



Restoration Advisory Board Biddle Air National Guard Base

Bill Myer

NGB/A4VR

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Updates Since 8 Dec 2022



- Environmental Restoration Program Sites:
 - Willow Grove Site 1 (Privet Road):
 - Starting Five Year Review (BB&E) 7 Dec 2022
 - Contract awarded to EA for Final Record of Decision/Long Term Monitoring to support site closure
 - Meet with EPA and PADEP on 21 Nov 2022 to discuss way forward and closure standards
- Coordinating with EPA/PADEP on the transition from SDWA AO to Navy Federal Facility Agreement
 - FFA out for 60 day public comment period 14 January 2023, published in The Intelligencer on January 13, 2023 (see Public Notices | Govt Public Notices (theintell.com)) and will be published in the Pennsylvania Bulletin on January 14, 2023, see 53 Pa. Bull 315, 420 (Pa Bulletin (pacodeandbulletin.gov)).
- PFAS Remedial Investigation:
 - Draft UFP QAPP submitted to regulators for review on 22 February 2023
 - 16 February EPA provided response approving the rounds 11, 12, and 13 draft final quarterly surface water sampling technical memorandums.
 - Leidos delivered the final technical memorandums for the rounds 11, 12, and 13 quarterly surface water sampling on 24 February.
- Interim Groundwater Action:
 - 23 Feb 2023 UFP QAPP Scoping session



3 Month Forecast of Activities



- Sign Navy Federal Facilities Agreement:
 - Complete Surface Water Response Action Memorandum
 - Complete Residential Drinking Water Action Memorandum
- Continued drinking water response actions (sampling, bottled water, and coordination with North Wales Water Authority (NWWA) and Warminster
- Finalize UFP QAPP addenda for RI and Pilot Study.
- Surface Water Sampling Event 16
- Continued storm water treatment operations (Warminster)
- Finalize Five Year Review Site 1 Privet Road
- Long Term Monitoring Groundwater Site 1 Privet Road

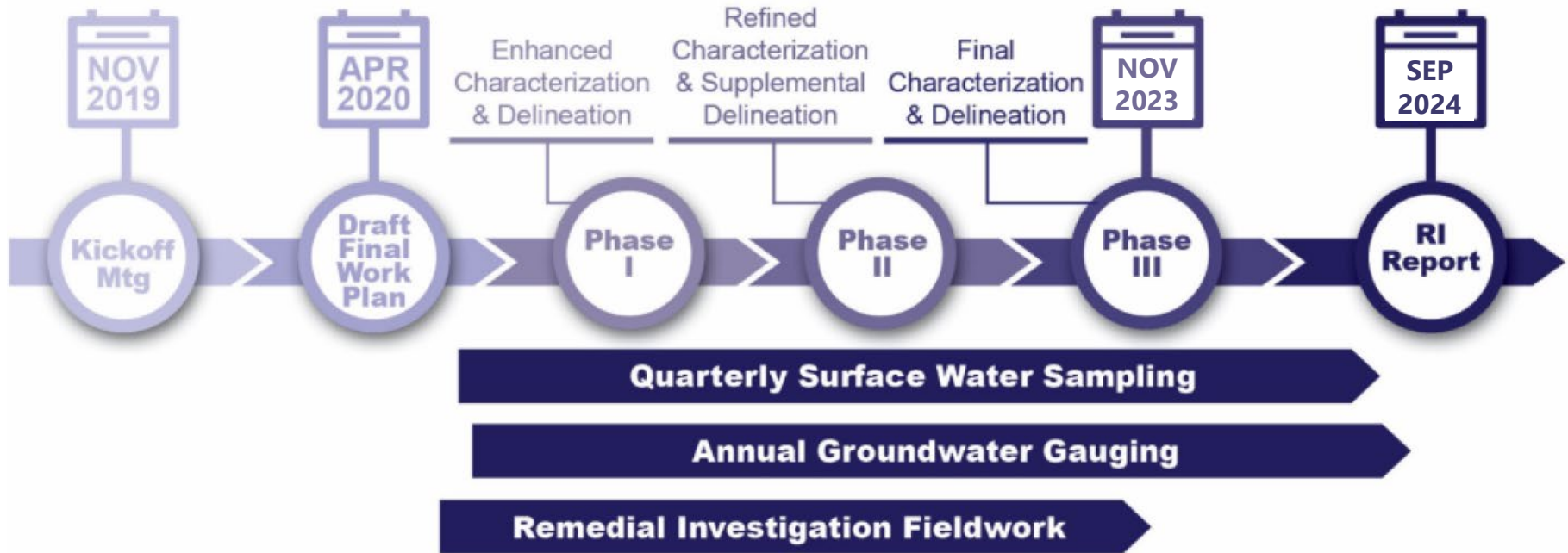


Remedial Investigation Project Objectives



- Delineate the nature and extent of PFAS contamination, the threat to human health and the environment and prepare a Remedial Investigation (RI) Report.
 - Collect soil, sediment, surface water, and groundwater PFAS data on and around Biddle ANGB.
 - Conduct Baseline Risk Assessment (BRA).
 - Investigate link between groundwater and unnamed tributary to Park Creek.
 - Obtain data required to inform future development of a Feasibility Study.
 - Conduct quarterly surface water sampling for PFAS in coordination with the Navy.
 - Conduct annual potentiometric gauging, as needed to support USGS model.

Remedial Investigation General Process and Schedule



Remedial Investigation Progress



- EPA, PADEP, ANG, and Leidos are developing the path forward for the RI.
- Prepared draft UFP-QAPP Addendum to present planned activities and methodologies. Submitted to EPA on 22 February.
- Field work tentatively planned for May 2023.



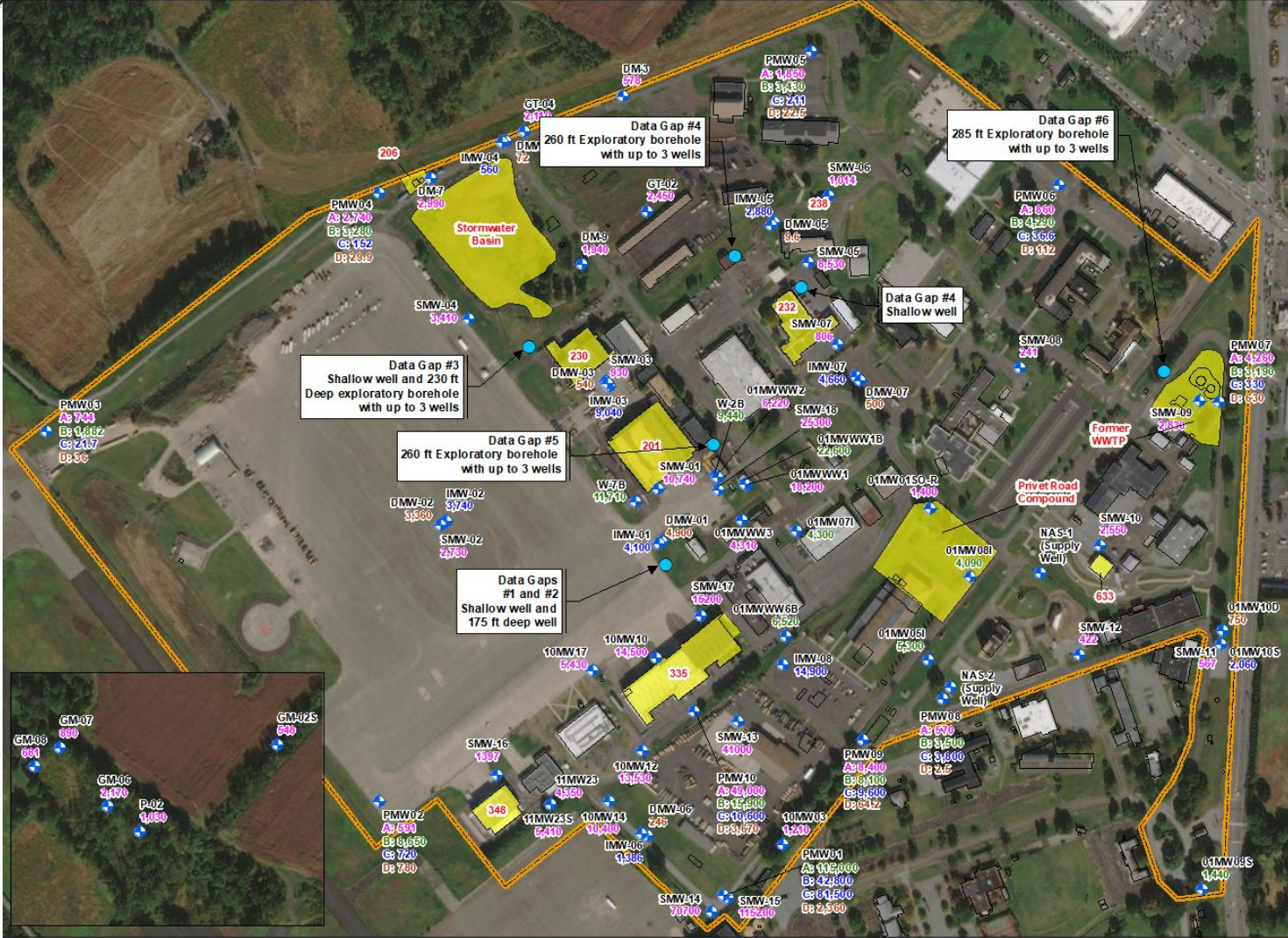
Remedial Investigation Progress



- Planned activities for the remainder of Phase 2 include:
 - 4 Shallow Wells
 - 12 Intermediate/Deep wells (up to 285 ft)
 - Borehole geophysical surveying at all intermediate/deep wells
 - Packer testing at all intermediate/deep wells
 - Real-time data review and decision making with EPA/PADEP
 - Sampling of all new wells
 - Results, conclusions, and recommendations to be presented in Phase 2 Memorandum



Remedial Investigation Progress



Quarterly Surface Water Sampling



- Performed Round 14 Surface Water Sampling with Navy and USGS in December 2022 and Round 15 next week
- Submitted Final Sampling Memos for Rounds 11, 12, and 13.
- Preparing Sampling Memo for Round 14 and 15.

Groundwater Pilot Study



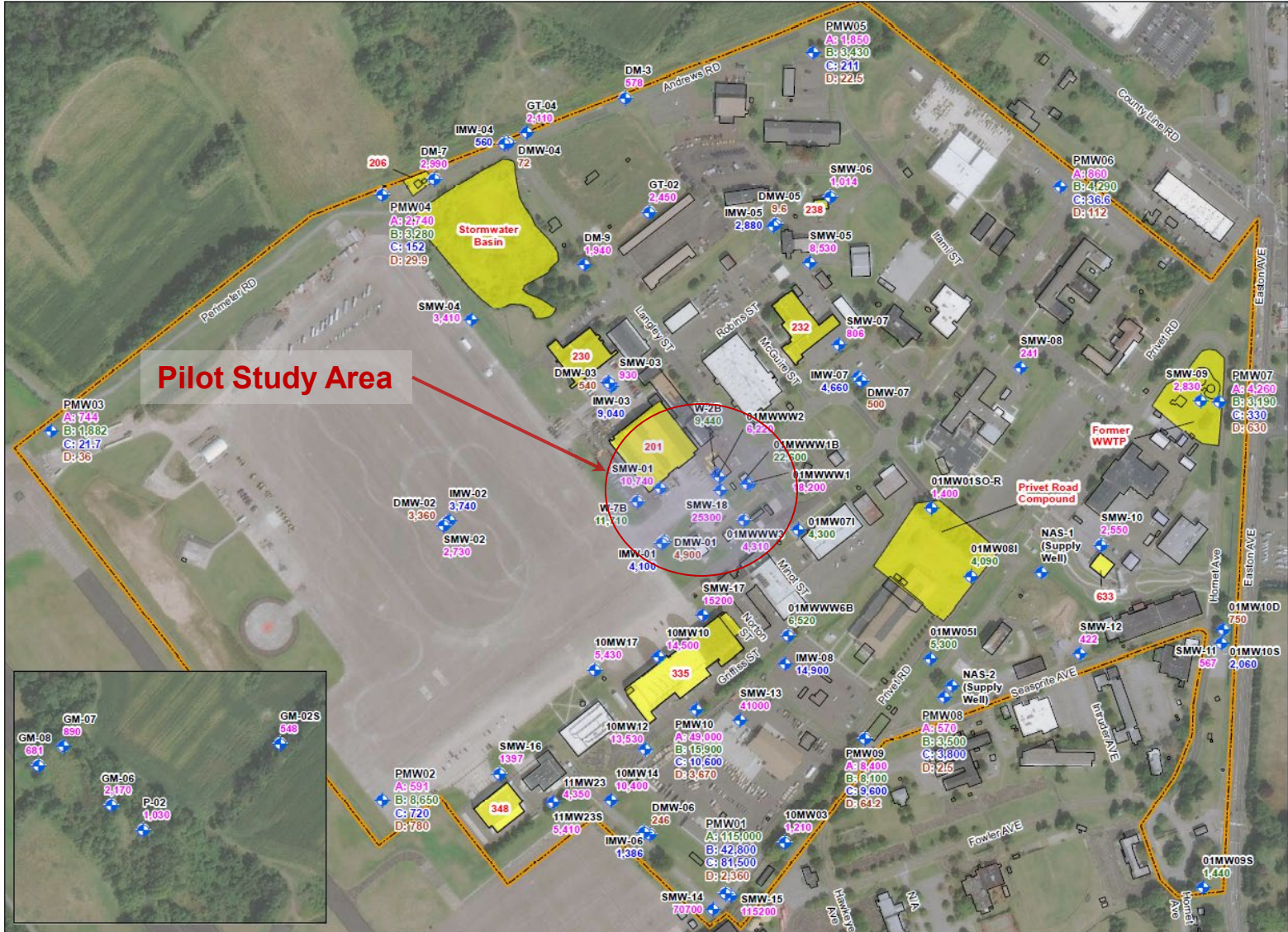
- ANG conducting Pilot Study to inform plans for subsequent interim groundwater action
- Pilot Study includes: design, construction, operation of 30-day pilot test to evaluate feasibility of hydraulic containment of groundwater plume near Building 201
- Conducted 3 scoping sessions with EPA and PADEP to present, discuss, and refine plans
- Final scoping session held 23 February. General consensus amongst team

Groundwater Pilot Study



- Three extraction wells with combined 50-75 gpm extraction rate. Wells to target unique depths/zone of the aquifer
- Pilot Study to include series of variable rate step-tests, followed by series of constant rate pump tests with hydraulic and chemical monitoring throughout 30 day period
- Results, conclusions, and recommendations to be compiled in Technical Memorandum
- Pilot Study will inform plans for full-scale interim action(s)
- Draft UFP-QAPP addendum under review by ANG

Groundwater Pilot Study



Actions Planned for Next 3 Months



- Submit Final UFP-QAPP Addendum for RI
- Submit Draft Final UFP-QAPP Addendum for Pilot Study, address comments when received
- Prepare Surface Water Memo for Round 14 and 15
- Begin RI Phase 2 field work

PFOS/PFOA Water Treatment

Biddle ANGB



- PFOS/PFOA has been detected in surface water leaving Biddle. This water is primarily groundwater that discharges to a storm water 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 began operations on 11 August 2021. 182M gallons treated through Feb 2023.
- First media changeout in late 2022.
- Used media staged on base until final disposal.
- Treatment plant effluent PFOS+PFOA < 2ppt (<70 ppt required)
- Construction and O&M through Warminster Cooperative Agreement

NWWA Activities



- North Wales Water Authority assumed responsibility for Warrington water service area. Cooperative agreement for water system actions.
- GAC treatment for Wells 1, 2, 3, 6 and 9 is complete. Working on resolving Total Dissolved Solids issues for 4 of the wells.
- Main extensions and service connections completed.

Private Well Sampling



- ANG has contract in place with Weston 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.
 - Horsham:
 - 6 wells sampled
 - 5 were above HA
 - 4 have been connected to municipal water
 - 1 well abandoned by Wood
 - Warrington:
 - 150 well sampled
 - 53 are above HA
 - 68 have been connected

Private Well Sampling (cont.)



- Warminster: 12* well sampled
 - 11 are above HA
 - 8 have been connected municipal water
 - * Some of these properties are on Valley Road with Warminster mailing addresses but are located in Warrington Township
 - * ANG is using the US EPA 2016 Health Advisory standards, 70 part per trillion (ppt) for PFOA and PFOS
- Sampling contact for ANG area of responsibility: Transitioning to Weston, Mr. Bob Wagner, 570-466-4026, r.wagner@westonsolutions.com

