



PFAS Update

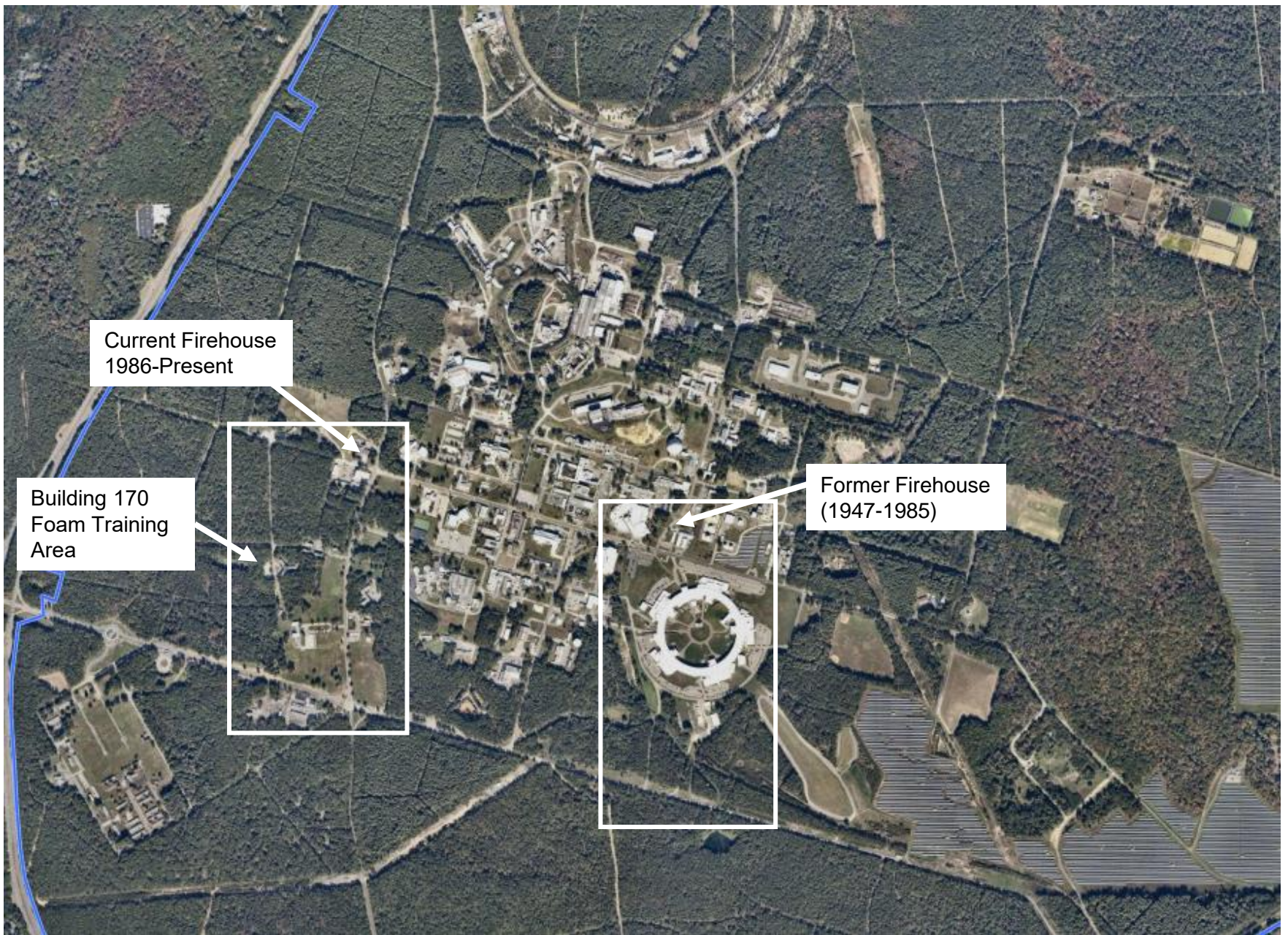
**BNL Community Advisory Council
September 8, 2022**

Doug Paquette and Vinnie Racaniello
BNL Groundwater Protection Group



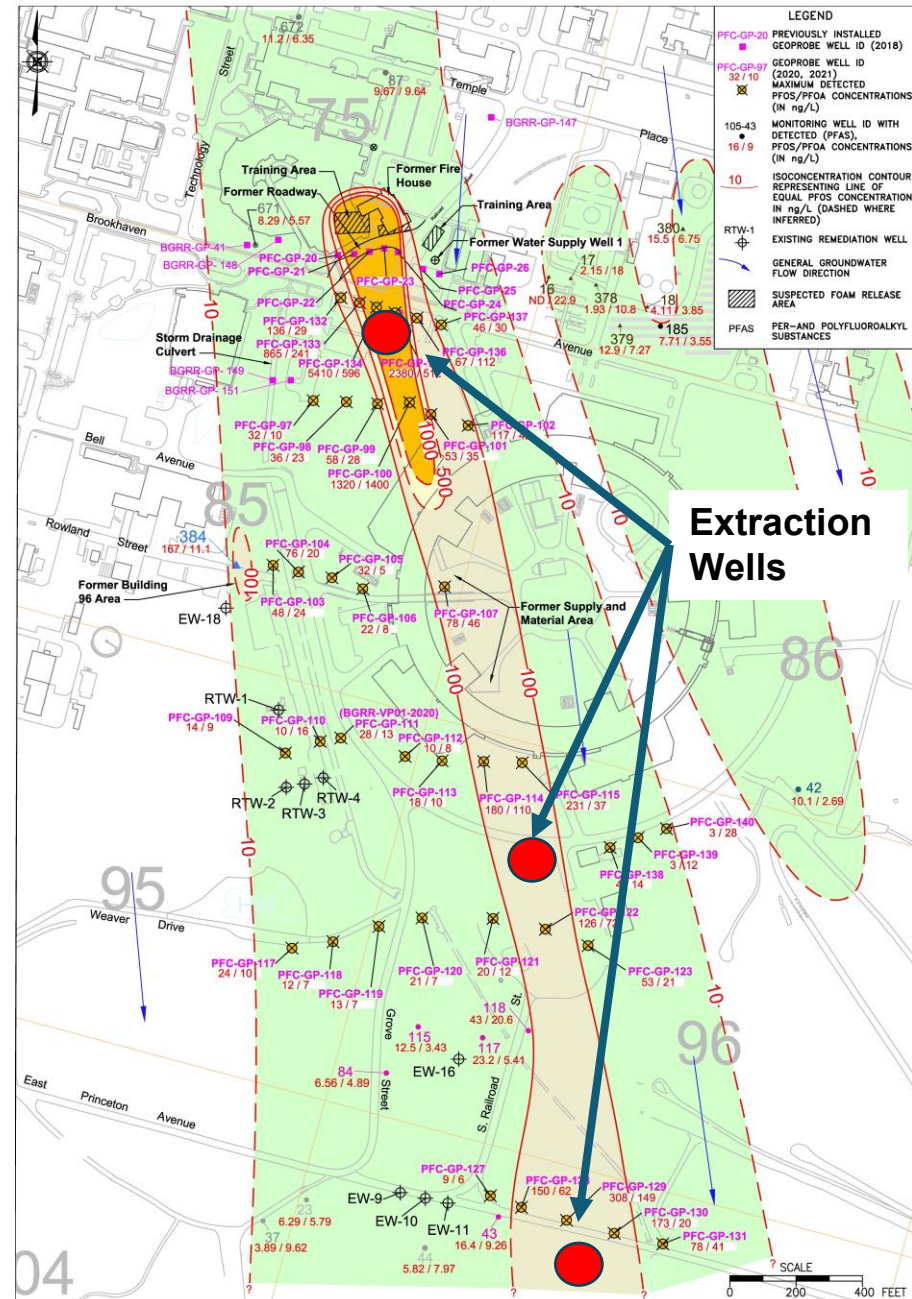
Agenda

- Update on installation of groundwater treatment systems for the Current Firehouse/Building 170 and Former Firehouse PFAS plumes
- Next steps



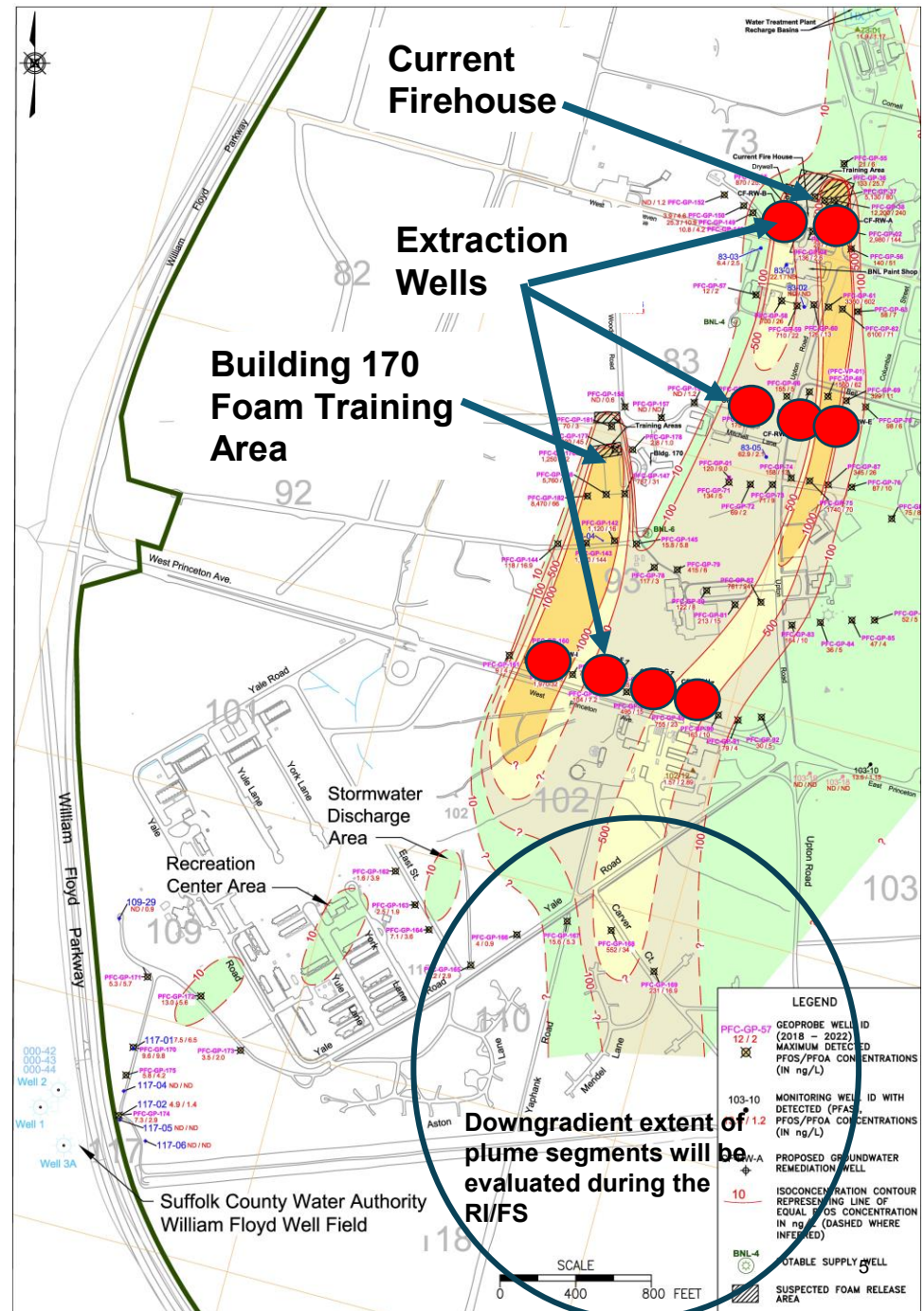
Former Firehouse Plume Remediation

- Treatment system design
 - Three extraction wells
 - Capture goal of 100 ng/L for PFOS or PFOA
 - Treat ~225 gallons per minute (gpm) of contaminated groundwater using granular activated carbon (GAC) filters
- Monitoring
 - Installed 29 groundwater monitoring wells to evaluate cleanup progress



Current Firehouse/Building 170 Plume Remediation

- Treatment system design
 - Nine extraction wells
 - Capture goal of 100 ng/L for PFOS or PFOA
 - Treat ~500 gpm of contaminated groundwater using GAC filters
- Monitoring
 - Installed 66 monitoring wells to evaluate cleanup progress

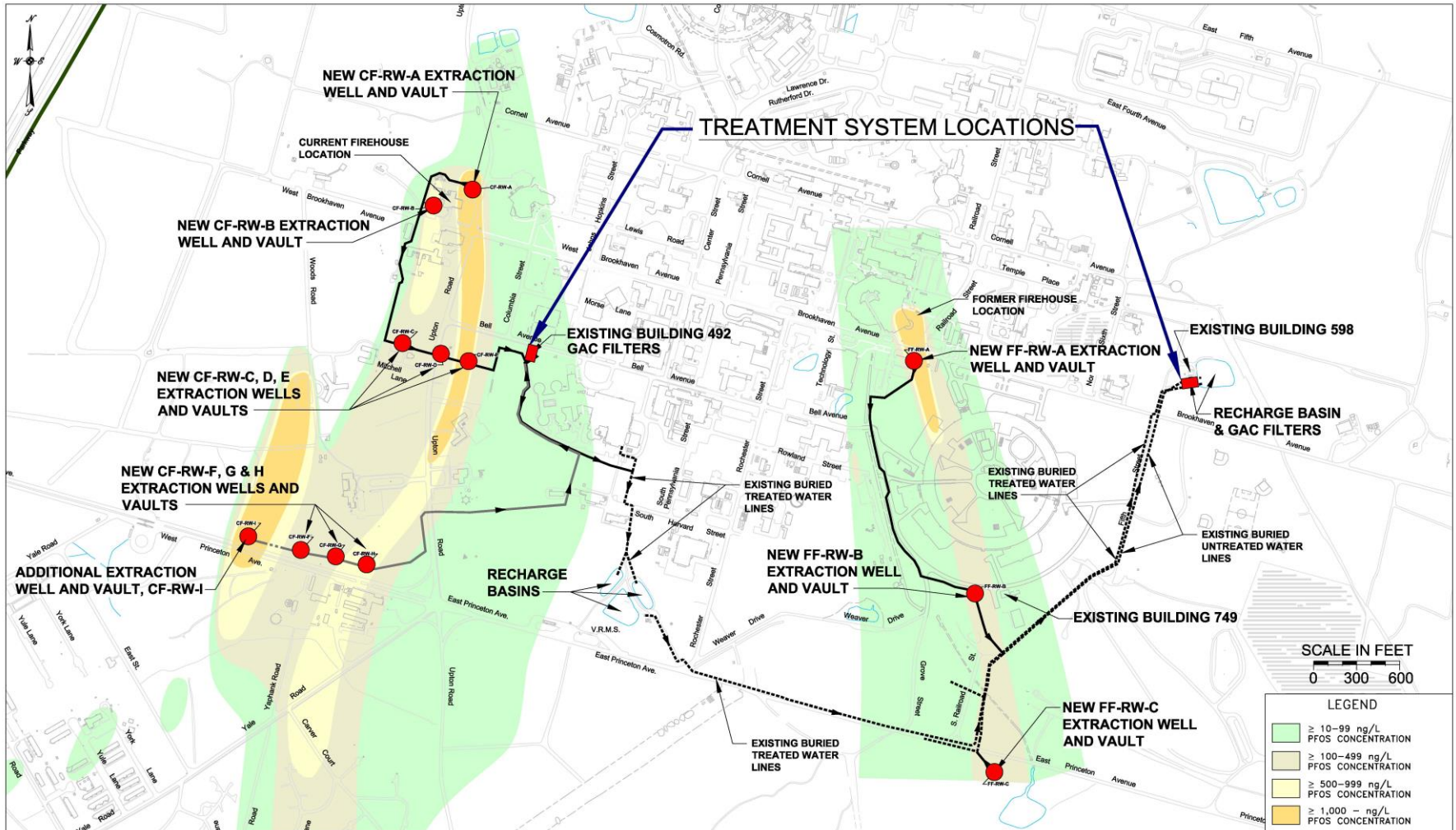


Summary of Construction Activities

- Installed
 - 12 groundwater extraction wells
 - ~13,000 feet of underground piping to connect the extraction wells to treatment buildings, and the treatment system buildings to the recharge basins
 - ~5,000 feet of underground electrical wiring
 - ~14,000 feet of underground fiber optic cables for communications/system controls
 - 95 groundwater monitoring wells to monitor cleanup progress over time
- Repurposed two former groundwater treatment system buildings
 - Former Medical Research Reactor cooling water filter Building 492 was repurposed for Current Firehouse/Building 170 PFAS Treatment System
 - Installed two new GAC filters
 - Cleaned two inactive recharge basins
 - Former HFBR Pump and Recharge System GAC filters were repurposed for Former Firehouse PFAS Treatment System
 - Repaired and repainted two GAC filters
 - Constructed a new building for the filters

PFAS SOURCE AREA GROUNDWATER REMEDIATION PROJECT

Current Firehouse and Former Firehouse areas



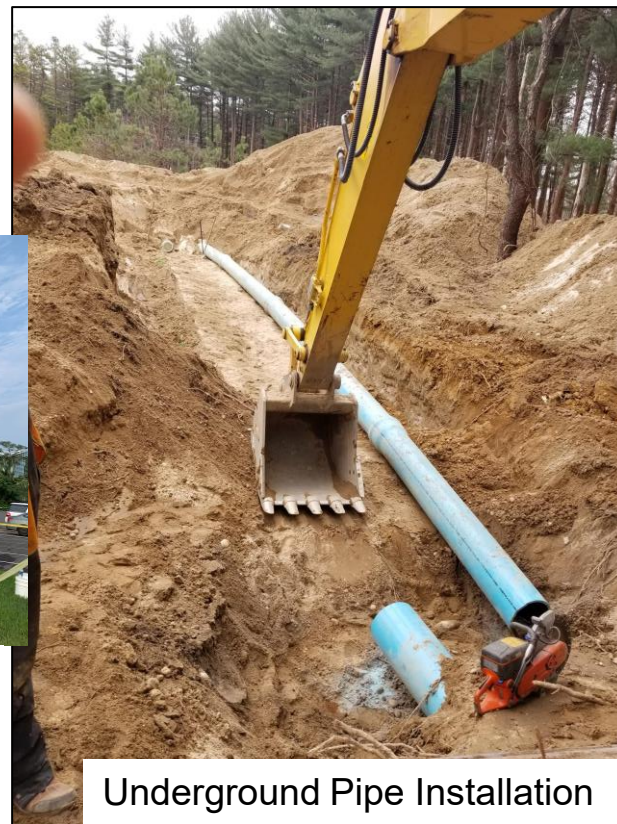
System Construction



Extraction Well Vault at Current Firehouse



Extraction Well Installation
South of Former Firehouse
Area



Underground Pipe Installation



Monitoring Well Installation

Granular Activated Carbon Filters



Installing GAC Filters at Current Firehouse/Building 170 Treatment System Building



Construction of Former Firehouse GAC Filter System Building

Filling Filters with New Granular Activated Carbon



Current Firehouse/Building
170 Treatment System



Photo Credit: DHGCarbon



Preparing Basins for Recharging Treated Water



Recharge basin for the Current Firehouse/Building 170 Treatment System

Next Steps

- Complete “punch list” of remaining construction activities and startup testing
 - Complete installing electrical and communications wiring and system controls
 - Complete initial collection of groundwater samples from the 95 new monitoring wells
 - Samples have been collected from 85 of the new wells
 - Conduct treatment system startup testing (September-November)
 - Several extraction wells have been briefly turned on to verify proper operation
 - Working with NYSDEC to obtain (SPDES Equivalency) permits for the treatment system discharges
- Complete draft Remedial Investigation/Feasibility Study (RI/FS) Work Plan
 - Focus of the plan is to fill in the gaps in our understanding of the extent of PFAS and 1,4-dioxane (on-site and off-site)
 - Expect to complete draft Work Plan by early 2023
 - Submit draft Work Plan for regulatory agency review