

# PFAS Treatment at Linn Drive and Fairview Avenue Well Stations – Project Update

Town Council Meeting  
October 17, 2022

## Project Overview & Purpose

- Linn Drive and Fairview Ave Well Stations are offline due to Perfluorooctanoic Acid (PFOA) concentrations that exceed NJDEP drinking water standards (MCLs)
- In addition to PFOA, other Per- and Polyfluoroalkyl Substances (PFAS) have been detected in both wells
- Arsenic concentrations have also been detected at Linn Drive
- Verona has to make up approximately 1 MGD of lost water capacity from these wells by purchasing from PVWC
- PFAS treatment will be required to bring the well stations back in service and in compliance with NJDEP MCLs
- Arsenic treatment will also be incorporated into the Linn Drive Well Station

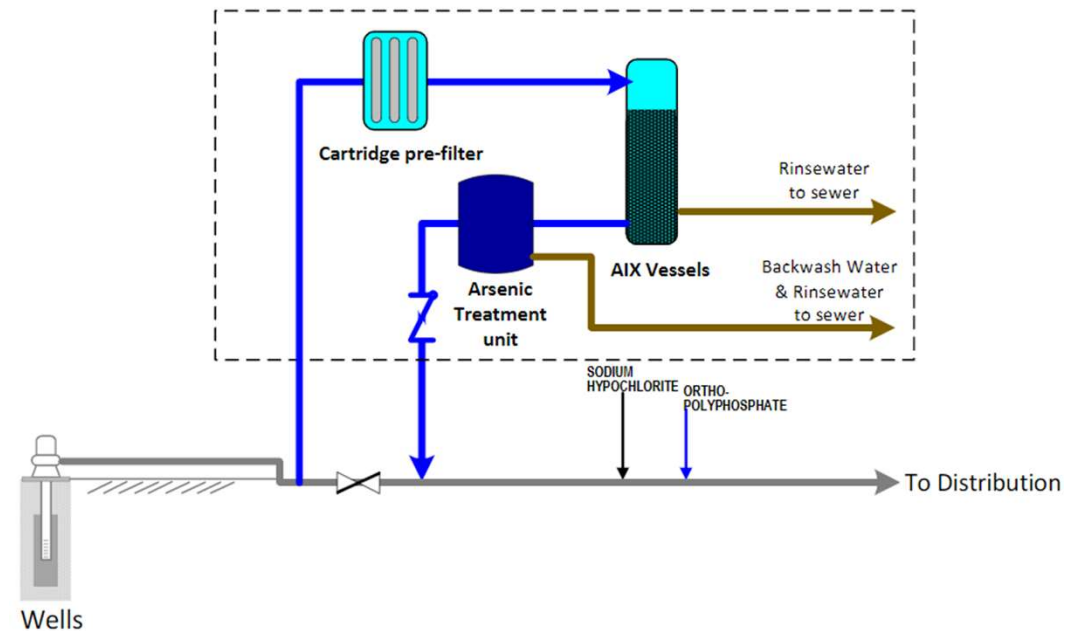
## Linn Drive Well Station

- Well Design Capacity - 275 gallons per minute (GPM)
- Feeds high service area of system
- Existing treatment and booster station from low service area located inside Community Center
- Treatment includes sodium hypochlorite & pipe loop for disinfection and corrosion inhibitor



## Proposed Design – Linn Drive Well Station

- Proposed treatment
  - 3-ft diameter cartridge pre-filters (2)
  - 6-ft diameter Filter vessels (2) with Ion Exchange (IX) media for PFAS treatment
  - 7-ft diameter filter vessels (2) with Granular Ferric Hydroxide (GFH) adsorbent media for arsenic treatment
- Utilize existing space (Garage and Storage Rooms) inside Community Center facility
- Tie into well pump discharge piping prior to chemical treatment





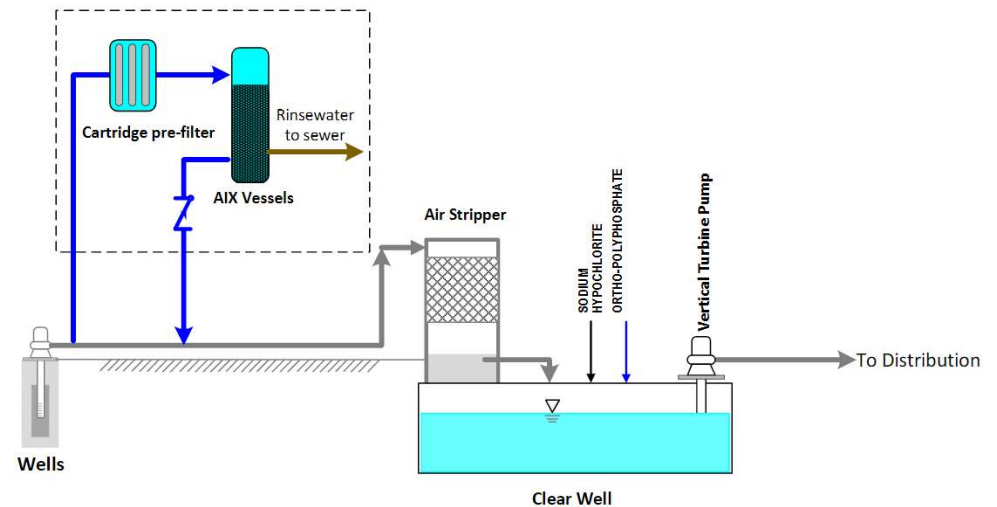
## Fairview Ave Well Station

- Well Design Capacity - 500 gallons per minute (GPM)
- Feeds low service area of water system
- Existing treatment includes, air stripper, sodium hypochlorite & clearwell for disinfection and corrosion inhibitor



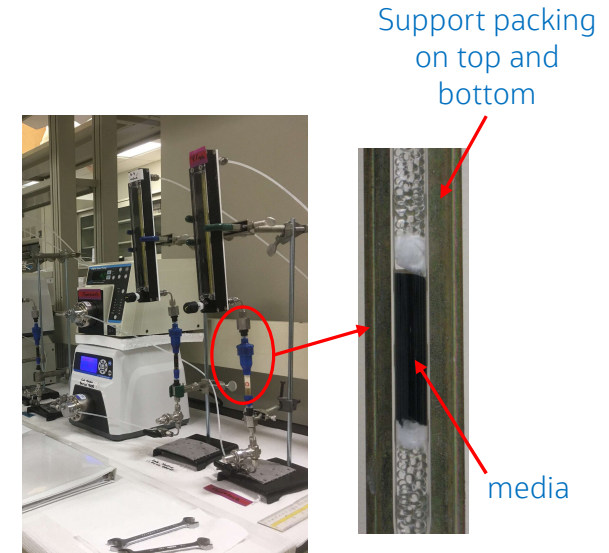
## Proposed Design – Fairview Ave Well Station

- Proposed treatment
  - 3-ft diameter cartridge pre-filters (2)
  - 8-ft diameter Filter vessels (2) with Ion Exchange (IX) media for PFAS treatment
- New pre-engineered metal building adjacent existing well head to house vessels
- Tie into well pump discharge piping prior to Air Stripper



## Rapid Small Scale Column Testing (RSSCT)

- Conducting RSSCTs for both wells to compare IX media
  - Testing 3 widely used IX media at other locations
- Select optimal IX resin to procure for treatment vessels
- Simulates full-scale performance in short time-period
  - Small diameter (0.94 cm ID) column
  - Will simulate 15 months of full-scale operation in 30 days
  - Provides breakthrough data, media usage rates
- Use to develop site-specific operational cost estimates



## Work Completed and Upcoming Milestones

- Completed:
  - Existing conditions and site visits
  - Preliminary Design Report
  - Rapid Small Scale Column Testing (RSSCT) Plan
  - Completed survey at Fairview Ave Site
  - Proposed Linn Drive Room Layout
  - Proposed Fairview Ave Site Plan
- Upcoming:
  - 30% Design - October
  - RSSCT Sampling – October
  - Linn Drive Well Pump Testing – October
  - NJIB Funding: Project Information & Planning Document Submissions – October
  - 90% Design – December



## Key Issues and Considerations

- Linn Drive
  - Well pumping capacity needs further testing to confirm design flows
  - Draw-down & water quality testing to be completed
- Fairview Ave
  - Site encumbered by Green Acres Program which will delay permitting approvals and warrant separation into two NJIB projects

## Schedule Milestones

- Detailed Design completed and submitted to NJDEP - December 2022
- Anticipated NJIB/NJDEP Authorization to Bid
  - Linn Drive - May 2023
  - Fairview Ave – TBD
- Construction
  - Linn Drive (8 months)
    - NTP - August 2023
    - Completion – April 2024
  - Fairview Ave (12 months)
    - NTP - TBD

# Questions