

On an island, there is no pipeline from somewhere else. Your water capital plan has to hold.

Hawai'i's drinking water sits in a handful of island aquifers with no imported backup — and the last five years have shown how fast that supply can be threatened. Red Hill took a quarter of O'ahu's sources offline, Lahaina rebuilt a poisoned system from scratch, and roughly 88,000 cesspools have to be retired by 2050. For a utility CFO, every one of those forces reshuffles the project list. Invizion helps Hawai'i utilities re-sequence a capital portfolio in a click — and defend every decision.

~93K¹ People on the Navy's O'ahu water system exposed when jet fuel from Red Hill reached a drinking-water well in 2021.	\$1.2B² Sought by the Honolulu Board of Water Supply from the Navy to protect and restore O'ahu's aquifer after Red Hill.	~88K³ Cesspools statewide that Act 125 requires be converted or connected to sewer by 2050 — the largest such mandate in the U.S.	~\$194M⁴ Bipartisan Infrastructure Law water dollars flowing to Hawai'i since 2022.
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THE HAWAII LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. On an island system with no imported supply and construction costs among the highest in the nation, the capital plan you approved last year may already be the wrong plan.

CONTAMINATION — RED HILL

A single fuel leak took a quarter of O'ahu's supply offline

The Navy's Red Hill Bulk Fuel Storage Facility held up to 250 million gallons of fuel in 20 tanks sited about 100 feet above the aquifer that supplies O'ahu.⁵ In November 2021 fuel reached the Red Hill drinking-water well, and roughly 93,000 people on the Navy water system were exposed to contaminated tap water.¹

To protect its own wells, the Honolulu Board of Water Supply shut down the Hālawā Shaft and the 'Aiea and Hālawā wells — about a quarter of O'ahu's water sources — and is seeking roughly \$1.2 billion from the Navy to monitor, treat, and replace lost capacity.² The Navy finished removing fuel from the tanks in 2024, but the aquifer response is a decades-long capital commitment.⁶

SUPPLY — ISLAND AQUIFERS & DROUGHT

No backup supply, and a recharge that depends on rain

O'ahu's municipal drinking water comes almost entirely from groundwater, and the state's water agency reports groundwater supplies roughly half of Hawai'i's total water needs.⁷ Those aquifers refill only from rainfall — there is no interstate pipeline or imported river to draw on.

Recurring drought across the islands stresses recharge in the same years demand and contamination pressures rise.⁹ Protecting and diversifying source capacity — new wells, treatment, and interties — is now a capital question, not just a resource one.

WASTEWATER — CESSPOOLS

The nation's largest cesspool-conversion mandate

Hawai'i has roughly 87,900 cesspools discharging about 53 million gallons of untreated wastewater into the ground each day — over the aquifers and near the reefs.³ Act 125, passed in 2017, requires all of them be converted to septic or connected to sewer by 2050.

The Department of Health's original estimate was about \$1.75 billion at roughly \$20,000 per conversion; individual conversions now often run \$50,000 or more, and the burden falls heaviest on Hawai'i Island (~49,300 cesspools) and Kaua'i (~13,700).³ For county sewer utilities, absorbing even part of that load reshapes the collection-and-treatment capital plan for a generation.

RECOVERY & RENEWAL — LAHAINA AND AGING PIPE

Rebuilding a poisoned system while the old one keeps breaking

After the August 2023 wildfire, Maui County issued an unsafe-water advisory for Lahaina that stood nearly a year until August 2024; crews tested about 26 miles of mains and more than 1,500 service laterals and cut and capped roughly 850 contaminated laterals before restoring service.¹⁰

Recovery capital stacks on top of ordinary renewal. Honolulu's Board of Water Supply alone runs nearly 2,100 miles of pipeline and around 94 active sources, and has recorded hundreds of main breaks in a single year.¹¹ New obligations don't replace the backlog — they compete with it for the same dollars and the same crews.

WHO RUNS HAWAII'S WATER

A county-run system — four semi-autonomous water boards, few private utilities

Hawaii's water is delivered almost entirely by county water departments and boards, which set their own rates. Private, PUC-regulated utilities are a small share, and the federal military systems sit outside both. The pressures are shared; the accountability path differs.

County water utilities

Rates set by county water boards & councils · capital approved by governing boards

Honolulu Board of Water Supply ~1M served · ~2,100 mi of line · 94 sources

Honolulu BWS (delivery & CIP) ~145 MGD · FY2025 CIP ~\$310M

Maui County Dept. of Water Supply Countywide; led Lahaina recovery

Hawaii County (Big Island) Dept. of Water Supply Largest cesspool-conversion burden

Dept. of Water, County of Kauai Semi-autonomous county water board

County water boards in Hawaii are semi-autonomous: they own their systems, set their own rates, and approve their own capital plans in public.

Private & federal systems

Private utilities regulated by the Hawaii PUC; military systems federal

Hawaii Water Service Company PUC-regulated private utility · neighbor-island systems

Navy / JBPHH (Red Hill) water system Federal · ~93,000 users affected in 2021

Numerous small private & HOA systems Where funding and compliance gaps hit hardest

With so few investor-owned utilities, most of Hawaii's water capital is decided by county boards and the state — not a single statewide rate regulator.

Every capital dollar has to be defensible

Whether you answer to a county water board or the Public Utilities Commission, the question is the same: why this project, why now, why at this cost? In Hawai'i, contamination, wildfire recovery, and the cesspool mandate have put that question front and center.

County water boards & councils set rates and approve capital for the four county water utilities — in public, in front of ratepayers — since Hawai'i has no statewide rate regulator for municipal water.

Hawai'i Public Utilities Commission (PUC) regulates rates and capital recovery for the state's small number of investor-owned water and sewer utilities.

Hawai'i Dept. of Health, Safe Drinking Water Branch holds Safe Drinking Water Act primacy and administers the Drinking Water State Revolving Fund — lead service line inventories, PFAS/emerging-contaminant monitoring, and the compliance capital that follows¹³

Act 125 cesspool mandate (Dept. of Health, Wastewater Branch) requires all ~88,000 cesspools be upgraded or connected to sewer by 2050 — a compliance driver with no statewide precedents³

The money is moving — can your plan absorb it?

Hawai'i utilities have more capital funding available than in a generation, including a large wildfire-recovery supplement. The constraint is no longer only dollars — it's readiness: which projects are shovel-ready, which qualify, and how the timing lines up with everything else on the list.

Drinking Water SRF — ~\$112M in federal funds (SFY2026) including a \$68.3M Hurricanes Helene/Milton and Hawai'i Wildfires supplement (with a Maui set-aside), \$24.9M in general BIL supplemental, and \$7.9M for emerging contaminants such as PFAS¹³

~\$194M in Bipartisan Infrastructure Law water dollars has flowed to Hawai'i since 2022, including a \$50.08M drinking-water, clean-water, and stormwater package announced in 2024⁴

Honolulu BWS FY2025 CIP ~\$310M blends operating funds, about \$112M in SRF loans, and roughly \$55M drawn against a WIFIA loan — a template for stacking sources on one program¹²

Cesspool conversion assistance — Dept. of Health grant and loan programs, plus county pilots such as Kaua'i's \$20,000-per-household reimbursement, chip away at the 2050 mandates³

USDA Rural Development water and waste-disposal loans and grants fund small and rural systems across Hawai'i and the Western Pacific.¹⁴

HAWAII WATER, IN BRIEF

Questions Hawai'i utility leaders are asking

Short, sourced answers — the same facts we'll dig into on a call, in the context of your system.

How did Red Hill affect O'ahu's public water supply?

In November 2021, fuel from the Navy's Red Hill facility — up to 250 million gallons stored about 100 feet above the aquifer — reached a drinking-water well, exposing roughly 93,000 people on the Navy system. To protect its own wells, the Honolulu Board of Water Supply shut down the Hālawā Shaft and the Aiea and Hālawā wells, about a quarter of O'ahu's sources, and is seeking roughly \$1.2 billion from the Navy for monitoring, treatment, and replacement supply¹²

How much of Hawai'i's drinking water comes from groundwater?

Almost all of it on O'ahu: the Board of Water Supply's municipal system draws essentially all of its drinking water from underground aquifers, and the state's water agency reports groundwater supplies roughly half of Hawai'i's total water use. Those aquifers refill only from rainfall, so there is no imported backup when a source is lost or contaminated⁷⁸

What is the cesspool mandate and what will it cost?

Act 125 (2017) requires all of Hawai'i's roughly 87,900 cesspools — which discharge about 53 million gallons of untreated wastewater a day — be converted to septic or connected to sewer by 2050. The Department of Health's early estimate was about \$1.75 billion at roughly \$20,000 per conversion, but individual conversions now often exceed \$50,000, and Hawai'i Island alone has about 49,300 cesspools³

What happened to Lahaina's water system after the 2023 fire?

Maui County issued an unsafe-water advisory for Lahaina after the August 2023 wildfire that stood until August 2024. Crews tested about 26 miles of mains and more than 1,500 service laterals and cut and capped roughly 850 contaminated laterals before service could be restored — a full rebuild running in parallel with the rest of the county's capital program¹⁰

What funding is available to Hawai'i water utilities right now?

Hawai'i's Drinking Water SRF carried about \$112 million in federal funds in SFY2026, including a \$68.3 million Helene/Milton/Hawāi-Wildfires supplement and \$24.9 million in BIL general supplemental. Since 2022 the Bipartisan Infrastructure Law has sent roughly \$194 million into Hawai'i water infrastructure, and USDA Rural Development funds smaller and rural systems¹³⁴¹⁴

How does Invizion help Hawaii water utilities plan capital?

Invizion is scenario-based capital portfolio optimization for water utilities. It lets you model how a lost source, a wildfire-recovery mandate, a cesspool-conversion obligation, or a funding award reshuffles your whole project list, re-sequence the portfolio automatically against the constraints you set, and keep a defensible record of every decision for your county board, the PUC, or ratepayers. The best next step is a short first meeting to look at it against your own program.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

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ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for water and wastewater utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See what a defensible Hawaii capital plan looks like — book a 20-minute first meeting.

Book your first meeting →