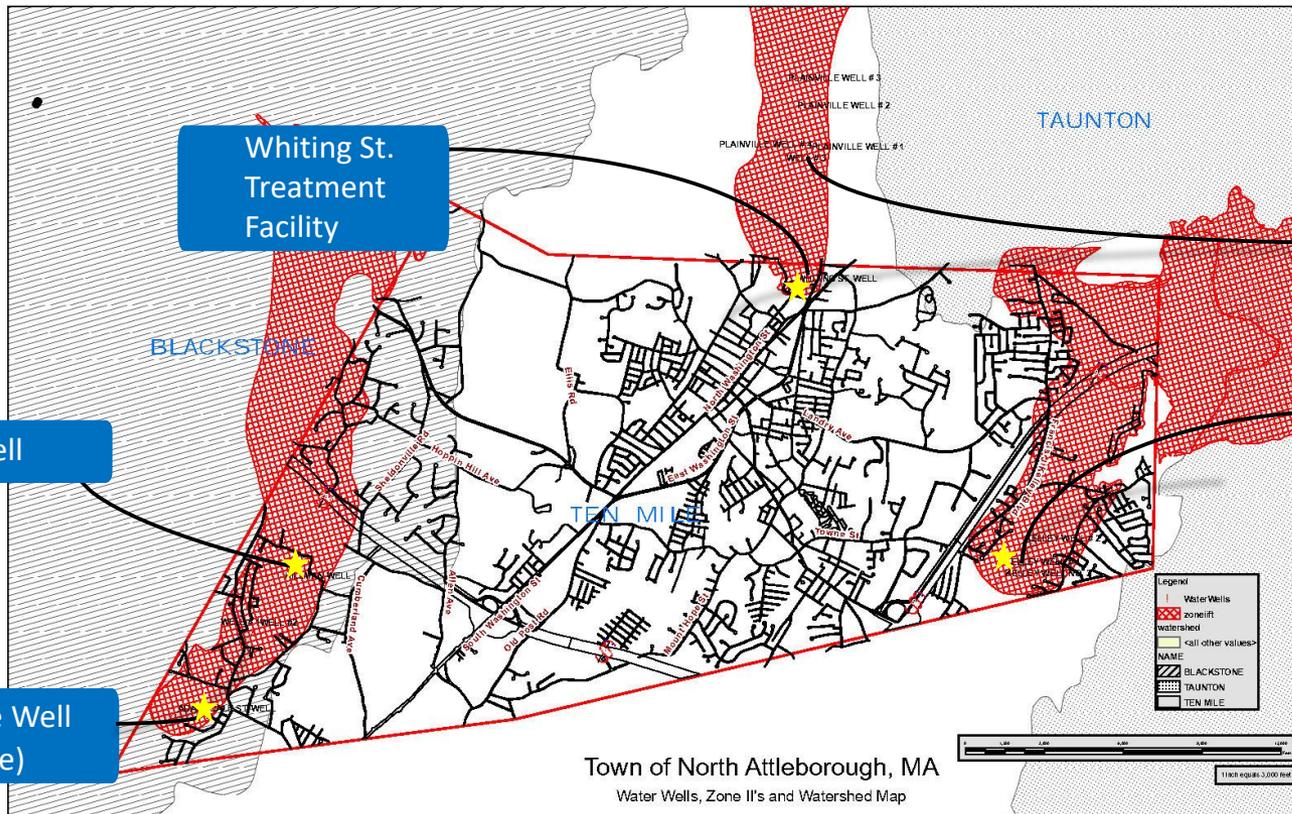
Town of Burlington

Townsend Water Department

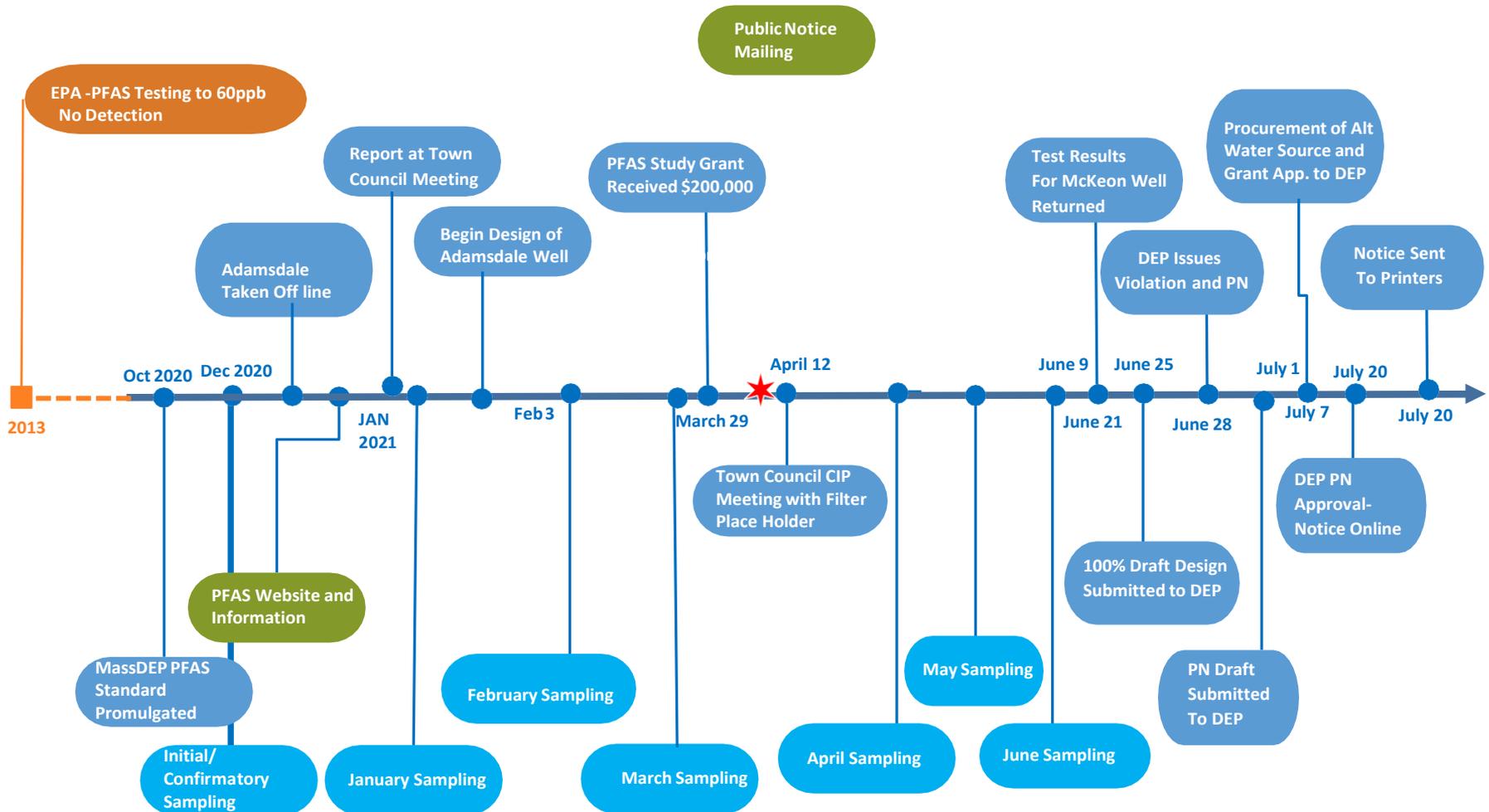
Tyngsboro Colonial Heights Condo

Water System Overview

- 9 Groundwater Wells
- Two Water Treatment Facilities
- Three Storage Tanks
- 150 miles of water mains
- 1,500 fire hydrants
- 950,000,000 gallons pumped, treated, and delivered annually



Timeline



★ MassDEP PFAS Regulations Set April to Begin PFAS Testing

Monthly Results

2021 PFAS6 Monthly Results & Quarterly Averages: Active Drinking Water Sources							
Sample Collection Date	Water Treatment Plant	Whiting Treatment- with Highway Well	Whiting Treatment- No Highway Well	McKeon Treatment	Hillman Well	Adamsdale Well (offline since December 2, 2020)	MCL (ng/L)
	EPTDS	Whiting Street	Whiting Street	Mary Kennedy Dr.	Huntsbridge Road	Grandview Drive	
1/27/2021	January	Highway Offline	13.1	13.8	17.4	28.1	20
2/17/2021	February	Highway Offline	11.1	13.7	17.1	22.8	
3/23/2021	March	Highway Offline	15.3	14.1	18.5	24.9	
	Quarter 1 Averages	-	13.2	13.9	17.7	25.3	
4/14/2021	April	Highway Offline	16.2	18.2	18.4	No Longer Sampled	20
5/25/2021	May	19.1	18.6	23.6	18.7		
6/09/2021	June	19.4	23.1	25.6	15.6		
	Quarter 2 Averages	19.3	19.3	22.5	17.6		
7/15/2021	July	25.1	19.3	26.8	16.0		
	August						
	September						
	Quarter 3 Averages						
	October						
	November						
	December						
	Quarter 4 Averages					-	20

KEY:

EPTDS = Entry Point To Distribution System (location where treated water enters the drinking water system)
 ng/L = nanograms per liter, also equal to parts per trillion (ppt)
 MCL = Maximum Contaminant Level (highest amount allowed by regulation)
 QC = Quality Control report, this determines if a sample result is valid or invalid for lab processing reasons

NOTES:

Yellow highlight = Violation
 Red highlight=Offline from system
 Violation/compliance with regulation based on locational Quarterly Averages
 Adamsdale Well is currently an inactive source

Next Steps-

- Adamsdale Well Filter Project
 - Design Completed
 - Con-Com Aug. 10
 - Filter Procurement Bids Due Aug. 16
 - Full Bid for Construction in Late September
 - Bids Open in Mid-November
 - Construction and Acceptance through May/June 2022
- McKeon Treatment Plant Upgrade-
 - Begin Design in October 2021
 - Complete Design in March 2022
 - Bid for Construction in May 2022
 - Bids Open in June 2022
 - Construction and Acceptance through April 2023
- Sensitive Subgroups -(Pregnant, Nursing, Infants and Compromised Immune Systems)
 - Purified Water Kiosk at Whiting St. Under Construction (early Sept 2021)
 - Sensitive Subgroups should purchase bottled water and save receipts for abatement or refund (Rental Sensitive Subgroups only).