

Air Force Installation & Mission Support Center



AFCEC BRAC Former Pease AFB RAB Meeting

Chris King – USAF
Haley Plante – WSP
Jack Besse – WSP
Amy Quintin - WSP
01 November 2023



Agenda



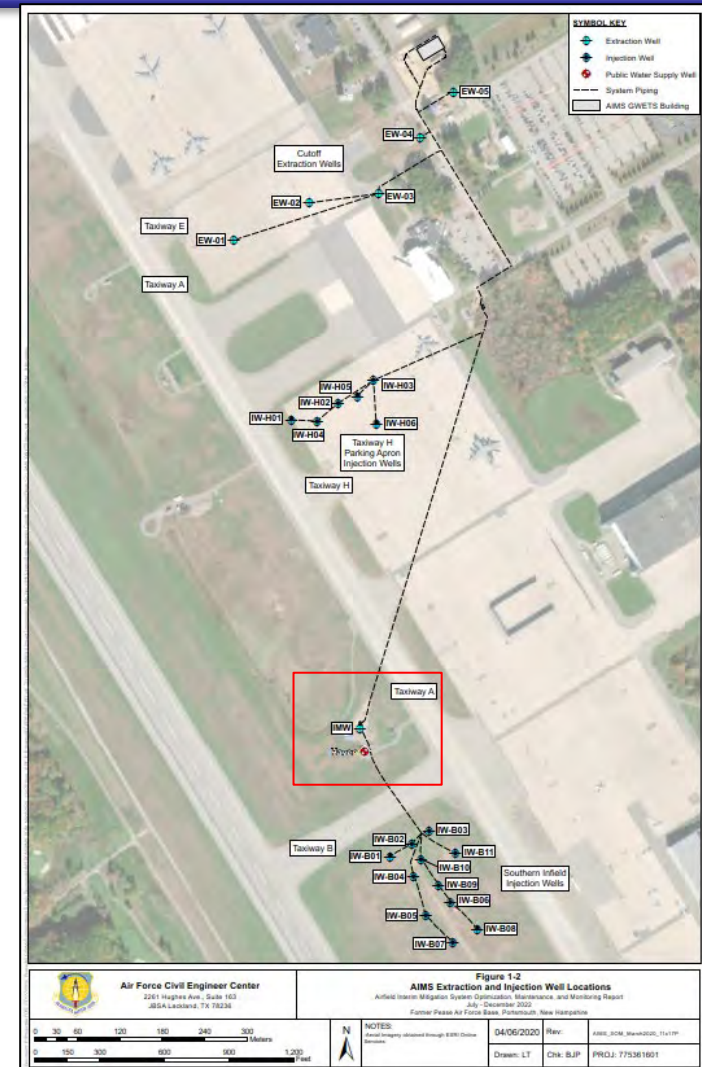
- **Technical Check** – Ona Ferguson (Consensus Building Institute)
- **Technical Presentations** - (Video recording)
 - AIMS and Site 8 IMS Updates – WSP
- **Welcome, Introductions, RAB Business** – Ona Ferguson (Consensus Building Institute)
 - Consensus Building Institute Transition
- **Open Discussion Time**
- **DoD Policy Update**
- **Human Health Risk Assessment Update**
- **City of Portsmouth Update**
- **Public Comments**
- **Meeting Recap and Next Steps** – Consensus Building Institute
- **Adjourn**



IMW and Haven Well Operations



- Purpose of the Interim Mitigation Well (IMW) is to protect the Haven Well.
- Modeling during the AIMS design demonstrated that extraction above 300 gallons per minute (gpm) from the IMW/Haven Well area results in contaminants bypassing the cutoff extraction wells.
- IMW was designed to run concurrently with the Haven Well with a combined extraction rate of 300 gpm.
- Operations are coordinated between the USAF and the City of Portsmouth.

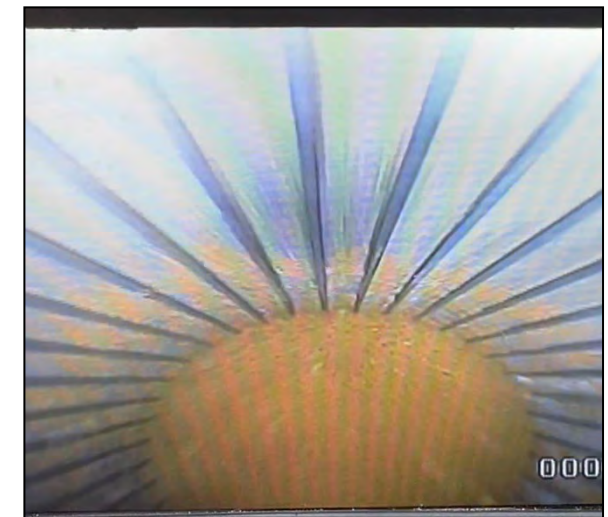




AIMS - EW-01 Replacement



- During routine maintenance in October 2021, a break in the well screen at Extraction Well 1 (EW-01) was identified.
- A temporary seal was installed to block the break to allow the well to continue running.
- Reduction in capacity since the damage was initially identified – planned replacement of EW-01 in spring of 2024.
- Iron fouling and additional screen damage identified during August 2023 routine redevelopment expedited the schedule of the replacement.





AIMS - EW-01 Replacement



- Drilling and Design of EW-01R Activities:
 - Pilot boring drilled 18 August 2023
 - Civil engineering planning
 - Ongoing coordination with the Pease Development Authority
 - Design recommendations submitted to USEPA and NHDES on 27 September 2023

- Next Steps:
 - Installation of EW-01R in November 2023
 - Well development and initial assessment of capacity
 - Engineering – installing pump, water line extension through EW-01 vault, electrical connections



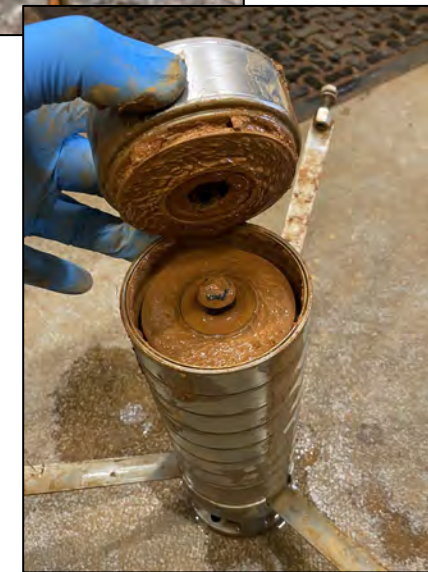


Site 8 IMS Status Update



■ Site 8 Interim Mitigation System (IMS) Optimization Challenges

- Iron/metals fouling continues to be the primary limiting factor for treatment capacity. Operators increasing cleaning and maintenance frequency.
- Operators' efforts have yielded steady improvements in treatment flow and operational time, but treatment flow is approaching maximum system capacity with current configuration.

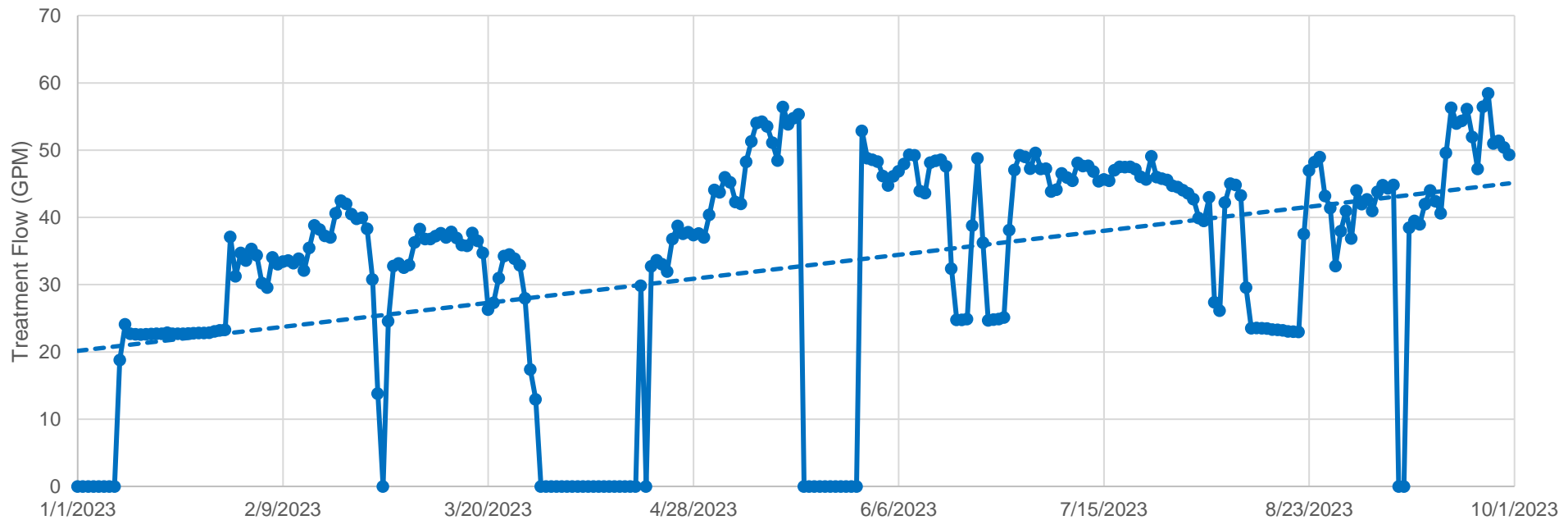




Site 8 IMS Status Update

	Previous RAB (5/3/2023)	Current RAB (11/1/2023)
Treatment Flow (gallons per minute)	39 gpm	55 gpm
Number of wells running	6	10

Daily Average Site 8 Water Treatment Flow



- **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 and is effectively removing PFAS at Site 8.
- Single use resin has allowed increased flow through the treatment process.





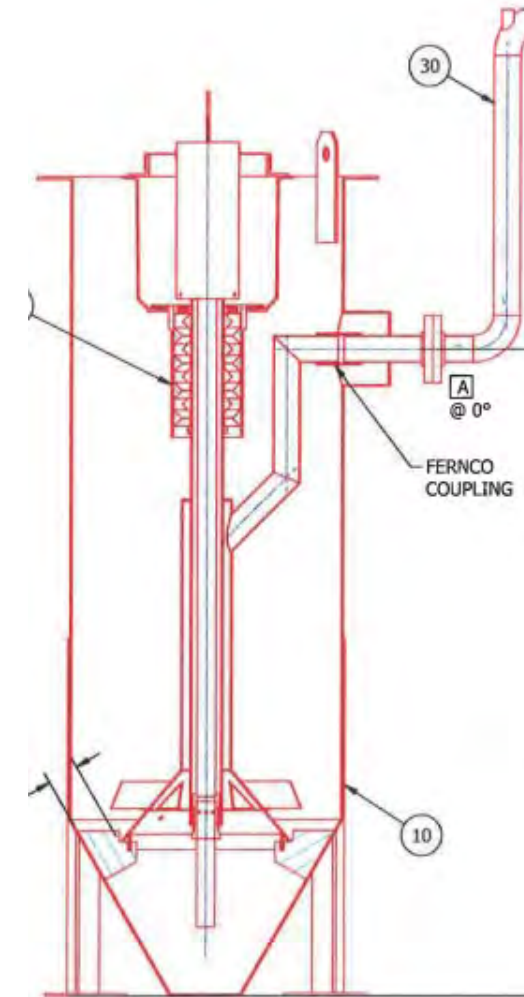
Site 8 IMS Status Update



■ Site 8 IMS Optimization Plans

■ Phase 1 – Future Work

- Conduct 8-week gravity sand filtration pilot test to evaluate additional filtration to improve system reliability.
- Sand filtration pilot test expected to begin winter 2023.





Site 8 IMS Status Update



- **Site 8 IMS Optimization Plans**
 - **Phase II – Future Work**
 - 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



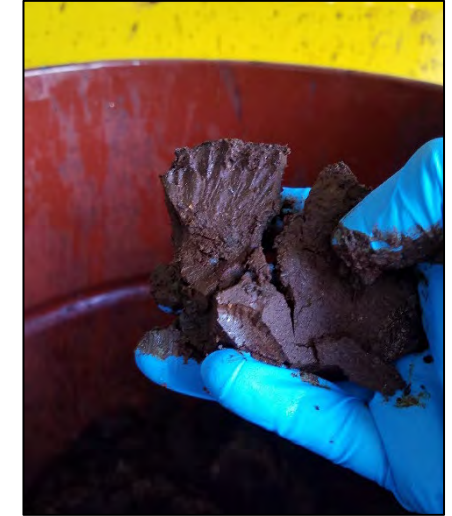


Site 8 IMS Status Update

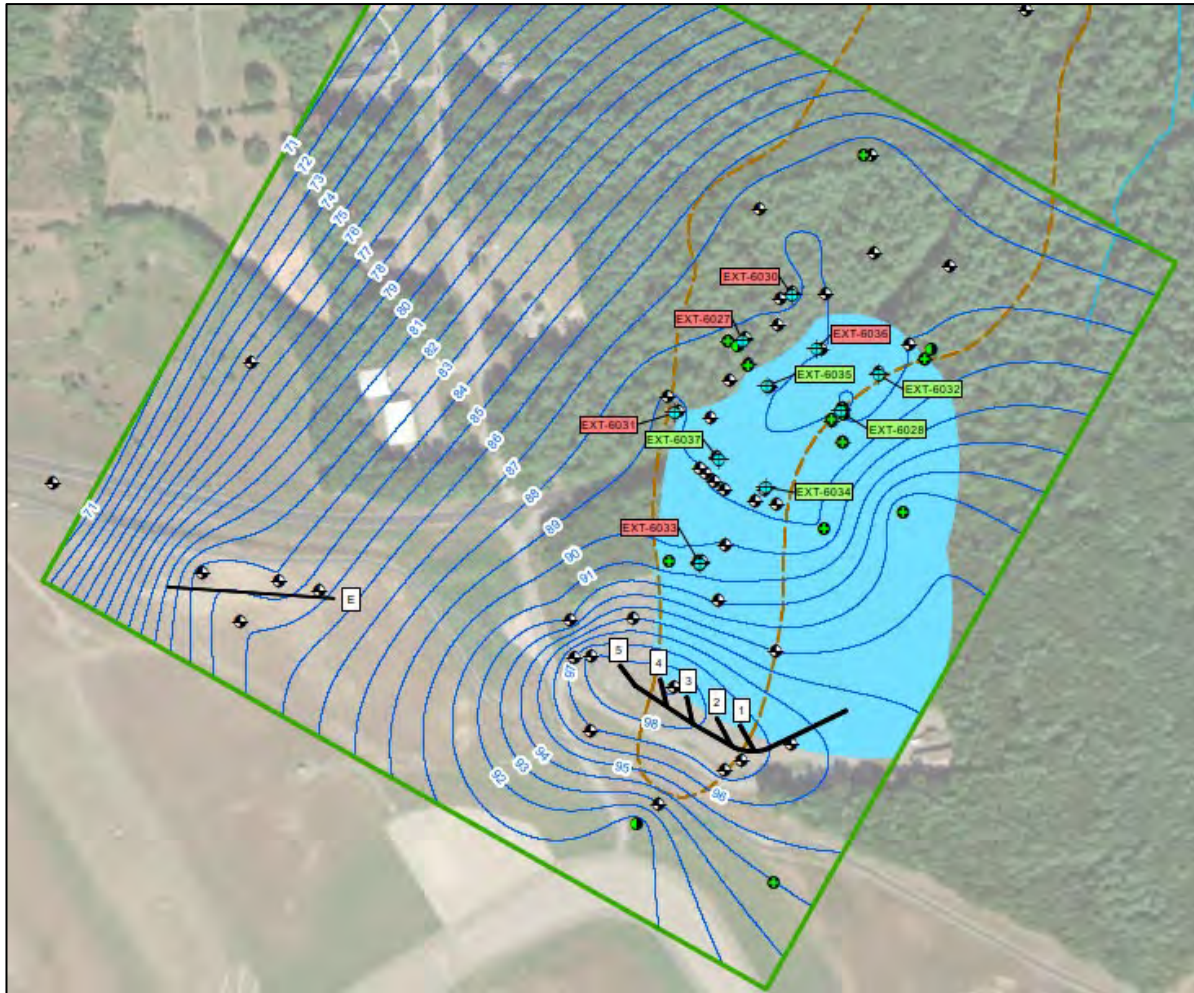


■ Site 8 IMS Waste

- Pressed sludge solids and other PFAS-impacted waste accumulated around Site 8 due to delays from new sludge transport/disposal vendor.
- New vendor conducted first waste pickups in October, majority of accumulated waste removed for offsite disposal as of 01 November 2023.
- Waste will be sent to a RCRA Subtitle C hazardous waste landfill in Belleville, Michigan.



Site 8 IMS Impacts



- The IMS maintains hydraulic control, preventing the spread of PFAS-impacted groundwater
- ~70% of wells monitored within the bedrock trough (where extractions wells are located) show decreasing or probable decreasing trends in PFOS concentrations.
- Concentration of PFOS in bedrock well 08-6046 northwest of the bedrock trough reduced 0.065 ug/L pre-IMS to 0.023 ug/L in April 2022.
- Concentration of PFOS in the furthest upstream sample in Watering Spring reduced from 4.2 ug/L pre-IMS (April 2018), to 1.2 ug/L in October 2022.
- Concentration of PFOS in the furthest upstream sample in Pickering Brook reduced from 6.5 ug/L pre-IMS (March 2018), to 0.46 ug/L in 2022.



RAB Agenda

- **Join us on 01 November 2023 for the RAB Meeting**
- New Hampshire DES Building
 - 222 International Drive, Suite 175, Portsmouth, NH
- 5:00 pm – Viewing of presentation recording
- 5:30 pm – Welcome, introductions, RAB business
- 5:40 pm – Open discussion
- 6:15 pm – Updates on Department of Defense Policy and Human Health Risk Assessment
- 7:30 pm – Update on Drinking Water from City of Portsmouth
- 7:45 pm – Public Comments
- 8:00 pm – Adjourn





Clarifications for DoD “PII Policy” Overview



Personally Identifiable Information (PII) is protected from public release under the Freedom of Information Act (FOIA).

- **Names and addresses** of private individuals associated with DoD’s sampling results are considered PII and in accordance with the law, DoD is not releasing names and addresses associated with our sampling results.
 - This includes any type of media sample (drinking water, groundwater, soil, etc.).
 - Names and addresses of public or commercial entities are not considered PII under the law.
- **Latitude and Longitude** data is not considered PII; however, DoD has decided to protect this information, when associated with the results of samples taken from *residential privately owned drinking water wells*.



Clarifications for DoD “PII Policy” Lat/Long Summary



- Latitude and longitude data associated with results from non-drinking water samples is not protected under law or the DoD policy and should be shared with supporting regulatory agencies and may be made publicly available.
 - Examples of non-drinking water samples include soil, surface water, sediment, and groundwater samples.
 - Data should be shared with supporting regulatory agencies, as soon as practicable (e.g., when the next report/presentation is drafted), and can be made publicly available (e.g., provided to a RAB).
- Latitude and longitude data associated with results from drinking water or non-drinking water samples taken from non-residential properties is not protected under law or the DoD policy.
 - Data should be shared with supporting regulatory agencies, as soon as practicable (e.g., when the next report/presentation is drafted), and may be made publicly available.



Clarifications for DoD “PII Policy” Implementation



- **New Rights of Entry:** The policy requires the Military Departments to modify future access agreements to include a notification to residential property owners that the latitude/longitude associated with a result from drinking water samples taken from their property will be shared with state regulators and may be made publicly available.
 - This will enable DoD to share the latitude/longitude associated with future drinking water sampling results with state regulators and the public, while ensuring residential property owners are aware that the latitude/longitude will be shared.
- **Data Previously Collected:** The policy also directs the Military Departments to request permission from residential property owners for the latitude/longitude, associated with samples previously taken from their property, to be shared with state regulators and the public, when requested by a state regulatory agency.
 - This will enable DoD to share the latitude/longitude associated with past drinking water sampling results with state regulators and the public, while ensuring residential property owners are aware that the latitude/longitude will be shared.



Clarifications for DoD “PII Policy” Implementation



Implementation of the policy at Pease:

- The Air Force is drafting letters to obtain consent to share the latitude and longitude associated with past sampling results from private drinking water wells. Letters are expected to be mailed as soon as possible.
- The Air Force is including language in new access agreements notifying property owners that the latitude and longitude of all sampling results will be made available.
- New maps and drawings will include the latitude and longitude associated with results from:
 - Non-drinking water samples
 - Drinking water samples from non-residential properties
 - Drinking water samples from residential properties that have permitted latitude and longitude data sharing.



BHHRA WP vs BHHRA Interim Deliverable



- **Baseline Human Health Risk Assessment (BHHRA) Work Plan (WP) was Final in 2021:**
 - Purpose of BHHRA WP was to lay out the methods for conducting a BHHRA. Those methods are still current/correct.
 - “Snapshot” of contaminants of potential concern (COPC) selection and toxicity values from 2021 is outdated and will be re-evaluated.

- **The Draft BHHRA Interim Deliverable includes:**
 - Updated COPC selection using Fall 2022 screening levels (SLs).
 - Includes dermal contact pathways for both soil and water.
 - Includes specific exposure areas.
 - Includes all Remedial Investigation (RI) data collected to date, including biota such as eggs and fish.



Reminder from May: Hazard Identification

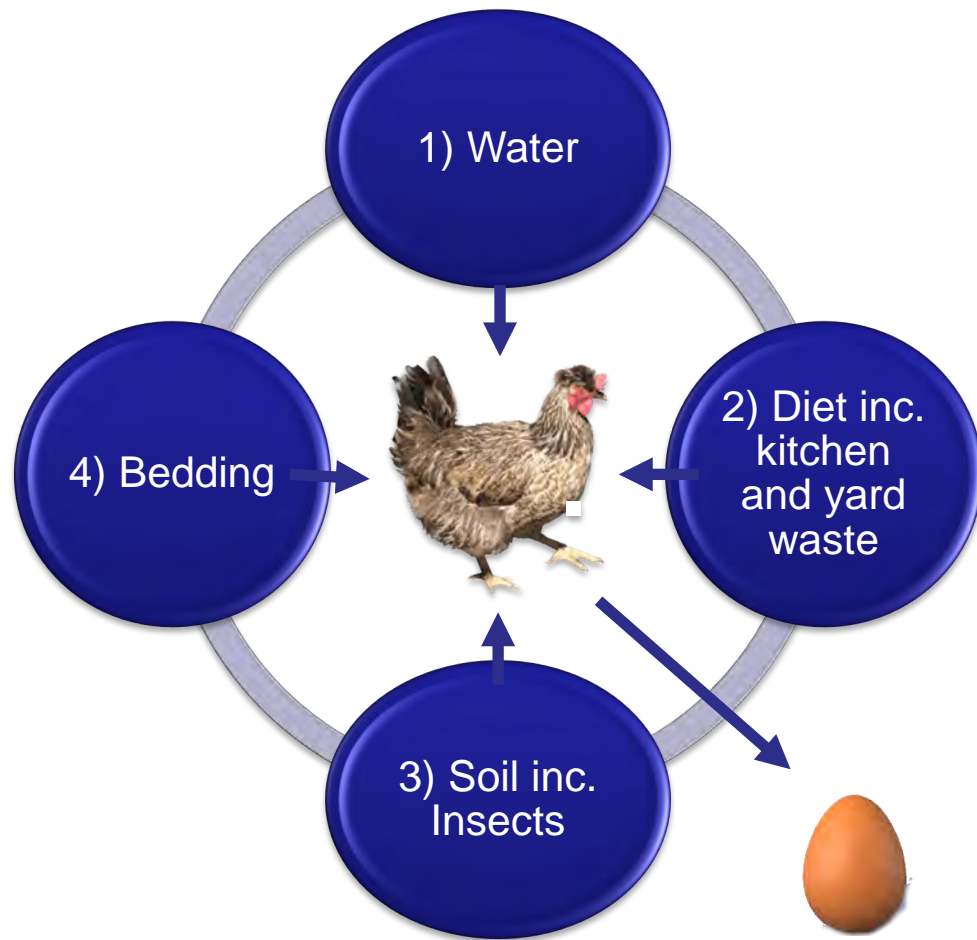



■ Comparison of Pre-RI data to USEPA Regional Screening Levels (RSLs) and USEPA Region 1 Pease-Specific Screening Levels – (10x factor)

Media	COPCs In Work Plan	2022 Updates (may not be comprehensive)
Groundwater	PFOS, PFOA, and PFBS in overburden, fractured bedrock, and deep bedrock	PFHxS and PFNA also above RSLs
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 Pease-specific screening levels	PFOS above Pease-specific screening levels in Tricky's Cove, Broad Cove, Mouth of McIntyre Brook, Herods Cove and Woodman Point
Surface Water	PFOS above Pease-specific screening levels in Pickering Brook, Watering Spring, Flagstone Brook, Paul Brook, and Knights Brook	PFHxS and PFOA also above Pease-specific screening levels
Sediment	No exceedances of the Pease-specific screening levels	One exceedance of Pease-specific screening levels in Watering Spring

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

Chicken and Egg PFAS Sources



- Free-range chickens deliberately ingest stones/soil to help with digestion.
- Free-range eggs typically have higher PFAS than commercial eggs.
- Some PFAS sources may be Pease-related (e.g., groundwater used as drinking water).
- Other potential PFAS sources may not be Pease-related (e.g., kitchen waste, bedding).
- PFAS typically found in yolk only. 



Collecting Chicken Egg Data in Newington



2021 – Eggs collected from 2 properties

- Private well water with PFAS detected in water on both properties with results in the single digit parts per trillion (ppt)
- 2 whole eggs samples
- 1 egg was separated and both yolk and white sampled

2022 - Eggs collected from 7 properties

- 2 resample both properties from 2021- private well water with PFAS detected in water
- Samples collected - yolk vs white
- PFOS detected in yolks only



- **Also sampled at time of egg collection:**
 - Soil
 - Groundwater
 - Chicken feed



Detected Chicken Egg Concentrations



Results including both 2021 and 2022 sampling events are shown below

PFAS	# Properties with Detections	Detected Egg Yolk Concentration		Estimated Whole Egg Concentration*	
		Min	Max	Min	Max
		ug/kg	ug/kg	ug/kg	ug/kg
PFOS	6:7	0.573 J	11.5 J	0.53	4.2
PFOA	1:7	0.321 J		0.44	
PFNA	3:7	0.061 J	0.379 J	0.086	0.46
PFBA	5:7	0.124 J	1.07 J	0.37	0.69

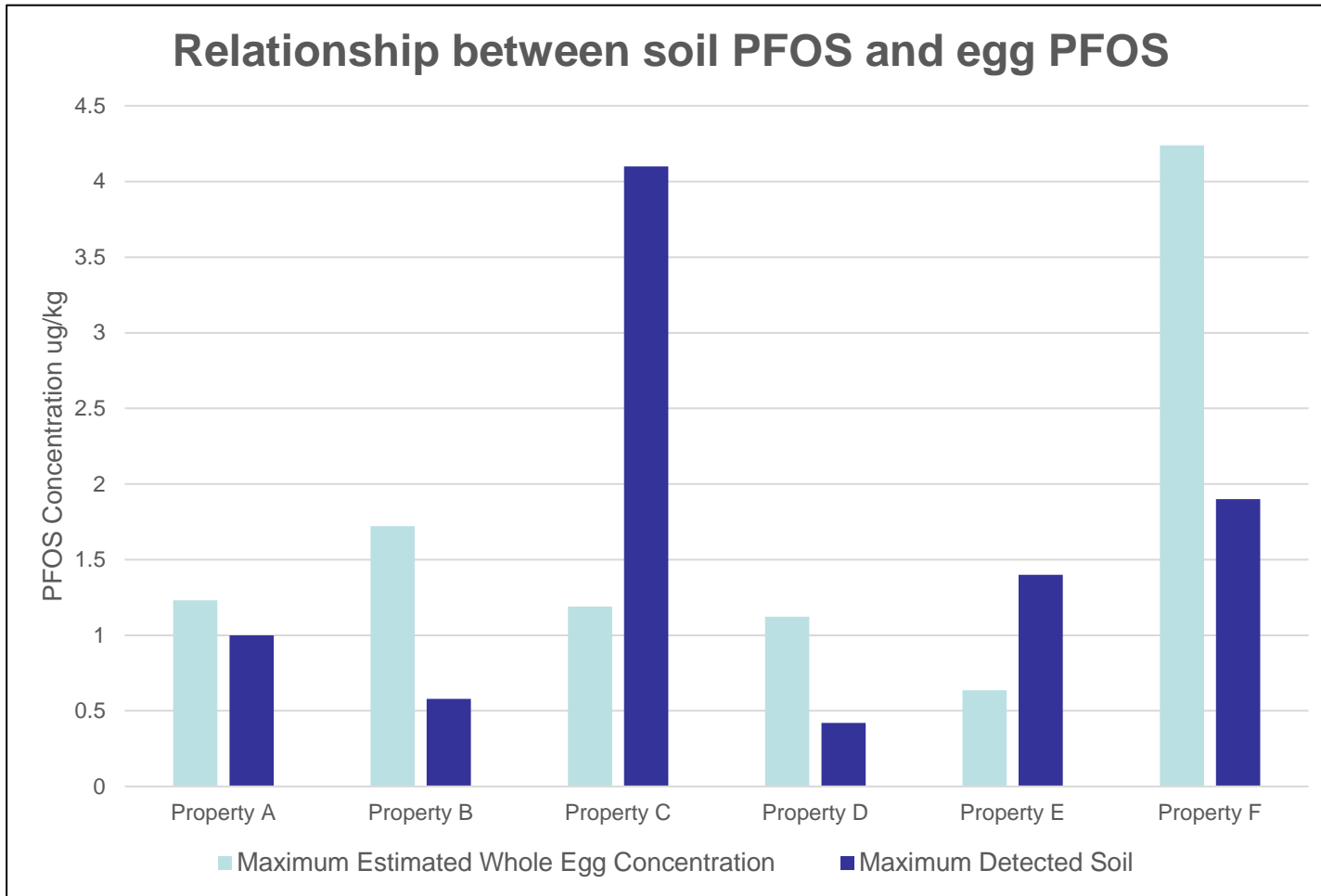
“U” = nondetect with reporting limit of 0.2 to 2 ug/kg. “J” = estimated value.

No other PFAS with USEPA toxicity values were detected.

Whole egg estimated concentration was derived from the yolk and white. Half the reporting limit used for egg white, which were all nondetect.



Understanding the CSM - Co-located Media



- PFAS-impacted groundwater only relevant at the two properties using well water for chickens.
 - This water only contained PFAS at single digit ppt levels
- PFOA:
 - detected in soil at one property
 - detected in egg at a different property
- PFNA not detected in soil



Your Success is Our Mission!