



Naval Weapons Station Yorktown Environmental Restoration Program Update

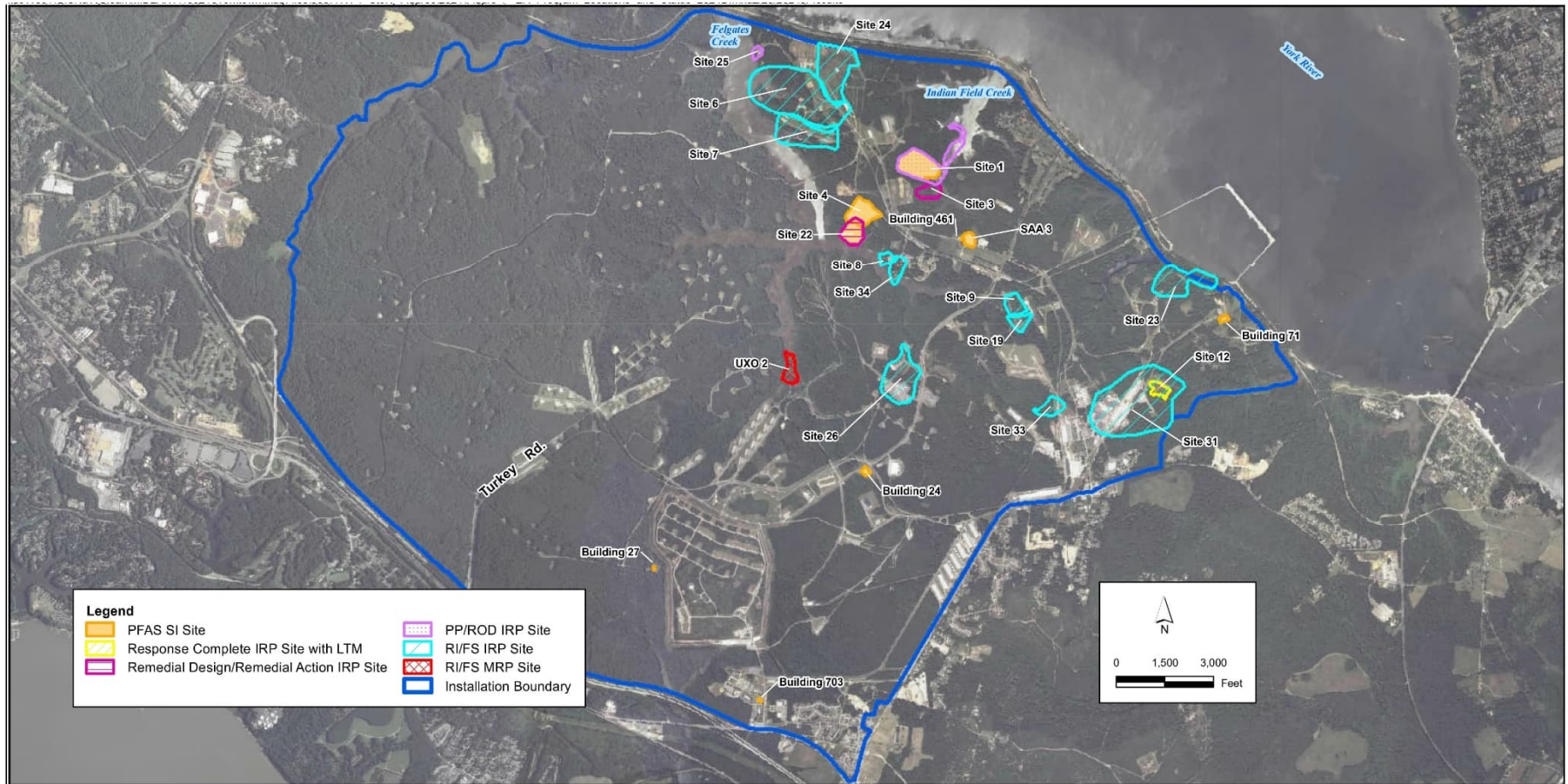
Naval Weapons Station Yorktown
Restoration Advisory Board Meeting
July 16, 2024

Agenda



- **Environmental Restoration Program (ERP) Overview**
- **Update on select sites:**
 - **Site 1 – Dudley Road Landfill**
 - **Site 3 – Group 16 Magazine Landfill**
 - **Site 6 – Explosives-Contaminated Wastewater Impoundment**
 - **Site 8 – NEDED Explosives-Contaminated Wastewater Discharge Area**
 - **Site 22 – Burn Pad**
 - **Site 24 – Aviation Field**
 - **Site 25 – Building 373 Rocket**

NWS Yorktown Active ERP Sites



- PFAS RI Sites: 5
- RI/FS IRP Sites: 10
- PP/ROD IRP Sites: 2
- RD/RA IRP Sites: 2
- RC/LTM IRP Sites: 1
- RI/FS MRP Sites: 1
- Total Active ERP Sites: 21

Site Status



Site 1 – Dudley Road Landfill

- 10-acre landfill
- ROD (1999) for soils; RA completed in 2000
 - Soil cover installation, surface debris removal, and excavation and offsite disposal
- Pre-RD investigation ongoing; fieldwork in Summer 2024
 - Determine extent of source area for RD (soil excavation)
 - Determine GW COC concentrations and evaluate conditions for MNA
- Proposed Plan in regulatory review
- ROD being developed
 - NFA for sediment and surface water
 - For groundwater preferred alternative includes Source Removal, SBGR, Biobarrier, Performance Monitoring, and LUCs
- Site included in ongoing PFAS RI



Legend

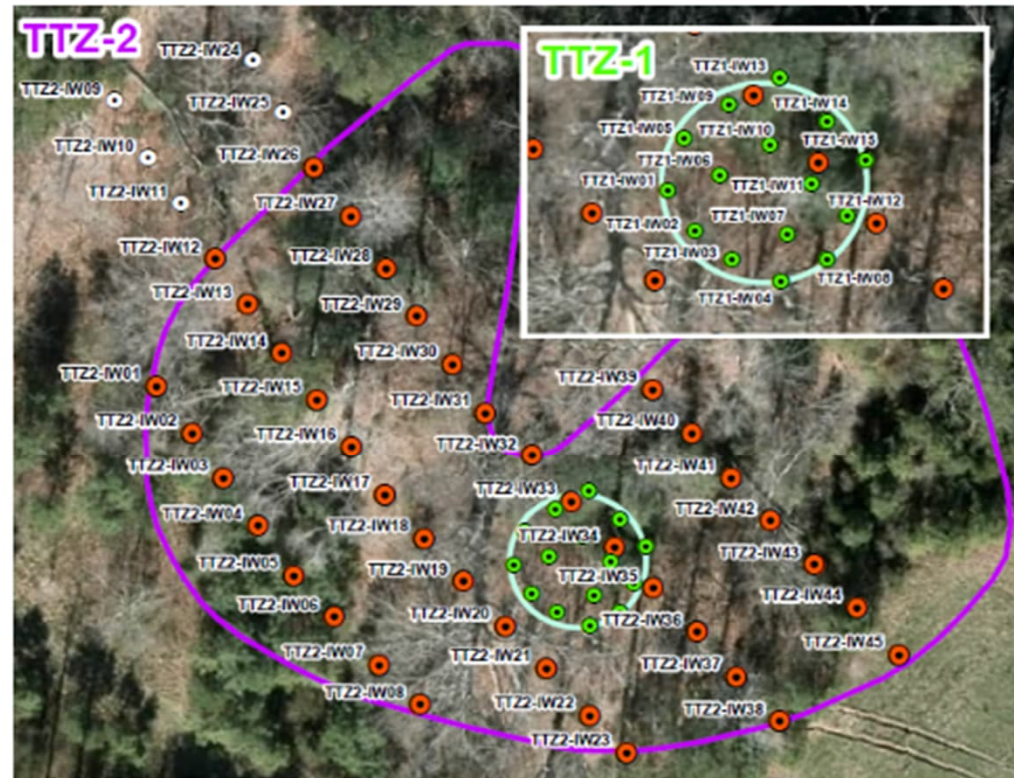
- | | |
|--|---|
| ■ Sediment Pore Water Sample Locations | ● Columbia Aquifer Monitoring Well |
| ▲ Surface Water and Sediment Sample Locations | ● Yorktown-Eastover Aquifer Monitoring Well |
| ● MIP Location | — Tributary |
| ◆ Test Pit Location | - - Intermittent Tributary |
| ● Staff Gauge Location | — Landfill Soil Cover Contour (CH2M HILL, 2014) |
| ● Surface Water/Sediment Sampling Location | □ Study Area Boundary |
| ● Shelby Tube Sampling Location | |
| ■ Surface Soil Sampling Location | |
| <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <p>■ Approximate Area of 1999 Excavation of Arsenic Contaminated Soil (OHM, 2001)</p> <p>■ Extent of 1999 Landfill Cover Restoration (OHM, 2001)</p> <p>■ Extent of Landfilled Waste and Landfill Cover (CH2M HILL, 2014)</p> </div> </div> | |

Site Status



Site 3 – Group 16 Magazine Landfill

- 6-acre landfill
- Soil: No further action (NFA) ROD following soil removal action
- Groundwater Pre-RD investigation completed in 2021
- Groundwater, surface water, sediment: ROD finalized
 - Active remedy for groundwater
 - NFA for surface water and sediment
- Land Use Control (LUC) RD finalized
- RD for GW remediation in development
 - Enhanced In-Situ Bioremediation (EISB)
 - Groundwater Monitoring
 - LUCs
- GW RA contract awarded in 2024
- GW RA planned for 2025



Site Status



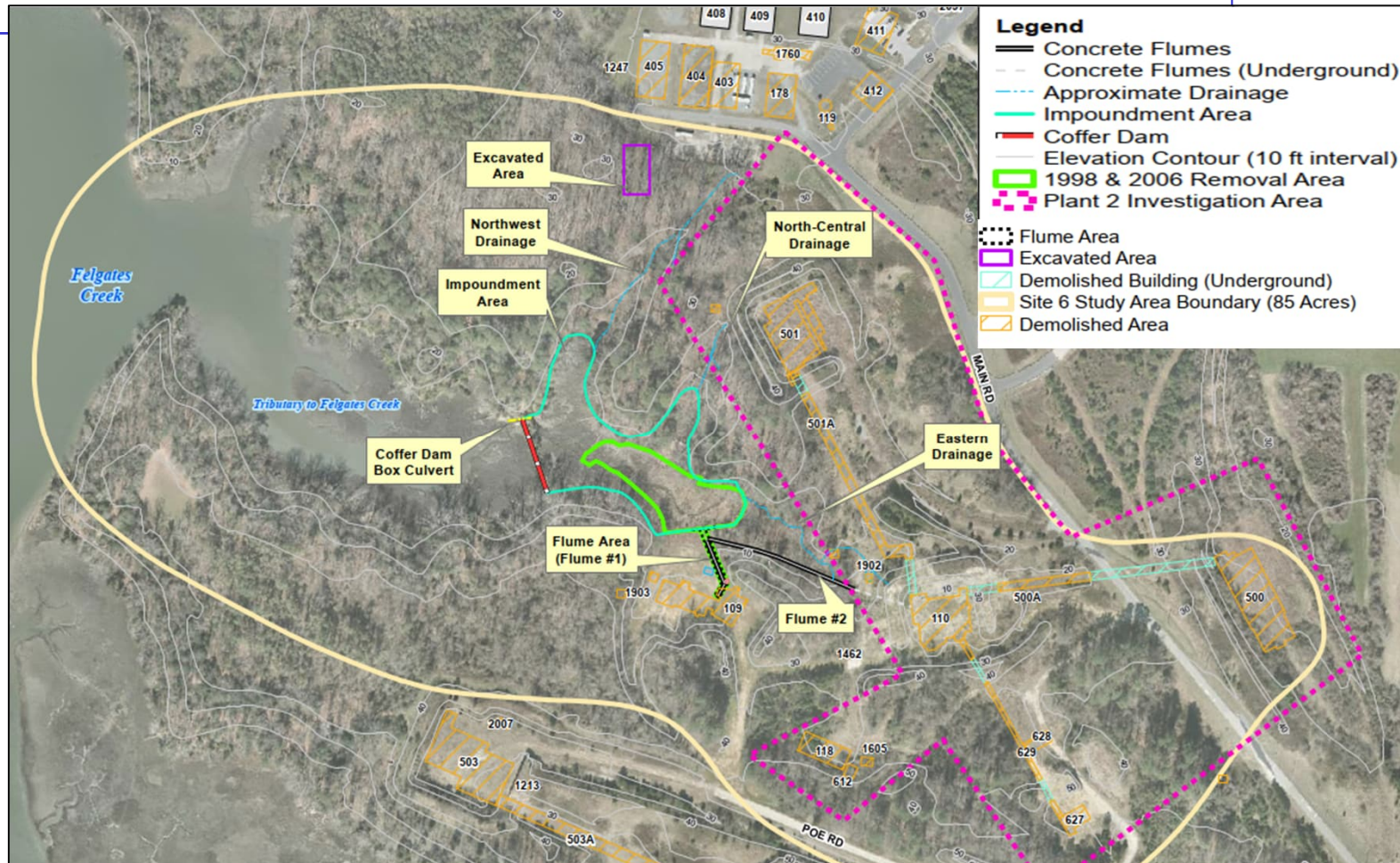
Site 6 – Explosives-Contaminated Wastewater Impoundment

- **85-acre site encompassing Plant 2 complex and consisting of three operational units (OUs):**
 - Impoundment Area (OU XV; approximately 3 acres)
 - Flume Area (OU XIII; approximately 0.1 acres)
 - Excavated Area (OU XIV; approximately 0.2 acres)
- **ROD in place for soil, groundwater, surface water, and sediment within the three operational units consisting of the following:**
 - Impoundment Area: LTM of surface water, sediment, and groundwater (interim action)
 - Flume Area: excavation and ex-situ bioremediation of soil and sediment; pressure washing of the flume; LUCs
 - Excavated Area: soil cover and LUCs
- **Phase II RI Report finalized in 2023**
- **Excavated Area NTCRA contract awarded in 2024 and work being planned for 2025**
 - Excavation and offsite disposal of zinc-impacted surface soil to mitigate potential ecological risk
- **FS being conducted to evaluate site-wide groundwater**
 - Evaluates remedial alternatives to mitigate potential risks to human and ecological receptors from exposure to COCs in groundwater
 - Provides rationale for NFA for surface water and sediment outside of the Impoundment Area at Site 6

Site Status



Site 6 – Explosives-Contaminated Wastewater Impoundment



Site Status



Site 8 – NEDED Explosives-Contaminated Wastewater Discharge Area

- **3-acre site**
- **SRI completed 2017-2020**
 - Evaluated soil and groundwater in the previously inaccessible area of the site
 - Potential unacceptable risks to future residents identified from exposure to metals in soil and metals, explosives, and volatile organic compounds in groundwater
- **Pre-FS groundwater sampling completed in 2023**
 - Evaluate the potential for natural attenuation of COCs in groundwater to
 - Determine whether MNA is a viable remedy for groundwater at the site to protect possible future residents
- **Pre-FS Report being developed for MNA evaluation**
- **FS anticipated to be completed in 2025**



Legend

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|---|----------------------------------|-------------------------------------|
| ● Unable to locate Well | — Building Drain | — Loading Dock |
| ● Yorktown-Eastover Aquifer Monitoring Well | — Drainage Trench | — Elevation Contour (5 ft interval) |
| ● Outfall | — Drainage Channel | — Excavated Area |
| ■ Drop Inlet | ■ Buildings | — Study Area Boundary (3 Acres) |
| — Wastewater Treatment Line | ■ Wastewater Treatment Structure | |
| — Overland Flow | ■ Wash Basin | |
| — Storm Water Drainage | ■ Demolished Buildings | |

Site Status



Site 22 – Burn Pad

- **9-acre site**
- **RODs in place**
 - Soil (NFA) signed in 2003
 - Surface water and sediment (NFA) signed in 2011
 - Groundwater in 2012
 - Remedial action objective of reducing TCE, VC and RDX and preventing exposure until remediated
 - In situ bioremediation
- **Pre-RD Investigation in 2014 and 2017 recommended further delineation of COCs in groundwater**
- **Remedial Optimization pilot study ongoing**
 - Included additional sampling (2022, 2023) and SBGR installation (2023)
 - Performance monitoring samples collected quarterly through August 2024
 - Report for initial 12 months of SBGR operation to be submitted in 2025
 - SBGR pilot study planned for continued operation for 12 months after August 2024
- **Site included in ongoing PFAS RI**

Site Status

Site 22 – Burn Pad



Preparing site for SBGR installation



Source and date of photograph unknown.



Site after SBGR installation



SBGR solar panels

Site Status



Site 24 – Aviation Field

- **34-acre site**
- **Groundwater: evaluated in RI**
- **Soil: Non-time critical removal action (NTCRA) initiated in 2016, now on hold**
 - Delays encountered due to discovery of munitions and radiological materials; radiologically impacted munitions (MDAS) safely disposed of in 2023
- **Data Gap RI being planned for 2025**

Area B-8



Site 25 – Building 373 Rocket Plant

- **2-acre site associated with Building 373 explosives loading plant**
- **Soil, groundwater, surface water, sediment**
 - RI completed in fiscal year (FY) 2021; only soil requiring additional action
- **FS for soil excavation and offsite disposal finalized in 2023**
- **Proposed Plan in regulatory review**
- **ROD being developed**



Site 25

Questions or Comments?



For additional information regarding the ERP at Naval Weapons Station (NWS) Yorktown, please contact:

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Visit NWS Yorktown's ERP Public Web Page at:
<https://www.navfac.navy.mil/Business-Lines/Environmental/Products-and-Services/Environmental-Restoration/Mid-Atlantic/Yorktown-NWS/>

Have questions after the meeting?

If so, you can submit your questions for up to 10 calendar days after the meeting to the NAVFAC PAO officer at [NAVFAC ML PAO@navy.mil](mailto:NAVFAC_ML_PAO@navy.mil) or leave a message at 757-341-1410/11