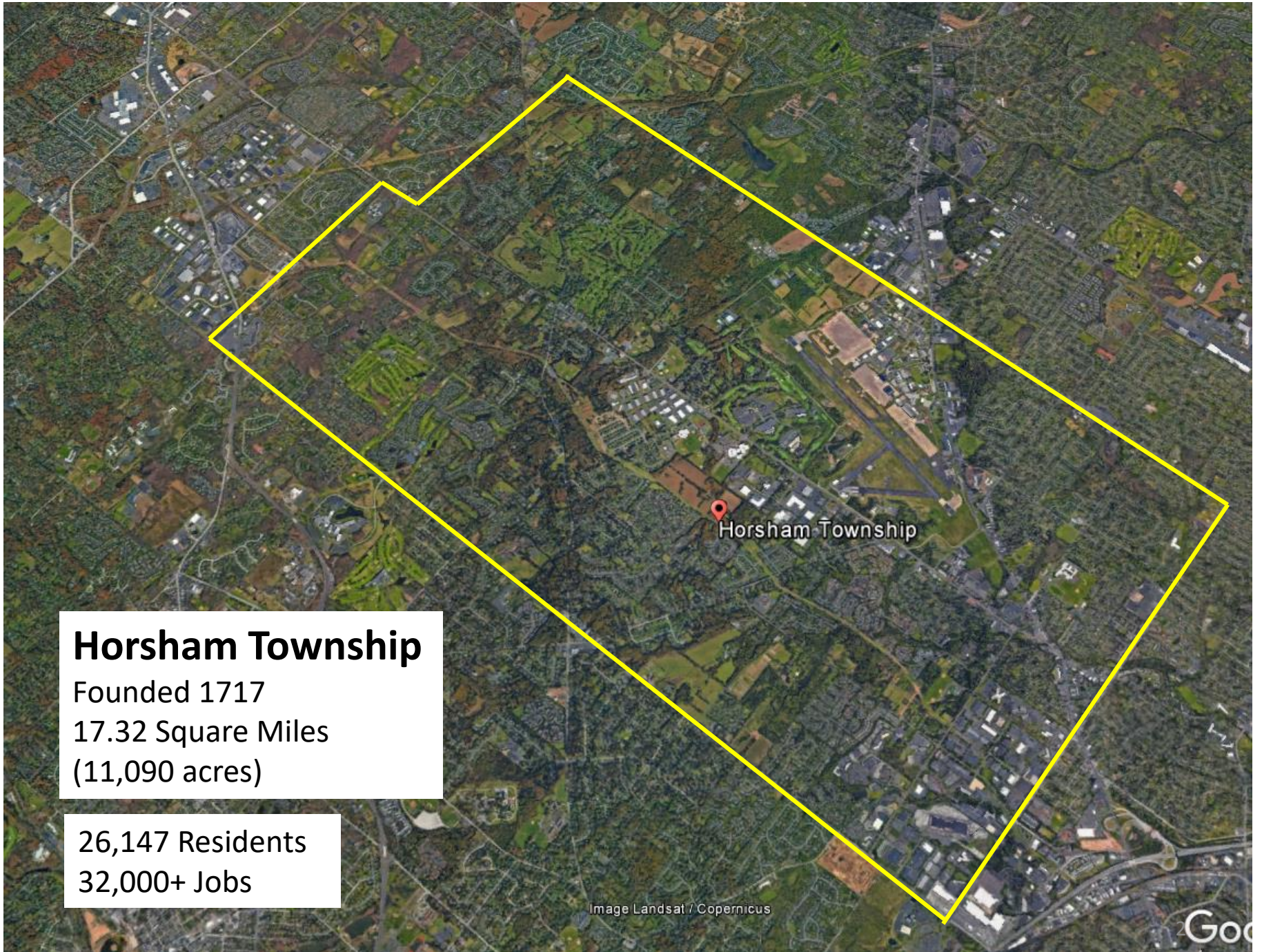




HORSHAM

Horsham Township
Horsham Water & Sewer Authority



Horsham Township

Founded 1717
17.32 Square Miles
(11,090 acres)

26,147 Residents
32,000+ Jobs

Image Landsat / Copernicus

Go

Holocaust survivor, author
Elie Wiesel dies at 87 **News, B5**

Holy Ghost Prep grad Jones
signs with Indians **Sports, C1**

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BUCKS COUNTY Courier Times

\$2.00 SUNDAY, JULY 3, 2016

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PFOA, PFOS mainly limited to base communities

BY KYLE RAGENSTORF
STAFF WRITER

Anxiety about the safety of drinking water in parts of Bucks and Montgomery counties continues to grow, as residents question whether their local water supplies have been tainted by chemicals. The concern reached a feverish pitch last week, when a Facebook video posted by a local resident went viral. It ranged residents of "Harbortown, Horsham, Warrington, Iyland, and Southampton" to stop drinking their water. As of Friday, the video had been viewed more than 250,000 times on Facebook. But is it true?



So far, drinking water contamination from perfluorinated compounds perfluorooctanoic sulfonate (PFOS) and perfluorooctanoic acid (PFOA) has only been confirmed in levels above the amounts recommended by the federal Environmental Protection Agency in Horsham, Warminster and Warrington. Water authorities in those communities have been reacting to the contamination since 2014,

when the chemicals were first discovered in public wells. The contamination is suspected to have originated from firefighting foams used on a trio of former and current military bases in those communities. The bases include the former Naval Air Station-Joint Reserve Base in Horsham, the former Naval Air Warfare Center in Warminster and the active Horsham Air Guard station. Water in those systems is now below the EPA's new 70 part per trillion (ppt) health advisory level, although some question whether those levels are protective of

human health. This news organization has determined the chemicals have also been found in lower levels in other Bucks County communities, and that some public wells in townships neighboring the affected areas haven't been tested. The Horsham, Warminster, and Warrington water authorities rely on groundwater for the bulk of their water supply, as opposed to surface waters, like creeks or rivers. The systems use a series of wells to supply residents with water. The water from those wells is combined, so officials say each resident drinks the same water.

As PFOS and PFOA contamination above the EPA limits has been found in wells in those municipalities, the water authorities have taken them offline. In 2014, eight public wells were taken offline in the three communities, based on the previous EPA advisory limit of 400 ppt for PFOA and 200 ppt for PFOS. After the EPA's recommended limit dropped to 70 ppt in May, the number of closed wells grew to 16 public wells. The number of affected private wells grew from 80 to about 150. See **WATER**, Page **4B**

INQUIRER SPECIAL REPORT

POISONING THE WELLS



Hope Grasse and brother Chris Mattioli used to climb the fence near their Warminster home to play at the Naval Air Warfare Center. Grasse says she drank the water there for years. "How long is it going to take to get out of my body?"

Two former Navy bases have been linked to tainted drinking water in three area townships. Residents seeking answers fear their health has been harmed.

BY JUSTINE McDANIEL and LAURA MCCRYSTAL | STAFF WRITERS

When the planes burned, the kids would come out. Hope Grasse and her siblings would run down their Warminster street and rub their eyes and shake their heads. They would watch Navy firefighters shoot a dense white foam from hoses, smothering the flames that kept up from the fenced-off lot. When the blackened plane was cool, the children would climb the fence and jump into the burned-out cockpit, pretending to be pilots, Grasse recounted. The plane, and the field where the Navy conducted drills, was also a playground for the "Bird Road" kids back in the 1970s and '80s. They did not know then that the firefighting foam could be toxic, or that it would seep into their drinking water. Now Grasse wonders, like at least hundreds of others in Bucks and Montgomery Counties, Have we been poisoned? For decades, Navy personnel used the firefighting foam at hundreds of

bases. Now they know that it contained chemicals linked to cancers, and that those chemicals flowed through the groundwater into wells and out of the faucets of thousands of residents in Southeastern Pennsylvania. Two former bases just north of Philadelphia have become the first Navy sites linked to drinking water tainted by those chemicals. As the Department of Defense investigates others across the country, what happens here could help shape the response. See **WATER** on **A16**.

Starting in 2014, Horsham was spot-lighted by the media as a community with 'PFC' problems.

BUCKS COUNTY Courier Times

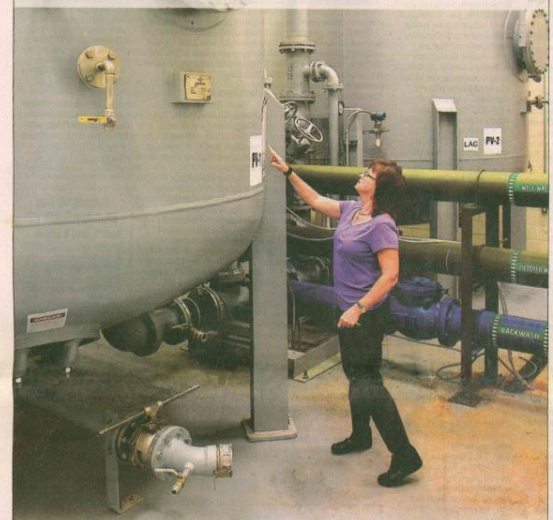
\$1.50 FRIDAY-SATURDAY, MAY 26-27, 2017

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PFC levels on rise

Lawmakers forming plan to pressure military



Tina O'Flourka, business manager for the Horsham Water and Sewer Authority, looks over two new filtration tanks at the authority's filtration plant in Horsham. Each tank uses 20,000 pounds of carbon media to clean the water coming through it.

BY KYLE RAGENSTORF
STAFF WRITER

As local lawmakers continue to pressure the military to do more to clean massive groundwater pollution near its bases in Bucks and Montgomery counties, contaminant levels appear to have increased in the past year. That's according to sampling data published by a number of affected water utilities.

Since the PFOS and PFOA contamination was first discovered in 2014, 16 public drinking wells, serving tens of thousands of residents, have been closed in Warminster, Warrington, and Horsham. Those wells were closed because they exceeded 70 parts per trillion



(ppt) of the chemicals, the limit designated as safe by the U.S. Environmental Protection Agency. Additionally, water provider Aqua Pennsylvania continues to keep a close eye on about two dozen of its wells throughout the region. Only one near the military bases, in Harbortown, has been closed so far. Sampling data from the water authorities show

that levels have increased, if only slightly, in 15 of 17 wells belonging to Horsham, Warminster, Warrington, and Aqua Pennsylvania. No wells above the 70-ppt safety limit are currently providing water to area residents. **Two-by-four levels** Five of the Horsham Water and Sewer Authority's nine drinking wells have been taken offline due to

contamination. Testing data show increases in each of the four remaining wells between May 2016 and April 2017. The increases were of approximately 7, 8, 8, and 10 ppt, with the most contaminated well showing 29 ppt in May of this year. These of eight public wells in Warrington remain online. From May 2016 to April 2017, data show levels increased in two of those wells: one from 19 ppt to 24 ppt, and another from 19.6 ppt to 23 ppt. The third decreased, from 20.9 ppt to 17 ppt. Warminster has six wells that have exceeded the EPA advisory level, and does **See PFC**, Page **A2**



May 21, 2014

Dear Neighbor:

We write today with an important update about Horsham Township's drinking water. As most of you know, the U.S. Environmental Protection Agency (EPA) establishes national standards for water quality. Last week, EPA modified its health advisory for PFCs. PFCs are substances used by the U.S. Navy in the fighting activities on the coast of Iraq and which were detected in our groundwater in 2010. When the new EPA health advisory was published, the Horsham Water and Sewer Authority (HWASA) immediately set to work to ensure that the public water supplied to Horsham residents was not below the EPA advisory.

We recognize and respect that many of you are concerned with the safety of our water supply. We spoke with many of you regarding the information and events of the past several days and deeply appreciate the honest and helpful feedback you have provided. As Council members, we are also residents of this community, and we share your concern. We are thankful to our residents for addressing the concerns of our residents. Your health and safety is our utmost priority. You have our commitment to provide factual, up-to-date information and show the steps that we, in collaboration with HWASA, have taken to ensure water quality in our community. Council's emphasis in future communications will be on water quality and education.

First, we want to reassure customers of the HWASA that your water meets or exceeds all state and federal drinking water quality standards, including the more rigorous standards imposed by the EPA last week. All advice with these PFC levels significantly below the new EPA drinking water advisory. We are actively addressing remediation of the water based on our current and expert that at least two weeks are operational, with carbon filters, by the end of the year. For more information about the new standards and the actions taken by the Horsham Water and Sewer Authority to ensure compliance with EPA standards, visit our Horsham Township website at www.horsham.org.

Second, Council and the HWASA are committed to providing ongoing, frequent updates to our residents regarding our drinking water. We have set up a designated e-mail, water@horsham.org to address specific questions and concerns regarding your water supply. We invite you to contact us directly using that e-mail, and we will promptly respond to your e-mail. We will continue to post updated information to www.horsham.org. You can also sign up to receive email communication from us regarding this matter by emailing water@horsham.org with the subject line "PFCs/2014".

We ask that residents with private wells contact the Township directly at water@horsham.org for updates specific to their water supply.

We want to express our gratitude for the patience and support you have provided as we work to protect the residents of our community. It is a great privilege to serve residents who rise to challenges such as these and step up to work together to safeguard and help one another.

Sincerely,

Horsham Township Council
Edward M. Tustin, President
Mark McCrackin, Vice President
W. William Whitehead

Tom Johnson
Gregory S. Hechtel, Esq.

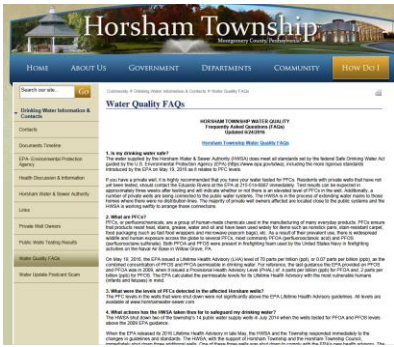


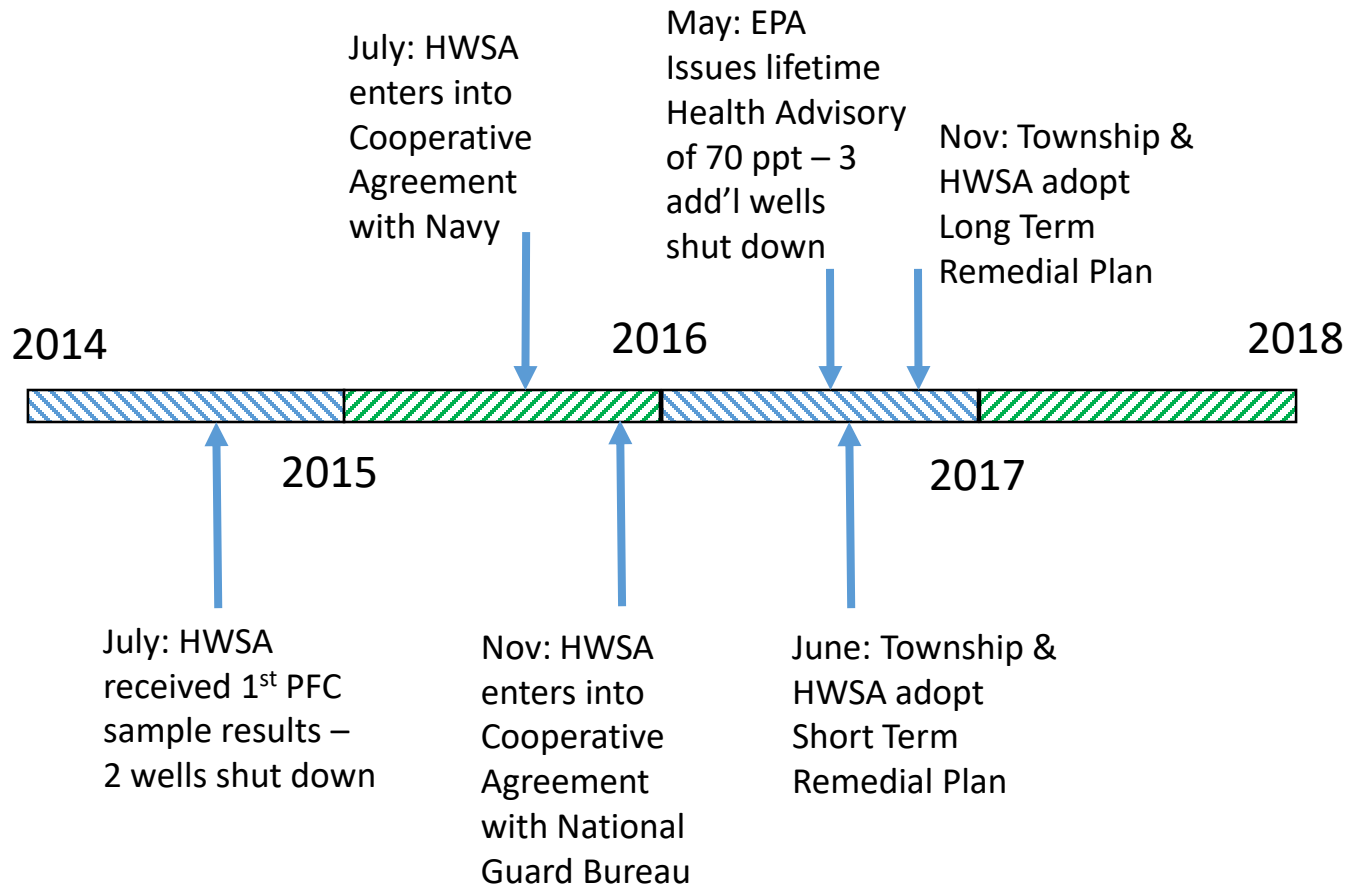
Table with columns: County #, Service, Service Date, Meter, Meter Date, Meter Location, Meter Status, Meter Reading, Meter Type, Meter Size, Meter Material, Meter Manufacturer, Meter Model, Meter Serial, Meter Year, Meter Cost, Meter Warranty, Meter Notes. The table lists various meter readings and details for different service areas.

WELL #26



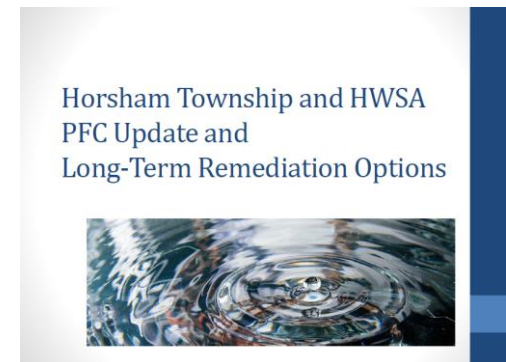
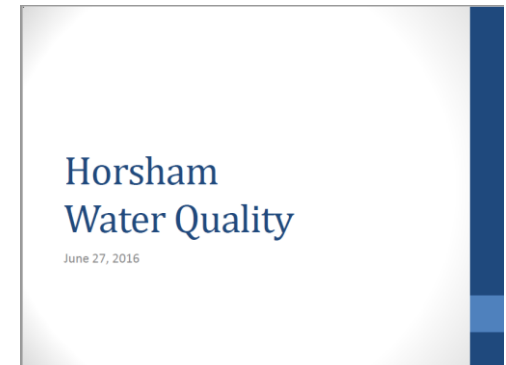
To address the concerns of its residents, local businesses and those who work in Horsham every day, Horsham Township Council and the Horsham Water & Sewer Authority took decisive and proactive steps to reverse this perception and provide its citizens with the best water in the region.





Horsham Township's Plan has four distinct components:

- Education
- Communication
- Remediation
- Compensation



Currently HWSA continues to achieve more stringent water quality standards than those set by EPA and DEP.

EPA's Lifetime HAL (70 ppt) is approximately 17 times greater than HWSA's current system-wide average (4 ppt combined)

This average is calculated by a mass calculation formula.

Annual cost is ~ \$1.2 Million and is being funded by Horsham ratepayers



Horsham has been able to accomplish these efforts through:

- Funding from cooperative agreements with the U.S. Navy and National Guard Bureau
- Funding from a PENNVEST grant
- An on-going surcharge paid by HWSA rate payers
- Township Funds

All of these efforts have been accomplished at significant cost to Horsham Township citizens. Currently the Township's out of pocket expenses are approaching \$1M. Even more importantly, the stigma of the contamination has potentially impacted local real estate values and employment opportunities.

Challenges

- Installing GAC treatment of wells, particularly those with either small land footprints and/or in residential neighborhoods can be difficult and extremely unpopular with neighboring property owners.

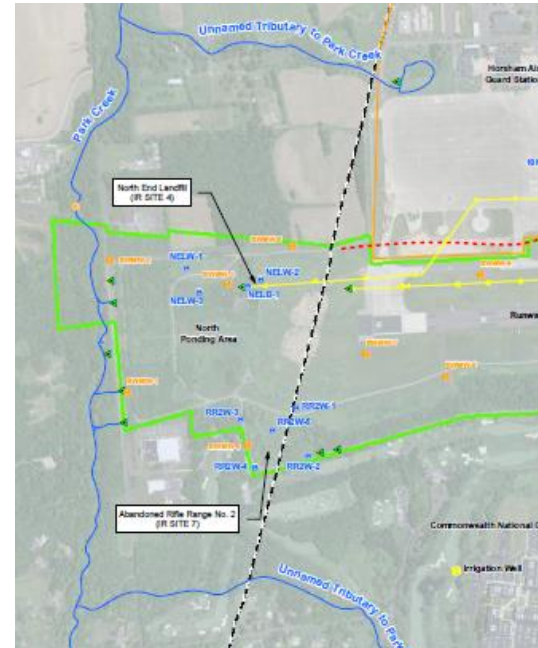


Challenges (con't)

- Capital and O&M (carbon change-outs) costs are expensive.
- Carbon change-outs can result in wells out of service for days.
- GAC treatment on wells is a substantial change in operational complexity and knowledge – these are transformative changes for small/medium groundwater systems
- Permitting of alternative treatment, such as resin, is proving to be difficult, which is somewhat ironic considering PFAS is not regulated!

Challenges (con't)

- Stormwater leaving the former Naval Air Station –Joint Reserve Base Willow Grove and the Horsham Air Guard Station has PFOA/PFOS levels above the EPA LHAL
- Much of the stormwater enters Park Creek which likely impacts down stream drinking water sources in other communities



Take aways:



- Horsham continues to be a great place to live, work and play.
- Thanks to the expedited efforts of the Horsham Township community, our drinking water continues to be high quality and safe
- However, the response has been (and continues to be) costly