

Red Hill Drinking Water Update



09 OCTOBER 2024

CLASSIFICATION

UNCLASSIFIED



Apple



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JOINT BASE PEARL HARBOR-HICKAM DRINKING WATER MONITORING PROGRAM ENSURING SAFE AND COMPLIANT DRINKING WATER



Emergency Response

Nov. 2021 - Dec. 2021



A Red Hill watchstander inadvertently strikes a drain valve, spilling fuel which contaminated the JBPHH drinking water well and distribution system. The Navy responded and worked with other federal and state agencies to address health advisory concerns.



Interagency Drinking Water System Team

Dec. 2021 - Mar. 2022



A team of experts from the Hawaii Department of Health (DOH), Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), the Navy and Army was formed to develop requirements to restore the JBPHH drinking water system.



JBPHH Drinking Water System Flushing

Dec. 2021 - Mar. 2022



Between Dec. 2021 to Mar. 2022, the Navy conducted a complete flush of the JBPHH drinking water distribution system to include all facilities and residences on the system in compliance with the IDWST approved Drinking Water Distribution System Recovery Plan.



Drinking Water Long Term Monitoring

Mar. 2022 - Mar. 2024



From March 2022 to March 2024, the Navy implemented a two-year period of LTM of the JBPHH drinking water system. The Navy collected over 9,000 samples testing for over 50 analytes to include metals, hydrocarbons, Synthetic Organic Compounds, and Volatile Organic Compounds to ensure the water is safe.



Extended Drinking Water Monitoring

Mar. 2024 - Present



In March 2024, the Navy **voluntarily** implemented EDWM ensuring the JBPHH drinking water system remains safe for consumption and meets all state and federal drinking water standards. The Navy has collected over 3,500 samples testing for over 50 analytes.

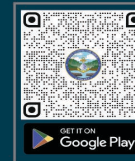
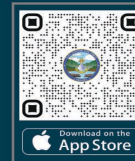


SAFE DRINKING WATER ACT COMPLIANCE MONITORING

NCTF SAFE DELIBERATE
RH ENGAGED COMMITTED

FIND US ONLINE

<https://www.navyclosurerecoverytaskforce.navy.mil/>



SCAN THE QR CODE for the NCTF-RH app available through the Apple Store or Google Play

CONTACT US

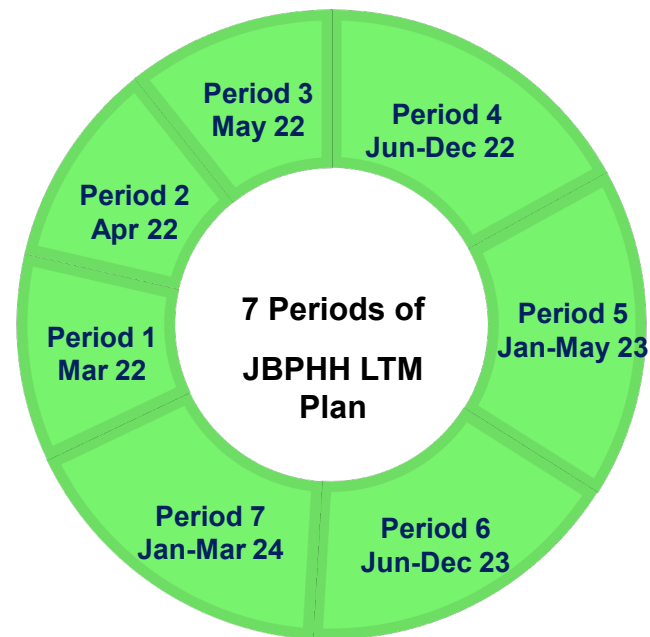
EMAIL
NCTF_PAO@US.NAVY.MIL



Drinking Water Long-Term Monitoring

SAFE. DELIBERATE. ENGAGED. COMMITTED.

- Two-year program, following system flushing and HI Dept. of Health (DOH) certification
- Established by Interagency Drinking Water Systems Team; oversight by EPA & DOH
- Analysis of typical DW analytes, fuel-related products and petroleum hydrocarbons via established EPA methods – in addition to normal Safe Drinking Water Act (SDWA) compliance sampling and monitoring
- 19 drinking water zones
- 7,800 planned drinking water samples
 - 65% of residences distributed across system
 - Repeated sampling at priority areas:
 - Clinics, Schools, Child Development Centers/Homes
 - Distribution system (hydrants)
 - Waiawa Shaft source
- Samples analyzed; data validated by third-party contractor



Waiawa Shaft – located more than 6 miles from Red Hill Bulk Fuel Storage Facility; serves as sole drinking water source for JBPHH since Dec 2021



Drinking Water Long-Term Monitoring

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- Over 9,200 Navy samples collected
- No detections of fuel or JP-5 (Red Hill contaminant of concern)
- Validated results online: Safewaters
- Drinking Water Information Booths
- Split-samples collected (EPA oversight)
- Navy root cause analysis of petroleum hydrocarbons
- Independent 2024 DOH investigation

<https://jbphh-safewaters.org>





Extended Drinking Water Monitoring

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- One-year enhanced monitoring plan
- Objectives:
 - Continues enhanced DW monitoring to ensure no impact of 2021 Red Hill release
 - Sample remaining JBPHH residences
 - Fuel-focused, investigative approach
- Aspects:
 - Additional sample zone (+ Manana) = 20 zones
 - Additional analysis of fuel-related analytes
 - Increased sampling frequency of priority areas (DW source and Schools, Child Development Centers)
 - Refined extraction method prior to analysis by EPA Method 8015 (petroleum hydrocarbons)
Advanced analysis (forensic methods) to delineate chemical makeup of petroleum hydrocarbon detections
- Results
 - 3,500+ samples collected to date
 - Posted to Safewaters website
 - Documented in quarterly reports



CAO: 03OCT24



LTM vs. EDWM

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LTM

Long Term Monitoring

**EPA Method
8260 / 8015**

EDWM

Extended Drinking Water Monitoring

Total Petroleum Hydrocarbons

Total Petroleum Hydrocarbons

BTEX (Benzene, Toluene, Ethylbenzene, Xylenes)
 1,1,1-Trichloroethane 1,1,2-Trichloroethane
 1,1-Dichloroethylene 1,2,4-Trichlorobenzene
 1,2-Dichlorobenzene 1,2-Dichloroethane
 1,2-Dichloropropane 1,4-Dichlorobenzene
 Carbon tetrachloride Chlorobenzene
 cis-1,2-Dichloroethylene Dichloromethane
 Styrene Tetrachloroethylene
 trans-1,2-Dichloroethylene Trichloroethylene
 Vinyl Chloride Total Trihalomethanes

BTEX (Benzene, Toluene, Ethylbenzene, Xylenes)
 n-Butylbenzene Sec-Butylbenzene
 Tert-Butylbenzene Isopropylbenzene
 N-Propylbenzene 1,2,4-Trimethylbenzene
 1,3,5-Trimethylbenzene Total Trihalomethanes

**EPA Method
524.2**

Total Haloacetic acids

Total Haloacetic acids

Metals (Antimony, Arsenic, Barium, Beryllium, Cadmium,
 Chromium, Copper, Lead, Selenium, Thallium)

Metals (Copper, Lead)

**EPA Method
552.2/552.3**

Mercury

Mercury

**EPA Method
200.8**

Benzo[a]pyrene 1-methylnaphthalene
 2-methylnaphthalene Naphthalene

Benzo[a]pyrene 1-methylnaphthalene
 2-methylnaphthalene Naphthalene
 Acenaphthylene Anthracene
 Benzo[b]fluoranthene Benzo[k]fluoranthene
 Benzo[g,h,i]perylene Chrysene
 Dibenz[a,h]anthracene Fluorene
 Indeno[1,2,3-cd]pyrene Phenanthrene
 Pyrene

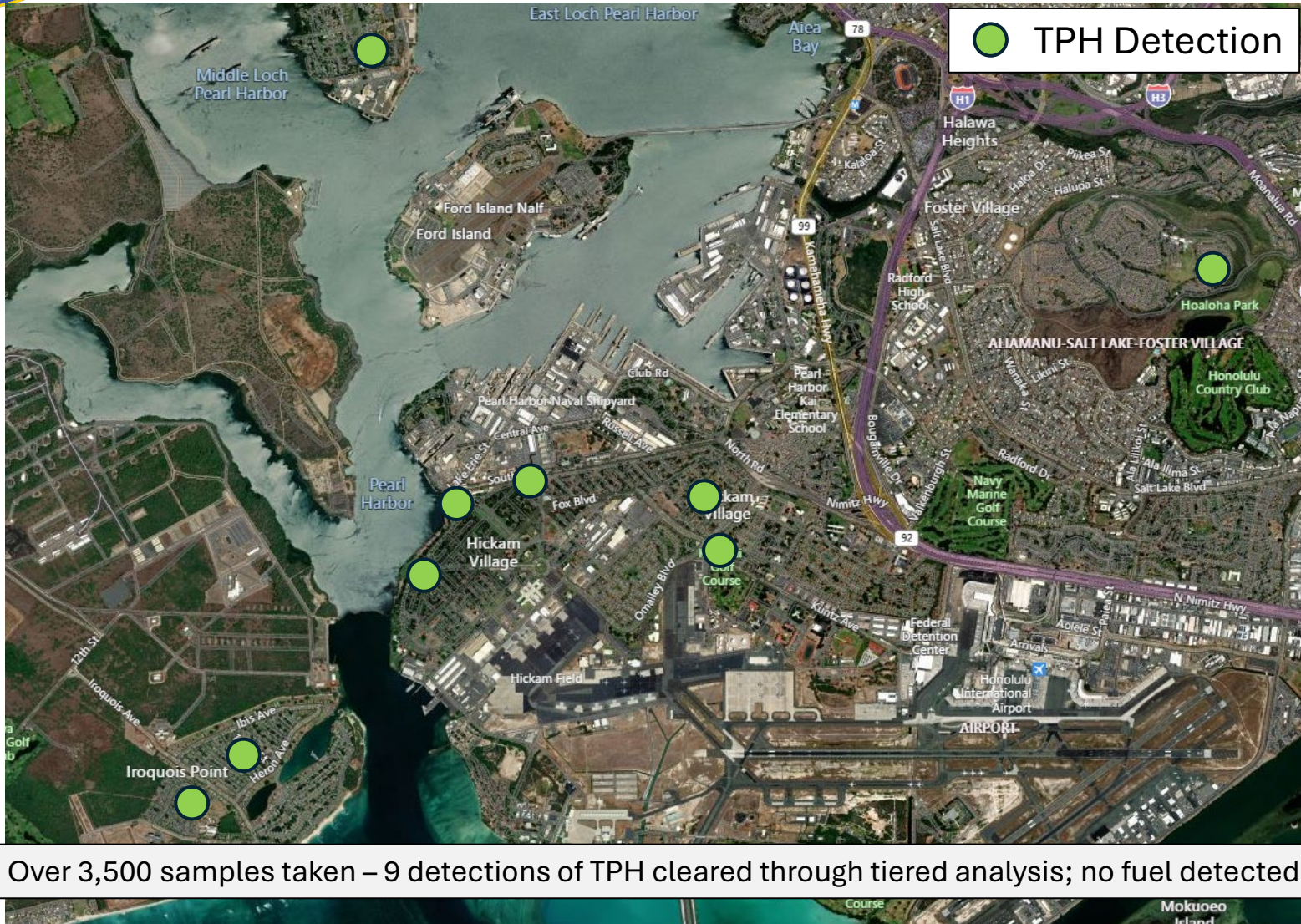
**EPA Method
245.1**

**EPA Method
525.2**



Extended Drinking Water Monitoring

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Additional Information

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Joint Base Pearl Harbor-Hickam Safe Waters

jbphh-safewaters.org

- Ongoing information on Navy efforts regarding water on the island of Oahu
- Two primary areas: Drinking Water System & Red Hill Environmental Remediation



Navy Closure Task Force – Red Hill

navyclosuretaskforce.navy.mil

- Document library for defueling & closure of Red Hill Bulk Fuel Storage Facility
- Photos & media gallery related to water response efforts & drinking water testing



Navy Region Hawaii Facebook Page

facebook.com/NavyRegionHawaii

- Frequent updates & information about Joint Base Pearl Harbor-Hickam drinking water



Joint Base Pearl Harbor-Hickam Facebook Page

facebook.com/JPBPHH

- Features daily joint base water updates
- Imagery & resources related to water response efforts
- Infographics & information

