



February 26, 2025

Update on DPW and Landfill PFAS Environmental Site Assessment Activities

PRESENTATION BY:



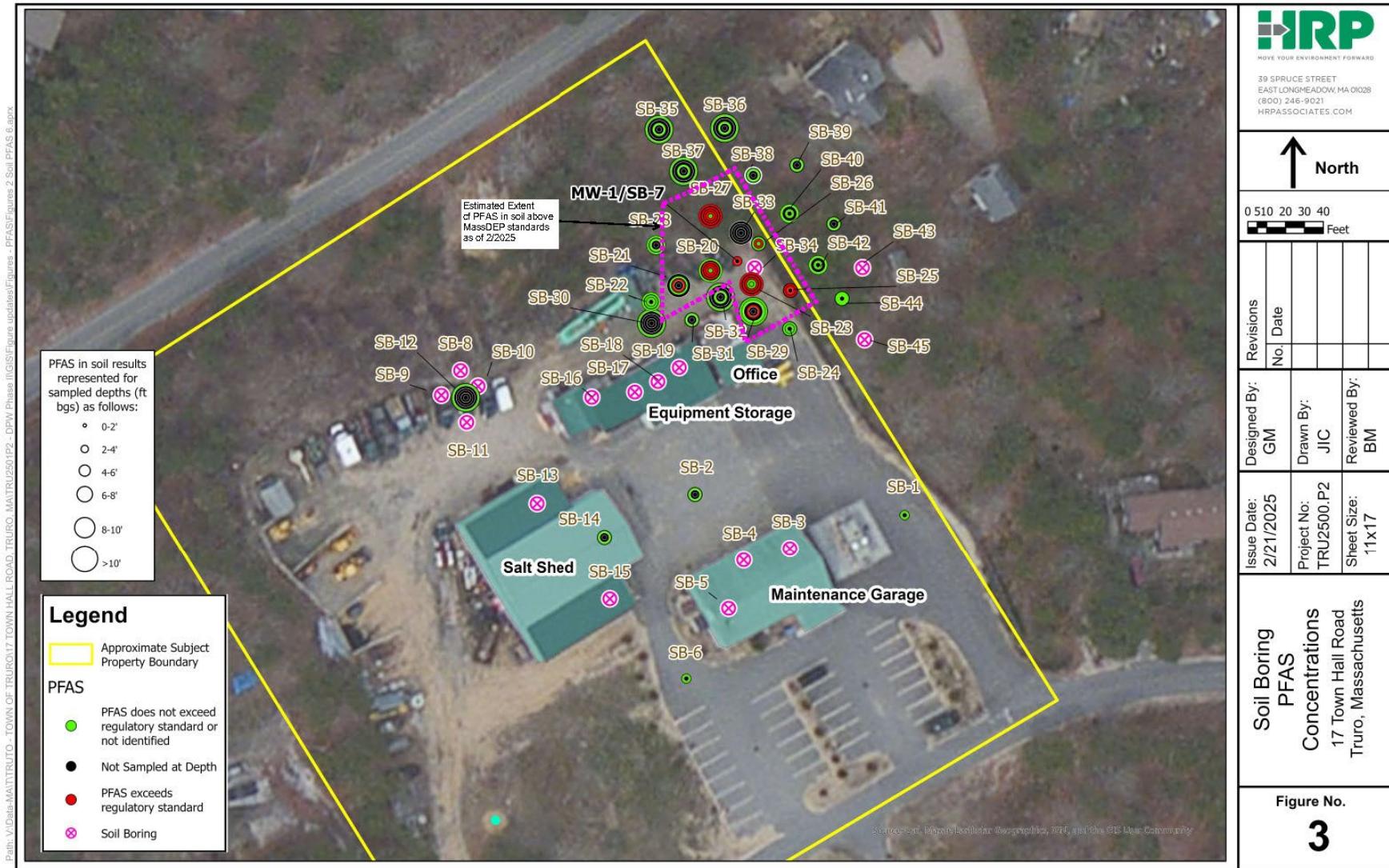
DPW PFAS Subsurface Investigation Background

- The Town of Truro contracted HRP to complete a limited site investigation (LSI) to evaluate if the historical operation of a DPW facility at the Site since the 1950s resulted in a reportable release of oil and/or hazardous materials (OHM) to the environment.
- During the LSI, Per- and polyfluoroalkyl substances (PFAS) was detected above the applicable standards in soil and groundwater samples collected at the Site. The detection of PFAS above the applicable groundwater standards triggered a 72-hour reporting obligation to the Massachusetts Department of Environmental Protection (MassDEP).
- The MassDEP was notified about the reporting obligation within the specified amount of time on September 5, 2024, and subsequently issued release tracking number (RTN) 4-50777. The release required the completion of an Immediate Response Action (IRA) consistent with the requirements of the Massachusetts Contingency Plan.
- Details of the LSI can be reviewed on-line through the MassDEP searchable site database by using the abovementioned RTN or with the following hyperlink:
<https://eeaonline.eea.state.ma.us/portal/dep/wastesite/viewer/4-0050777>
- The source of PFAS is currently unknown but may be related to the historic placement of catch basin sediments and/or street sweepings behind the DPW office building.

DPW Immediate Response Action Scope of Work

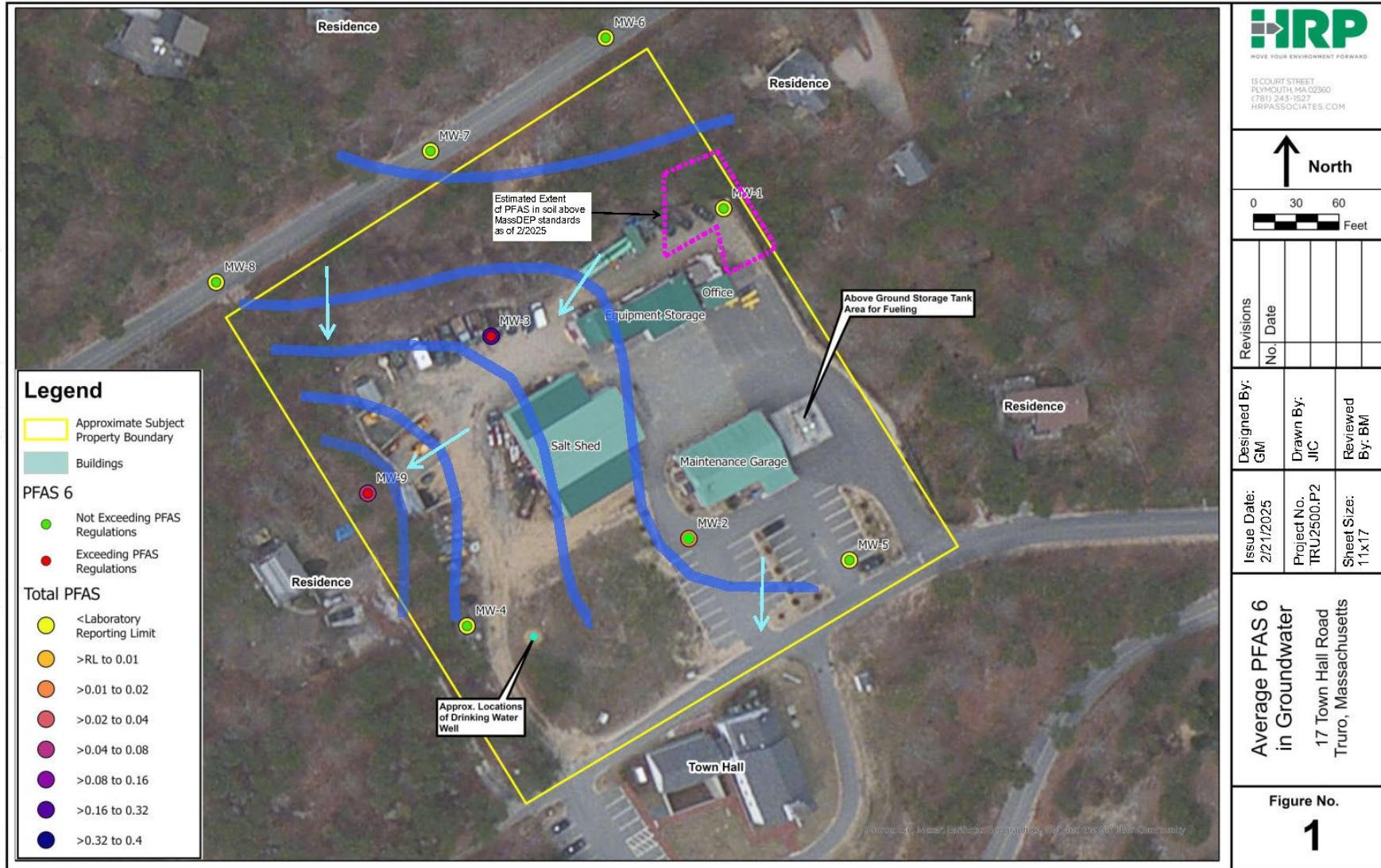
- Determine the vertical and horizontal extent of PFAS in soil at the DPW.
- Determine groundwater flow direction and the vertical and horizontal extent of PFAS in groundwater both on and off DPW property.
- Sample private wells for PFAS located within 500 feet of the DPW property.
- Sample additional private wells beyond 500 feet for PFAS if PFAS is detected in private drinking water wells.
 - Provide bottled water for residences impacted by the PFAS release as a temporary measure.
 - Install point of entry treatment systems (POET) and monitoring effectiveness at residences to remove PFAS as a permanent measure.

DPW Soil Sample Results for PFAS



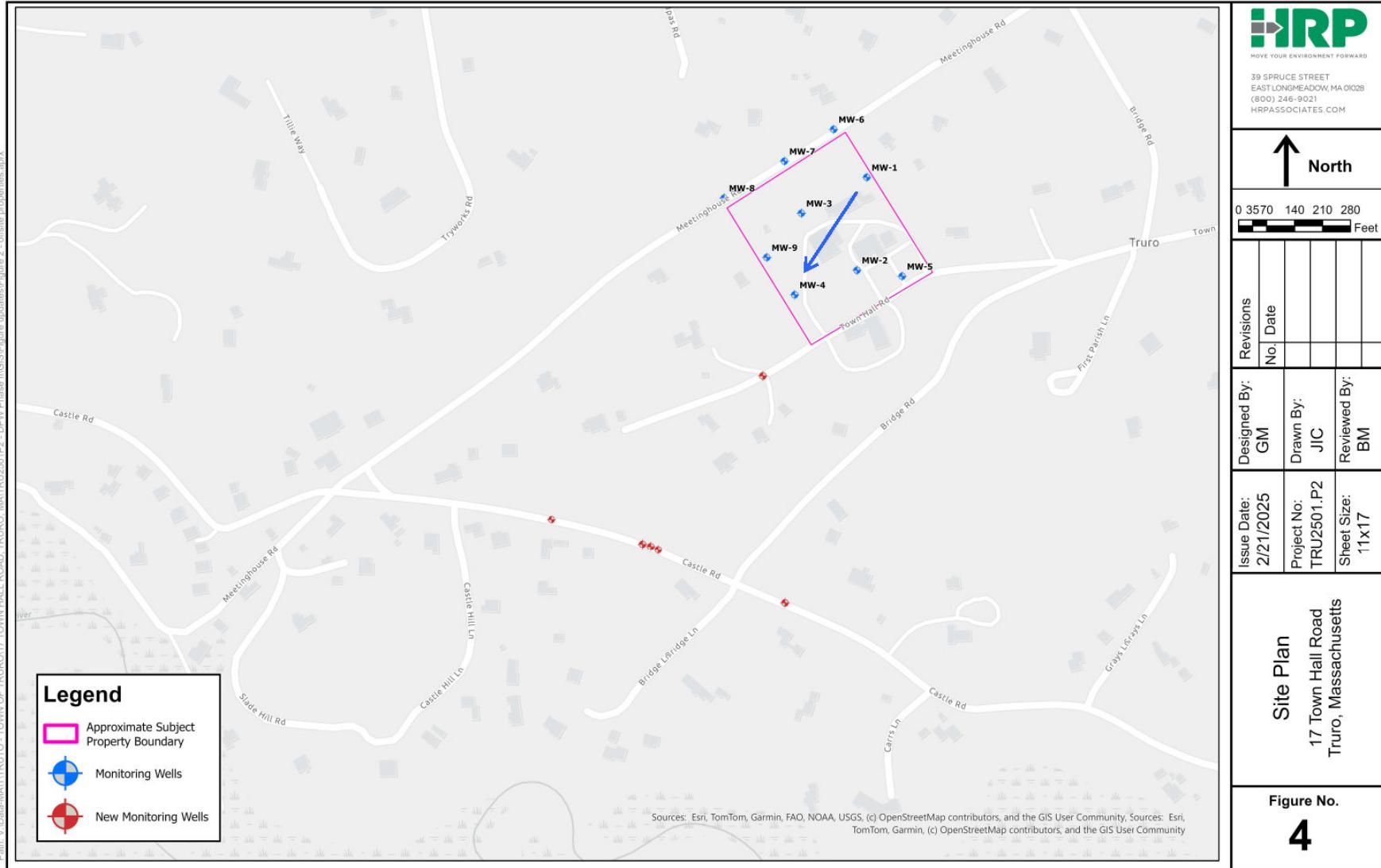
NOTE: Soil boring samples taken at specified depths, presented in feet below ground surface (ft bgs).

DPW Groundwater Sampling Locations



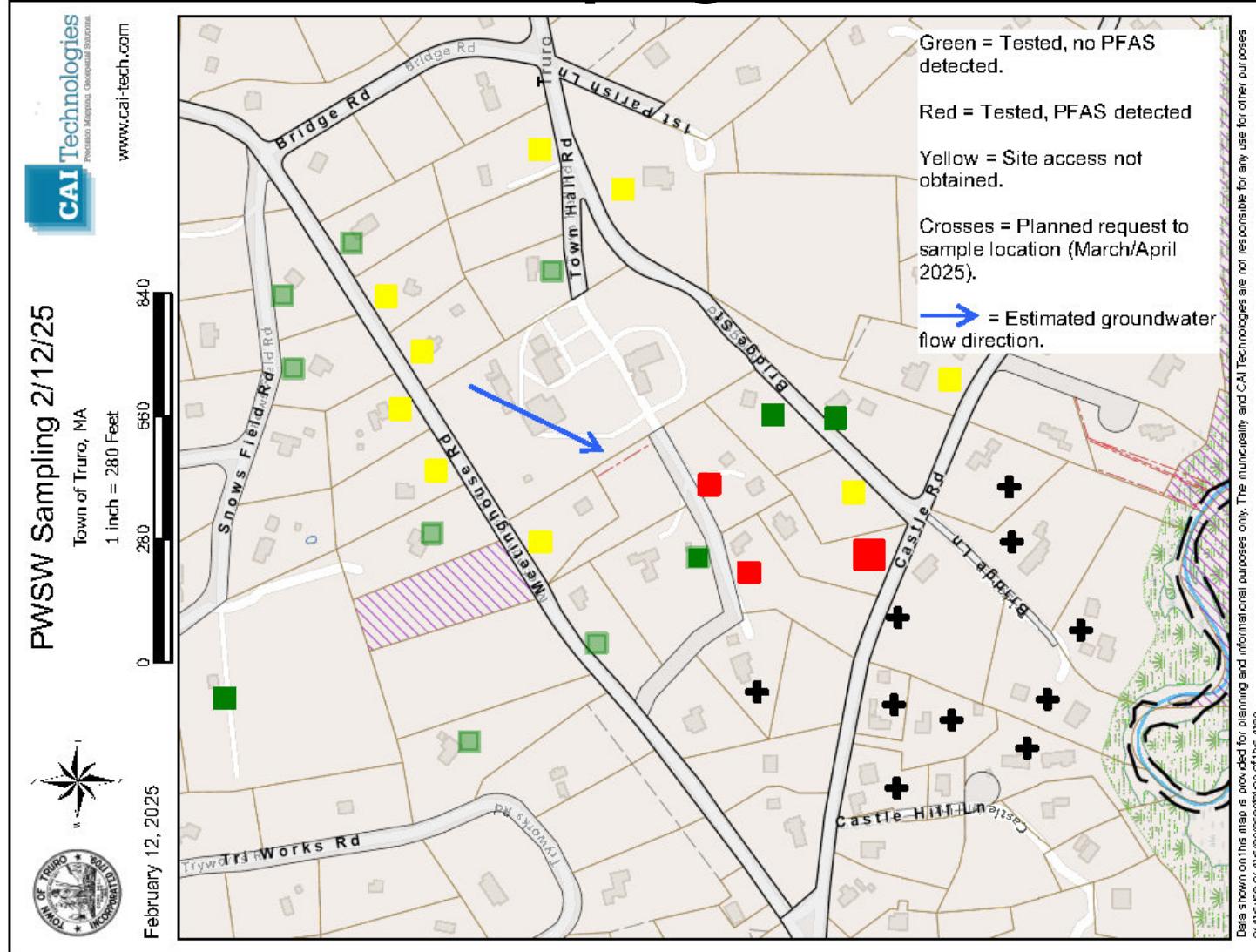
Off-site Monitoring Wells (Town Hall and Castle Road)

Path: V:\Data\MA\TRU\17 TOWN HALL ROAD, TRURO, MA\TRU2501P2 - DPW Phase II GIS\Figure updates\Figure 2 - offsite properties.aprx



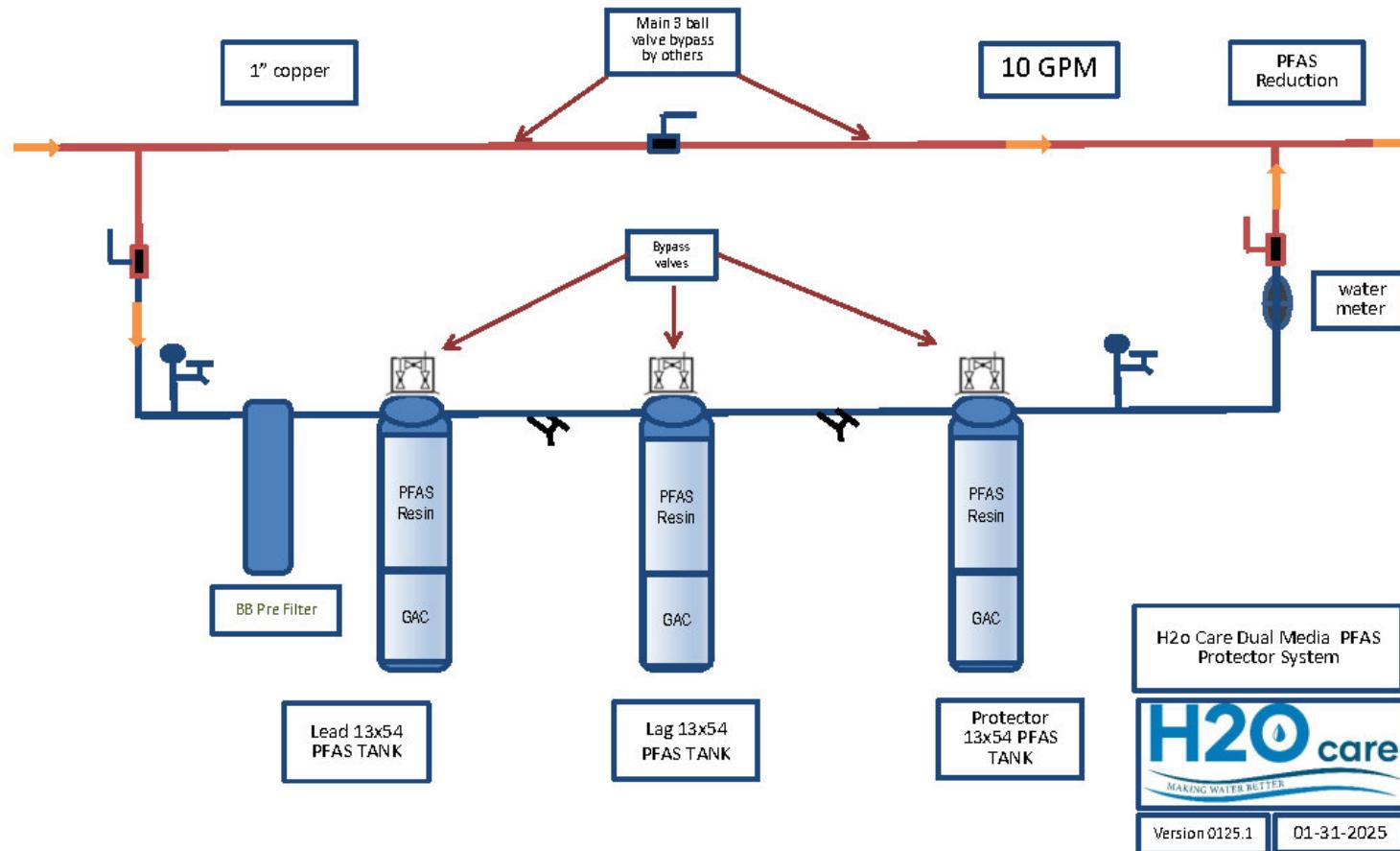
Note: Locations of the new monitoring wells are approximate.

DPW Private Well Sampling Locations



POET System Design for Impacted Residential Wells

PFAS Filtration System



DPW Next Steps

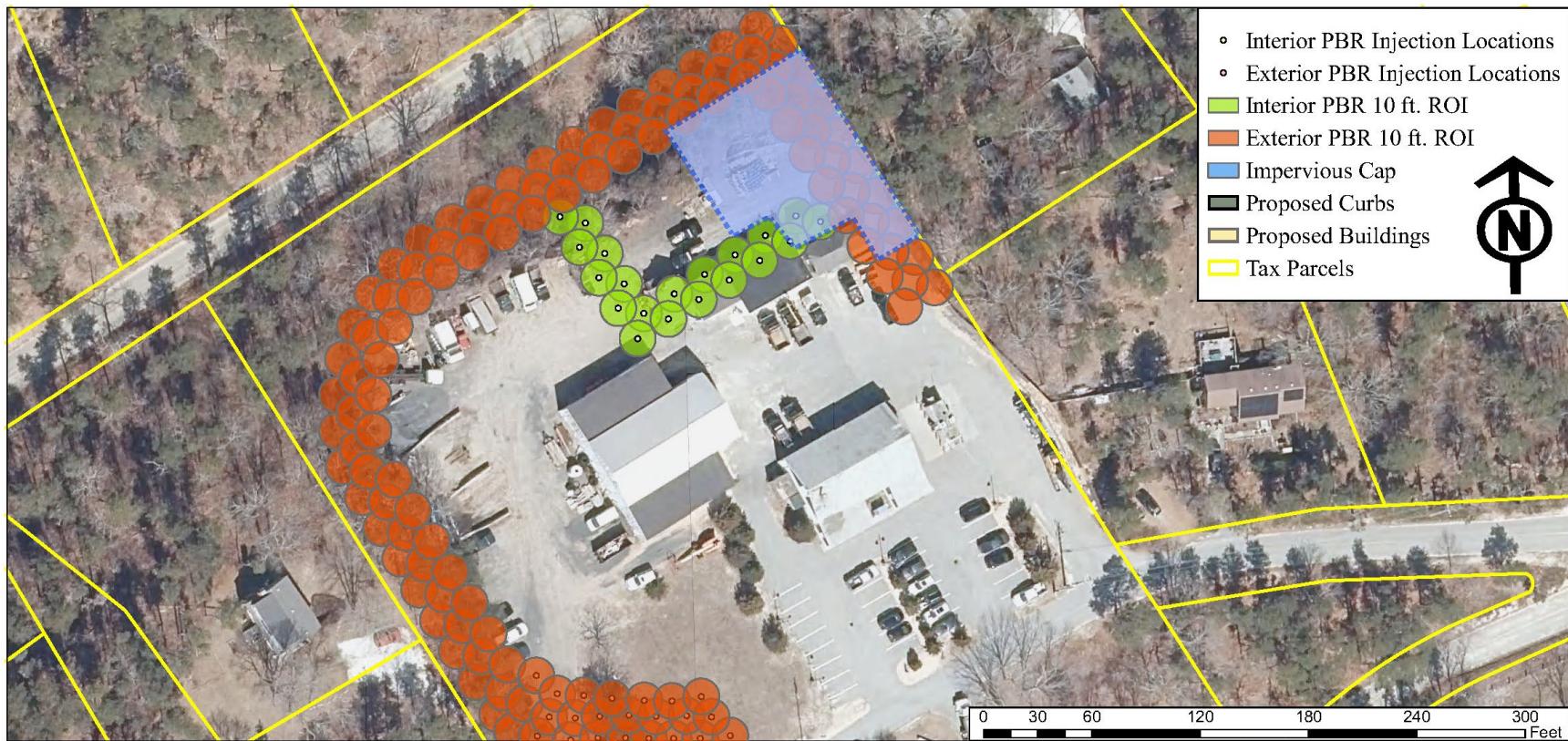
- PFAS investigation in soil is almost complete. Impacts appear to be limited to the northeast corner of the DPW behind the current office building.
- PFAS investigation in groundwater is on-going to delineate the spatial extent of impacts. Impacts extend off-property in a southwesterly direction.
- The Town is committed to providing bottled water to residences impacted by the DPW PFAS release as a temporary solution until a more permanent solution (POET) is achieved.
- Additional sampling of residential wells is planned until the full extent of groundwater impacts associated with the DPW PFAS release are identified.

DPW Next Steps (Continued)

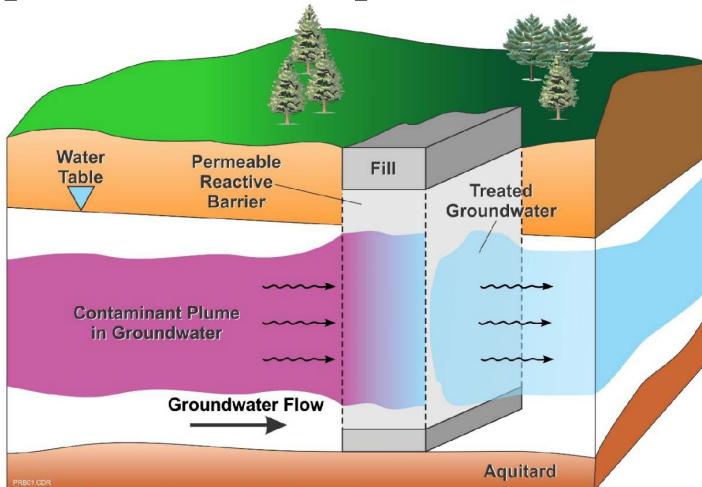
- IRA Status Reports will be submitted to MassDEP every four months until the IRA is complete (may take one to two years to complete).
- Remedial strategy at the DPW will likely include a combination of soil capping and groundwater treat with a Permeable barrier reactive wall (PBR).
- Residences impacted by PFAS from the DPW will be provided with bottled water until a more permeant solution such as a POET is installed.
- Monitoring will continue until a permanent solution can be obtained.

DPW Remedial Strategy for PFAS

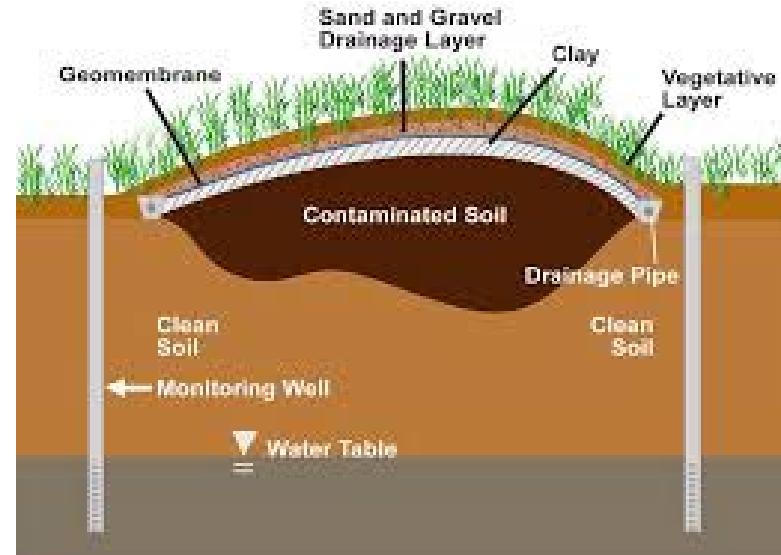
- PFAS soil cap
- Permeable barrier reactive wall (PBR) for groundwater treatment
- POET System for residences
- Monitoring



DPW Remedial Strategy For PFAS (continued)



PBR Cross Section



Soil Cap Cross-Section



- PBR treats groundwater plume leaving DPW.
- Soil cap prevents PFAS in soil from continuing to leach into groundwater.
- POET systems mitigate residential risk of drinking PFAS impacted water.

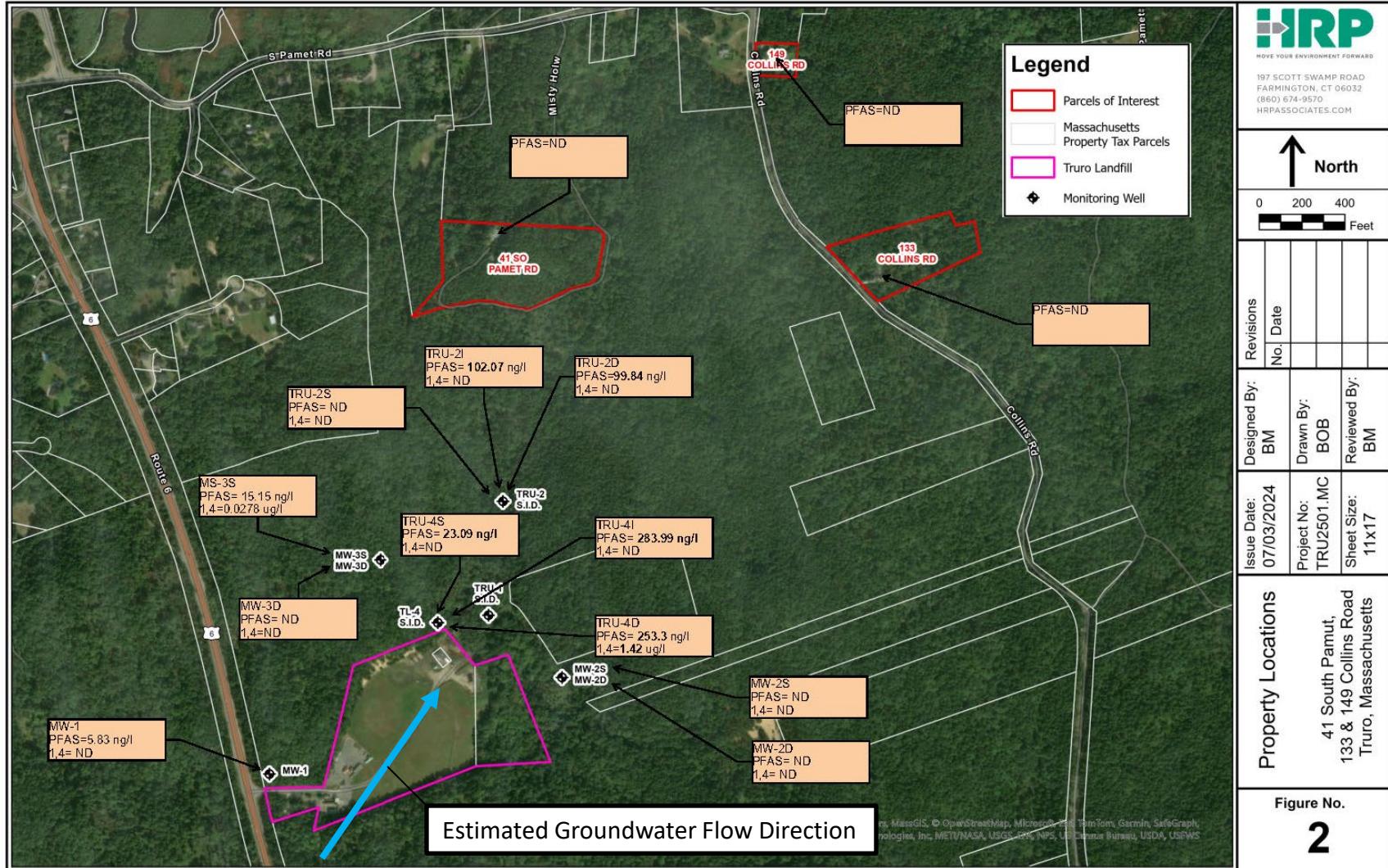
DPW Estimated Remedial Costs (For Discussion Purposes Only, Subject to Change)

- POET System Costs: \$300,000 (20 systems at \$15,000)
- POET O&M Costs: \$300,000 (\$30,000 per year for 10 years)
- POET PFAS Testing Costs: \$450,000 (\$45,000 per year, 10 years, 20 systems with PFAS testing bi-annual).
- Remedial Cost (Pilot, Design, Oversight, Regulatory Reporting): \$3,000,000
- Regulatory Reporting and Monitoring: \$1,000,000 (assumes 10 years of monitoring to reach closure)
- 25 Percent Contingency: \$1,265,000
 - Estimated Total DPW Remediation Cost Range: **\$5,050,000 to \$6,315,000**

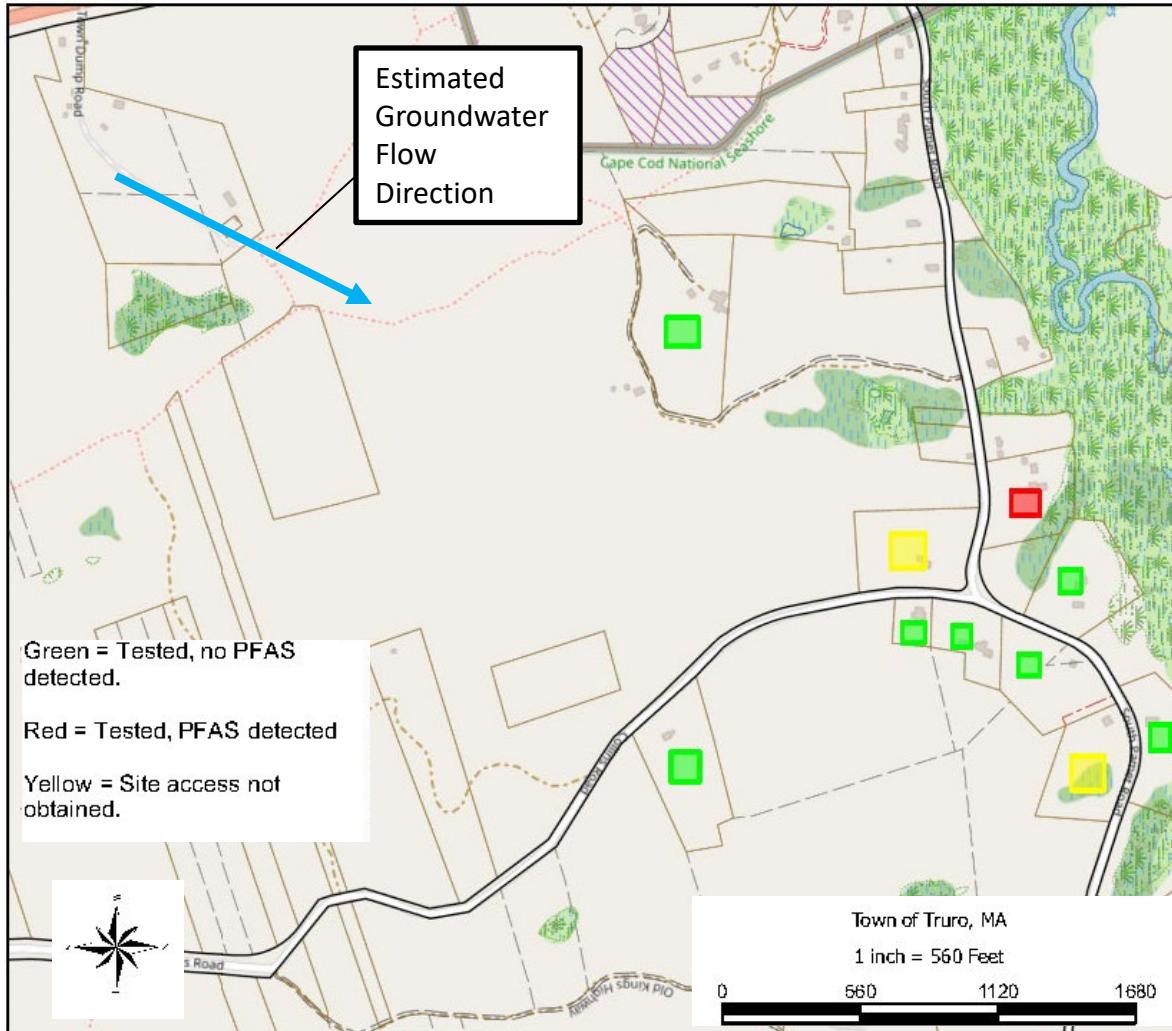
Landfill PFAS Update

- The landfill was capped in 1999 and obtained final closure certification from MassDEP in 2020.
- As part of the final closure conditions, the landfill will complete environmental monitoring quarterly until 2050.
- In May 2023, the landfill monitoring well network was tested for PFAS prior to any MassDEP directive .
- PFAS was detected above the regulatory standard in six of the 11 monitoring wells tested.
- The PFAS results were reported to MassDEP and a plan was discussed to initially sample three residential wells located downgradient of the landfill for PFAS.

Landfill PFAS Monitoring Well Network and Initial Residential Sampling Locations



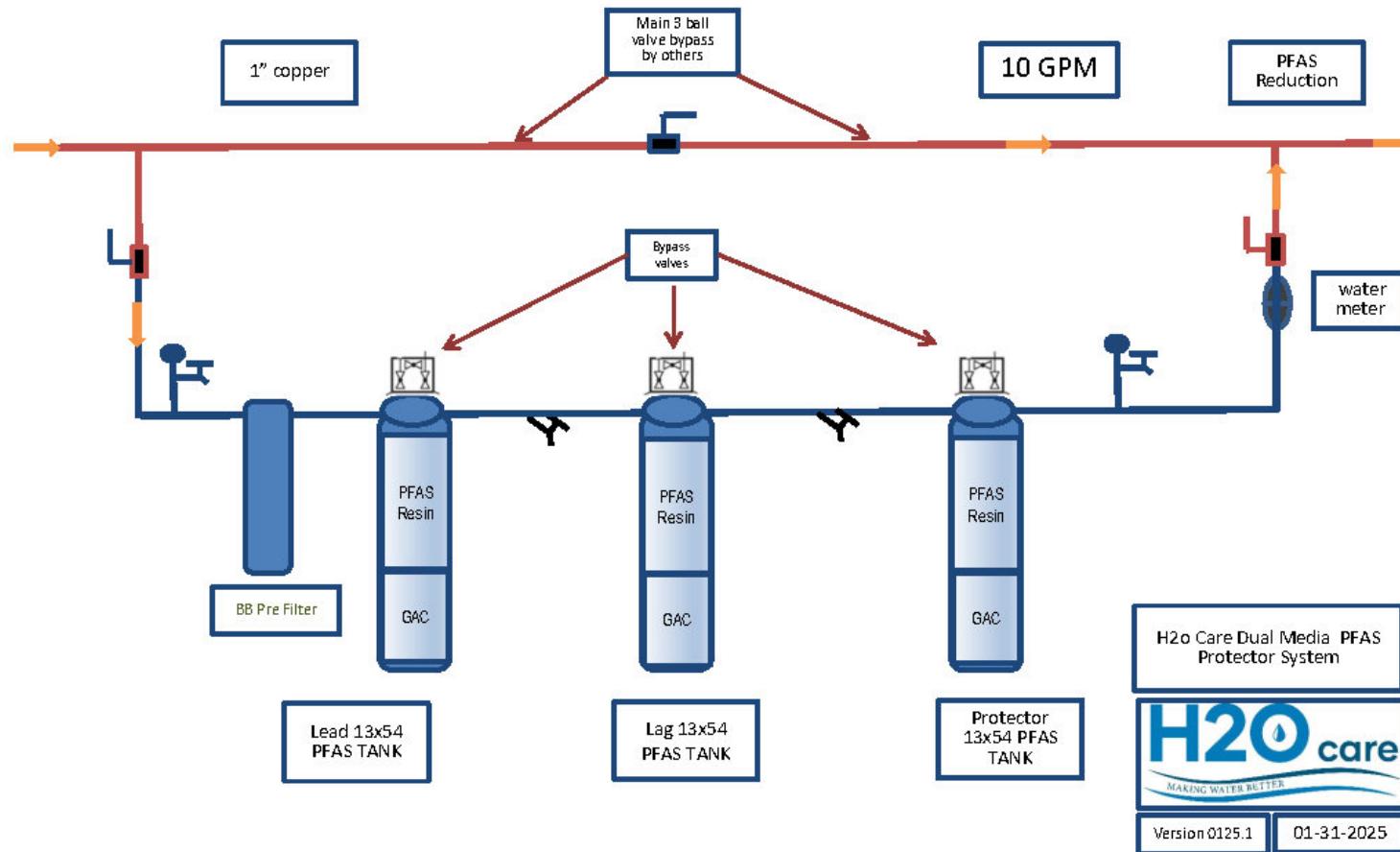
Landfill PFAS Residential Sampling Results



- Additional residences added to the sampling program
- 10 residential wells tested for PFAS.
- 1 residences had PFAS below the regulatory standards.
- 7 residences had no PFAS detections.
- Access to 2 residences for private well testing is still pending.
- Bottled water provided as an interim measure for PFAS detections relating to the landfill until a permeant solution such as a POET is installed.

POET System Design for Impacted Residential Wells

PFAS Filtration System



Landfill Next Steps

- PFAS investigation in groundwater is on-going to delineate the spatial extent of impacts. Impacts extend off-property in a northeasterly direction.
- The Town is committed to providing bottled water to residences impacted by the Landfill PFAS release as a temporary solution until a more permanent solution (POET) is achieved.
- Additional sampling of residential wells is planned until the full extent of groundwater impacts associated with the Landfill PFAS release are identified.
- Monitoring wells within the right-of-way along Collins Road and/or South Pamet Road are planned during late 2025.
- PFAS monitoring will continue as part of the landfill monitoring program.

THANK YOU

Contact

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