



# **Restoration Advisory Board Biddle Air National Guard Base**

Bill Myer  
NGB/A4VR

15 September 2021



# Updates Since May 2021

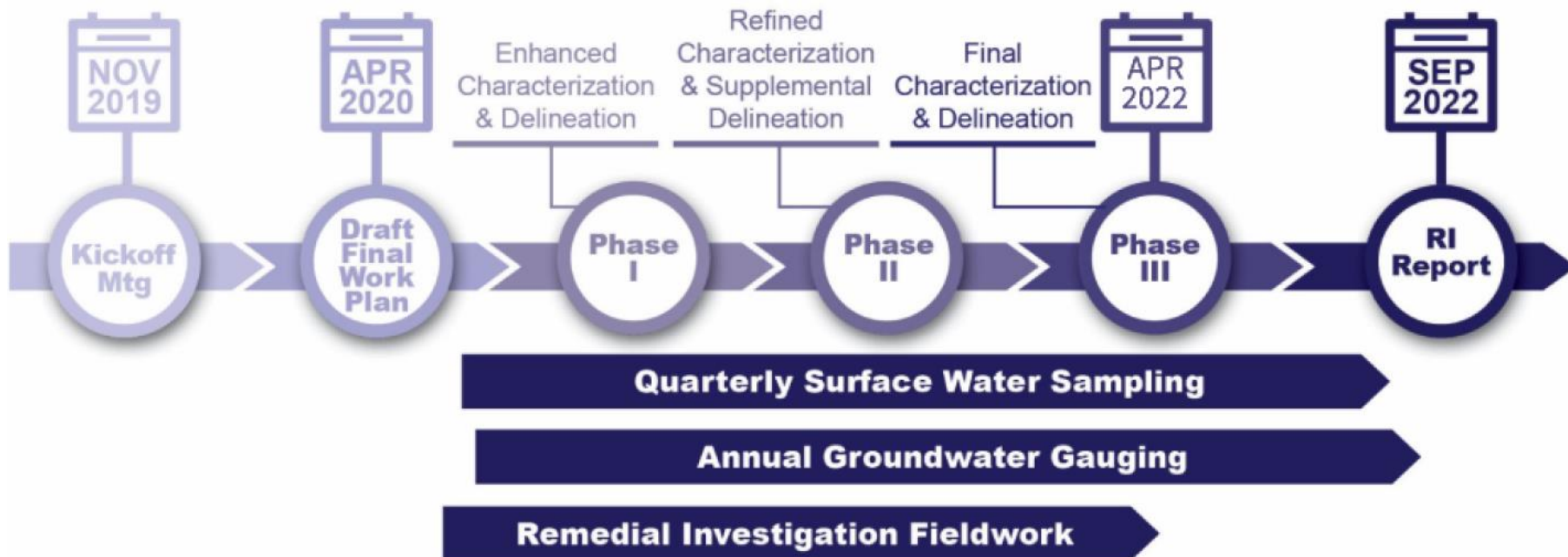


- Environmental Restoration Program Sites:
  - No Updates
- PFAS Remedial Investigation:
  - 31 August: Submitted Draft Tech Memo for Round 7 regional surface water sampling to EPA, DEP, and Navy.
  - 28 & 29 June: Completed Round 8 regional surface water sampling in coordination with the Navy.
  - 21 July: Submitted Draft Tech Memo for Round 6 regional surface water sampling to EPA, DEP, and Navy.
  - 30 August: Held technical consultation with EPA/PADEP covering bedrock characterization sampling methodology.
    - Preparing a Technical Memorandum to clarify RI DQOs, conduct comparative analysis of multiport well sampling groundwater quality with traditional monitoring well/piezometer groundwater water data
- PFAS surface water treatment:
  - 11 August 2021 New Surface Water Treatment System started; as of 2 Sep 2021 treated 9M gallons
  - 21 August 2021 discontinued operations of temporary surface water treatment system
  - Final NPDES Permit issued
- New ANG RPM: Bill Myer email: [william.myer.2@us.af.mil](mailto:william.myer.2@us.af.mil)

# Remedial Investigation Biddle Air National Guard Base



# Remedial Investigation General Project Steps and Schedule





# Remedial Investigation Progress



- 28 & 29 June: Completed Round 8 regional surface water sampling in coordination with the Navy.
- 21 July: Submitted Draft Tech Memo for Round 6 regional surface water sampling to EPA, DEP, and Navy.
- 26 July and August 30: Held technical consultations with EPA covering Phase II investigation activities.
- 31 August: Submitted Draft Tech Memo for Round 7 regional surface water sampling to EPA, DEP, and Navy.
- Planning monitoring wells and investigation methods for offsite locations.



# Quarterly Surface Water Sampling



- Performed regional Surface Water sampling with Navy during June Quarterly Event.
- Data validation is in progress.
- The next Surface Water sampling event is planned for the week of September 20.



# Actions Planned for Next 3 Months



- Actions Planned for Next 3 Months
  - Continue regional surface water sampling in coordination with the Navy.
  - Preparation of Technical Memoranda for Phase II activities. Includes amended worksheets for Work Plan (UFP-QAPP).
  - Finalize offsite investigation methods and locations.

# PFOS/PFOA Water Treatment

## Biddle ANGB



- PFOS/PFOA has been detected in surface water leaving the Biddle Air National Guard Base. This water is primarily groundwater that discharges to a stormwater detention basin on the northwest boundary of the Base and flows to Park Creek which flows to the Little Neshaminy Creek.
- 500 gallon per minute treatment plant constructed to replace temporary system operating since 2017.
- Start-up on 11 August 2021. As of 2 September recovered and treated ~ 9M gallons.
- First round of new treatment plant effluent sampling required by NPDES Permit: PFOS+PFOA < 1ppt.

# PFOS/PFOA Water Treatment Biddle ANGB



# PFOS/PFOA Water Treatment

## Biddle ANGB



# NWWA Activities



- North Wales Water Authority assumed responsibility for Warrington water service area
- Cooperative agreement for water system actions
- PFAS treatment added to 3 municipal wells
- Construction underway to add PFAS treatment to 2 additional wells – 2022 completion
- Two water main extensions are in design with construction bidding expected in October 2021
- Service line connections and private well decommissioning ongoing



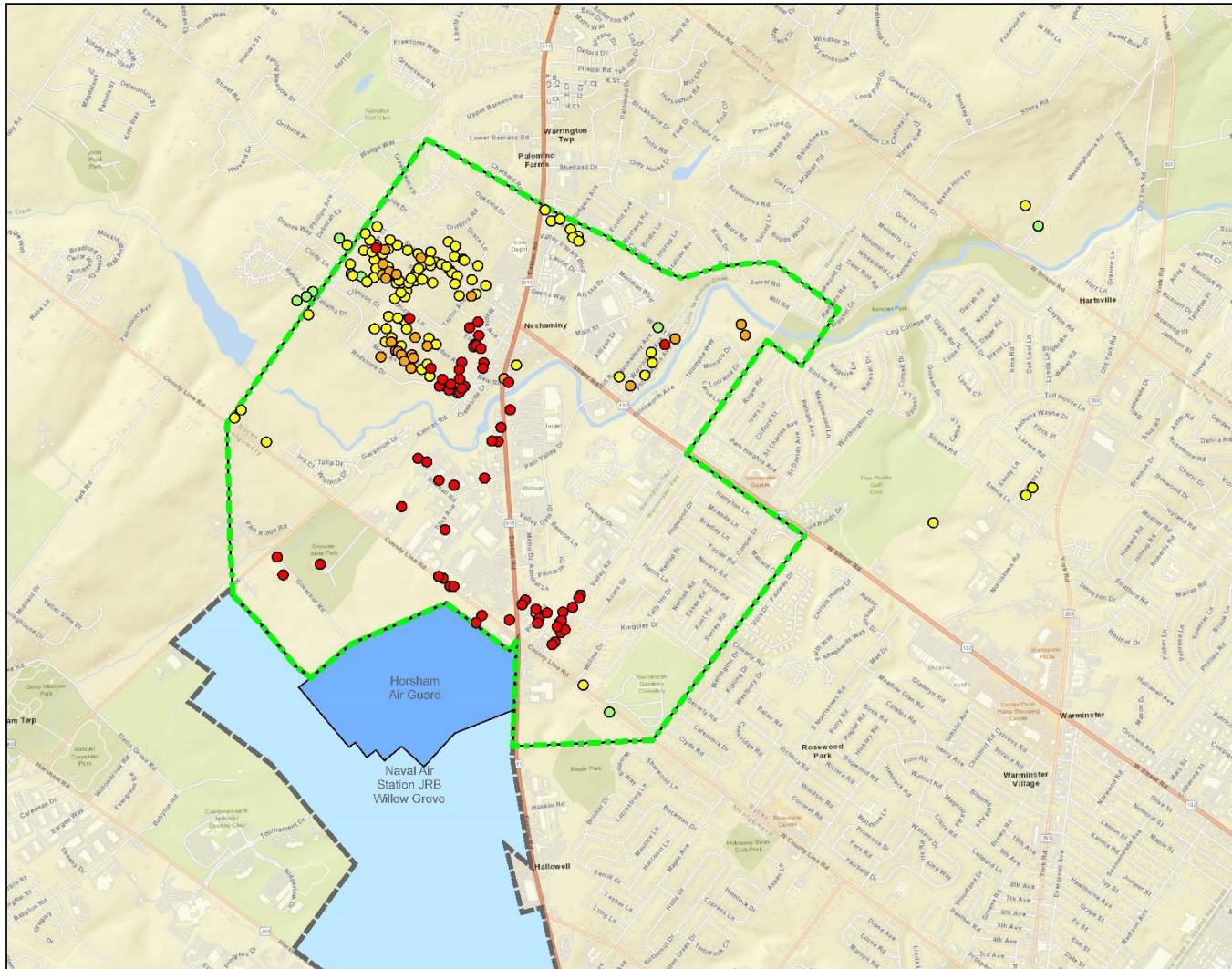
# Private Well Sampling



- ANG has contract in place with Wood to provide PFOS/PFOA testing of private drinking water wells and supply bottled water to properties with PFOS/PFOA at or above the EPA Health Advisory level (HA) for residents within our area of responsibility in Horsham, Warminster, and Warrington
  - Total number of private wells sampled by ANG are:
    - Horsham
      - 6 wells sampled
      - 5 were above HA
      - 4 have been connected to municipal water
      - 1 well abandoned by Wood
    - Warrington:
      - 150 well sampled
      - 52 are above HA
      - 44 have been connected
      - 16 met the >40<70 HA: 5 have completed 4 quarters sampling rounds <70
    - Warminster: 12\* well sampled
      - 5 are above HA
      - 4 have been connected municipal water
- \*Some of these properties are on Valley Road with Warminster mailing addresses but are located in Warrington Township
- Sampling contact for ANG area of responsibility: Brad LaForest at [brad.laforest@woodplc.com](mailto:brad.laforest@woodplc.com) or (207) 828-3620



# Private Well Sampling Map



## PFAS Sample Results for January 2021

Horsham Air Guard Station  
Horsham and Warrington  
Townships, Pennsylvania

## Legend

- PFOS+PFOA not detected
- PFOS+PFOA at or below 0.040 µg/L
- PFOS+PFOA between 0.040 and 0.070 µg/L
- PFOS+PFOA above 0.070 µg/L
- ANG Sampling Area
- Horsham Air Guard
- Former NAS JRB Willow Grove

## Notes & Sources

Notes:  
µg/L - micrograms per liter

PFAS - Per- and polyfluoroalkyl substances  
PFOS - Perfluorooctanesulfonic acid  
PFOA - Perfluorooctanoic acid

Health Advisory Level (HAL) is the sum  
of PFOS+PFOA (0.070 µg/L)

Base Map Source:  
Street map data from ArcGIS Online map services.  
Map service information available at:  
[http://gto.arcgisonline.com/maps/World\\_Street\\_Map](http://gto.arcgisonline.com/maps/World_Street_Map)

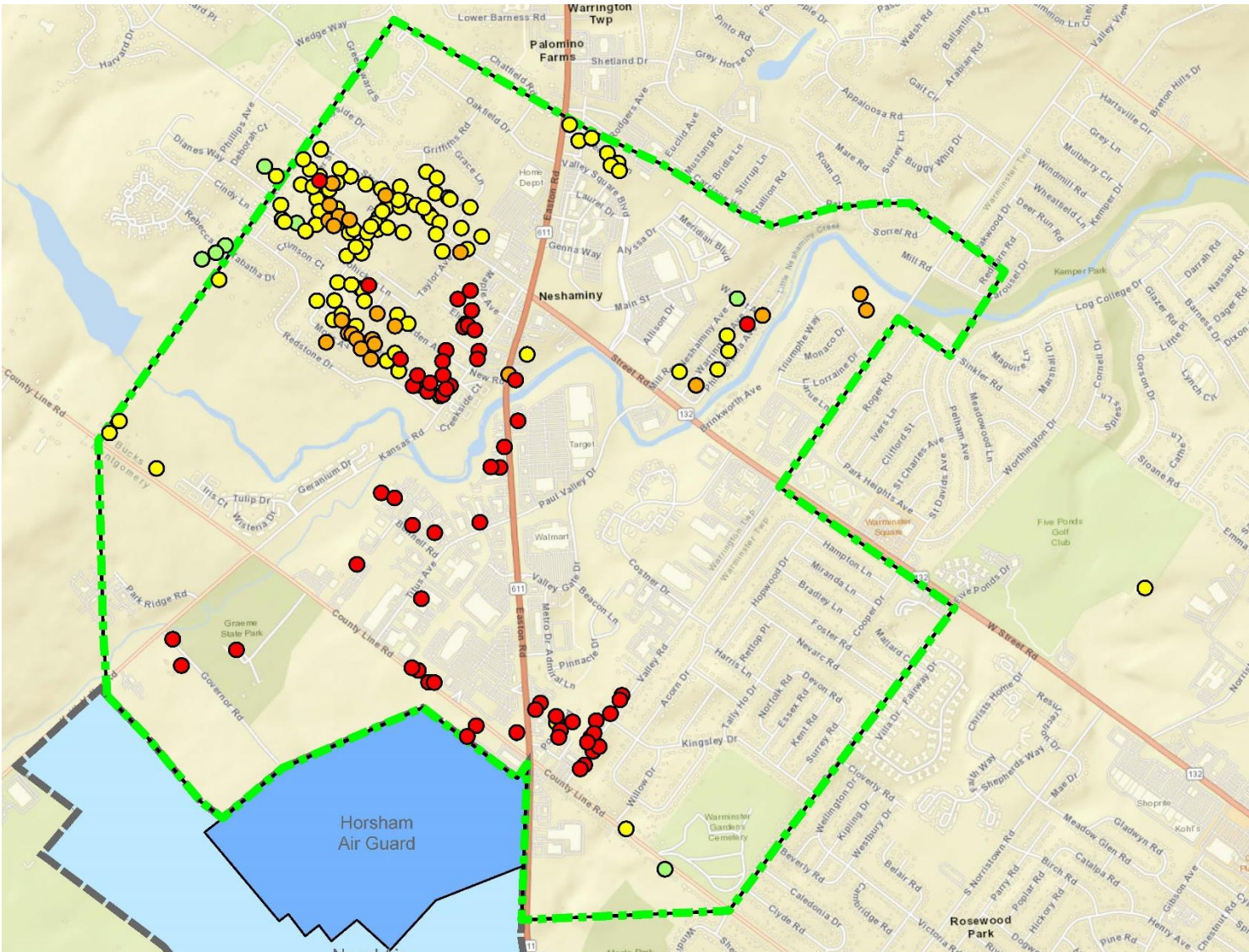
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Feet

**wood.**  
Wood  
Environment & Infrastructure Solutions  
511 Congress St. Suite 200  
Portland, ME 04101  
(207) 828-3200

N  
**FIGURE**  
**2**



# Private Well Sampling Map



# NPDES Permit Status



- Final NPDES Permit issued by PADEP in March 2021 and effective 1 April 2021. Biddle has complied with all permit requirements.
  - Discharge Monitoring Reports required by the permit have been submitted by Biddle and are available on the PADEP eDMR website.
  - Air Force has appealed this permit, permit is in effect during appeal process, negotiations ongoing.