

PFAS PILOT SOLUTIONS

BY



WATER SURPLUS®



Data-Driven Solutions

- ✓ Pre-Engineered Systems
- ✓ Rapid Deployment
- ✓ Flexible Operating Parameters
- ✓ Full Service Pilot Management
- ✓ Customized Pilot Analysis
- ✓ Next Step Support

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System Overview

The WaterPlus™ PFAS pilot skid is designed for ease of deployment. Built to allow side-by-side testing of up to four media treatment options, users can make a data-driven decision about the best treatment option for a given application. The compact, portable design measures 60" L x 28" W x 80" H. The pilot system has ¾" camlock fittings for the inlet and outlet. Each column has an individual rotameter and totalizer for monitoring water use and has an individual control valve for manual water flow adjustment. The system includes sampling ports and pressure gauges before and after each individual column, and a filtration housing to prefilter TSS. Each column has a filter nozzle installed in the bottom of the column to retain the test media and anthracite support media. The columns are configured with valving to allow simple backwash during startup and operation if required.

System Details

- Four 4" diameter test columns, which can accommodate up to 36" of PFAS adsorption media in each column
- Configured to test a wide variety of media simultaneously, including anion exchange (AIX) resins and granular activated carbon (GAC)
- Independent flow rate control for each column to meet EBCT requirements for each media type
- Total pilot system flow expected to be between 0.8 and 3.0 gpm depending on the number of columns in use and media selection

Typical Anion Exchange Resin (AIX) Test Parameters

- 0.2-0.8 gpm per column
- 3 ft bed depth of filter media
- 2.5 minute EBCT target

Granular Activated Carbon (GAC) Test Parameters

- 0.2 gpm
- 3 ft bed depth of filter media
- 10 minute EBCT target

Notes

1. An optional feed pump (120V, 6 amps), bisulfite metering pump, and bisulfite tank can be provided if necessary
2. Sample columns testing AIX resins may be reduced to 2" diameter to reduce the water volume requirements
3. Sample columns testing GAC must remain 4" since it has a lower flowrate compared to AIX resins
4. Pilot system is design for 24-hour operation. Sample water may be stored in tanks if well pump only operates part time
5. Pilot terms range from 6-12 months depending on state requirements