

Air Force Installation & Mission Support Center



AFCEC BRAC Pease AFB RAB Meeting

Chris King – USAF
Haley Plante – Wood
Hank Andolsek – Wood
Amy Quintin – Wood
17 May 2022

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Agenda



- **Technical Check** – Ona Ferguson (Consensus Building Institute)
- **Welcome, Introductions, RAB Business** – Ona Ferguson (Consensus Building Institute)
- **Technical Presentations**
 - **Air Force Cleanup Update** – Chris King (AFCEC)
 - **Remedial Investigation Update** – Wood
- **Open Discussion Time**
- **Public Comments**
- **Meeting recap and Next Steps** – Ona Ferguson (Consensus Building Institute)
- **Adjourn**



Private Well Update



- **AF is implementing December 2021 DOD guidance regarding how and when state AGQS can be used in removal actions**
- **AF is evaluating removal actions for drinking water wells that are:**
 - (1) below the EPA LHAs,
 - (2) hydrogeologically connected to wells that exceed the EPA LHAs, and
 - (3) expected to exceed the LHAs if action is not taken
- **AF will work with NHDES and homeowners to determine appropriate actions for eligible private wells**

AGQS = Ambient Groundwater Quality Standard

LHA = Lifetime Health Advisory



PFAS Waste Update



- **Incineration moratorium is in effect per National Defense Authorization Act (NDAA) 2022**
 - **At Pease, all wastes generated by the RI activities and operation of the treatment plants is disposed in a Class Subtitle C landfill**
 - **Each shipment cannot be shipped without undergoing a thorough review and approval process**
- **Most wastes are generated at Site 8 from system maintenance (waste includes filters, personal protective equipment (PPE), pressed and dewatered sludge)**
- **Waste disposal / destruction processes to be reevaluated when DoD issue PFAS waste guidance**



NDAA FY22 PFAS Data Restriction



Sharing Publicly disclosing PFAS sampling data collected from private property requires landowner's consent

NDAA 345(a)(2) – “The Secretary of Defense may not publicly disclose the results of testing for perfluoroalkyl or polyfluoroalkyl substance conducted on private property without the consent of the private property owner.”

- **Current access agreements do not address data sharing**



- Sample collection process (Haley Plante, Wood)
- Soil and Surface Water Samples – Summary of validated data will be presented (Hank Andolsek, Wood)
- Eggs, Shellfish, Co-located Surface Water and Sediment and Fish Summary – validated data (Amy Quintin, Wood)





Field Activities Process



Work Plan




What we do

FINAL

REMEDIAL INVESTIGATION WORK PLAN
CDRL A007B

PER- AND POLYFLUOROALKYL SUBSTANCE RESPONSE
FORMER PEASE AIR FORCE BASE
PORTSMOUTH, NEW HAMPSHIRE

Prepared for:
Air Force Civil Engineer Center
Joint Base San Antonio – Lackland, Texas



Prepared by:
wood.
Wood Programs, Inc.

Standard Operating Procedures



How we do it

SOIL SAMPLING
SOP Wood-02

SEDIMENT SAMPLING
SOP Wood-07

SURFACE WATER SAMPLING
SOP Wood-08

FISH SAMPLING FOR LABORATORY TISSUE ANALYSIS
SOP Wood-15 (PFAS)

SHELLFISH SAMPLING FOR LABORATORY TISSUE ANALYSIS
SOP Wood-18



Sampling Methods - Soil





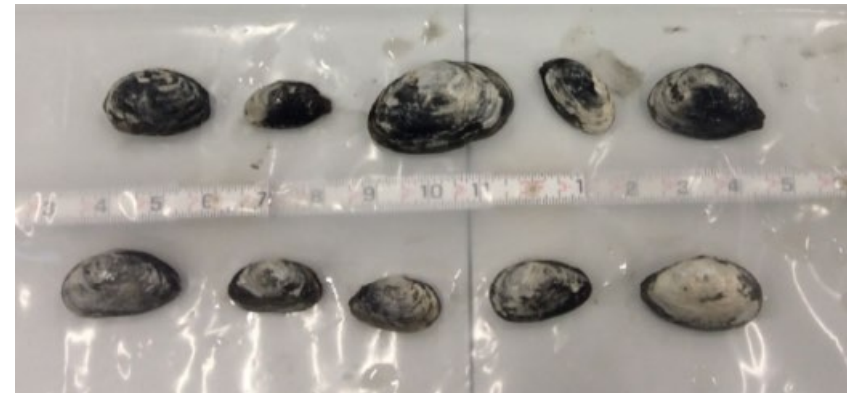
Sampling Methods – Surface Water/Sediment



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Sampling Methods – Fish and Shellfish



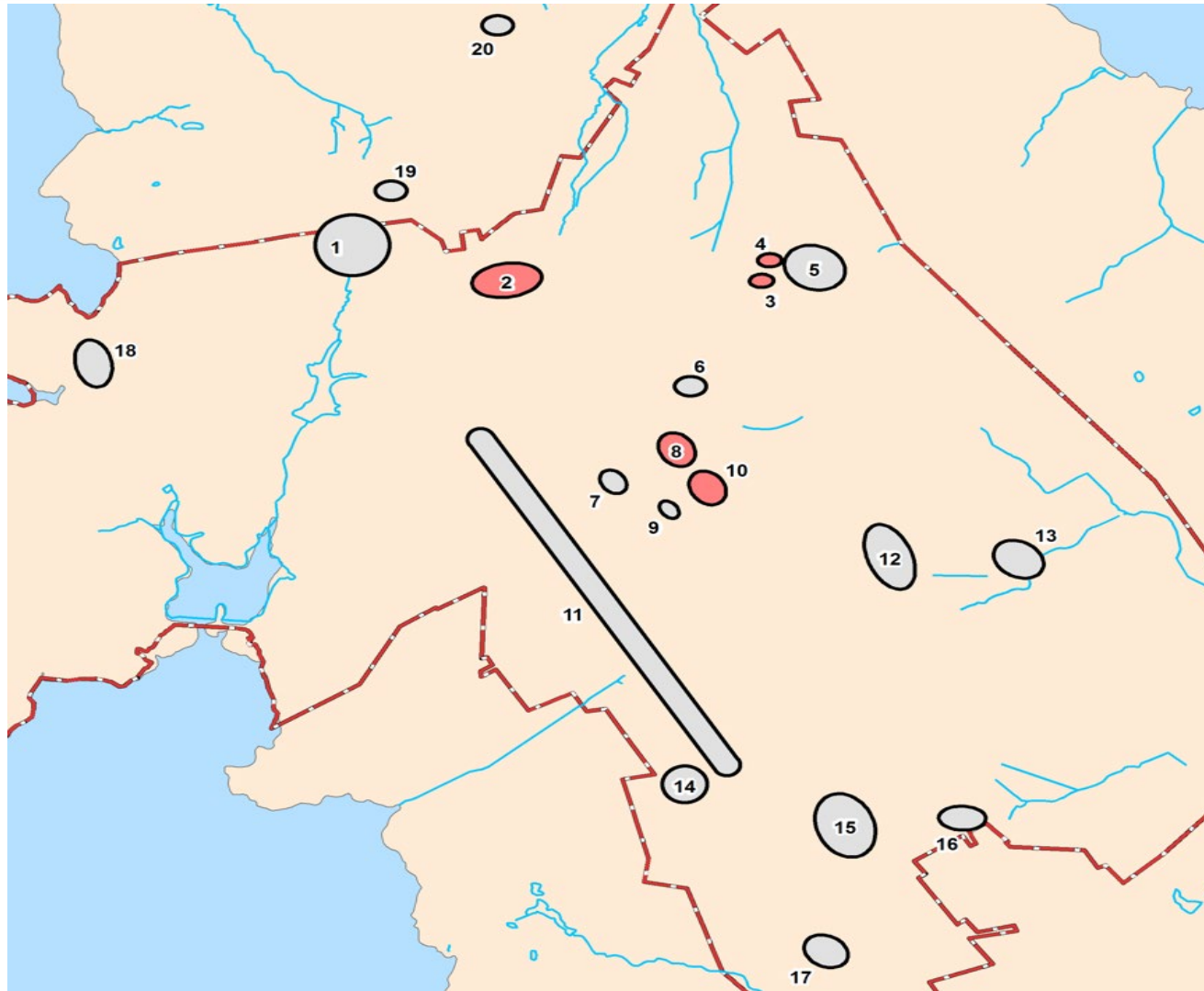


Soil Source Area Investigations



PFOS and/or PFOA exceed Regional Screening Level of 0.13 mg/kg in areas in **red**

*USEPA Soil RSL is based on ingestion and dermal contact - residential use



1. 1961 crash
2. Site 8/FTA-2
3. Firing Range
4. Fire Department Equipment Testing Area
5. Site 13/Bulk Fuel Storage Area
6. Hangars 254 & 254
7. KC-135 Fire
8. Current Crash Fire Station
9. AIMS Extraction Well Area
10. Former Crash Fire Station
11. Runway Area
12. Supply Building 122
13. Fire Department #3
14. Golf Course
15. Southern Airfield
16. Haven Well Blow Off Area
17. Golf Course
18. Munitions Residue Burial Site
19. Newington Transfer Station
20. Newington Fire Department



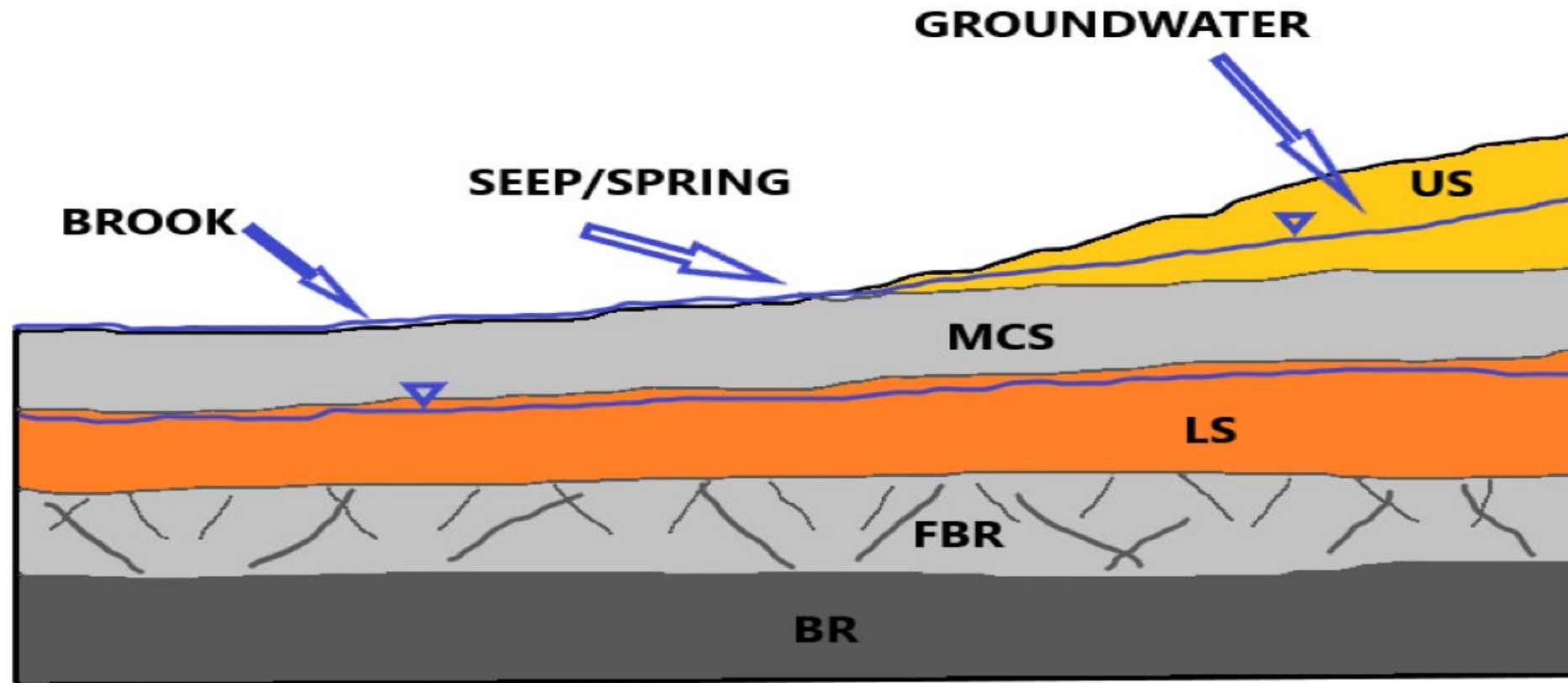
Surface Water Migration Pathways



- The flowing surface waters across the peninsula originate either as springs, or as outfall to a subsurface storm water system that is infiltrated by groundwater.
- Surface water facilitates movement of shallow contaminated groundwater.
- Non-tidal surface water samples were collected from multiple locations across the peninsula.



Surface Water Geologic Cross-Section

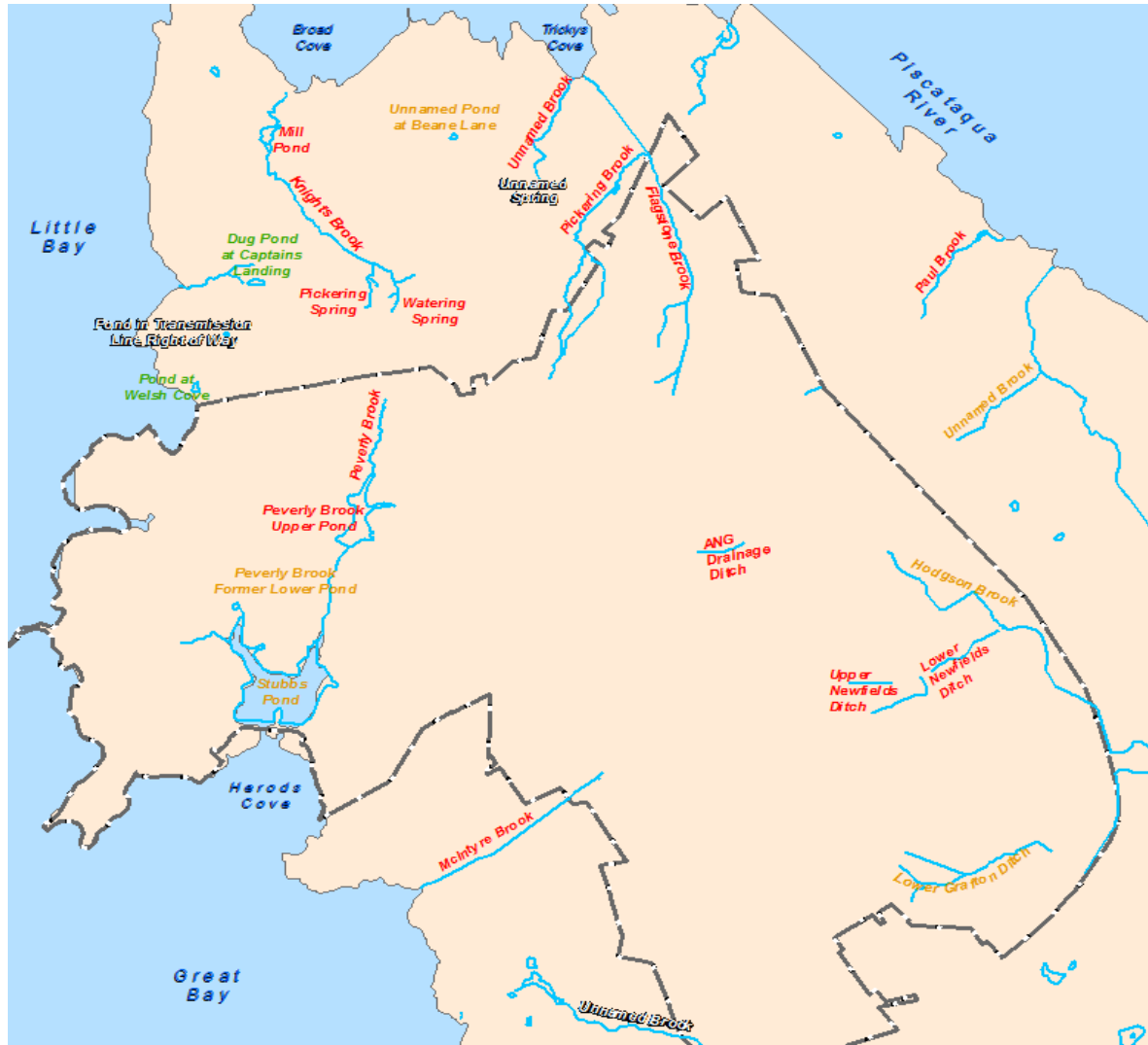


- US – Upper Sand
- MCS – Marine Clay Silt
- LS – Lower Sand
- FBR – Fractured Bedrock
- BR - Bedrock

- Substrate of surface water bodies is the low permeability marine clay silt (MCS) deposit which limits the vertical migration of contaminants to the underlying groundwater.



PFOS Distribution in Surface Water



- Focused on surface water as migration pathway, and not risk exposure.
- However, headwaters of Watering Springs, Pickering Brook, Paul's Brook and Flagstone Brook exceed EPA Regional Screening Level for Child Swimming.
- Because the surface waters originate as groundwater, the Ambient Groundwater Quality Standards (AGQS) are used for comparison purposes only.
- The AGQS values are not applicable to surface water and are only used to understand relationship between surface water and groundwater.

Non-detect (ND)

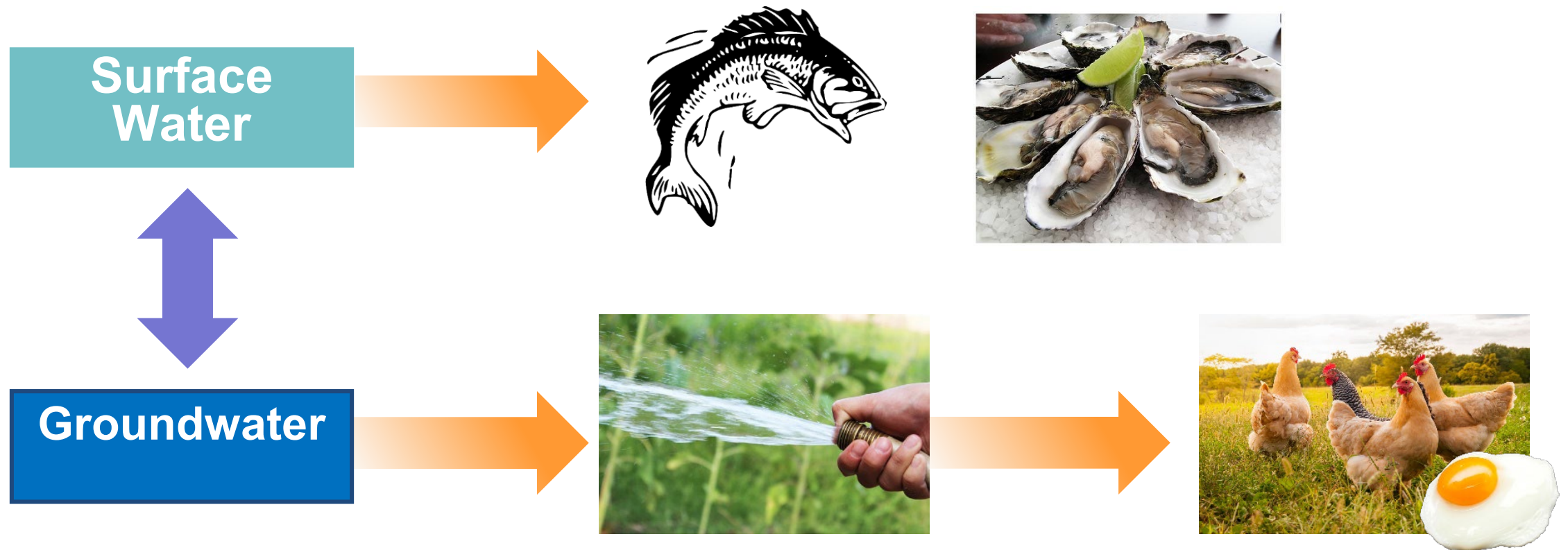
> ND < AGQS

> AGQS < 10X AGQS

>10X AGQS

PFOS AGQS = 15 ng/L or 15 ppt

• Potentially complete pathways





RI Field Work – Fish, Shellfish, Eggs



Big Picture Results



Freshwater
Fish

PFOS concentrations **above** risk screening levels



Shellfish

PFOS concentrations **below** risk screening levels



Eggs

PFOS detected – pathway identified

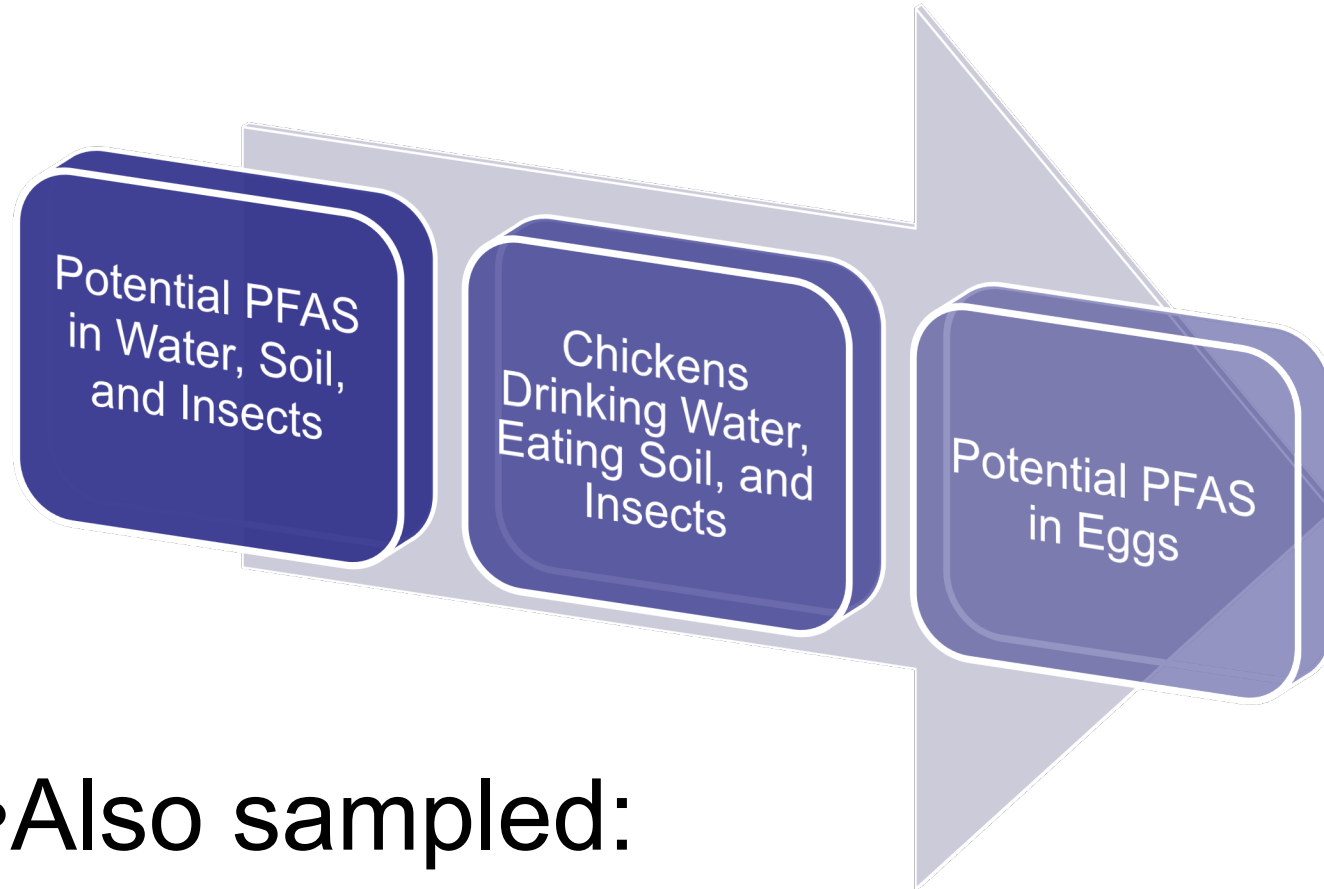


RI Field Work – Poultry Eggs



- Figure shows location of all 12 backyard produce properties
 - 2 properties using private well water for chicken drinking water
- Location selection = PFAS in private wells & residential input/questionnaires

RI Field Work – Poultry Eggs



- Also sampled:

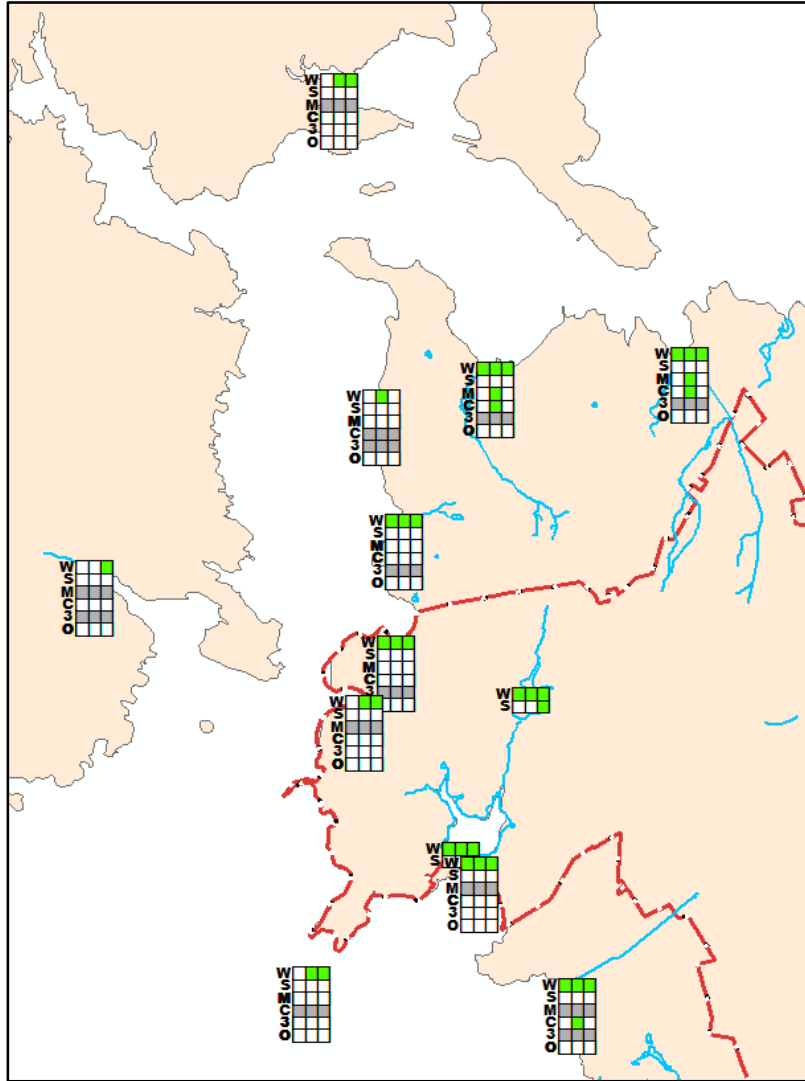
- Soil, Groundwater, Chicken Feed

- Whole egg and yolk vs white samples collected
- Further data collection proposed for 2022









Shellfish Figures – Box Plot Legend



Contaminant and corresponding EPA Region 1 Screening Level

	PFBS	PFOS	PFOA	
Surface Water:	30	2	2	ug/L
Sediment:	9100	609	609	ug/kg
Shellfish:	84	5.59	5.59	ug/kg

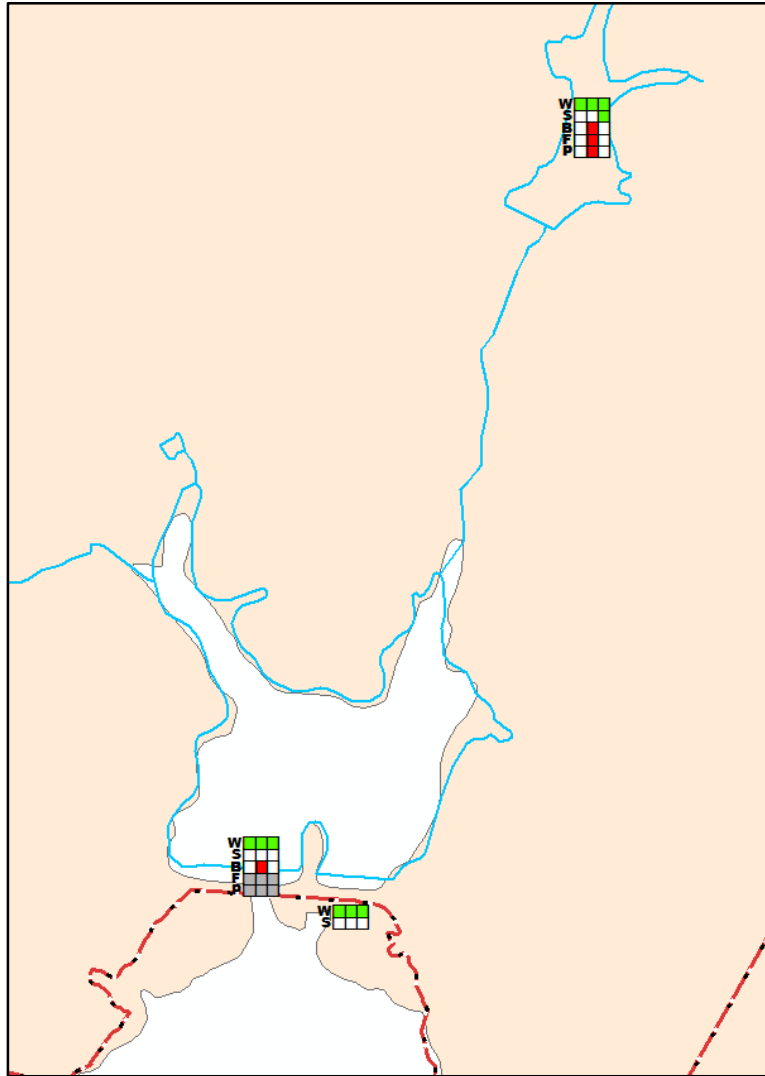
-  Not Sampled
-  Non-detect
-  Detected < RSL
-  > RSL < 10X RSL
-  >10X RSL

RSL – EPA Region 1 Screening Level

Row	Label	Sample Type
1	W	Surface Water
2	S	Sediment
3	M	Blue Mussel Max
4	C	Softshell Clam Max
5	3	Softshell Clam > 3 inches
6	O	American Oyster






Fish Figures – Box Plot Legend



Contaminant and corresponding EPA Region 1 Screening Level

	PFBS	PFOS	PFOA	
Surface Water:	30	2	2	ug/L
Sediment:	9100	609	609	ug/kg
Fish:	78	5.21	5.21	ug/kg

-  Not Sampled
-  Non-detect
-  Detected < RSL
-  > RSL < 10X RSL
-  >10X RSL

RSL – EPA Region 1 Screening Level

Row	Label	Sample Type
1	W	Surface Water
2	S	Sediment
3	B	Large Mouth Bass Max
4	F	Sunfish Max
5	P	Chain Pickerel Max



RI Field Work – Fish, Shellfish, Egg Summary



PFOS above risk thresholds in freshwater fish – Fishing currently prohibited - Further evaluation in the BHHRA for future use



PFOS below risk thresholds in shellfish – no health concern from ingestion



- PFOS detected - Further evaluation in the BHHRA



Legacy System Demolition and Site Restoration Project



- **Pease received a non-PFAS funding plus-up in FY22**
- **Air Force issued a new project to demolish and remove decommissioned equipment from legacy sites**
- **Scope will encompass up to eight mothballed systems, either wholly or partially depending on a site evaluation**
- **End goal is restoration of each location to usable land**



New Project Award – Re-evaluate Fuel Sites



- **New project award (FY22) to re-evaluate fuel sites, identify any residual hotspots**
 - **Eight fuel sites where we currently perform long-term monitoring**
 - **3-year project involving step-out sampling and modeling**
- **Project will result in reports addressing:**
 - **Status of plumes**
 - **Active remediation vs monitored natural attenuation (MNA)**
 - **System optimization and new technologies to be recommended**
 - **Overall path forward recommendations and next steps**



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