HAWAII STATE TEACHERS ASSOCIATION **NB #: 57**
BOARD OF DIRECTORS
NEW BUSINESS ITEM **DATE: 12/7/21**

TITLE: CLOSE RED HILL BULK FUEL STORAGE FACILITY

The HSTA Board of Directors calls for the immediate emptying of fuel and full closure of the Red Hill Bulk Fuel Storage Facility. HSTA will support actions that call for the closure of the facility including joining the coalition being spearheaded by the Sierra Club of Hawaii and allow the use of its logo in this endeavor.

Submitted by: O. Tui

Originator: O. Tui

Rationale: The 2008 HSTA Convention passed CLEAN DRINKING WATER IN PUBLIC SCHOOLS: The Hawaii State Teachers Association believes that every school's drinking water should meet Environmental Protection Agency requirements for clean drinking water. HSTA further believes that school water should be tested every six months and irregularities should be reported immediately. Multiple Hawaii public schools have been affected by petroleum products being found in their water supply and a large portion of the Oahu drinking water supply is at risk of being contaminated. Governor Ige and Hawaii's entire congressional delegation have called for the immediate closure and the Hawaii Department of Health has ordered the tanks to be emptied. See related Sierra Club of Hawaii presentation attached.

TO BE COMPLETED BY ORIGINATOR:	
X (Done)	
	(1) Rationale (above) – explain why adoption of this NBI is necessary.
	(2) Governance Manual -- confer with the Executive Director or designee: (a) New name and policy number: _____ (b) Amendment/revision: existing policy name and number: _____ (c) Page number and Roman numeral citation: _____

Red Hill Updates

Ko‘olau Waialua Alliance
December 6, 2021

Outline

- Cultural/Historical Background
- Red Hill Recap
- Contested Case Status
- Ongoing Concerns
- What Can You Do?

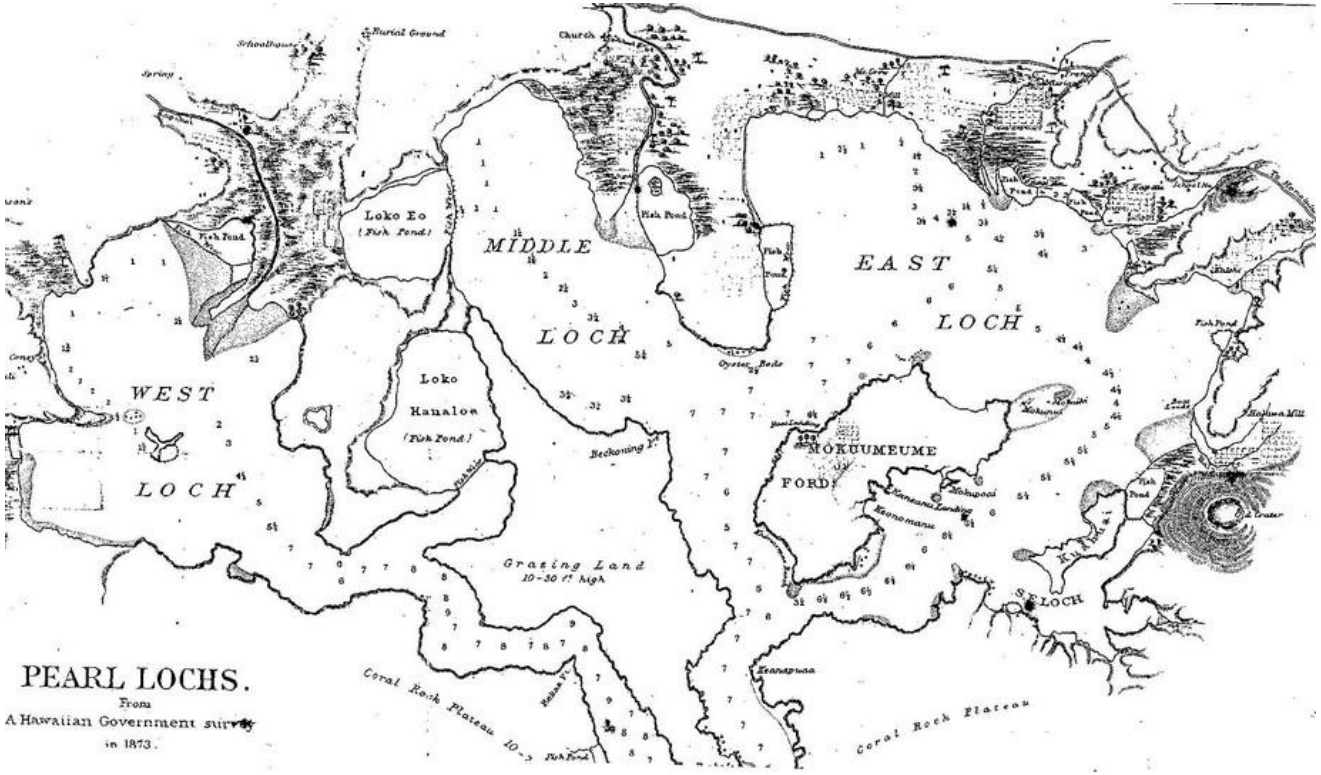
Waiola o Moanalua: Culture and History

- Kahu “Roddy” Kamawaelualani Kawehi Akau: “The creation myth of Moanalua describes how the goddess Kahikilaulani came across the ocean in a canoe, bearing gifts for her new husband Kamawaelualani, **in search of fresh water, the waiola that her homeland Kahiki-ku did not have in abundance**.”
- “My great great grand-aunt, Namakahelu [Makaena], the last chantress of Moanalua, chanted an ancient oli, the core of my family genealogy, and in it she describes how **waiola begins at the back of the valley and flows toward the sea, bringing all its life-giving nature throughout**. . . .”

Waiola o Moanalua: Culture and History

- Kepoʻo Keliʻipaʻakaua: “The waters of what is now known as the Moanalua-Waimalu aquifer have **long sustained the life of the plants, animals and people of the region.** Straddling the traditional boundary between the moku of Kona and ʻEwa, these waters have fed **area streams and springs that supported ecosystems that our ancestors cared for and were fed by.** The aquifer sits ma uka of Ke Awalau o Puʻuloa (Pearl Harbor), an area once renowned for its **bountiful seafood**, like oysters (pipi) and awa (milkfish), as well as the **sweet kāī kalo and ʻawa** -- all made possible by **abundant fresh water**. These sacred waters were brought forth by the akua Kāne and Kanaloa in nearby Waimalu and Waiawa, their first stop in Hawaiʻi.”

Waiola o Moanalua: Culture and History



- Rich, “royal” lands
- Loʻi kalo: taro leaves “so large that the keepers groped in the dark [beneath them] for taro for the chiefs”; fed by spring named ʻĪemi
- Puʻuloa: 30 loko iʻa (fishponds), prized fishery; Moanalua: five loko iʻa; Keʻehi: 13 loko iʻa, 7 fisheries

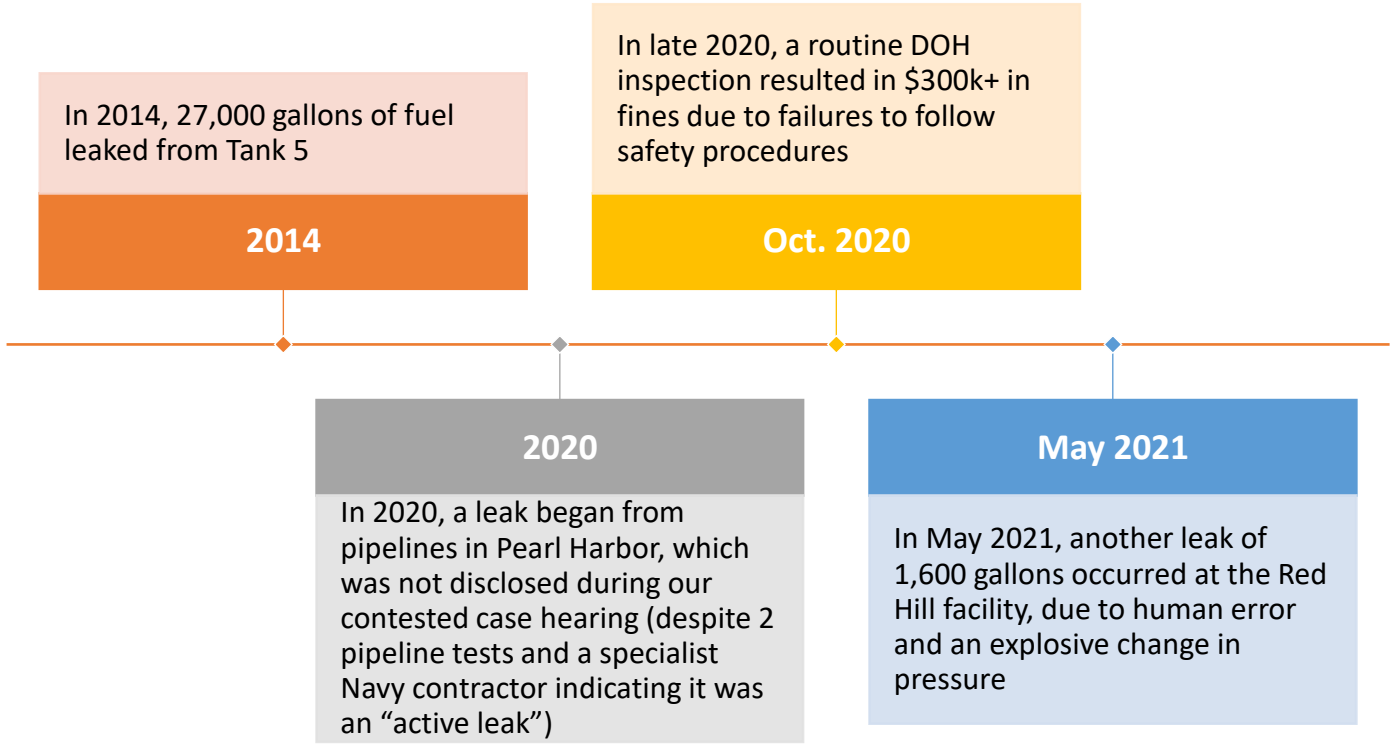
Waiola o Moanalua: Culture and History

- **Today**: “Southern O‘ahu Aquifer” is one of 9 EPA Region IX Sole Source Aquifer i.e. the only, irreplaceable water source for a community.
- BWS Hālawa Shaft provides 20% of O‘ahu’s municipal water, serves 450,000 residents plus businesses, hospitals, schools from Hālawa to Maunalua.
- Groundwater discharge - streams, springs, estuaries - continues to feed environment, people.

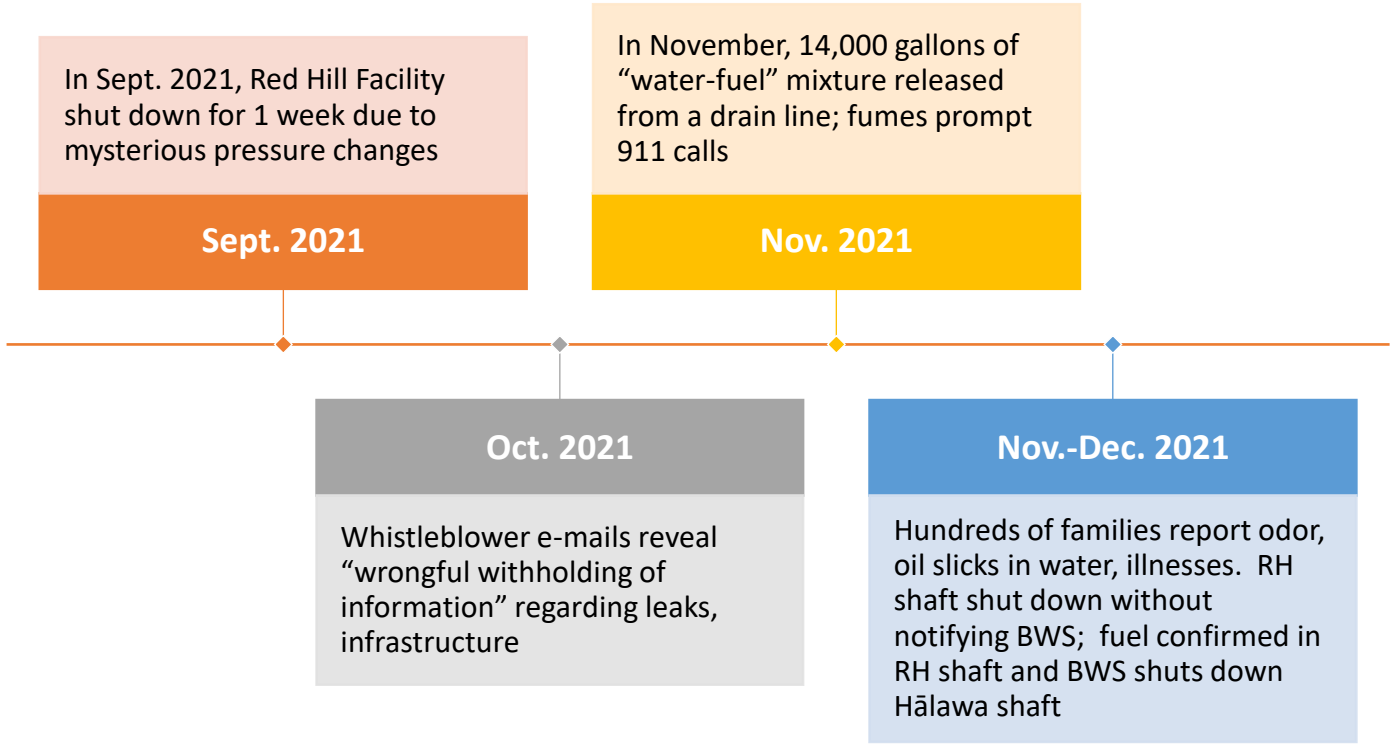
Red Hill Recap

- ~150-180 million gallons of petroleum fuel stored in 14, 12.5 million gallon-capacity tanks (note: 2 tanks decommissioned, 4 tanks currently empty for inspection, repair)
- Tanks were built in the early 1940s, 100 feet over the Southern O‘ahu Aquifer
- Aquifer now serves over **450,000 residents** (plus tourists, businesses, etc. from Hālawa to Maunalua)
- Tank walls when **new** were ¼” thick; now corroded to less than 1/3 of that in some places, and multiple “through-holes” have been detected
- Eight out of 14 tanks currently in actual use (i.e. with fuel in them) have not been inspected per industry and Navy standards in 20+ years (three for 30+years)
- **180,000 gallons (likely conservative) spilled since the 1940s; petroleum components have been found in the groundwater**

Red Hill Recap: Recent Spills, Violations



Red Hill Recap: Recent Spills, Violations



Contested Case Hearing: Status

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- Whistleblower e-mails leaked in October 2021
- October 20 contested case hearing response deadline now extended to December 19

According to Navy spokesman Mike Andrews, who provided written responses to questions, the Navy did not confirm the source of the problem until July. That was several months after the conclusion of the contested case hearing.

DOH Notice of Violation: October 27

- Notice of Violation issued in October 2021 may result in **further delays:**
  - Failure to operate and maintain ongoing corrosion protection to metal components of the portion of the Navy's tank and piping that contain regulated substances and are in contact with the ground. This violation resulted in a $30,000 penalty;
  - Failure to perform line tightness testing of repaired piping before return to service resulted in a $179,982 penalty;
  - Failure to perform an annual liquid tightness test on spill prevention equipment to prevent releases to the environment. This resulted in a penalty of $22,950;
  - Failure to perform an adequate visual walkthrough inspection of hydrant pits, resulting in a penalty of $2,250; and
  - Failure to maintain adequate release detection for two double-walled underground product recovery storage tanks. This penalty amounted to $90,000.

Nov. 10 Motion to Reopen

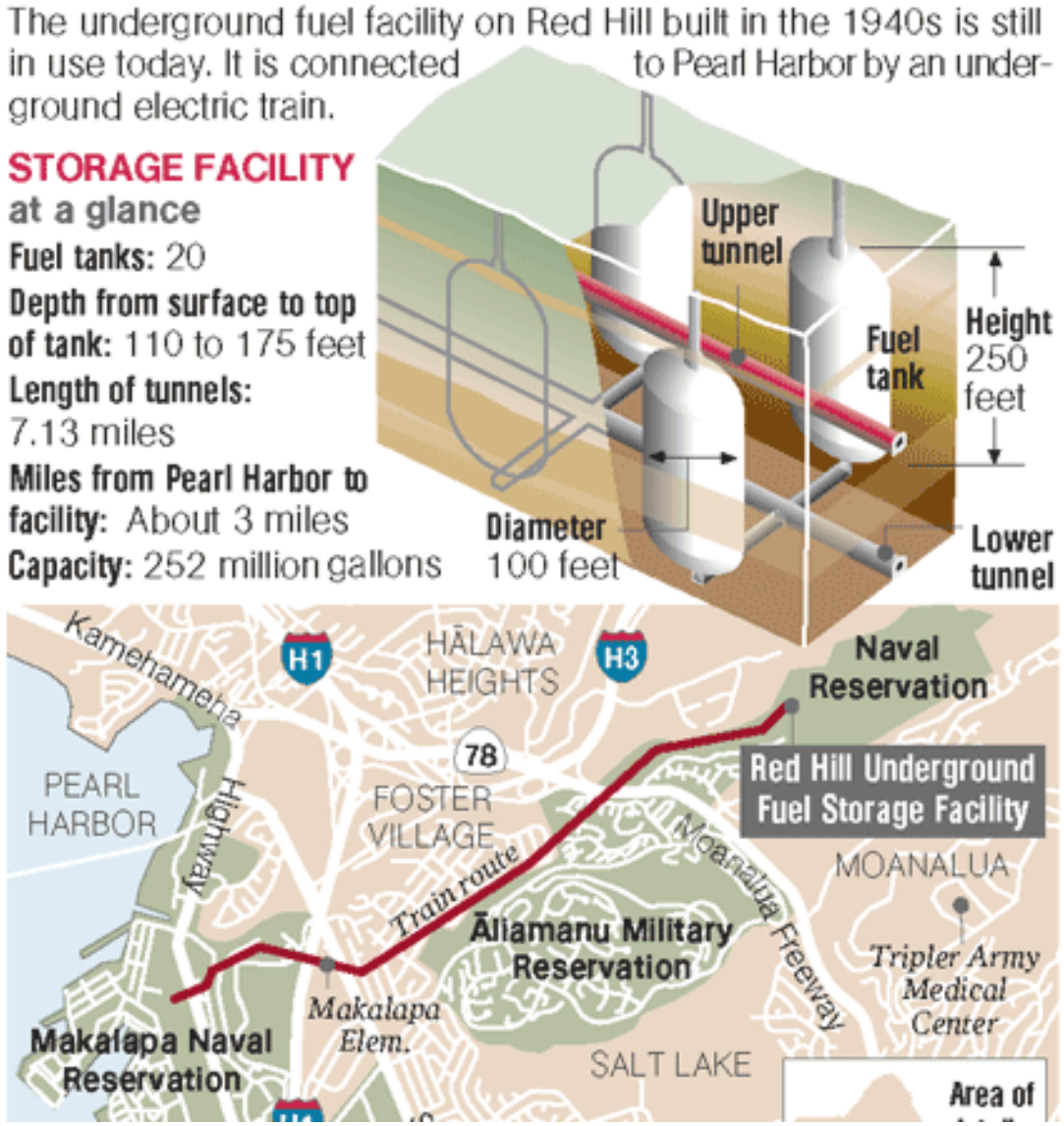
Naval officer informed DOH:

- “inaccurate testimony had been submitted, and important information had been wrongfully withheld by the Navy in the contested case proceedings.”
- “corrosion and leak detection issues, historical data, and the full extent of the Red Hill Facility including tanks and piping that are subject to permitting and regulation by the State.”
- “historical records of corrosion issues, **including holes in tanks, that are being hidden from the regulators**.”

Issue: further delays before decision made means fuel remains in tanks

Ongoing Concerns

- Challenge: Voluminous technical documentation, complex “system of systems” results in political deference to Navy assurances
- Contested Case Hearing, Administrative Order of Consent, and state Red Hill Fuel Tank Advisory Committee have helped demystify the situation – and heighten concerns
- Note: Risk assessment, other key components of AOC remain unfulfilled



Ongoing concerns: Assurances can’t be trusted

- The Navy’s “system of systems” is a system of bandaids that is full of holes:
  - Navy has no idea how bad the corrosion may be
    - Concrete “casing” around steel tanks actually traps moisture around the steel
      - Water + steel = rust, corrosion!
    - Cannot directly observe tank conditions where corrosion is occurring due to concrete
    - Inspection method is inherently unreliable
    - Destructive testing on 10 steel ”coupons” showed 40% miss rate in inspections
    - Eight tanks uninspected for 20-plus years despite Navy standard of 10-year inspection cycle

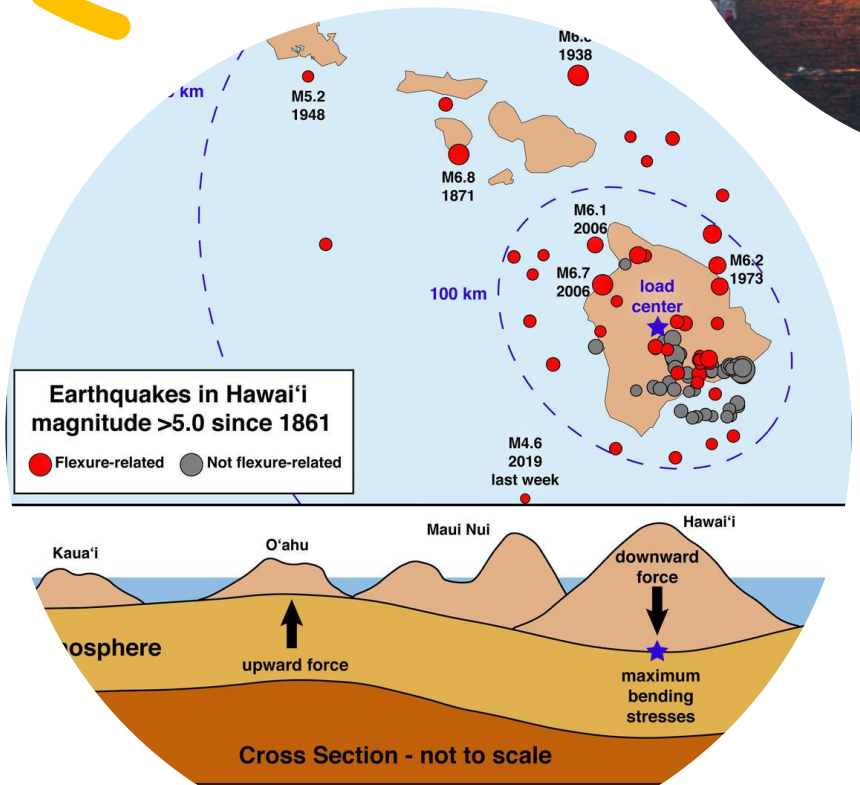
Ongoing Concerns: “System of Systems”

- Tank tightness testing (biannual):
  - Cannot detect slow leaks and may allow for 1,600 gallons to leak without any indication of vulnerability
    - Slow leaks could prelude larger or multiple leaks, especially when combined with other events
  - Cannot detect future leaks or near-through holes
- Tank fuel level monitoring
  - Alarm does not sound unless there is a ½” of fuel level change under normal conditions – i.e. 2,400 gallons will be lost before an alarm even sounds
  - Alarm won’t sound until a much greater loss if fuel is being “moved”
- Do these even work? (Hotel Pier leaked for >6 months, could not be confirmed until July 2021; fuel in Nov. release, in RH shaft – no idea where came from)

Ongoing Concerns: Blind Spots

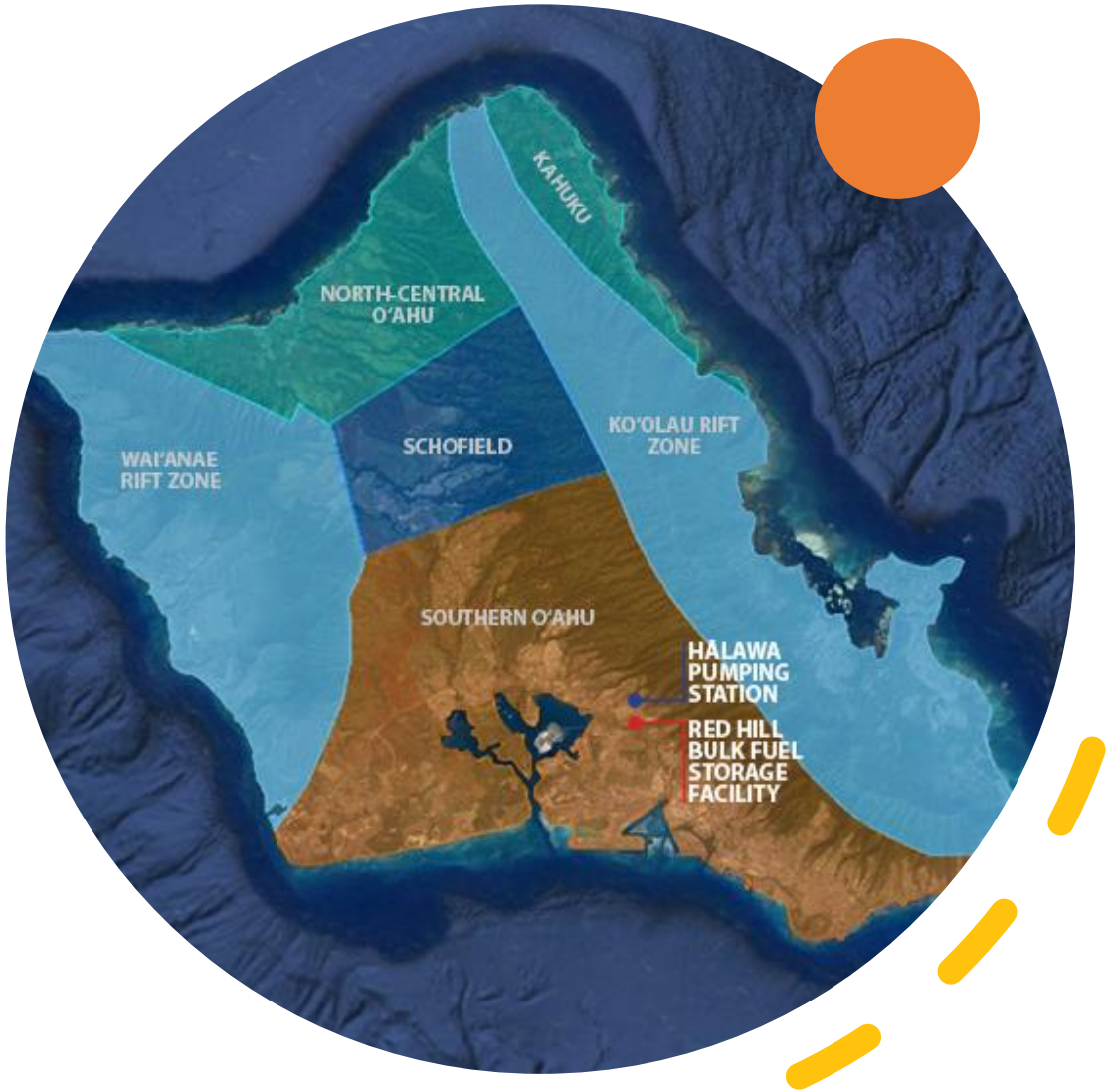
<u>The Navy cannot prevent:</u>

- **Earthquakes**:
  - 27% chance of leaking between 1,000-33,000 gallons of fuel next year, 80% over the next five, <u>without</u> an earthquake
  - <u>Earthquake in 1948 resulted in 1,100 barrels (about 46,000 gallons) lost</u>**<u>, when tanks were not 80 years old and not (as) corroded</u>**
- **Human error**:
  - 2014 spill, May 2021 spill were due to "human error"
  - 2020 inspection and resulting notice of violation(s)
  - May 2021 spill – highlights explosive consequences for just one person's error
  - Combined with other weaknesses (undetected leaks, possible spark/fire sources) could lead to catastrophe
  - See also: Exxon Valdez, Deepwater Horizon, etc.
- **Human malice**
- **Murphy's law:** undetected leak + electrical spark/fire, ?;



Ongoing Concerns: Catastrophe Cannot be Contained

- 1,600 gallon spill could not be fully contained
- 27,000 gallon spill likely reached groundwater, penetrated at least 30 feet below tank
- Spill of **1 million gallons** = 37 times the 2014 spill
- Each tank holds up to **12.5 million gallons**
- We do not know where or how released fuel will flow
- We cannot remediate the aquifer once it has been contaminated
- Catastrophic release will be catastrophic



What Can You Do?

- Join our mailing list for action alerts: www.sierraclubhawaii.org/redhill
- Support City Council Bill 48 (Waters, Cordero)
- Letters NOW to the actual decisionmakers: President Biden, Sec. Def. Lloyd Austin, Sec. Navy Carlos del Toro (see link)
  - DRAIN tanks now, RELOCATE fuel – PAR Pacific, other modern fuel tanks, Navy tankers can take them
  - PERMANENTLY CLOSE the facility
- Need contacts with businesses, community groups, others who may be interested.
- Need national exposure – celebrities, reporters, others
- Join Sierra Club in this work

What Can You Do?

- Join our coalition!
  - Add your logo to our press releases, promote/attend actions and events

Your logo here:

SIERRA CLUB OF HAWAI‘I

Mahalo nui!

Questions?