

CRI Meeting



12 DECEMBER 2024



Apple

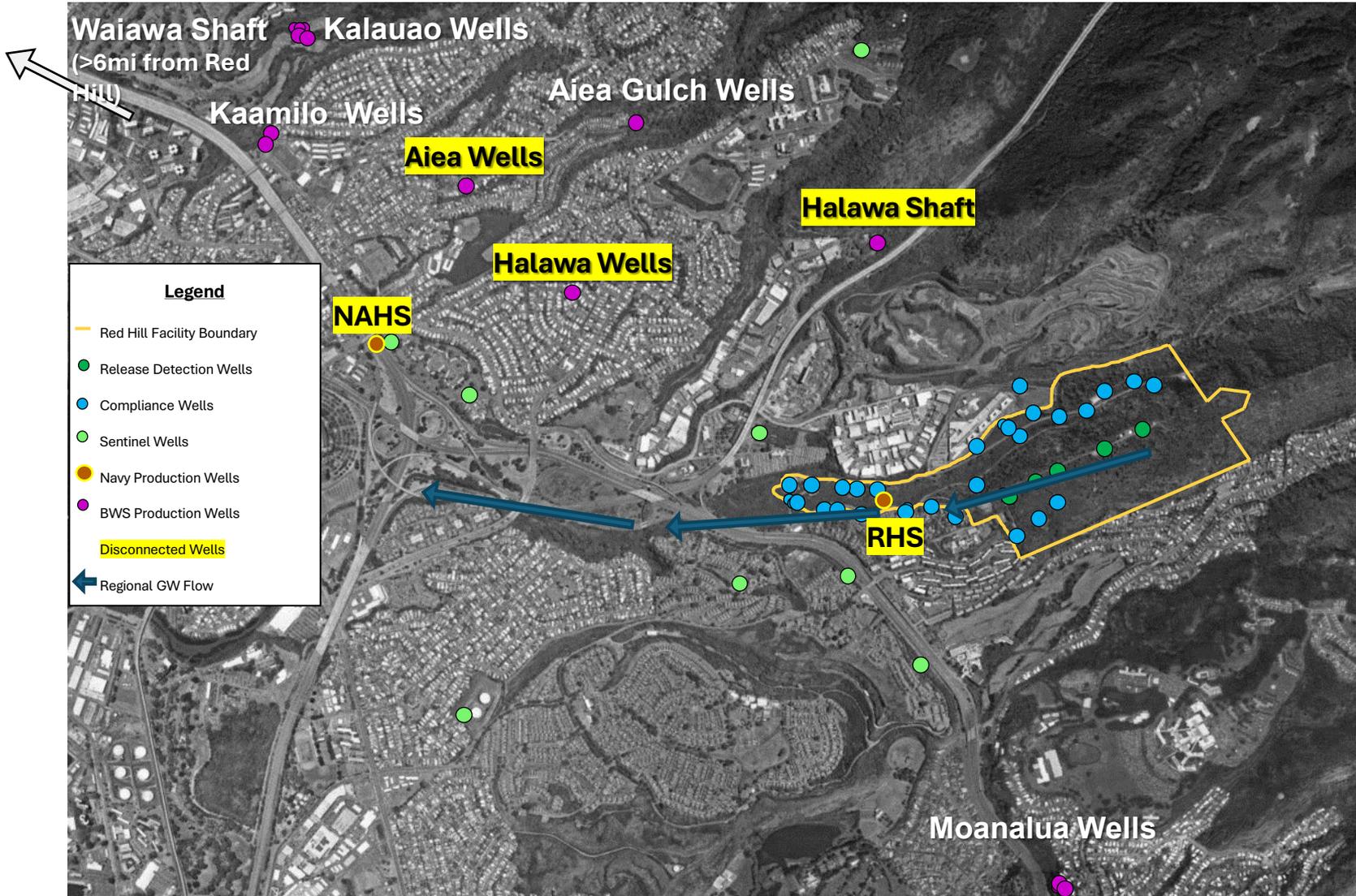


Android



Groundwater Network: Layers of Protection

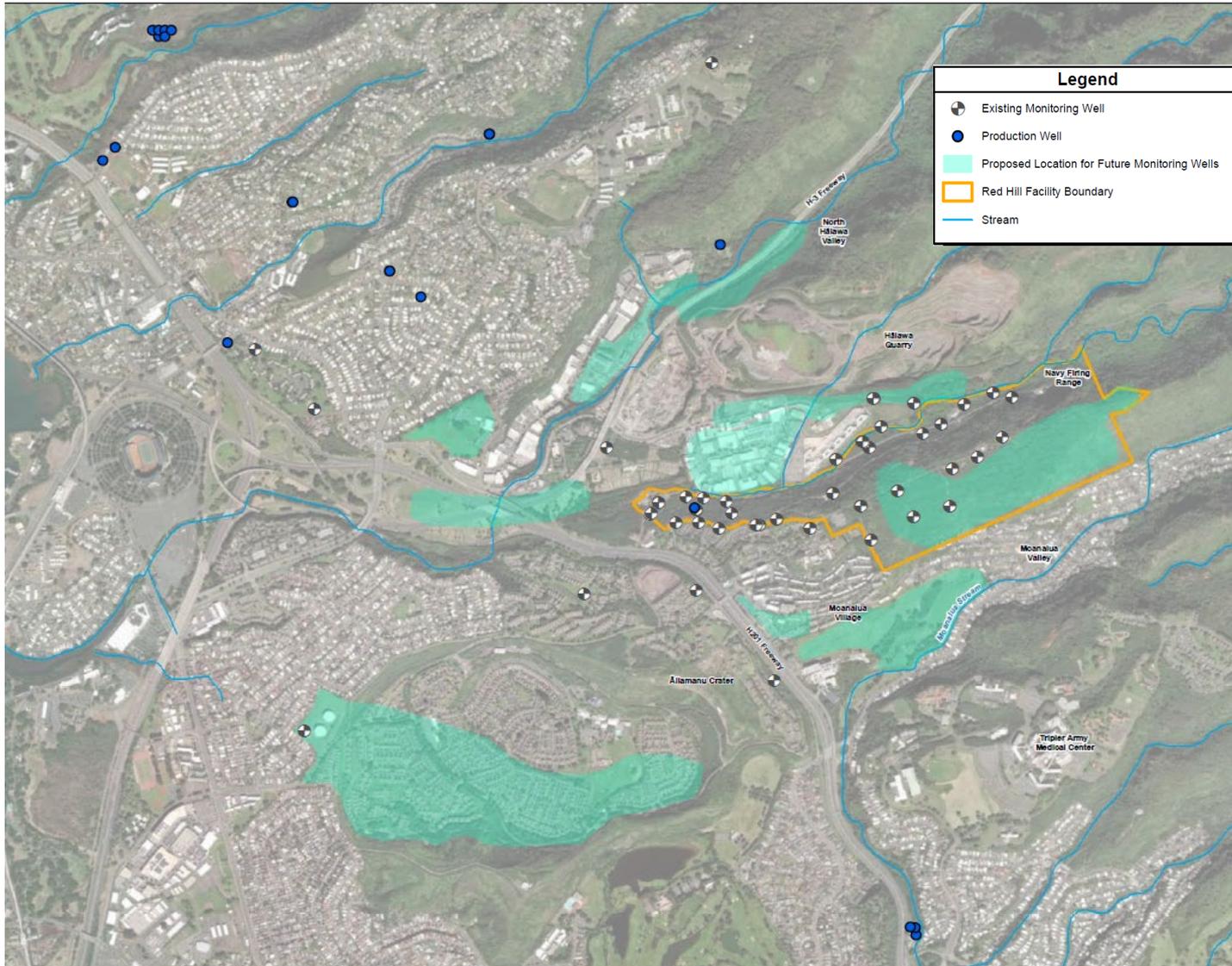
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Monitoring Well Network: Current and Future

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Navy Groundwater Flow Model

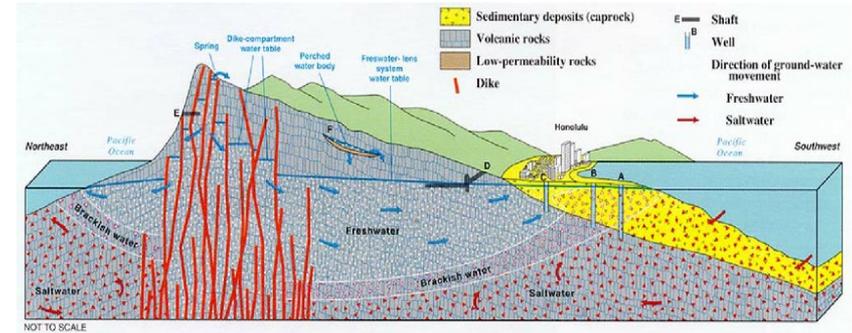
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Navy Groundwater Model:

- Advance understanding of subsurface conditions
- Informs environmental remediation
- Assess potential fuel release migration

Composite model:

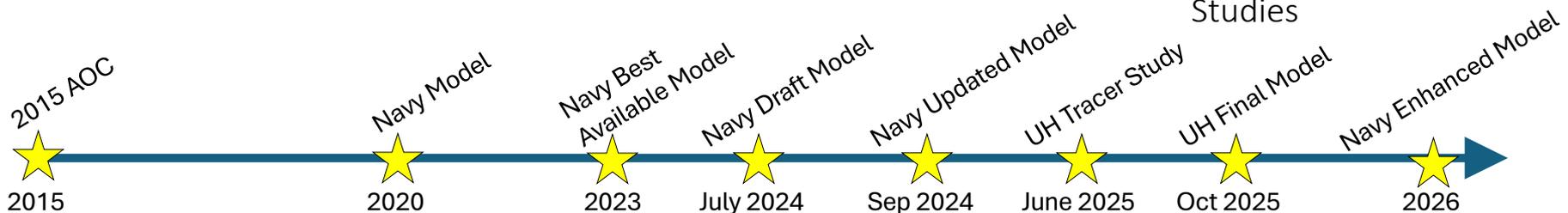
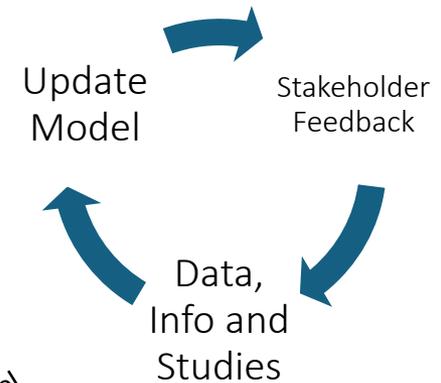
- Geological Conceptual Site Model
 - Estimation of the geologic material distribution
- Groundwater Flow Model
 - Estimates flow direction and flow rates of groundwater
- Vadose Zone Model
 - Studies processes that occur in the geology between the land surface and groundwater table
- Contaminant Fate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



Conceptual Hydrogeology of Oahu

Iterative Approach:

Informed by data, studies and feedback

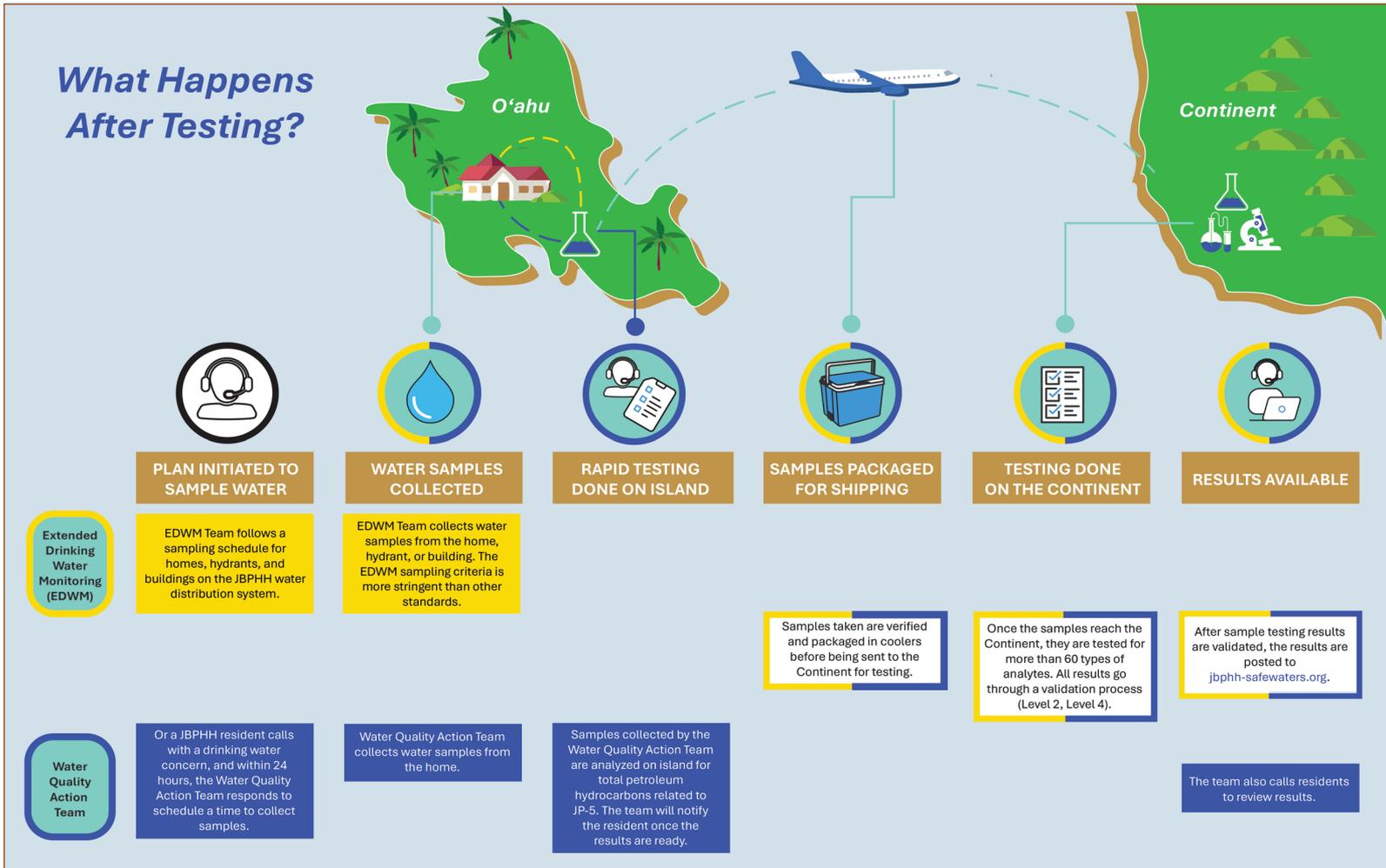




Drinking Water Sample Process

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What Happens After Testing?





Safe and Compliant Drinking Water

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Call Center QR Code



Water Quality Action Team

- 24/7 response to consumer concerns through the call center (808) 210-6968.
- Full water quality evaluation for consumer concerns, includes water quality professional.
- Includes investigations for hydrocarbons, bacteria, residual chlorine, water heater, and plumbing concerns.
- A liaison provides information and answers questions.



Compliance Monitoring

- Recurring monitoring in accordance with the Safe Drinking Water Act for drinking water systems.
- Full drinking water analytes sampled for plus required operational testing (bacteria/chlorine/etc.).
- Reported to all consumers by the JBPHH consumer confidence report which is completed each summer.



Extended Drinking Water Monitoring Program

- Successor to Long-Term Monitoring Program. Will be conducted through March 2025.
- Focus of the monitoring will be on looking for petroleum hydrocarbons and fuel-related constituents.
- A goal to sample 100% of homes.



Drinking Water System Operations and Maintenance

- Source water and wellhead protection plan.
- Unidirectional flushing.
- Backflow and cross connection program.



Medical Monitoring (Managed by Defense Health Agency)

- Established Red Hill Clinic and authorizing eligible community members to use the clinic.
- Established Defense Occupational and Environmental Health Readiness Red Hill Incident Report.
- Ongoing CDC/ATSDR Public Health Assessment and establishment of Red Hill Registry.
- Epidemiological studies and medical record reviews.



Layers of Environmental Protection

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Navy's continued protection of the aquifer

SANDBAG PLACEMENT/BARRIERS

- Absorbs and Channels Potential Overflow
- Redirects Potential Spills Away From Drains to Designated Collection Points
- Robust Containment System to Halt Accidental Spillage

WATCH TEAM

- 24 Hour Surveillance via Roving Watchstanders
- Tailored Training for Hazard Detection, Rapid Response and Fed Fire Dept Coordination



SLUDGE REMOVAL

- Tank 311 has permanent secondary containment, and all tanker trucks will be parked inside pop-up containment during liquid transfer.
- Tanker truck is a registered waste transporter

DEDICATED SPILL RESPONSE

- Red Hill response staff
- Spill kits located throughout Facility

AQUIFER PROTECTION

- French Drain Sealing
- Groundwater Monitoring Well Sealing
- Soil Vapor Points and Vault Sealing
- Pump Station Additive Barriers

FUEL OIL RECLAMATION LINE

- Daily rover inspection
- Integrity Testing
- Spill kits will be on site for emergency response.

SPILL RESPONSE DRILLS

- Navy-Led Drills Aligned with Facility Spill Response Plan
- Realistic Spill Scenarios for Optimal Readiness
- Regulator (EPA & DOH) Supervision for Quality Assurance





The Navy's Commitment

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Establishment of Navy Closure Task Force-Red Hill (NCTF-RH) to safely decommission the facility and continue long-term environmental remediation efforts.

MAR 2024



Four tanks have been prepared for cleaning with 146 gallons of sludge and 510 gallons of residual fuel removed.

NOV 2024



Formation of Joint Task Force-Red Hill (JTF-RH) to safely defuel the facility. JTF-RH drained over 104 million gallons of fuel from over the aquifer further protecting Oahu's water supply.

OCT 2022



NCTF-RH removed remaining Aqueous Film-Forming Foam (AFFF) in the facility and from over the aquifer, again further protecting Oahu's water supply.

APR 2024



Continued expansion of groundwater monitoring well network to 46 sampling points with more planned.

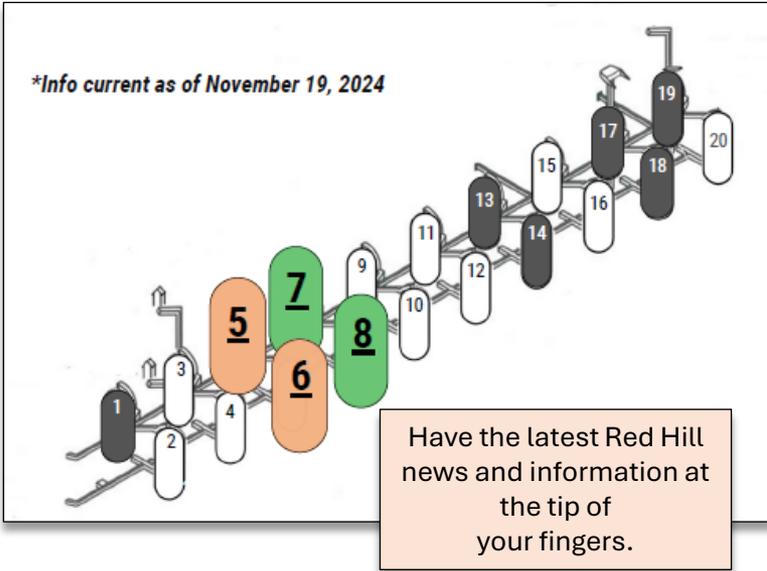
DEC 2024





NCTF-RH Mobile App

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SLUDGE AND RESIDUAL FUEL REMOVAL



**As of November 19, 2024*



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.

TANK 7

Step 1 Preparation (approx. 2-3 months) ✓

Step 2 Infrastructure/Sludge (approx. 2-3 months) ✓

Step 3 Pressure washing (approx. 1-2 months)

Step 4 Demobilization (approx. 1-2 months)



All repairs to main towers in Tanks 7 and 8 are complete, and the boom in Tank 7 is being installed in preparation for tank cleaning.

Boom installation continues.

The Navy is cleaning the tanks in staggered pairs and expects to begin pressure washing Tanks 7 and 8 in November.

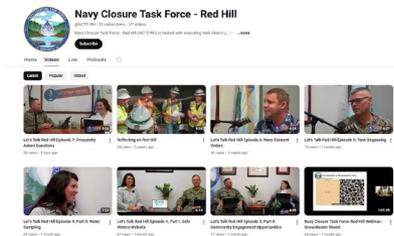
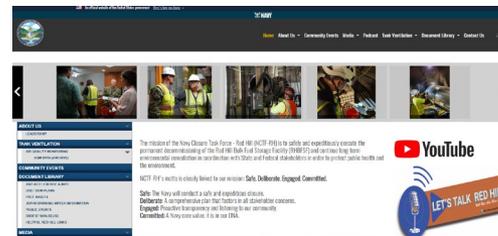
**Info current as of November 19, 2024*

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- Air Quality Monitoring
- Sludge & Residual Fuel Removal Totals
- Tank Cleaning Steps
- Tank Cleaning Progress
- Let's Talk Red Hill podcast
- Educational Videos & Photos
- Latest News & Updates
- Community Events
- NCTF-RH Contact Information

Other ways to stay informed



[NCTF-RH Homepage](#)

[NCTF-RH Videos](#)



Navy's Lead Sampling Program

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Navy Other Drinking Water Providers



Drinking Water Compliance Standards

Routine Compliance Monitoring **EPA Mandated**

- Annual water quality sampling of JBPHH drinking water system Safe Drinking Water Act (SDWA).
- Consumer Confidence Reports continue to demonstrate the drinking water continues to meet all federal and state drinking water standards.



Lead and Copper Rule (LCR) **EPA Mandated**

- Establishes Maximum Contaminant Level and Action Level that triggers actions the drinking water system must take to reduce lead or copper levels.
- Drinking water systems must notify the public if the action level is exceeded, and must provide information about the risks of lead and copper exposure and steps to reduce exposure.
- A 2021 LCR revision mandates drinking water systems to test for lead in 20% of elementary schools and childcare facilities every year and reach to 100% in a five-year sampling period.



Lead in Priority Area Rule (LIPA) **DOD OPNAV requirement**

- Implemented in the early 1990s, the Navy tests drinking water every five years at all its Child Development Centers, youth centers and schools.
- The Navy follows EPA's voluntary program, "3 T's (Training, Testing, Telling)" to reduce child exposure to lead in drinking water.



Legacy Compliance Sampling (Long-Term Monitoring)

- Two-year sampling period from March 2022- March 2024. LTM sampling conducted in accordance with EPA approved Drinking Water Long-Term Monitoring Plan.
- Lead detections in the distribution system and/or residences during LTM are reported in the annual CCR and posted for public access at the www.jbphhsafewaters.org.



Extended Drinking Water Monitoring Plan (EDWM)

- Continued extensive sampling and analysis of JBPHH drinking water system.
- Goal of EDWM is to test 100% of homes, childcare facilities, and schools on the system.



Water Quality Action Team

- Responds to consumer concerns and complaints; provides overall drinking water quality assessments and information to residents and drinking water consumers.
- Team includes a water quality professional to assess potential drinking water quality concerns.