



NAVAL ACTIVITY PUERTO RICO

**Restoration Advisory Board
Meeting #53**

November 17, 2022

Tonight's Agenda

Poster Session (Accomplishments, Upcoming Activities, and Status of NAPR Cleanup Program under RCRA) Sesión de afiches (Logros, Próximas Actividades y Estado del Programa de Limpieza de la NAPR bajo RCRA)	Navy Team Equipo de la Marina	5:00 – 5:55PM
Welcome and Introductions Bienvenida y Presentaciones	Thuane Fielding (Navy/Marina)	6:00 – 6:05PM
Per- and Polyfluoroalkyl Substances (PFAS) Investigation Investigación de Sustancias Perfluoroalquiladas y Polifluoroalquiladas (PFAS)	Jamie Butler (Navy/Marina)	6:05 – 6:25PM
Questions and Comments from the Public Preguntas y Comentarios del Público	Members of the public/ Miembros del Público	6:25 – 6:55PM
Adjournment Clausura de la Reunión	Thuane Fielding (Navy/Marina)	6:55 – 7:00PM

Evaluation of Potential Per- and Polyfluoroalkyl Substances (PFAS)

Jamie Butler
Navy

What are PFAS?

- **Per- and polyfluoroalkyl substances (PFAS)** are group of manufactured chemicals widely used in commercial and consumer products since the 1950s.
- **Used in a variety of products:**
 - Firefighting foam
 - Stain-resistant carpets and fabrics
 - Water-resistant fabrics
 - Personal care products
 - Non-stick cookware
 - Food packaging
- **Found in the environment around the world** (in air, water, soil, animals, plants, as well as people).



Navy Use of PFAS

- The most common historical military use has been as a component of firefighting foam (specifically aqueous film forming form, or AFFF).
- The Navy historically used AFFF for testing, training, firefighting, and other life-saving emergency responses.
- The Navy no longer uses AFFF for training



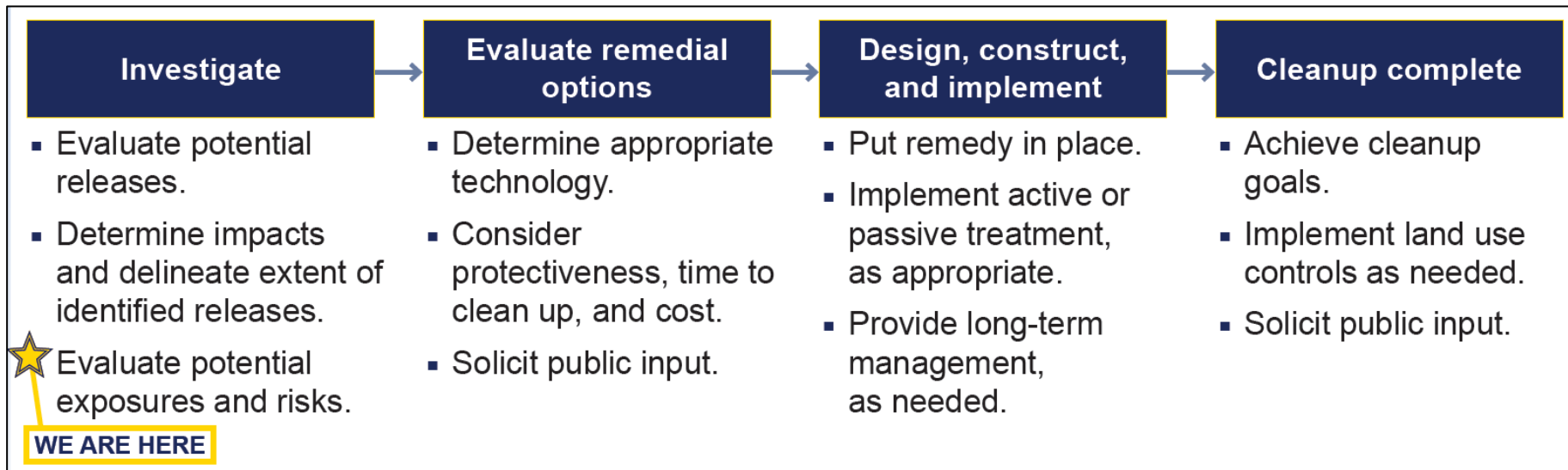
Example photos of firefighting training activities at past DoD facilities within the US (not Naval Activity Puerto Rico)

Why are PFAS a Concern?

- **PFAS are emerging chemicals of environmental concern.**
 - U.S Environmental Protection Agency (EPA) is currently in the process of developing drinking water standards for PFAS.
- **Exposure to PFAS appears to be global.**
- **Understanding the health effects from exposure to low levels of PFAS continues to develop as studies are continuing.**
 - CDC estimates that most people in the U.S. have PFAS in their bodies.
 - PFAS can build up in the body.
- **Long-term exposure effects are still being investigated by the EPA and other researchers.**

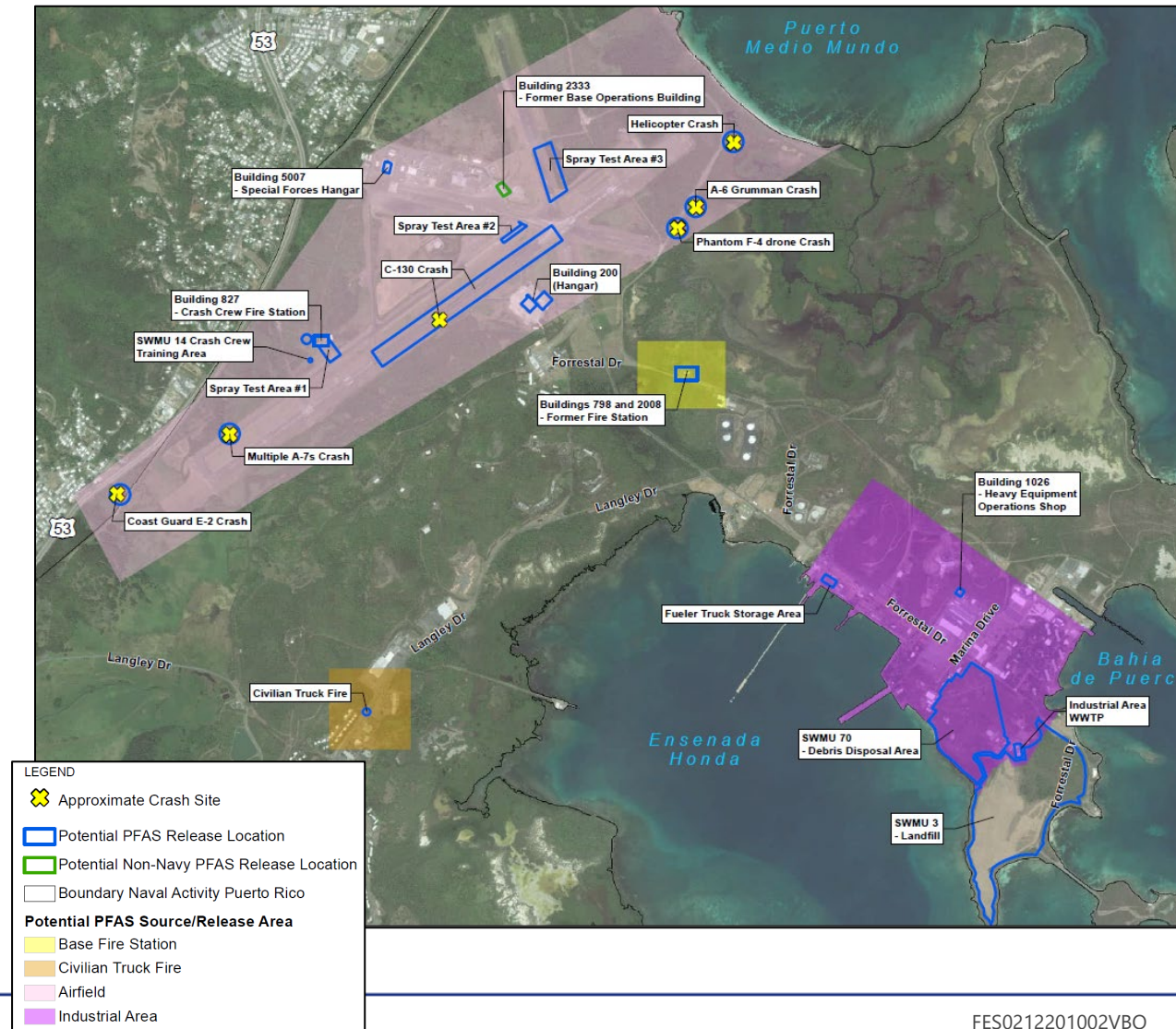
Investigating PFAS at NAPR

- Structured regulatory process (shown below), is being used to identify and clean up past environmental releases at NAPR.
- The Puerto Rico Department of Natural and Environmental Resources and the EPA are working closely with the Navy and are providing oversight at every step of the process.
- Public input is welcomed throughout the process and is formally solicited at certain points.
- From beginning to end, this process may be lengthy.



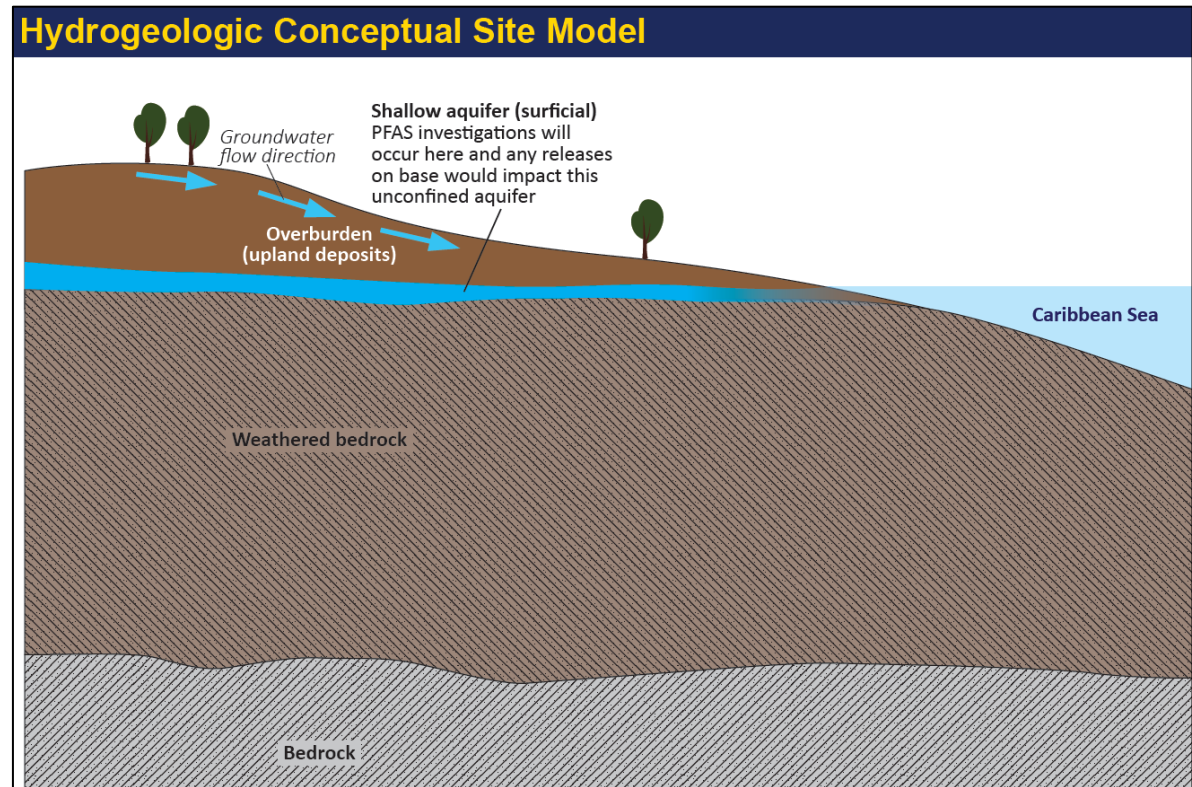
NAPR On-Base Potential PFAS Release Areas

- 21 potential PFAS release areas have been identified on NAPR
- Types of PFAS release areas on NAPR include:
 - Runways
 - Hangars
 - Fire training areas
 - Fire stations
 - Wastewater treatment plants
 - Sludge disposal
 - Landfills
 - Emergency response areas
 - Spray test sites
 - Other chemical release areas



NAPR RFA Sampling Approach & Conceptual Site Model

- Co-located surface and subsurface soil samples collected from 24 locations
- Groundwater samples collected from 23 monitoring wells.
- Sediment collected from 2 locations
- Surface water collected from 1 location (co-located with 1 sediment sample)



Path Forward

- **Sample results are currently being evaluated**
- **The RFA Investigation Report summarizing the results and recommended path forward is anticipated to be finalized in mid-2023**



Questions/Comments from the Public