AFCEC BRAC
Former Pease AFB
RAB Meeting

Chris King – USAF
Grant Austin – WSP
Haley Plante – WSP
Madi Dinsmore – WSP
Amy Quintin – WSP

03 May 2023

Agenda

- **Technical Check** – Ona Ferguson (Consensus Building Institute)
- **Technical Presentations -** (Video recording)
  - **Site 8 IMS update** – WSP
  - **Air Force Cleanup Update** – Chris King (AFCEC)
  - **Remedial Investigation Update** – WSP
- **Welcome, Introductions, RAB Business** – Ona Ferguson (Consensus Building Institute)
- **Open Discussion Time**
- **Public Comments**
- **Meeting Recap and Next Steps** – Ona Ferguson (Consensus Building Institute)
- **Adjourn**

Private Well Update

- Two residents currently on bottled water
  - A non-time critical removal action (NTCRA) memo is now being drafted
  - The physical connection to municipal water is planned for spring

- One resident is currently supplied with a point-of-entry-treatment system (POET) installed by NH Department of Environmental Services (NHDES)
  - NHDES transferred ownership to the resident on 6 Jan 2023
  - Air Force is drafting a time critical removal action (TCRA)
  - Air Force to assume operations and maintenance of the POET within six months

Site 8 IMS Status Update

- **Site 8 IMS Optimization Plans**
  - **Phase I**
    - **Treatment resin changed from regenerative resin to single use resin on 10 April 2023**
    - **Single use resin is same resin used at AIMS with proven performance**
    - **Replacement resin will allow influent rates to increase as system is calibrated**

Site 8 IMS Status Update

- **Site 8 IMS Optimization Plans**
  - **Phase 1**
    - **Elimination of regeneration equipment will create space for additional treatment equipment and higher treatment capacity**
    - **Conduct 8-week gravity sand filtration pilot test to evaluate additional filtration to improve system reliability**

Site 8 IMS Status Update

- **Site 8 IMS Optimization Plans**
  - **Phase II**
    - **Removal of resin regeneration and distillation equipment**
    - **Installation of additional influent solids pre-treatment systems such as:**
      - **Sand filtration**
      - **Larger sludge press**
      - **Addition of a second liquid GAC vessel**
      - **Upsizing of process tanks**

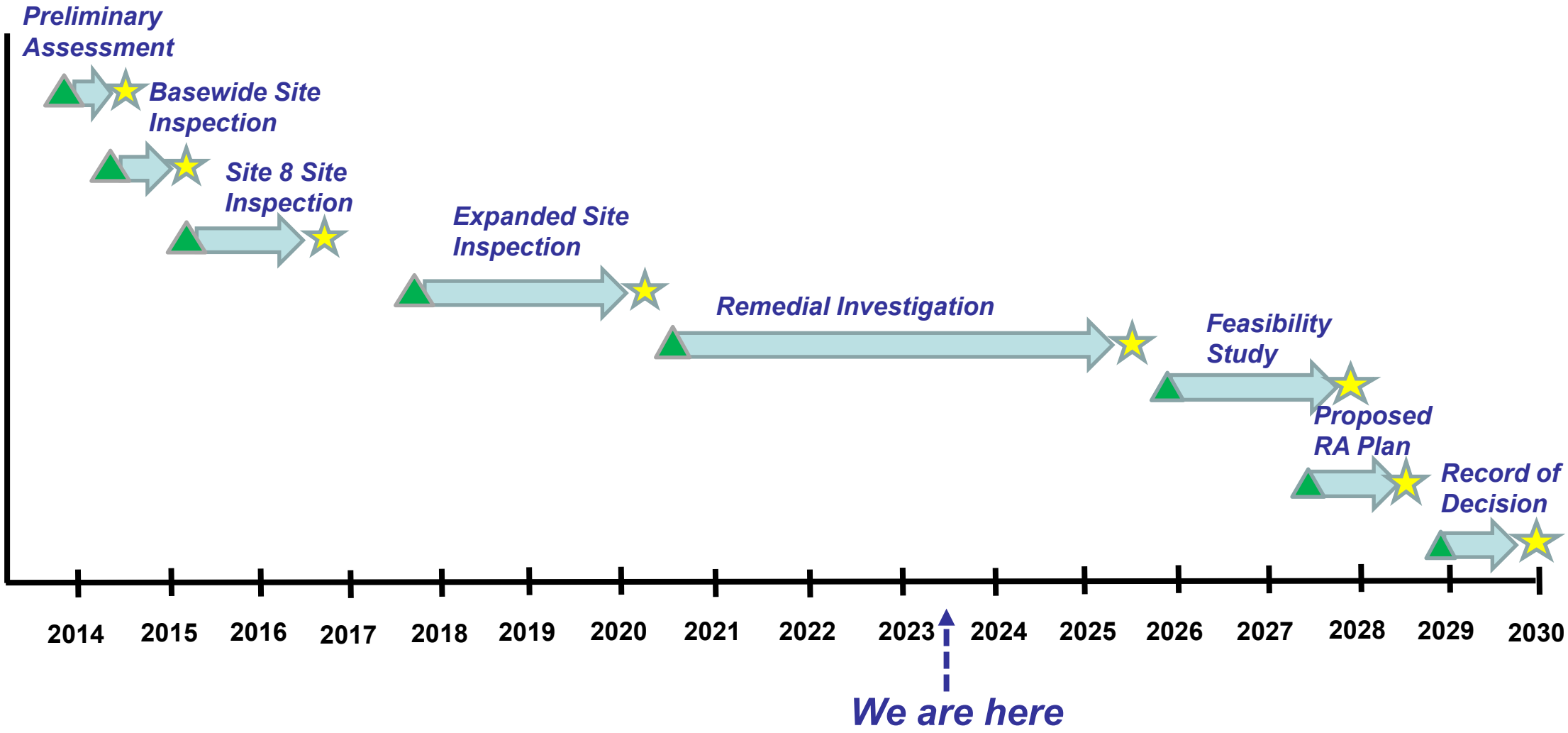
Remedial Investigation (RI) Schedule Update

- **Remedial investigation schedule has been extended so the Air Force can conduct additional investigation needed to fill remaining data gaps**

- **RI report now anticipated to be finalized in 2025 or 2026**

UNCLASSIFIED

Remedial Investigation (RI) Status



RI Update

- Field work nearly completed. Winter 2022/2023 field mobilization included:
  - Bedrock monitoring well construction and sampling
  - Maple sap sampling
- Ongoing:
  - Validation
  - Baseline human health risk assessment deliverable
  - Additional field investigation scoping

RI Update

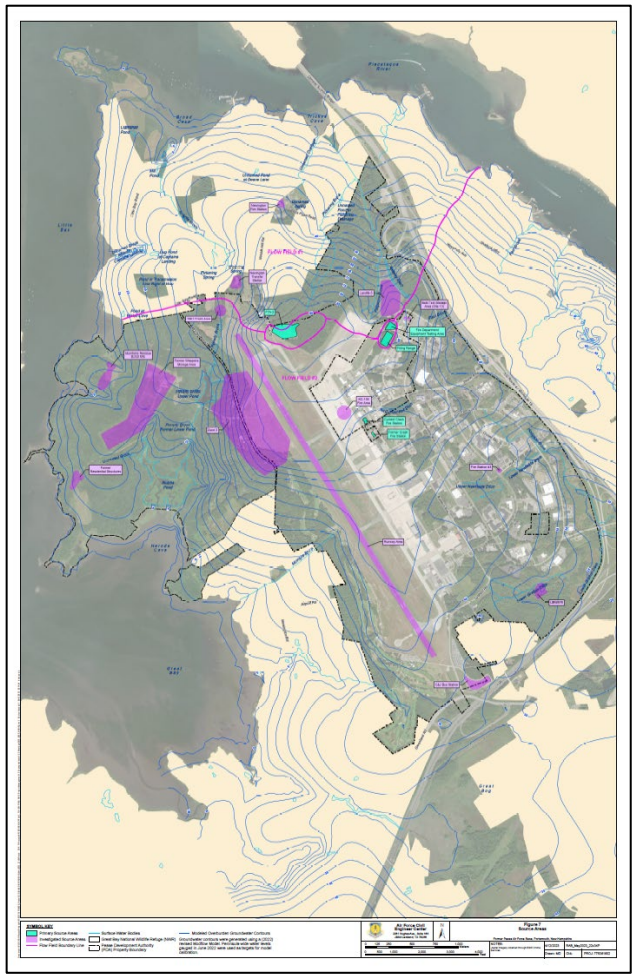
- Additional field investigation scoping (Haley Plante, WSP)
- Chemistry Update (Madi Dinsmore, WSP)
- Baseline Human Health Risk Assessment Work Plan (Amy Quintin, WSP)

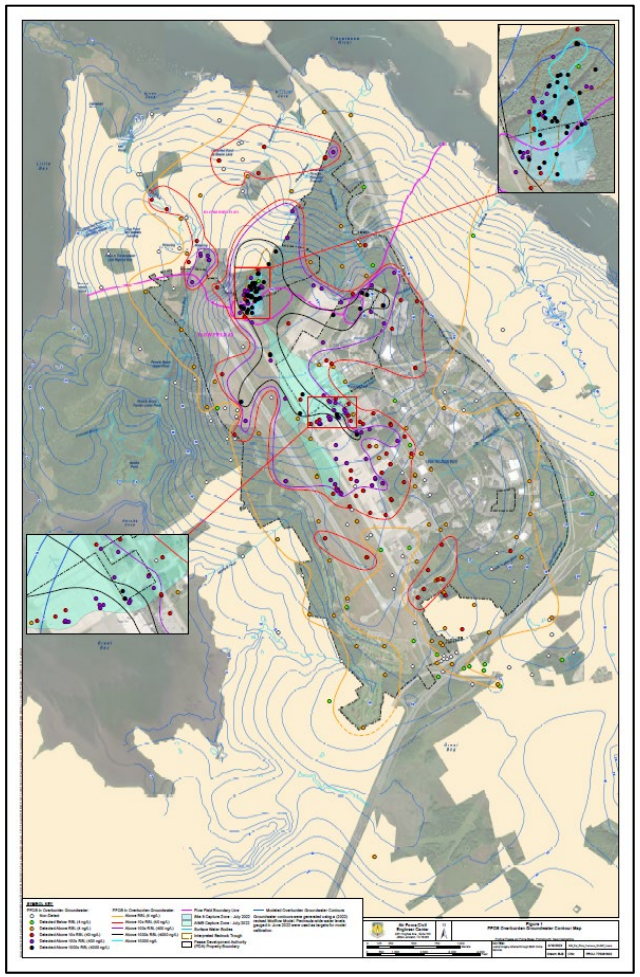
Additional Field Investigation Scoping

- Currently scoping the next field mobilization for Fall 2023, which may include:
  - <u>Soils</u>
    - Continued delineation of PFAS in source area soils
    - Investigation of potential source areas
  - <u>Groundwater</u>:
    - Installation and sampling of wells to continue to refine nature and extent
    - Include wells to corroborate predictive concentration modeling

Additional Field Investigation Scoping

Join us in-person on 03 May 2023 for a presentation of updated figures and discussion





- **Draft US EPA Method 1633**

Method Component	LC/MS/MS DoD QSM 5.4 Table B-15 (537 Modified)	Draft US EPA Method 1633
Matrices	Originally developed for drinking water matrix	Developed for all environmental media – soils, sediment, groundwater, surface water, biota, and wastewater
Compound List	25 PFAS Compounds	40 PFAS Compounds
Average Aqueous Reporting Limits	2.0 - 100 ng/L	1.6 - 40 ng/L

Human Health Risk Deliverables

Baseline Human Health Risk Assessment (BHHRA) Deliverables

1) **BHHRA Work Plan (2022)**
   - Methodology
2) **BHHRA Interim Deliverable (In Press)**
   - Preliminary Hazard Identification
3) **BHHRA (Concurrent with RI)**
   - Final Human Health Risk Evaluation

Initial Concepts

BHHRA Work Plan

- included pre-RI data and now outdated screening levels

BHHRA Interim Deliverable

- includes additional data and current screening levels

BHHRA

- will use up to date screening levels
- will include all representative data available

BHHRA Work Plan Components

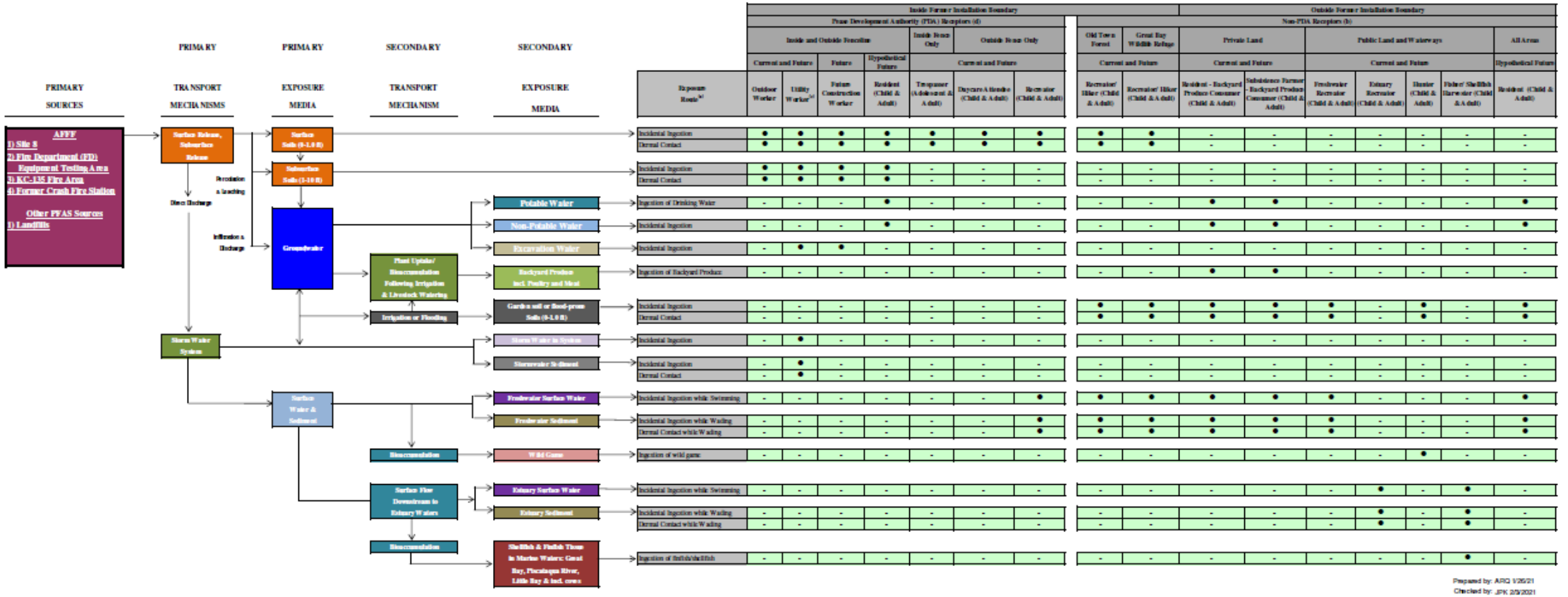
Preliminary exposure Conceptual Site Model (CSM)

BHHRA methodology

- **USEPA/DoD guidance will be followed**
  - Step 1 - Hazard Identification
  - Step 2 - Exposure Assessment
  - Step 3 - Toxicity Assessment
  - Step 4 - Risk Characterization
- **Has flexibility to adapt the approach to changes as needed**

Focus is on PFAS and PFAS exposure pathways

Preliminary Conceptual Site Model (CSM)



Prepared by: ARCJ 1/26/21
Checked by: JPK 2/3/2021
Revised by: ARCJ 3/18/21

- Indicates a potentially complete migration pathway
- Indicates an exposure route that may be complete, and will be further evaluated in the exposure pathway analysis of the risk assessment
- Indicates an exposure route that would not be complete, and is not evaluated further.

(a) PFOS, PFOA and PFBS are not considered volatile and there are no USEPA toxicity values to evaluate the inhalation pathway. Therefore will not be evaluated for the volatile or dust inhalation pathways. They will also not be evaluated for dermal contact with water, as this exposure route is considered negligible, although exposure to PFOS, PFOA, and PFBS in water may occur. These pathways will be included if relevant for historical chemicals only.

(b) It is assumed that soils outside of the former installation are not impacted unless PFAS transport through groundwater or surface water has occurred. Soils in private gardens will be evaluated for residents, and flood-prone wetlands will be evaluated for exposure by recreational visitors. The Old Town Forest and Great Bay Wildlife Refuge are within the former installation boundary.

(c) Utility worker exposure to soil is assumed 0-5ft and to include stormwater repairs.

(d) Includes parcels fully within the PDA boundary. Future subsurface exposure assumes redevelopment may occur including soil mixing.

Estuary waters include: Piscataqua River, Little Bay, and Great Bay.

AFFF = Aqueous Film Forming Foam.

USEPA - United States Environmental Protection Agency.

Conceptual Site Model Basis

- **Preliminary Conceptual Site Model (CSM):**
  - Based on 2018/2019 - Exposure Assessment (Expanded Site Inspection)
  - Pre-RI investigation
  - Identify current or anticipated land uses and
  - Consideration of human food chain exposure pathways

Step 1 – Hazard Identification

Compile and evaluate available data

Select data that will be considered in the BHHRA

Summarize the analytical data using statistics

Select Chemicals of Potential Concern (COPCs) per media (and area)

- **COPCs are selected by comparison to USEPA Regional Screening Levels (RSLs) –** based on a target risk of $1x10^{-6}$ and a Hazard Quotient (HQ) of 0.1 (includes 10 x factor)
- **COPCs are the chemicals that will be carried through the risk assessment (e.g PFOS in soil (at Site 8))**

Step 1 – Hazard Identification

- **Comparison of Pre-RI data to USEPA Regional Screening Levels (RSLs) – (10x factor)**

Media	COPCs In Work Plan	2022 RSL Updates (may not be comprehensive)
Groundwater	PFOS, PFOA, and PFBS in overburden, fractured bedrock, and deep bedrock	PFHxS and PFNA also above RSL
Soil (a)	PFOS and PFOA at Site 8, PFOS at the Former Crash Fire Station, and Fire Department Equipment Testing Area	PFHxS also above RSL at Site 8
Shellfish	No exceedances of the RSL	PFOS above RSL in Tricky's Cove, Broad Cove, Mouth of McIntyre Brook, Herods Cove and Woodman Point
Surface Water	PFOS above RSL in Pickering Brook, Watering Spring, Flagstone Brook, Paul Brook, and Knights Brook	PFHxS and PFOA also above RSL
Sediment	No exceedances of the RSL	One exceedance of RSL in Watering Spring

(a) surface (0–1 feet bgs) and combined surface and subsurface (0–10 feet bgs)

Step 2 - Exposure Assessment

- **Purpose: estimate the magnitude and frequency of potential human exposure to COPCs at each exposure area**
  - Identify potential receptors (i.e., people who may contact the impacted environmental media of interest)
  - Identify potential exposure points and/or exposure areas
  - Identification of potentially complete exposure scenarios including appropriate environmental media and exposure pathways for current and potential future site uses
- **Methodology for calculating the concentration of COPCs that a receptor may be exposed to at each exposure point, by each exposure route**
- **Methodology to quantify the exposure**

Step 3 Toxicity Assessment and Step 4 Risk Characterization

Toxicity Assessment

- Selects USEPA/DoD-approved toxicity values
- DoD-approved USEPA values available prior to draft BHHRA will be used

Risk Characterization

- Includes cumulative risk from PFAS and non-PFAS
- Relevant exposure pathways per scenario
- Decision points:
  - Excess lifetime cancer risk (ELCR) range of 1×10^{-4} to 1×10^{-6}
  - HI > 1 considering target endpoints (e.g., liver effects, neurotoxicity)

"Baseline" and "Representative"

Fundamental to the Baseline HHRA

- Baseline: "the absence of any actions to control or mitigate releases of contaminants (i.e., under an assumption of no action)"
- Representative: "data that characterizes existing conditions"

Two interim mitigation systems (IMS) on-site

- Data collected after mitigation is not "baseline"
- Data collected after mitigation may be "representative" of current conditions

The BHHRA will consider "baseline" and "current" datasets

BHHRA Interim Deliverable

Objective:

- Expand on the approach outlined in BHHRA WP
- Start the BHHRA

Expected outcomes:

- Identification and summary of data up to 2022 including non-PFAS
- Defining plume cores taking into consideration the impact of treatment
- Selection of Chemicals of Potential Concern (COPCs) in each area using data up to 2022
- Defining ‘representative’ datasets for baseline or current conditions

BHHRA Anticipated Timeline

BHHRA Interim Deliverable

- Estimated fall 2023

Full BHHRA

- Estimated 2025/2026 with the RI Report
- Will include datasets from BHHRA Interim Deliverable plus newly collected data
- Will include current screening levels at time of writing

RAB Agenda

- **Join us on 03 May 2023 for the RAB Meeting**
- **New Hampshire DES Building**
  - 222 International Drive, Suite 175, Portsmouth, NH
- **4:30 pm – Viewing of this presentation recording**
- **5:30 pm – Review of in-person poster figures**
- **6:00 pm – Welcome, introductions, RAB business**
- **6:15 pm – Open discussion**
- **7:30 pm – Public comments**
- **8:00 pm – Adjourn**

Your Success is Our Mission!