

PFAS Management

Horsham Water & Sewer Authority (HWSA) Perspective

PA PFAS Action Team Meeting
Abington Senior High School
Abington, PA
April 15, 2019

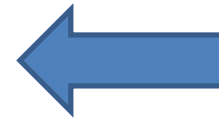
Background

- Prior to 2014, Horsham's public water supply was sourced via 14 active groundwater wells and 2 interconnections with neighboring suppliers
- 2014: UCMR3 sampling revealed the presence of PFAS in 5 of the 14 then-active public supply wells
 - PFOS concentrations in 2 wells exceeded the then-current provisional health advisory level of 200 ppt
 - In consultation with EPA & PADEP these wells were immediately shut down and public notice was issued
- 2015: Analyses at lower detection levels revealed PFAS concentrations in all HWSA wells
- 2016: 3 more HWSA wells (10, 17 & 21) were shut down when the new combined PFOA/PFOS HAL was set at 70 ppt
- The source of the PFAS contamination has been linked to historical activities at the former NASJRB and existing Horsham Air Guard Station (HAGS). The Navy is funding the installation, operation and maintenance of treatment systems for the 5 HWSA wells > 70 ppt
- In light of concerns as to the evolving nature of the science regarding PFAS and the historic, chronic exposure in this community, Horsham Township chose to set a local water quality standard with a goal of "non-detect"

Short-Term PFAS Action Plan

- The Short-Term Plan goal is to minimize levels of PFAS in the public supply through optimization of sources with the lowest PFAS concentrations while performing the phased installation of treatment systems
 - 5 wells with Navy-funded PFAS treatment systems restored to service
 - permanent GAC treatment (26 and 40)
 - temporary GAC treatment (17 and 21)
 - temporary Anion Exchange Resin (10)
 - 8 wells suspended from service
 - Temporary increase in purchased water from neighboring supplier while wells are out of service for treatment system installation
- The system-wide average in the HWSA public water system is currently ~ 4 ppt for PFOA/PFOS combined
- Annual cost of Short-Term Plan is currently ~ \$1.0 Million and is being funded by Horsham ratepayers in the form of a recurring surcharge

Temporary treatment sites



GAC trailer at Well 17

Anion exchange
resin vessels at
Well 10



Long-Term PFAS Action Plan

- Construct permanent treatment systems on 5 wells < 70 ppt
 - Well 22 was placed in service on 2/28/2019 and we are awaiting an operations permit from PA DEP for Well 20.
 - Wells 2, 4 and 19 are expected back in service by June 30, 2019
- Construct permanent treatment system on existing interconnection with neighboring supplier
- Install an additional interconnection with a separate neighboring supplier
- Construct 1.8 miles of new water mains in areas where public water was not previously available
- \$10M Long-Term Plan infrastructure is grant funded through PennVest

Long-Term PFAS Action Plan

- Convert temporary treatment systems at 3 Navy-funded wells (10, 17 and 21) and to permanent systems
- 4 wells with a combined production capacity of ~250,000 gpd will be placed in reserve status (1,3,7,9)
- Increased purchased water commitment
- Total of 11 permanent PFAS treatment systems (either GAC or IX)
- Capital and O&M costs for treatment of the 5 wells > 70 ppt PFOA/PFOS funded by the Navy
- Other long-term plan O&M costs to be borne by HWSA ratepayers

PFAS is not just a drinking water issue

- HWSA Park Creek Wastewater Treatment Plant:
 - Effluent monitoring results averaging ~ 25 ppt for PFOA/PFOS since installation of temporary treatment on HAGs supply wells
 - HWSA's NPDES permit renewal effective January 2019 formalized requirements for influent and effluent monitoring for PFOA/PFOS (although there is no approved method for PFAS measurement in wastewater)

Challenges

- Not only are the capital costs expensive, but installing GAC treatment on wells, particularly those with small land footprints and/or in residential areas, is significantly altering to the landscape of the neighborhood



The changes are substantial



Challenges

- O&M is labor intensive, expensive and obtrusive
 - Carbon change outs (and associated sampling now being required by PADEP) can result in wells being out of service (with the associated loss of production) for days to weeks at a time
 - Depending on location, carbon delivery is disruptive to residents
- GAC/IX treatment on wells is a substantial change in operational complexity and knowledge – these are transformative changes for small/medium groundwater systems
- Permitting of new treatment is proving to be difficult, which is frustrating considering both GAC and IX are not new technologies for drinking water and PFAS is not “regulated”

Recommendations/Needs

- HWSA and other PFAS impacted suppliers, *need collaboration, cooperation and assistance from regulators* in implementing new technologies and adjusting to new regulatory burdens on an accelerated schedule
- *We need help with risk communication strategies* to address public concerns regarding sources of contamination, impacts of past exposures and explaining regulatory inconsistencies
- *The citizens of Horsham, Warminster & Warrington should not bear any of the costs for removing PFAS from their drinking water*

Recommendations/Needs

- ***The impacts of the past exposure cannot be ignored***
 - It must be our collective mission that the Bucks & Montgomery County communities surrounding the former NAWC, NASJRB, and existing HAGS be selected for the multi-site health study
 - Team and stakeholder support of the PA DOH in developing a successful proposal is crucial
- The raw water in the aquifer remains contaminated and likely will be for decades to come – pumping and treating public supply wells cannot be the only long-term remediation method for the aquifer. ***The PFAS contamination and all associated pathways must be mitigated at the source in an expedited fashion through a coordinated and concurrent remediation of both the former NASJRB and existing HAGS***

Thank you

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