

Red Hill Update CWRM



Navy Closure Task Force–Red Hill 17 SEPTEMBER 2024



Apple



Android



Agenda

- Operational Update
- NCTF-RH Dashboard
- Groundwater Network
- Potential New Wells
- Groundwater Sampling
- Groundwater Flow Model
- Environmental Remediation
- Upcoming Engagements



Operational Update

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Late June/early July: completion of sludge removal from tanks 7 & 8



Late May: start of tank ventilation & air quality monitoring



September: ventilation operations begin for tanks 5 & 6



Beneficial reuse of water preparations are being made



NCTF-RH Dashboard

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[AIR QUALITY MONITORING](#)



[SLUDGE & RESIDUAL FUEL REMOVAL](#)



[TANK CLEANING PROGRESS](#)



[VIDEOS](#)



[PHOTOS](#)

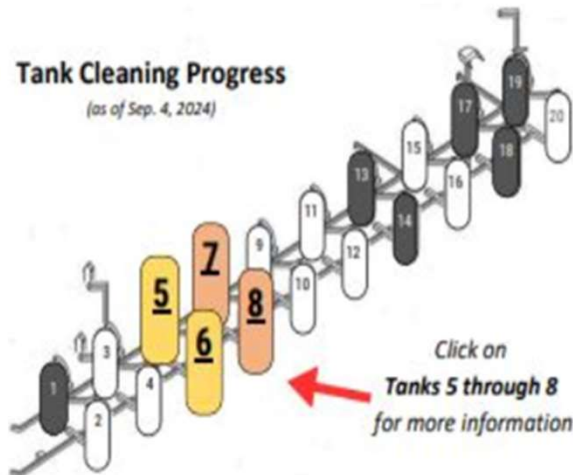


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Tank Cleaning Progress

(as of Sep. 4, 2024)



- Step 1 – Preparation** (Approx. 2-3 months):
 - Isolate tank and disconnect piping
 - Install tank ventilation equipment and inject water to soften sludge
 - Remove flowable sludge
 - Begin tank ventilation with forced air
- Step 2 – Remove Solid Sludge** (Approx. 2-3 months):
 - Inspect and repair central tower and catwalk
 - Install center tower elevator; load test tower and catwalk
 - Remove solid sludge
- Step 3 – Pressure Washing** (Approx. 1-2 months):
 - Set up pressure washing system and
 - Pressure wash with 3% Simple Green
 - Rinse, continuously removing rinsate
 - Dry tank interior and validate cleanliness; submit cleaning report
 - Receive regulatory agency final approval that tank is clean
- Step 4 – Tank Decommission** (Approx. 1-2 Months):
 - Remove booms and infrastructure
 - Install permanent lockable steel hatch at the entrance

These tanks out of service prior to defueling.



SLUDGE AND RESIDUAL FUEL REMOVAL

00264.4

GALLONS RESIDUAL FUEL REMOVED

4,000 gallons of residual fuel are spread throughout nearly 10 miles of pipeline in low points, valves, and other isolated areas.

**As of Sep. 4, 2024*

00078.0

GALLONS SLUDGE REMOVED

Sludge is removed by lowering personnel to the bottom of the tank where it is manually shoveled out and put into drums. The drums are sealed and sent off the island for disposal at a permitted waste disposal facility on the continental U.S.

[SLUDGE REMOVAL VIDEO](#)

[BACK TO TOP](#)

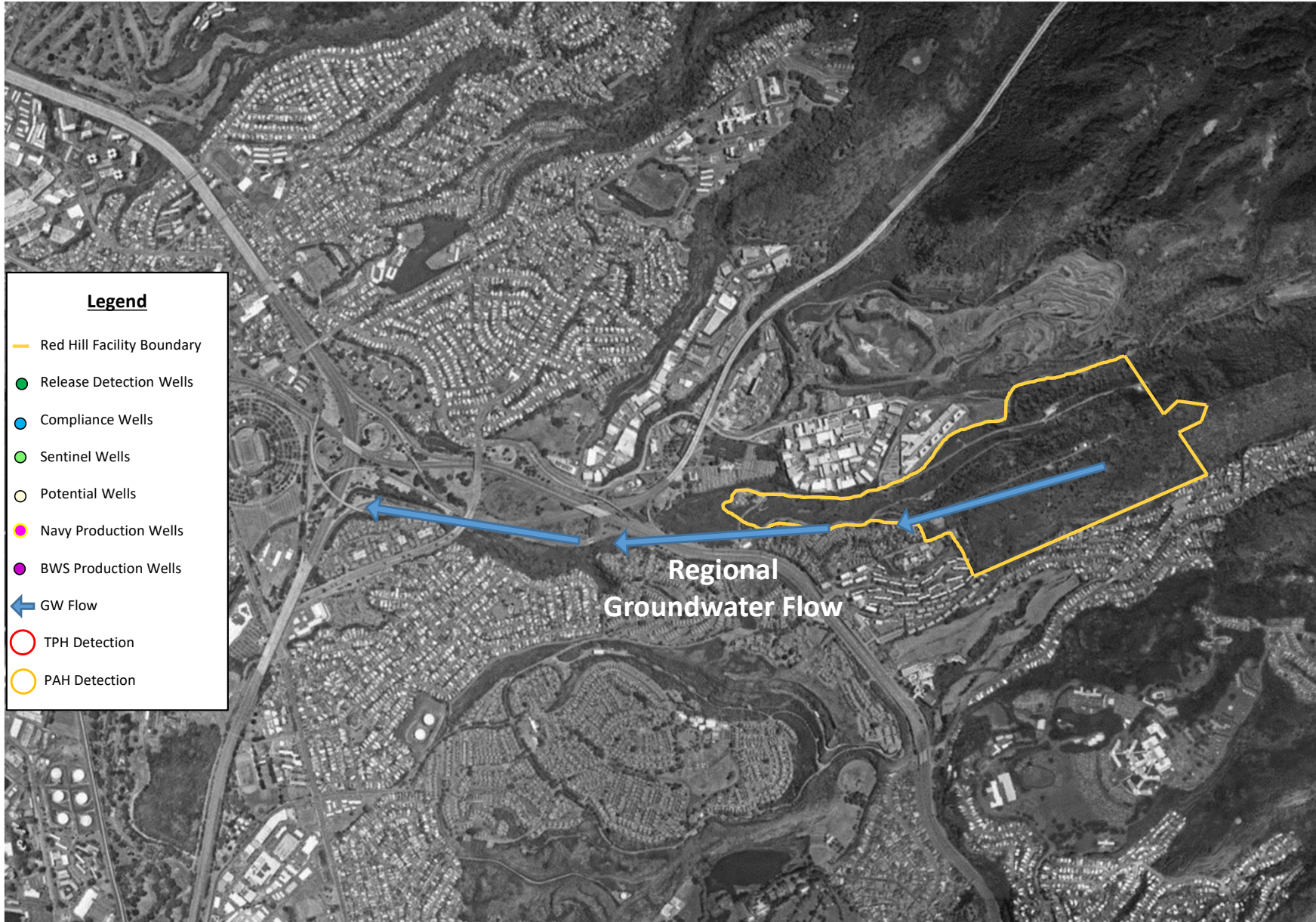
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Groundwater Flow

Groundwater Network Layers of Protection

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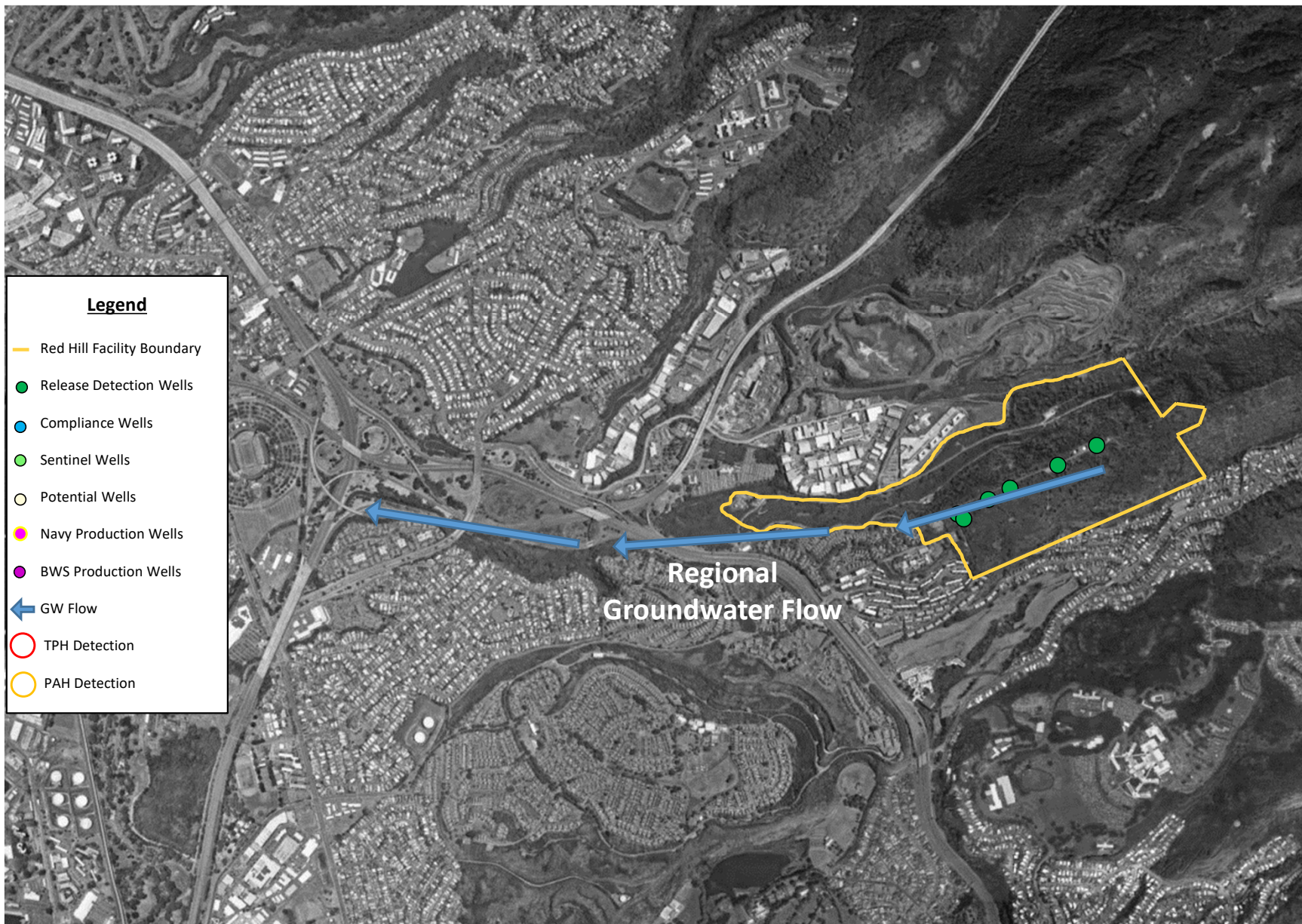




Release Detection Wells

Groundwater Network Layers of Protection

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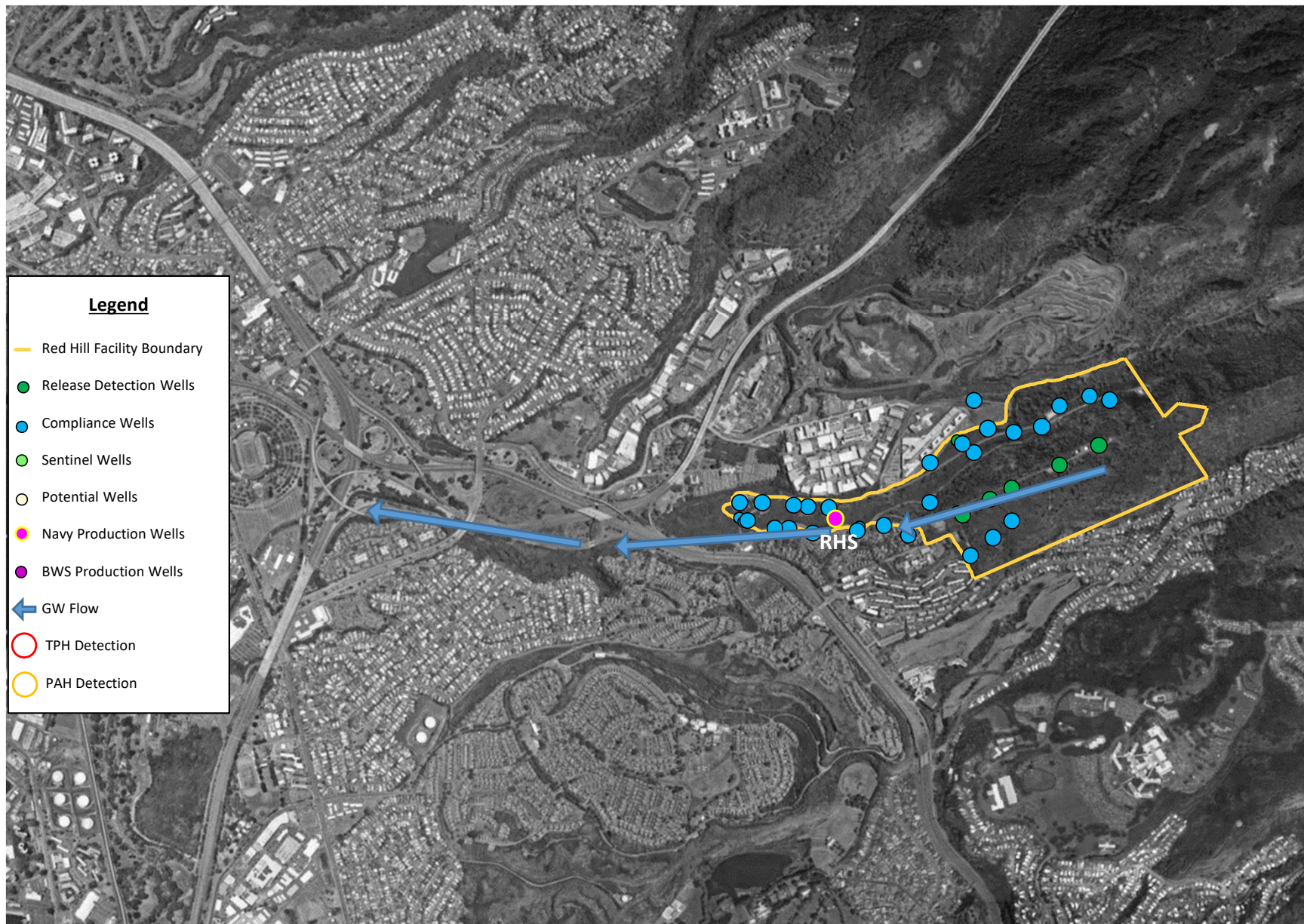




Compliance Wells

Groundwater Network Layers of Protection

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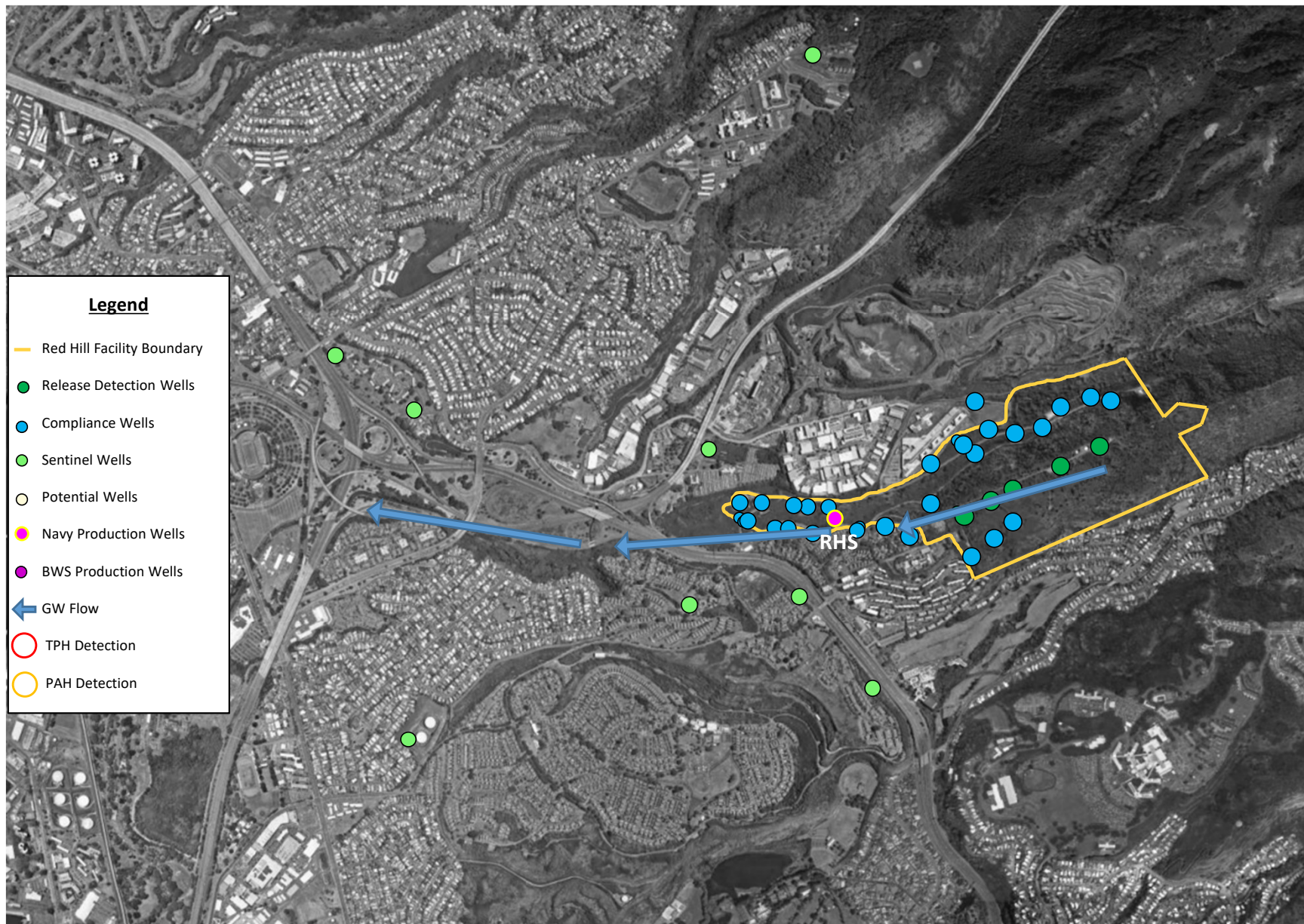




Sentinel Wells

Groundwater Network Layers of Protection

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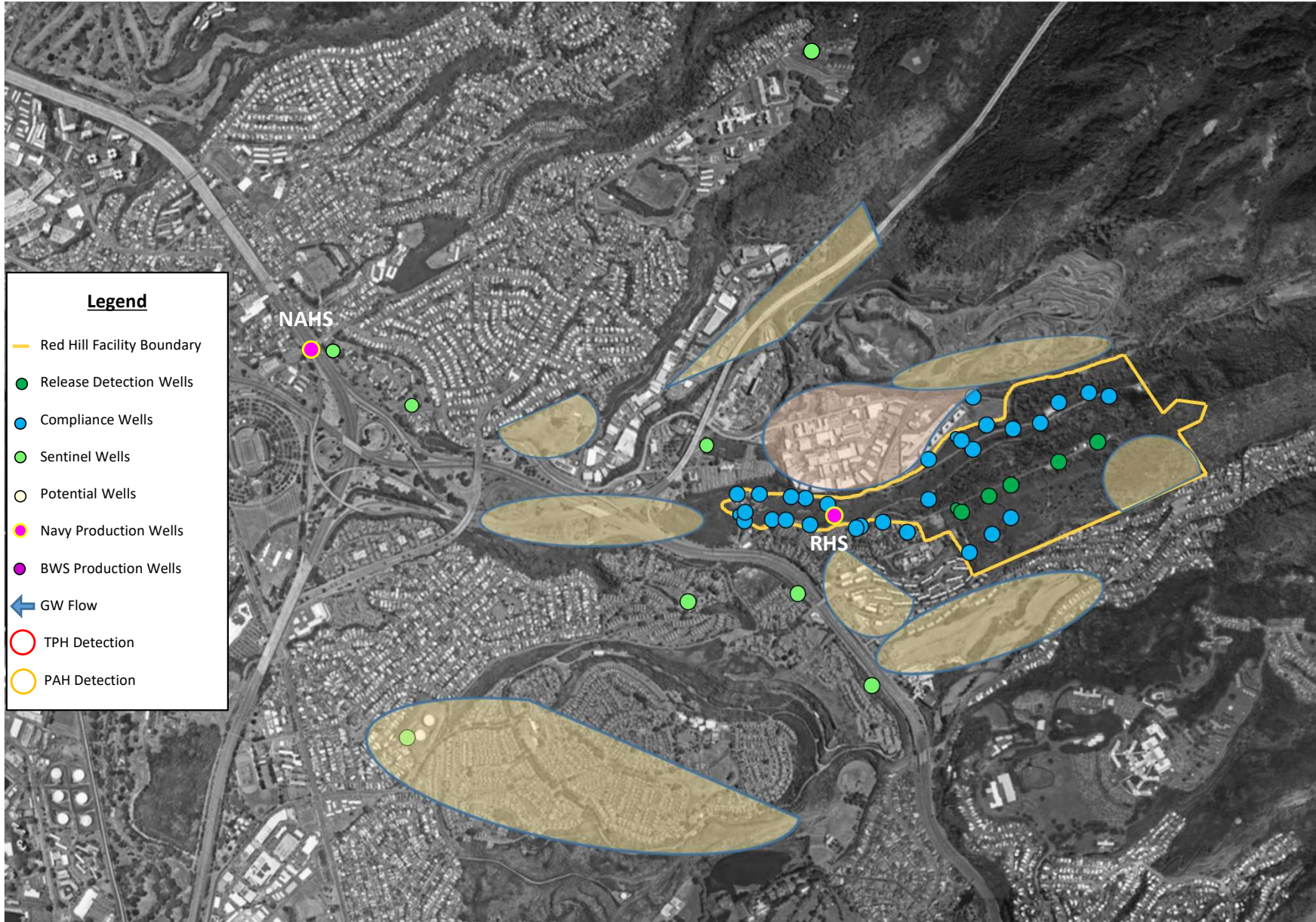




Potential New Wells

Groundwater Network Layers of Protection

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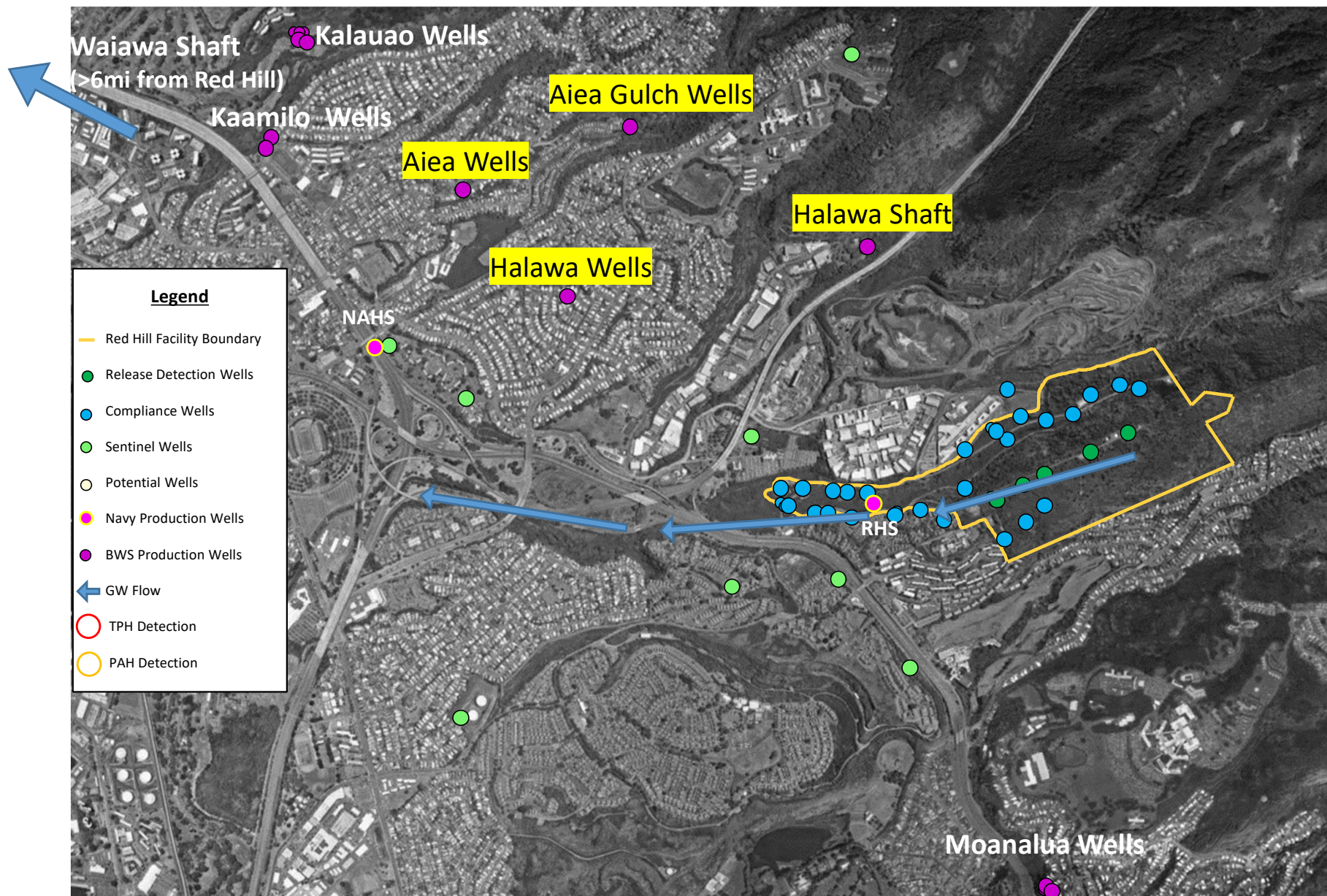




BWS Production Wells

Groundwater Network Layers of Protection

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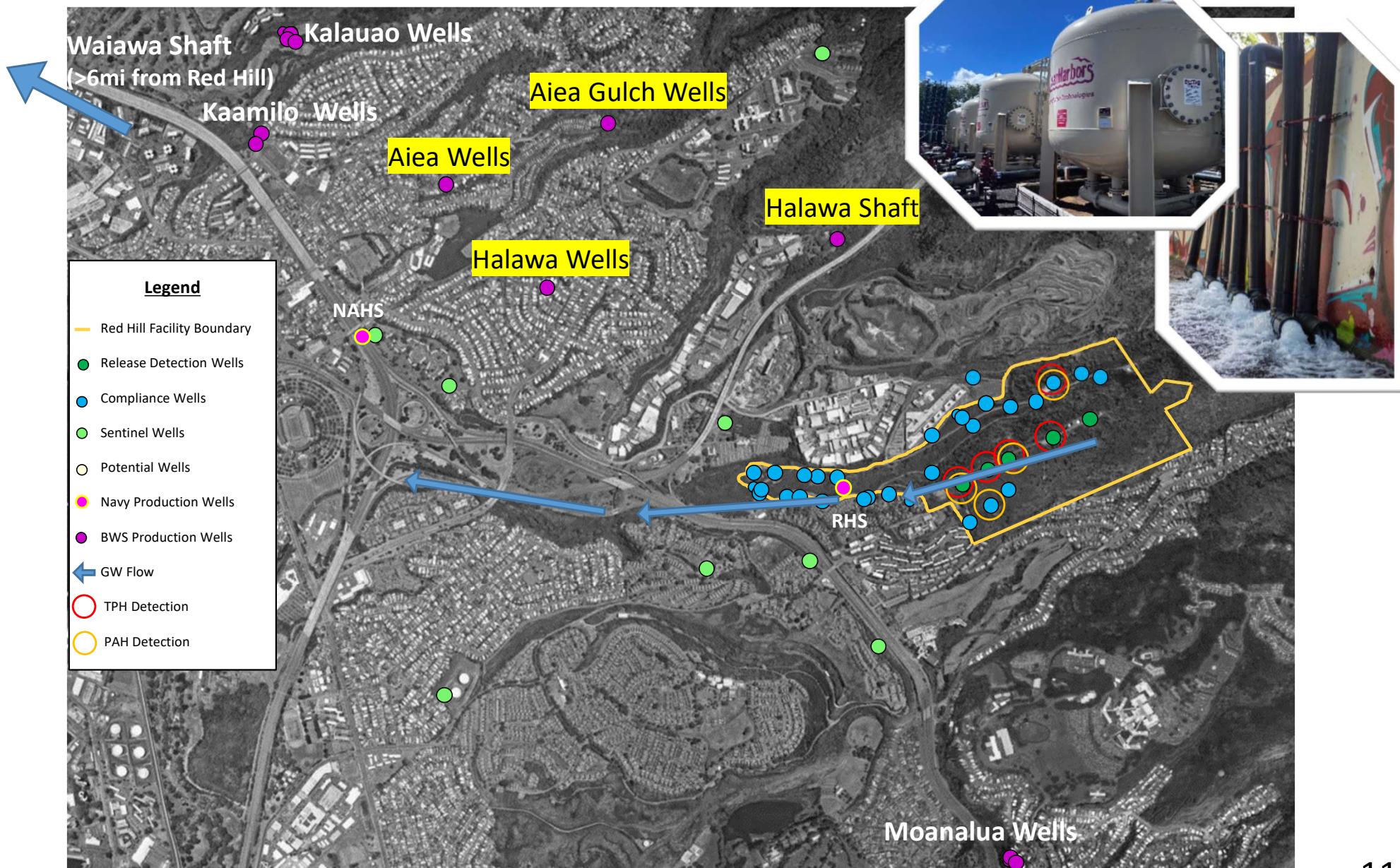




Navy Results

Groundwater Network Layers of Protection

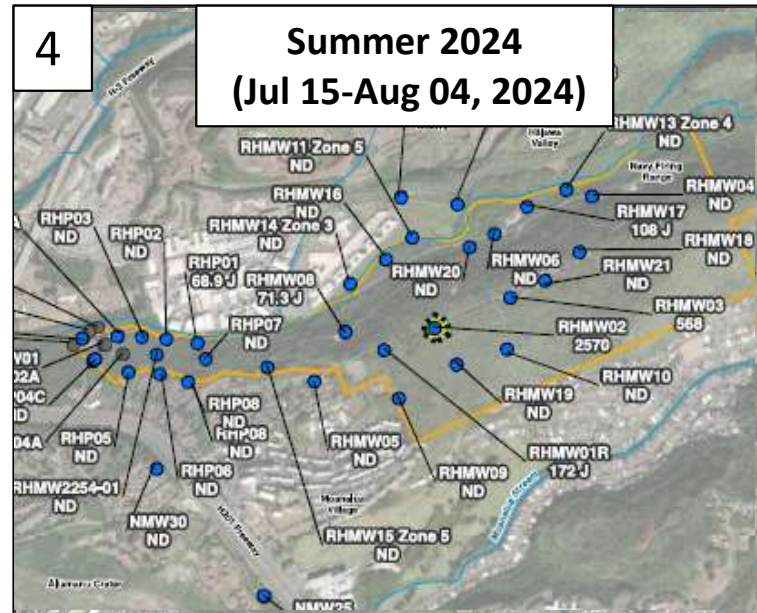
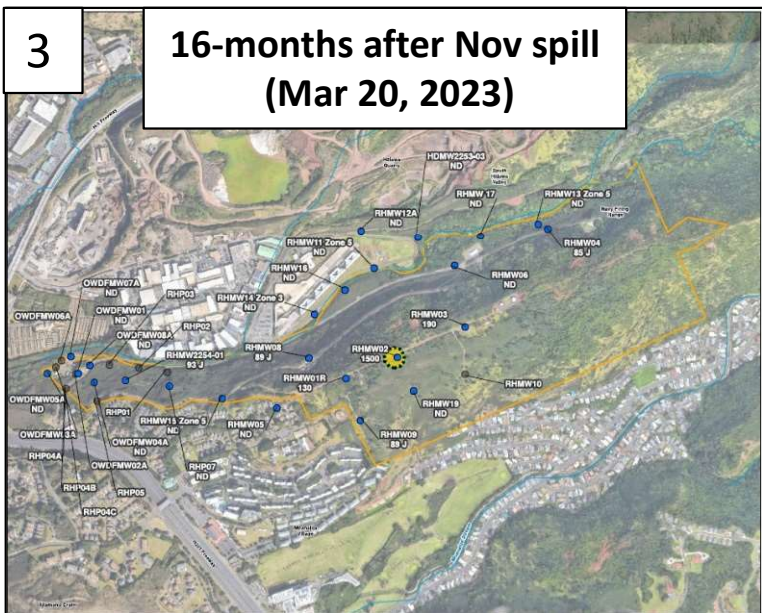
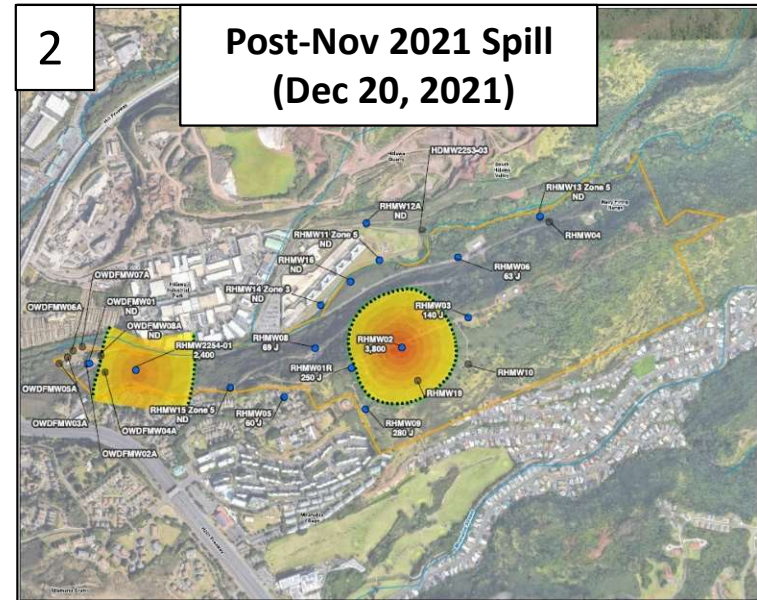
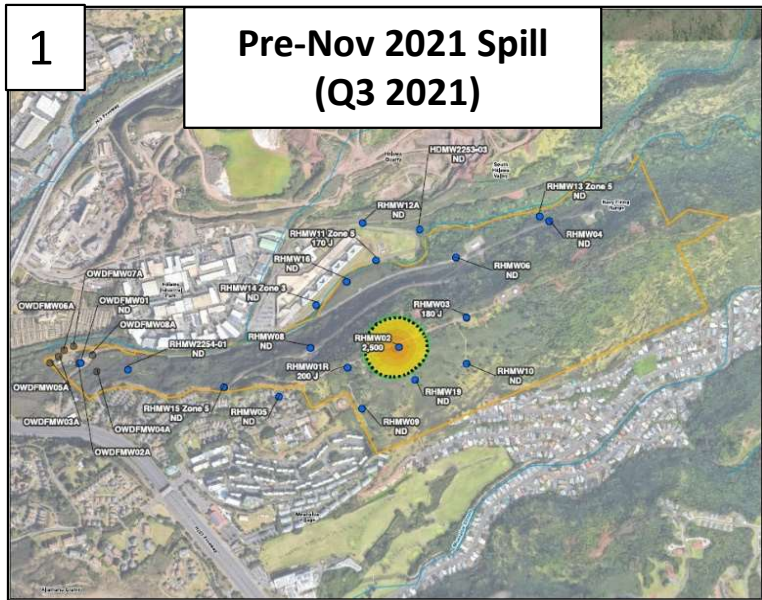
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Contaminant Mapping (TPH-d): 2021–2024

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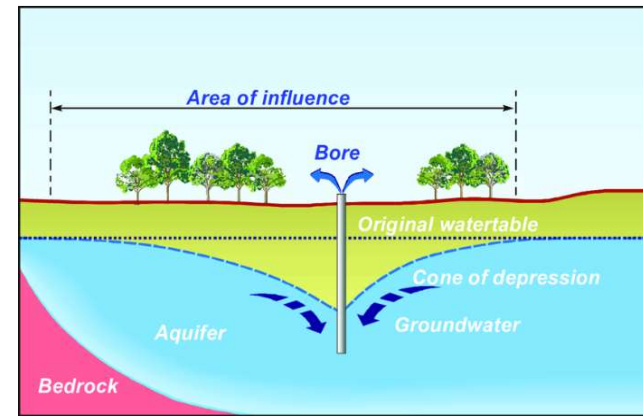
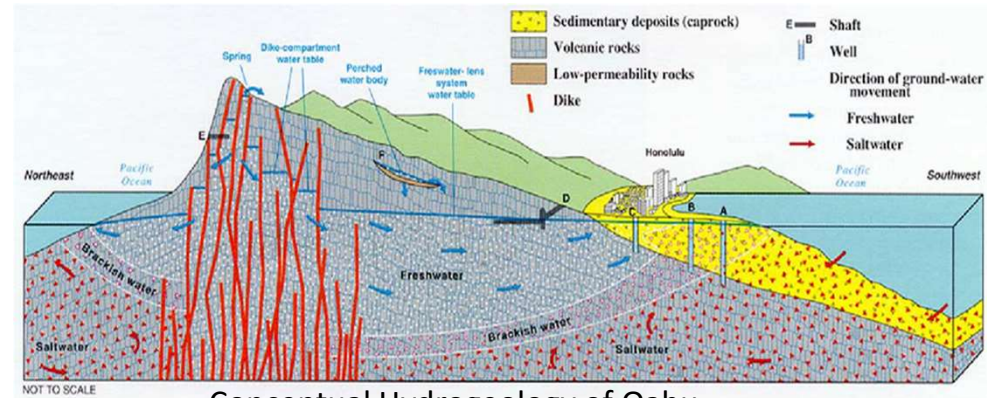


Groundwater Flow Model

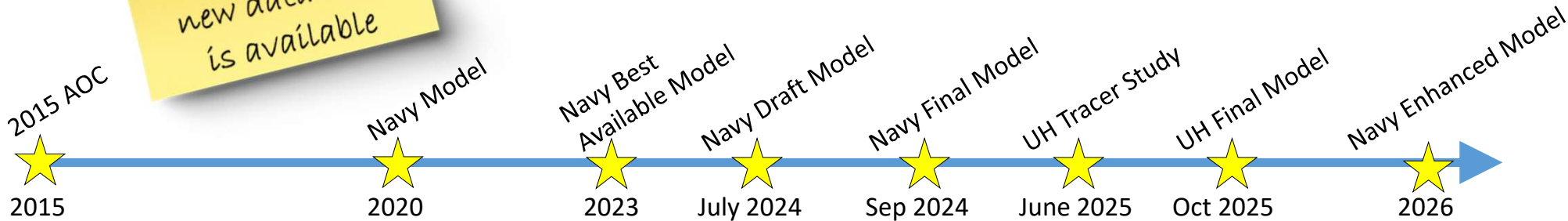
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Composite model:

- Geological Conceptual Site Model
 - Estimation of the geologic material distribution
- Groundwater Flow Model
 - Estimates flow direction and flow rates of groundwater
- Vadose Zone Model
 - Studies processes that occur in the geology between the land surface and groundwater table
- Contaminant Fate and Transport Model
 - Estimates migration pathways of contaminants
 - Estimates how natural processes affect concentrations



GWFM is a dynamic model that incorporates new data as it is available





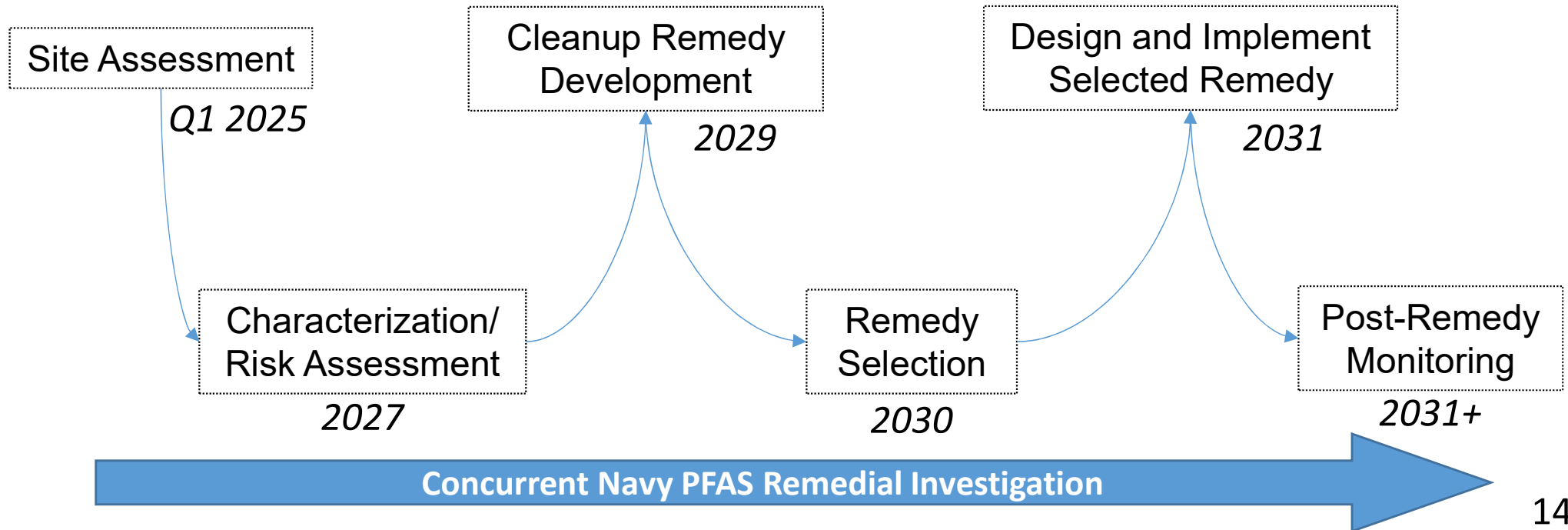
Environmental Remediation

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Remediation began in 2021 and will continue until complete

- Site Assessment Purpose: determine if historic releases (known and unknown) have impacted the facility
 - Will meet all regulatory requirements
 - Sampling and analysis to determine presence or absence of a release
- Deliberate, data-driven process

General Process Flow



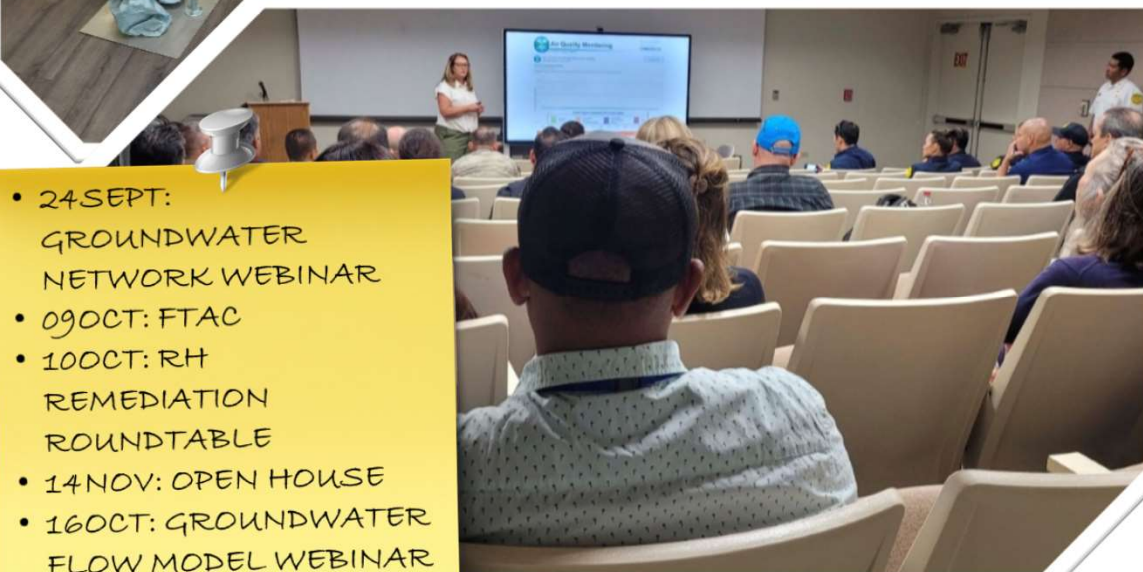


Upcoming Public Engagements

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LET'S TALK RED HILL
With Rear Adm. Marc Williams
Navy Closure Task Force - Red Hill



- 24 SEPT: GROUNDWATER NETWORK WEBINAR
- 09 OCT: FTAC
- 10 OCT: RH REMEDIATION ROUNDTABLE
- 14 NOV: OPEN HOUSE
- 16 OCT: GROUNDWATER FLOW MODEL WEBINAR





Navy's Commitment

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The Navy's priority is protection of Oahu's aquifer now and into the future. Protecting the aquifer protects all people.

The Navy is committed to ensuring JBPHH's water distribution system continues to meet state and federal standards and the water remains safe for consumption.