• Welcome RAB and Community Members
• Radiological Status
• Environmental Restoration Status
• Perfluorinated Compounds Status
• Questions
• Closing Remarks
• 18 potential radiological impacted sites were identified by the Historical Radiological Assessment in July 2013

• A scoping survey was performed as an initial evaluation to identify if radiological contaminants exist. All field work was completed in 2015.

• Scoping survey reports for the 18 sites were submitted to regulators for review, in three groups:
  - Building Surveys (10 Buildings)
  - Building Footprints (5 Former Buildings)
  - Landfills (3 Sites)
Radiological Investigation
Potentially Impacted Sites

Legend
- Impacted Buildings
- Impacted Sites
- NAS JRB Willow Grove
- Major Roads
- Limited Access
- Highways
- Secondary Roads

Figure 8-20: Station Map Showing Impacted Sites
• Final Building survey reports (10 former buildings) were completed in June 2016
  - No radiological concerns for future commercial use of existing building

• Draft Landfill reports prepared in summer 2016. EPA/PADEP provided concurrence of Navy recommendation of unrestricted use without concern for radiological contamination. Reports are being finalized.
  - Results are incorporated into Feasibility Studies currently being prepared for Site 3 and Site 12 Landfills

• Draft Building Footprint survey reports (five locations) were submitted to EPA/PADEP in October 2016 and are under review.
• Anaerobic bioremediation system continues to operate

• Annual performance monitoring is being conducted in accordance with approved Operation, Maintenance, and Monitoring Plan

• Additional injections of amendments will be conducted based on monitoring results

• Results continue to show good conditions for continued biodegradation of volatile organic compounds (VOCs) and decreasing trends of VOCs
• PFOS and PFOA are unregulated contaminants that are being sampled in Public Water Systems. PFOS and PFOA are man-made chemicals, break-down slowly, and are used in many different products including carpeting, food packaging, cookware and fire-fighting foams.

• EPA used the Unregulated Contaminant Monitoring Rule (UCMR) program to collect data for contaminants, including PFOA/PFOS, suspected to be present in drinking water.
  - UCMR sampling performed at public water systems serving greater than 10,000 persons. Data collection was from 2013 through 2015.
  - EPA is working to improve its understanding of the prevalence and toxicity of these chemicals to determine if safe drinking water regulatory limits are needed.
Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) had provisional health advisory (HA) values established by EPA which were used for comparison during UCMR sampling in 2013-15.

- PFOS: 0.2 μg/L (parts-per-billion)
- PFOA: 0.4 μg/L (parts-per-billion)

Under the UCMR public water sampling, PFOA and PFOS was detected above the PHA levels in area public water systems in mid-2014. The Navy requested support from the EPA to support sampling of nearby private drinking wells for PFOA and PFOS.

In 2016, EPA set a lifetime HA value of 0.07 μg/L or 70 parts per trillion (ppt) for combined PFOS and PFOA.

Per the EPA, The lifetime HA values are reasonable health based concentrations, above which actions should be taken to reduce exposure. HA values include many safety factors to protect vulnerable populations (e.g., children).
Private drinking water well sampled by the Navy for PFOA/ PFOS (all townships) near NASJ RB Willow Grove:

- Private wells sampled: ~ 490
- Private wells above lifetime HA (>70 ppt): 89
- Private wells connected: 62
- Private wells below HA/monitored (>40 ppt): 70

The Navy has funded carbon filtration systems at five Horsham Water and Sewer Authority (HWSA) public wells which are above the lifetime HA.
Private Well Sampling as of December 2016

Map Legend

Red = Sum of PFOS+ PFOA exceed LHA
Orange = Sum of PFOS+PFOA at/below LHA and monitored
Yellow = Sum of PFOS+ PFOA at/below LHA
Green = Non-detection of PFOS or PFOA
        = Connection completed
The Navy is performing a Remedial Investigation (RI) to better understand the nature and extent of the PFC contamination at the Navy base. The investigation included the installation and sampling of numerous groundwater wells and sampling of soils and surface water/sediment.

- Draft RI Data Report submitted November 2016
  - Identifies areas needing additional investigation
  - Additional field investigation and RI Report to be completed in 2017
  - Source control actions are developed from RI information
Department of the Navy (DON) Perfluorinated Compounds (PFC) / Perfluoroalkyl Substances (PFAS) website

NAVFAC BRAC PMO Websites (includes links to environmental information and the administrative record):


For private well sampling near NAWC Warminster:
Scharr.Ruth@epa.gov or willie.lin@navy.mil

For private well sampling near NAS JRB Willow Grove:
Rovira.Eduardo@epa.gov or willie.lin@navy.mil
Environmental Protection Agency  
https://www.epa.gov/pfas

Agency for Toxic Substances and Disease Registry  

Pennsylvania Department of Environmental Protection  
http://www.dep.pa.gov/Citizens/My-Water/drinking_water/Pages/default.aspx

Horsham Township  
http://www.horsham.org/default.aspx

Warminster Township  
http://warminstertownship.org/information-on-perfluorinated-chemicals-pfoa-and-pfos/
• Questions or Comments from the RAB?

• Community questions or comments?

• Next Meeting
  – Anticipated to be May 10, 2016

• Closing Navy Remarks