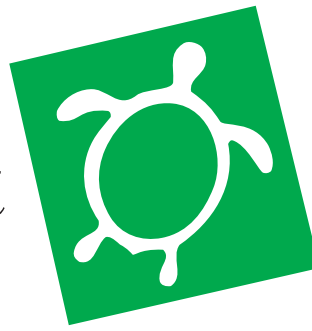


Environment



Hawai‘i

a monthly newsletter

CPR Doesn't Help Dam in Distress

Kaua‘i’s Waiakalua Reservoir has more owners than any other in the state. Most have one, maybe three. Waiakalua has nine as a result of developers creating condominium property regimes on two of the three parcels that make up the reservoir.

The state agency charged with overseeing dam safety has so far been unable to get the owners to comply with orders to make the reservoir — which has been excessively seeping since at least 2009 — safer.

Fines for missing deadlines, recently pre-approved by the Board of Land and Natural Resources, may change that.

Complex Ownership Regime Delays Fix To High Hazard Reservoir in North Kaua‘i

The owners of lands beneath and surrounding the Waiakalua Reservoir in North Kaua‘i are facing \$65,000 in fines if they don’t steadily progress toward making the sugarcane plantation-era fixture safer.

The reservoir is relatively small compared to the Kaloko Reservoir, which failed in 2006 after more than a month of rain. The resulting flood killed seven people.

While Kaloko’s maximum capacity exceeds 450 million gallons, Waiakalua’s is just under 72 million.

Even so, the state Department of Land and Natural Resources’ Engineering Division, which administers the state’s dam and reservoir safety program, has classified the Waiakalua Reservoir as a high hazard dam, because its failure would probably result in the loss of human life.

In April 2009, an inspector with the division found extensive seepage from the 275-acre earthen reservoir, which was likely

causing soil erosion.

Built in the 1920s, the reservoir extends across three agriculture-zoned parcels. While the parcel directly beneath the reservoir is owned by the non-profit entity He Makana Ka Wai, the other two — where embankments and other appurtenant features are located — were developed decades ago into condominium property regimes.

As a result, there are currently nine “owners” who are responsible for managing and maintaining the dam safety standards of the reservoir. Most of those owners reside on the mainland.

In a March 11 report to the Board of Land and Natural Resources, the Engineering Division noted that the lack of any organizational structure among the owners to meet their legal responsibilities “has resulted in non-unified attempts . . . to

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PHOTO: DLNR



Waiakalua Reservoir, Kaua‘i

Environment

Volume 32, No. 11



Hawai'i

May 2022

NEW AND NOTEWORTHY

Wire Leader Ban: The National Marine Fisheries Service has published a final rule that, effective May 31, will ban the use of steel wire leaders by Hawai'i longline fishing vessels that target tunas. The leader is the part of the gear between the longline and the hook.

The Hawai'i Longline Association initiated the action following the determination of oceanic whitetip sharks as threatened under the Endangered Species Act in 2018. The use of monofilament leaders instead of wire leaders is intended to improve the survival of oceanic whitetip sharks that are unintentionally caught by the longliners.

As the NMFS rule states, "wire leaders are difficult for sharks to bite off and free themselves and difficult for fishermen to cut from deck height as compared to alternative monofilament leaders."

The new rule is expected to result in a decrease of more than 30 percent in the number of oceanic whitetip sharks that die after being hooked, NMFS says.



Oceanic whitetip shark.

Waipi'o Valley Litigation: In addition to the federal lawsuit that was filed in March against Hawai'i County over the closure to the general public of the road leading into Waipi'o Valley, another lawsuit was filed last month in state court. The plaintiffs include a community group, Mālama i Ke Kai 'o Waipi'o, and several individuals. Named defendants are the county, Mayor Mitch Roth, who ordered the steep road closed in late February, citing safety concerns, and county Public Works director Ikaika Rodenhurst.

Even before the second lawsuit was filed, the first one was voluntarily withdrawn from federal court. Within a week of it being filed in federal court, attorney Ron Kim notified the court on April 1 that the plaintiffs were voluntarily dismissing their claim against the county.

Both the lawsuits claimed that the engineering study that Roth cited in justifying the

closure is flawed. And both sought to have Roth's emergency closure order invalidated.

In other respects, however, the lawsuits differed. The first lawsuit argued that the closure amounted to an unconstitutional taking, with businesses that rely on Waipi'o Valley traffic having suffered harm. The second argues that the road closure violates the protections found in the Hawai'i constitution of rights to access beaches and also the right to a healthful environment, among other things.

The state lawsuit has been assigned to 3rd Circuit Judge Peter Kubota. No hearing date had been set as of press time.

'Aina Le'a Hearing: A big date is coming up in federal court in the case involving DW 'Aina Le'a's \$200 million claim against the state. On May 24, U.S. District Judge Susan Oki Mollway will hear the state's motion for summary judgment, asking the court to dismiss all claims against the state and the Land Use Commission.

The case, filed in 2017, asks for damages stemming from the LUC's vote to revert about 1,000 acres of land in the Big Island district of South Kohala to Agricultural from Urban. The state The LUC action was overturned in 3rd Circuit Court, a decision upheld by the state Supreme Court.

Years later, DW 'Aina Le'a brought its claim against the state, which countered that the case was barred by the statute of limitations. An appeal to the 9th Circuit resulted in the question of the statute of limitations being thrown back to the Hawai'i Supreme Court, which in December 2020 ruled in favor of the interpretation of the statute of limitations put forward by DW 'Aina Le'a.

Environment Hawai'i has published numerous articles on this and related litigation. Check them out using the search engine on our website, www.environment-hawaii.org.

Correction: In a story in our April courts roundup, "DOH, Sierra Club Agree To Drop Greenhouse Gas Case," we incorrectly suggested that the Department of Health did not pay the Sierra Club's attorney fees of \$11,379.81, when, in fact, it did.

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Quote of the Month

"While others may choose to illegally dump rocks and come away with fines just a fraction of what we are spending, Mantokuji is doing everything by the book."

— Eric Moto, president of
Mantokuji Mission of Paia

As Seabed Mining Plans Advance, So, Too, Does Push for Moratorium

A huge area of the open ocean lying between Hawai'i and Mexico could be open to the mining of metallic nodules found on the seafloor as early as the middle of next year. And, at this time, it's an open question as to whether there will be any meaningful environmental restrictions on how that mining is conducted.

The International Seabed Authority, an agency of the United Nations, is charged with developing the regulations, also known as the Mining Code. So far, draft rules have been proposed but, at the ISA's latest meeting, held in March, there was no agreement on adopting them.

In the meantime, the clock is ticking. Under the U.N. Convention on the Law of the Sea, a member nation can give the agency a two-year notice that it plans to move forward with mining in the area the ISA has allotted to it. If, within that period, the ISA has not adopted its own regulations, the member nation can begin mining under whatever draft protocols exist at the time.

And so, by letter of June 25, 2021, the president of Nauru, Lionel Aingimea, informed the ISA that it was invoking the so-called two-year rule, requesting that the agency finalize its mining code by July of 2023. Failing that, the ISA will apparently have to give provisional approval to Nauru Ocean Resources, Inc. (NORI), a partnership between Nauru and The Metals Company of Canada, to move forward with its plan to mine polymetallic nodules in the Clarion-Clipperton Zone (CCZ).

Reaching agreement on the Mining Code, which is to govern exploitation of seabed resources, has proven difficult. As Nauru pointed out in its notice letter, the ISA has been engaged in discussions of draft rules since 2014. At its most recent meeting, in late March, the ISA was still unable to come to any consensus, despite Nauru holding a figurative gun to its head.

Uncertainties

In its letter to the ISA, Nauru defended its decision to move forward with seabed mining as a step forward in fighting climate change. Many of the metals in the nodules found in the CCZ — including cobalt, manganese, nickel, and copper —

are used in the batteries that are a critical component of post-fossil-fuel technologies. Invoking the two-year rule, Aingimea wrote, was a decision “compelled by the impetus to build forward better by ensuring that polymetallic nodules are part of the solution to the global transition required to secure a clean renewable energy future.”

“For Pacific Island countries like Nauru,” he wrote, “climate change poses an existential threat to the wellbeing, livelihoods, and security of our people.” Referring to Nauru's devastating history of guano mining, which has left much of the island a wasteland, Aingimea mentioned his country's own “firsthand experience of careless resource extraction.” This, he said, gives Nauru “a unique insight into the future of our world if mining on land continues to meet the exponential growth in demand” for the metals needed for renewable energy technologies. “We strongly believe that moving to responsible collection of polymetallic nodules from the seafloor will help deliver us to a carbon neutral future.”

Other proponents of seabed mining have argued that land-based mining of metals is not free of terrible environmental consequences either, including the destroyed ecosystems, mountains of toxic tailings, and polluted bodies of water.

In March, Nauru and NORI led an online webinar to discuss feedback that they had received on a draft environmental impact statement prepared in anticipation of launching a nodule collector test. The next step is a review of the final EIS by the International Seabed Authority's Legal and Technical Commission, which is expected to be completed in July. Sometime in the fall, NORI anticipates conducting further studies at sea on the impacts of its nodule collection activities.

A Moratorium?

Even as Nauru presses forward with its mining plans, critics of deep-sea mining are pushing for a moratorium until more is known about the long-term impacts of mining in an environment that is one of the most pristine on earth. Several companies have signed on, including Google, BMW, Volvo, and Samsung.

At last year's World Congress of the International Union for the Conservation of Nature, 88 governments and government agencies and 577 organizations endorsed a moratorium on seabed mining until sufficient evidence is in hand to determine if it could be done responsibly.

In March, more than 30 scientists co-authored an article in *Marine Policy* that looked at peer-reviewed literature on the environmental effects of seabed mining. After reviewing some 300 articles, they concluded that the state of knowledge was insufficient to “enable evidence-based decision-making regarding environmental management, including whether to proceed with mining in regions where exploration contracts” have already been granted by the ISA.

Among the co-authors was Craig Smith, professor emeritus of oceanography at the University of Hawai'i's School of Ocean and Earth Science and Technology. “Considering that the ecosystems targeted for mining are among the most pristine and biodiverse in the ocean, we must use extreme caution in moving forward with seabed mining,” he said. “Otherwise, mining in the deep sea may accelerate the crises of species extinctions and loss of ecosystem services we are witnessing on our planet.”

Divergent Trends

As the 7th World Ocean Conference opened last month in Palau, a group of leaders of Pacific island nations announced the formation of an alliance that hopes to slow down the push to mine the seabed.

Members of the Pacific Parliamentarians' Alliance on Deep Sea Mining (PPADSM) include elected officials from New Zealand, Fiji, French Polynesia, Guam, Papua New Guinea, the Solomon Islands, Samoa, Vanuatu, Tuvalu, and Palau.

In the group's “Call to Protect Our Pacific Ocean,” it urged Pacific and world leaders to join the growing movement opposing “the rush to mine the ocean floor” and for a suspension of deep-sea mining activities in the Pacific, “to allow for greater scientific understanding” about its potential impacts.

“[G]iven the experimental nature of this industry and growing scientific consensus around the probable irreversible damage to the ocean and ocean systems, all

Continued on next page

deep-sea mining activities must cease immediately to allow the scientific research to establish whether or not it should be pursued,” the group stated.

Meanwhile, in the United States, Lockheed Martin has asked the National Oceanic and Atmospheric Administration's National Ocean Service to extend for five years two exploration licenses for seabed mining in an area of the Clarion-Clipperton Zone.

The company has no immediate plans to mine the areas, but needs the additional time to determine whether seabed mining activities will be worth the “enormous capital expenditures of billions of dollars” required.

There are additional caveats, however. The licenses held by the company were issued in 1984, under the Deep Seabed Hard Mineral Resources Act (DSHMRA). That law, passed in 1980, was supposed to be an interim law pending completion of negotiations on the Law of the Sea Convention. But the U.S. never signed on to the Law of the Sea and is not a member of the International Seabed Authority.

As noted in the *Federal Register* announcement of the extension request, “As the United States is not a party to the Law of the Sea Convention and thus not a member of the ISA, the United States is unable to seek from the ISA an exploration contract to obtain international legal recognition of Lockheed Martin’s domestic law rights under DSHMRA.”

Further complicating matters is the fact that the ISA recently set aside an area that overlaps with the company’s licenses as an Area of Particular Environmental Interest, and, as such, not available for exploitation. But, since the United States isn’t a signatory to the Law of the Sea Convention, the National Ocean Service stated in the *Federal Register* notice, “the ISA designation has no bearing on the extension request currently under consideration.”

The comment period on the extension request (NOAA-NOS-2022-0033) ends on May 17.

An Impartial Agency?

The International Seabed Authority has itself come under fire, with critics assert-

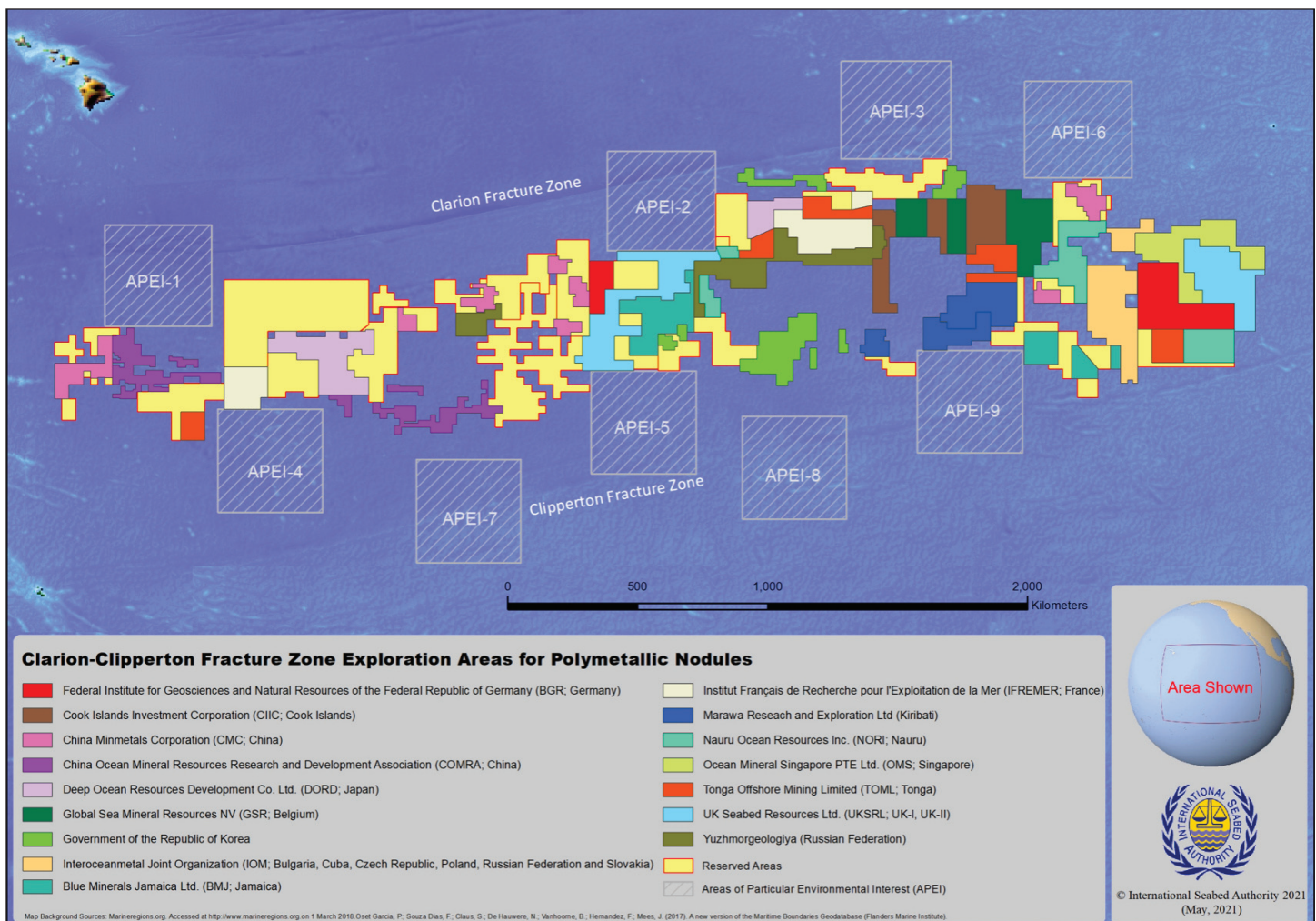
ing that its secretary general, Michael Lodge, has clearly aligned himself with the mining interests. In 2018, Lodge was featured in a promotional video produced by Deep Green, now known as The Metals Company – the same company that has partnered with Nauru.

After the video generated negative attention, it was removed from the company’s website. However, *The Los Angeles Times* recently released it again in connection with an investigation into the ISA and its close ties with the industry it is to regulate.

As the newspaper reported, documents reviewed by its reporters “point to a closeness with mining companies that stands out as unorthodox in environmental regulation.”

The article quotes a marine geologist, Sandor Mulsow, who was employed for more than five years by the ISA as its lead environmental officer until he left in 2019. “The ISA is not fit to regulate any activity in international waters,” he was reported to have told the Times. “It is like to ask the wolf to take care of the sheep.”

— *Patricia Tummons*



BOARD TALK

Can a Solar Farm Coexist with Cattle Pens? Renewable Energy Company Will Investigate

A renewable energy developer pursuing a project on lands leased by the state's primary slaughterhouse received a right-of-entry permit from the Board of Land and Natural Resources last month to conduct due diligence investigations.

The board granted the one-year permit over the objections of slaughterhouse operator Hawai'i Land & Livestock, LLC (HLL).

Through a May 2019 executive order, management of the 110-acre parcel of state land at Campbell Industrial Park on O'ahu transferred from the Department of Land and Natural Resources to the Department of Agriculture.

In December of that year, the DOA entered into a 35-year lease with HLL, which plans to use the lands as a holding area for animals awaiting slaughter. The slaughterhouse is located on an adjacent parcel.

However, the governor's executive order noted that the set-aside to DOA was subject to a reservation of the Land Board's right to issue leases for renewable energy projects on the land, "provided that the projects do not unreasonably interfere with DOA's or its lessee's use of the land for agricultural purposes."

On January 12 of this year, Eurus Energy America, LLC, asked the DLNR for a right-of-entry permit to conduct land, geotechnical, and biological surveys on the parcel to assess whether it would be feasible to build a solar-based electricity and renewable hydrogen generation facility there. The company, which is owned by Toyota and Tokyo Electric Power, envisions using no more than 90 acres.

"The Department reserved rights for developing renewable energy projects on the land because the land was once designated as income-producing as a prime site for renewable energy projects with its location in Campbell Industrial Park across a Hawaiian Electric Company, Inc. (HECO) facility and close to the west side energy corridor," the DLNR's Land Division stated in its report to the board. "The land was previously under a Board-approved development agreement for a

renewable energy project, but the developer was not able to secure the HECO power purchase agreement for its project and the development agreement terminated. Soon thereafter, DOA requested the land be transferred to it."

Land Division administrator Russell Tsuji told the board that the DOA sought control over the property because it was needed to provide water to the slaughterhouse on the DOA's neighboring parcel.

"Our parcel would be the holding area of cows for slaughter," Tsuji said.

Renewable Goals

In its permit application, Eurus suggested that since it estimated it would use no more than 90 acres of the site, at least 20 acres would still be available for HLL's holding pens.

Company representative Nick Hendrickson testified that Eurus has built renewable energy projects throughout the world capable of producing a total of three gigawatts. That includes a 27.6-megawatt solar farm built in 2017 on about 200 acres in Wai'anae, which was the largest PV facility in the state at the time.

"This is a project we're very excited about," he told the board of the possible project on the Campbell Industrial lot.

David Tomlinson, the technical project manager, explained that the company envisioned building a solar farm and converting the energy created into renewable hydrogen.

In a memo to the Land Division, the state's chief energy officer, Scott Glenn, expressed his support for Eurus's proposed solar-hydrogen project.

Glenn noted that the soil on the Campbell site is known to be contaminated. "In some cases, contaminated sites are well-suited for solar development and may be facilitated by the U.S. Environmental Protection Agency (EPA) and [state Hazard Evaluation and Emergency Response branch of the Department of Health]," he wrote.

He added, "The nearby natural gas infrastructure makes the site uniquely well-suited for hydrogen generation and sale

to Hawai'i Gas should it be an off-taker. There is also the opportunity to sell hydrogen to other parties for transportation use, which is a substantial need for Hawai'i to transition away from fossil fuels for transportation use. In addition, the site's proximity to other large electrical generation and transmission infrastructure makes it well-suited to sell electricity to Hawaiian Electric. In both cases, the site's location near this infrastructure would reduce the impacts and the connection and development costs of the proposed project."

At the Land Board's April 8 meeting, chair Suzanne Case, who also serves as DLNR director, said, "This is the kind of project I and we envisioned when we were negotiating with previous [DOA] director Scott Enright," who she said exerted some "very heavy pressure" to allow the parcel to become a lot for cows.

"We negotiated we could do a renewable energy project [with] panels raised to allow cows to use it," she said, adding that Eurus's proposed solar-hydrogen project, which produces a more mobile fuel, sounds like a better idea.

Possible Violations

Although HLL leases the former DLNR parcel for use as a feedlot or holding pen area, the land is not yet being used in that way, according to Land Division agent Luke Sarvis, who recently inspected the property.

"I was expecting to find cattle, corrals," he told the board. Instead, he saw mostly vacant land. What he found alarming was the extent to which the land was being used as a baseyard, with tractors, trailers stacked high, road-building equipment, graders, excavators ...

He also noted abandoned junk vehicles.

When he called the DOA to inform the agency of this apparently unauthorized use, "it became apparent they are very much aware of it," he said.

The DOA refers to the area Sarvis was concerned about as a bone yard.

"They might ask them to scale it back some, but it's a use they seem to be permitting. The EO to the DOA is for ag purposes, specifically, feedlot purposes," he said.

"I didn't see any sign of cattle. ... None of what I saw would be allowed under the terms of the lease," he added.

Continued on next page

He also noted that he had checked with the Honolulu Department of Planning and Permitting to determine whether any of the grading or grubbing that appeared to have occurred on the property was authorized.

"A big part of the parcel has been cleared and leveled and turned into parking lots and roads. ... There's no signs of them getting any permits for grading or grubbing, for construction," he said.

He pointed out that the land is a federally designated brownfields site and contains significant soil and groundwater contamination.

"In the course of doing grubbing, it's very likely they spread that stuff who knows where," he said.

In response to Sarvis's report, backed up by photos he had taken and attached to the division's submittal to the board, DOA deputy Morris Atta, a former administrator for the DLNR's Land Division, said HLL's justification for the baseyard was that it furthers HLL plans to develop the feedlot and it also supports the slaughter operations.

"Whether or not that constitutes an allowable use, I thought was a bit premature until we hear an explanation from the lessee," Atta said.

With regard to the development of a renewable energy project on the site, Atta said the DOA understands the DLNR's reserved right and "we really have no position."

Bobby Farias, HLL's owner and operator, explained that there are no cattle are yet on the property because improvements to the slaughterhouse were completed only last October.

"The timing on building out the feed lot depends on need," he said. Once HLL determines how many cows will be processed

at the facility, it will have a better idea of how big the holding pen area needs to be.

With regard to the baseyard/bone yard, Farias suggested that Sarvis simply misunderstood what constitutes agricultural infrastructure.

"Ninety percent of the time, the meat is in a truck on the road," Farias said. Those trucks, and other equipment needed for hauling, clearing, etc., need a place to park and to be serviced, he argued.

He admitted that clearing had been done to remove concrete and kiawe trees to make room for the trucking company that does a lot of the maintenance on HLL's non-meat production equipment. (That company, American Hauling, is not in good standing with the Department of Commerce and Consumer Affairs and was dissolved years ago.)

Land Board member Chris Yuen asked Farias about his company's utilization plan for the property filed with the DOA.

"What does it say of the area where the equipment is stored? Is that consistent with the plan of utilization?" Yuen asked.

Farias said it was and that the DOA visits the property annually. "The facility where American Hauling is is integral to the slaughter business," he said, adding that it's where all of HLL's shipping containers are repaired.

For the rest of the property, Farias said he envisions building holding pens, with larger pens for longer stays and smaller pens for cows kept close to the slaughterhouse.

"Feedlot is a bad title for the parcel," he said, since that is not actually what the property's use will be. "Surge tank is the best term. ... It would look somewhat like a rotational grazing project," he said.

However, he did not envision growing grass for the cows to feed on. "I don't think

that would be a great place to grow feed," he said, noting that there are a lot of baling opportunities on O'ahu.

When Land Board member Doreen Canto expressed concern about the bone yard activities polluting the environment, Farias replied, "Changing a tire or fueling a truck [is] not going to have any negative impact on livestock."

To have a viable agricultural entity, it takes a fair amount of industrial support, he continued.

"I understand what you are saying. That was not the intention when we transferred [the land]," Case said.

Playing Nice

The DLNR's reserved right to develop a renewable energy project on the land is conditioned upon it not unreasonably interfering with the DOA's agricultural activities those of its tenant.

To Farias, there is no way the energy project could co-exist with the slaughterhouse-associated activities.

Farias seemed to be under the impression that Euris would require HLL to forfeit its lease with DOA, which he said was highly unreasonable.

He opposed the right-of-entry permit because he saw the project as a non-starter.

To this, Land Division administrator Tsuji said that Farias misunderstood the leasing situation. The lease to Euris would be with the Land Board and HLL's lease with the DOA would remain intact. "I just want to clarify that," Tsuji said.

Board member Vernon Char was torn over how to proceed. "I would hope DOA would take a stronger view and advise ... rather than merely rely on Farias's company," he said.

Former DOA director Enright, who now works for HLL, said he found the discussion adversarial and recommended that the DOA's and DLNR's land management divisions "settle it."

In written testimony, Enright complained of inaccuracies in the Land Division's submittal to the Land Board "that could have been avoided had there been better communication; and I mean 'communication' in the full meaning of the word between the two land divisions involved." He added that HLL would have allowed Sarvis to inspect the property had he asked, which would have cleared up the apparent



"Bone yard" on land leased from the Department of Agriculture by Hawai'i Land & Livestock.

misunderstanding of the bone yard's role in the slaughterhouse operations.

"[T]his is the same disregard for communications that has DLNR and HDOA trying to implement Act 90 decades after it became law," he finished, referring to an act that requires certain DLNR lands to be transferred to the DOA.

Board chair Case told Enright, "I did not appreciate your comment that we were, as is typical, taking an adversarial position, like we're doing with Act 90." She said her department has been trying to work collaboratively for years with ranchers and multiple users. "Ranch wars don't help anyone."

Enright apologized, but insisted that granting Eurus a lease would be "steam-rolling agriculture," effectively brushing aside millions of dollars that had been spent on upgrading the slaughterhouse.

Farias added, "This would be another show the state isn't getting behind agriculture. ... The slaughterhouse will depend on the feedlot next door to ensure its feasibility for years to come."

Case reminded Farias that the executive order allows renewable energy development in a manner that does not interfere with the DOA's activities. "We will make every effort to be careful that your use of this parcel for ag purposes is not reasonably interfered with. We're talking about two very high priorities — renewable energy and ag. ... The goal is to work this out in a way that works for everyone," she said.

"Bobby, I never told you you would be displaced," Tsuji added.

The board then unanimously approved the permit, with member Canto voting with reservations.



Paia Temple Gets Permit For Temporary Sandbag Revetment

On April 8, the Land Board approved construction right-of-entry and revocable permits to the Mantokuji Mission of Paia to install a temporary sandbag revetment on 784 square feet of coastal state land.

Among other things, the mission must submit to the Department of Land and Natural Resources' Office of Conservation and Coastal Lands a plan to relocate threatened structures by next May and post

a bond for the cost of removing the structure should it fail to remove the structure before its emergency Conservation District Use Permit expires on May 12, 2024.

The Zen Buddhist temple was built in 1906, and includes a residence, bell tower, columbarium, and graveyard.

In 1933, the mission granted the County of Maui an easement to allow for sand mining. A tsunami in 1946 also may have caused significant sediment loss from the local beach system, according to an April 8 report by the Department of Land and Natural Resources' Land Division.

Since then, erosion has exposed an old dump site makai of the temple. "In this area, rusted car parts, carpet, glass, tires, and other debris are entering the marine environment. If left in its current condition, the shoreline will continue to move toward the temple structure," a report by the DLNR's Land Division states.

The temple is now 14-16 feet from the shoreline, which is eroding at a rate estimated by the University of Hawai'i's Coastal Geology Group to be 1.6 feet a year.

In addition to exposing the dump site, erosion has unearthed old graves "and there are also headstones scattered on the beach," the Land Division report continues.

The mission has hired a contractor to remove the landfill debris, the loose headstones, and an old concrete brick crematory oven that used to be underground but is now exposed.

It has also hired the engineering consulting firm Oceanit to develop a beach restoration plan. "There is currently no specific long-range plan," the report states.

Mission president Eric Moto testified to the Land Board that the temple, facing an existential crisis from the last decade of erosion, has been working with Oceanit since the spring of 2018.

"We all worked long and hard to see this project through," he said, noting that it has required obtaining an emergency CDUP, a Special Management Area minor permit from the county, and working with an architect to meet OCCL requirement for relocation of threatened structures.

"Mantokuji worked with all the county laws and requirements. ... While others may choose to illegally dump rocks and come away with fines just a fraction of what we are spending, Mantokuji is doing



PHOTO: DLNR

In the foreground, a headstone from the eroding graveyard makai of the Mantokuji temple.

everything by the book," he said.

In response to questions for board members about what gravesite debris might be on the beach, Moto explained that the graves are at least 100 years old and all of the records from that time are in Japanese. Some graves probably had nothing left below the head stones, he said, adding that he was not sure if what was buried was urns or coffins.



Land Board Deadlocks On Fireworks Show Permit

Six years ago, avid waterman and then-Land Board member Keone Downing dumped on the board's meeting table a garbage bag full of litter he had collected from the reef after a fireworks show at the Kahala Hotel & Resort.

It was one of the first times a board member had expressed concern about the potential environmental impacts from fireworks shows staged on state beaches.

The board has since continued to grant right-of-entry permits for firework shows, mainly to hotels or their contractors. To address the debris concern, it's now a standard condition for the company obtaining a permit to provide a \$2,500 deposit to ensure a timely post-event cleanup.

On April 8, the DLNR's Land Division requested approval of a permit to Pyro Spectaculars North, Inc., for a fireworks show at Fleming Beach Park in Lahaina a few days later. The Ritz Carlton had hired the company to conduct the show for a corporate event being held at the hotel.

Board member Tommy Oi asked the division's Daniel Ornellas whether the company had plans to remove fireworks

Continued on next page

Board Talk from Page 7

debris from the ocean after the show.

Wayne Hijiki of the Ritz Carlton said that there was a lot of wave action off of the beach park. He said he would be open to adding a permit requirement to check in the water for debris, so long as there were no safety issues. However, he added that he could not speak for Pyro.

Kevin Moore, assistant administrator for the Land Division, said that in conversations with the company's CEO, he understood there would be a cleanup of the beach and submerged area. "This is a northern exposure on Maui. ... They won't have good visibility with active surf. It's still an obligation to clean up, to the extent they can," he said.

The board approved the permit, with members Oi and Kaiwi Yoon voting in opposition. "Lots of waves is no excuse for not cleaning debris in the ocean. Even if it's paper, you're still polluting the beach, you're still polluting the ocean. If the waves are making it hard to clean up the ocean, you shouldn't be doing fireworks there," Oi said.

Board chair Suzanne Case voted in favor of the permit, but with reservations. She said she had reservations about all of the permits for fireworks shows that come to the board, because of the impacts "not just to people but to animals."

"The public benefit is not very high here and there are impacts," she said.

Two weeks later, Pyro requested another permit for a fireworks show for the Ritz Carlton. This time, Russell Sparks, an aquatic biologist with the DLNR's Division of Aquatic Resources, commented on the harm the show and its associated set-up might have on the dune system, the protected sea turtles and monk seals that sometimes rest on the beach there, and the ocean environment.

He said there are published studies of the heavy metals in fireworks fallout, which may impact water quality. Without further study, "[t]here is no way to declare these fireworks events will have minimal or no significant effect on the environment," he stated in written comments to his division administrator, Brian Neilson.

After much discussion of the impacts fireworks may have on protected species, and even the climate, the board ultimately deadlocked 3-3 on a motion to approve the permit, effectively denying it. Chair Case had to leave the meeting before the vote. Board members Oi, Yoon and Aimee Barnes voted in opposition. — **T. D.**

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cover the operations, maintenance, and any necessary improvements to the structure. Therefore, operation, maintenance, and improvements have mostly been localized to the properties of a few owners and have not holistically addressed the structural deficiencies of the dam. This lack of clear responsibility and unified effort poses elevated safety risks beyond that already posed by structural deficiencies, as there is no single operator or point of contact that is reliably able to do maintenance or take emergency actions for the entire structure."

Despite the division repeatedly sending notices of dam safety deficiency to the reservoir's owners over the years, starting in 2009, the seepage problem remains.

Deficiency Notices

Following an April 21, 2009, notice of deficiency from the Engineering Division, one of the owners hired the consulting firm Sustainable Resources Group International, Inc., to do a seepage study. The company completed a draft report in September of that year, which was then submitted to the Engineering Division.

The study found that the amount of water seeping through the reservoir embankment varied exponentially depending on the amount of water in it. But according to the Engineering Division's chief engineer, Carty Chang, the draft report failed to answer critical questions. The cause and even the location of the seepage were still unknown, and the consultant did

not evaluate the embankment's stability, he stated in a September 2014 deficiency notice to the owners.

"Although dams may be able to seep, the seepage must be able to be explained, the seepage needs to be controlled appropriately, [and] the stability of the embankment needs to be evaluated and shown that the embankment is stable under the various loading conditions," Chang wrote.

That letter stemmed from an inspection a few months earlier, which again found extensive seepage at the downstream toe of the reservoir's left embankment.

The reservoir's water level at the time was 14 ¾ feet. (The overall height of the reservoir is 26 feet.) To reduce the risk of a dam breach, the division required the reservoir owners to lower the water level to nine feet, which they did.

Among other things, Chang ordered the owners in a June 2014 deficiency notice, and again in the September notice, to hire a professional engineer to assess the seepage and slope stability of the embankment and provide the division with remediation recommendations.

"Failure to meet the above requirements could result in an order to drain the reservoir, and/or be subject to penalties up to \$25,000 a day," he wrote.

As requested, the owners cleared access to the reservoir's weir so that it could be measured. They also provided water level reports to the division on a weekly basis.

Despite this progress, a 2015 inspection found that the water level had increased to

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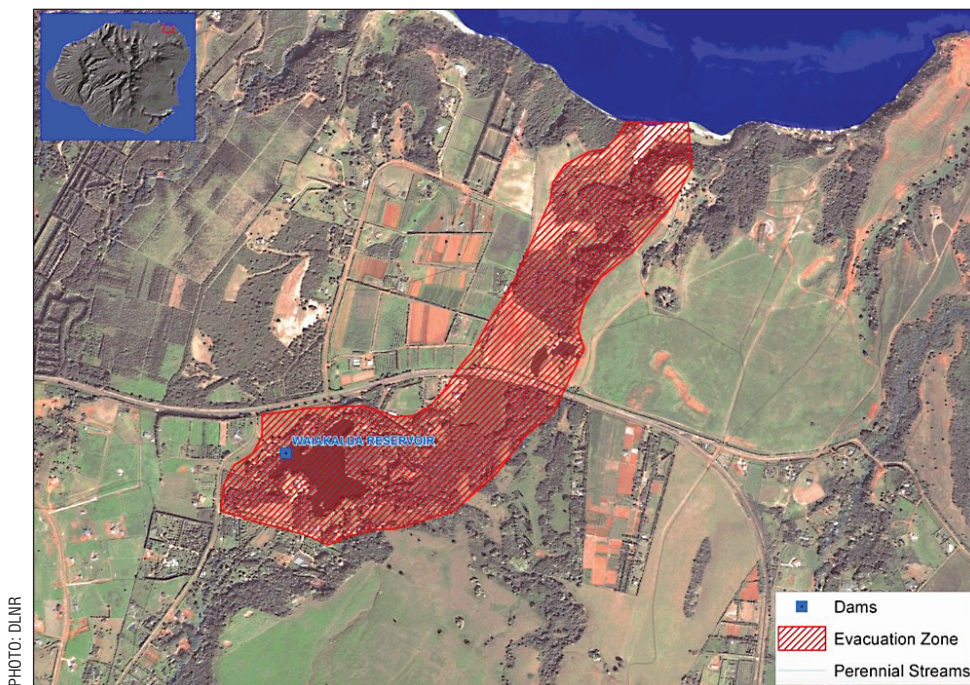


PHOTO: DLNR

Inundation zone of the Waiakalua Reservoir in North Kaua'i.

11 feet and the owners had still not hired an engineer to do the seepage and stability assessment.

The division issued another notice of deficiency in December 2015.

Six years later, another inspection found the dam to be in "poor overall condition and a threat to public safety," according to a September 27, 2021, notice of deficiency.

The notice ordered the owners to submit a schedule to complete the technical studies by December 1 of last year and submit them to the division by April 1 of this year.

The owners were also directed to submit a permit application for the remediation, repair, or removal of the reservoir by December 1 of this year.

They were instructed to clear by February 1 of next year vegetation that was impeding proper inspection of the reservoir and was also posing a safety hazard, and to start improvements of the reservoir itself on December 1, 2023.

In January, the owners asked the Engineering Division to extend the deadlines.

Cats Herded

At the March 11 meeting of the Board of Land and Natural Resources, the Engineering Division asked the board to authorize its chair, DLNR director Suzanne Case, to extend the study submission, dam safety permit application, and vegetation clearing deadlines by three months, and the deadline to start construction of improvements to six months after the board approved the dam safety permit.

"While the three-month delay requested by the owners may not be warranted, it may still be the most expeditious path to improving the safety of the structure. Imposing large fines immediately might stop the momentum of the owner concurrence and consultant studies while not providing any significant acceleration of progress toward dam safety. ... However, based on history of inaction, we recommend pre-approving enforcement actions should the new deadlines be missed," the division stated in its report to the board.

The division recommended fining the owners \$5,000 if they failed to submit the technical studies on time. If they missed the deadlines to submit their permit application, to clear vegetation, or to execute a contract to do the permitted construction work, the division recommended fining the owners \$20,000 for each missed deadline.

If they failed to pay any of the fines associated with missed deadlines, the division also recommended that the board pre-approve fines of \$5,000 a day until

those fines are paid.

Finally, the division recommended authorizing the board's chair to further restrict the water level in the reservoir to five feet or some "other level deemed necessary."

At the meeting, Chang told the board that regardless of whether the reservoir is owned by a single owner or jointly owned, the owners have a duty to make the dam safe. He said his staff had identified 13 outstanding safety issues with the Waiakalua Reservoir.

"Because of the lack of progress, this is a fair solution," he said of the pre-approved fines.

Board member Vernon Char seemed baffled by the fact that so many owners were responsible for the reservoir.

Gina Belleau of the division's dam safety section read the department's administrative rules, which state that an owner includes "any person who has a right, title, or interest in or to the dam or reservoir or to the property upon which the dam or appurtenant work is located or proposed to be located."

That means that the CPR owners' shared interest in the TMK parcels that have some part of the reservoir on them qualifies them as owners, even if their individual lots don't contain any reservoir features.

Board chair Case noted that the state Department of the Attorney general reviewed the case and agreed that the nine identified owners were liable for the reservoir's management.

"If this fine went into place because they missed these deadlines and someone were to challenge their liability for it, we would certainly deal with it at that point," she said.

Darrell Holowaychuk of Alberta, Canada, has been an owner since 2010, who has been working with the Engineering Division over the years to help bring the reservoir into compliance.

Although he did not formally request a contested case hearing, he did object to the Engineering Division's proposal of pre-approved fines, calling them "confrontational and threatening." He also said the proposed extended deadlines were arbitrary and possibly too short.

In oral and written testimony, he argued that the state was somewhat responsible for the predicament of having so many owners involved.

"In the time I've been there, there have been seven ownership changes," he said, noting in written testimony that during that time, "at least three of the owners refused to return calls or emails to the other

owners regarding the dam."

"Yes, it's a 'buyer beware' and they should know, but they aren't informed properly prior to the sales," he told the board.

"The state decided to CPR those lands. The state decided to have nine owners of a very critical piece of infrastructure," he said. And because of that, he continued, "we need to look at it as a partnership."

Because the dam had been found to have the potential of killing people, Holowaychuk said, "the state should be sending notification to people below the dam [and] make sure there are no homes or illegal encampments. ... If safety is the number one issue, that has to happen. I can't do it."

He also said that prospective dam owners should be made aware of their legal responsibilities during the purchase of the land, noting that he only became aware of the DLNR's dam and reservoir rules last year, while conducting research to respond to the Engineering Division's September deficiency notice.

"When I went to research these Administrative Rules, I found that they were adopted November 22, 2010. I bring this up as I am wondering why this informational document was not brought to the attention of the owners or referenced until eleven years later in 2021? It would benefit all DAM owners not just the owners of Waiakalua Reservoir if they were made aware of this document and given a link to the document as it would greatly help them understand their responsibilities as DAM owners," he stated in written testimony.

While he opposed the current proposed fines, he did admit that the Engineering Division's failure to follow up on its threat of fines over the years "bred complacency with owners."

"It's a learning curve. I feel we need to work together and not be confrontational. ... It's a wrong time to be punishing people to resolve a complex issue," he said.

He reported that the current owners have come together and are working towards remediating the dam. They hired a consulting engineer, Karl Bromwell, submitted a vegetation removal plan and hired a contractor to do that work, and have designated two local owners to do the required seepage reporting.

"We collectively as a group have been funding the necessary engineering work that is underway to the tune of almost \$100,000 that is on top of the engineering work that was done previously. ...

Continued on the bottom of next page

USGS Studies Describe Extent to Which Pumping Alters Windward O'ahu Streams

Preliminary groundwater modeling results from the U.S. Geological Survey seem to support what staff with the Commission on Water Resource Management believed when they proposed new interim instream flow standards (IIFS) for He'eia Stream in Windward O'ahu more than a year ago: That withdrawals from the Honolulu Board of Water Supply's (BWS) tunnels and wells in the area were reducing base flow in that stream and others.

At the Water Commission's April 19 meeting, Barry Usagawa, program administrator for the BWS's Water Resources Division, didn't exactly contest the USGS findings, which were reached using an admittedly coarse model. But he did urge the commission to consider water quality, not just quantity, in deciding whether or not to further restrict the BWS's groundwater withdrawals in the region to meet protected public trust uses.

Contaminants from cesspools and former military training sites may be polluting whatever water is returned to He'eia

Stream, he suggested.

"We are in a water shortage situation because of Red Hill on the town side," he said, referring to the groundwater contamination caused by fuel spills from the U.S. Navy's bulk storage facility.

"Any further cutbacks in Kahalu'u-Waihe'e—they're our primary water supply for Kāne'ohe, Kailua and Waimānalo—could create a water shortage condition there, too," he said, reminding the commission that domestic water use is also a public trust use. (The total combined population of Kāne'ohe, Kailua and Waimānalo exceeds 76,000.)

Bulkhead

In the fall of 2020, commission staff proposed a new IIFS of 1.77 million gallons a day for He'eia Stream. Stream users, including non-profit groups involved in restoring and maintaining an ancient Hawaiian fishpond and nearby agricultural fields, had complained about inadequate flow. Commission hydrologist Ayrton Strauch,

who had studied the relationship between groundwater withdrawals and stream flow in the area, said last year that flows into He'eia dropped to a trickle—300,000 gallons a day—in the dry season.

Last June, the Water Commission ordered the BWS to reduce its withdrawals from a tunnel in Ha'ikū to 0.3 million gallons a day, in the hope that that would increase stream flow.

Under the same commission order, the BWS must complete by June 2023 a feasibility study and preliminary engineering design of a 10-foot-thick bulkhead 1,200 feet inside its Ha'ikū Valley tunnel. The bulkhead, which would keep more of the water inside the mountain, is intended to result in more base flow in He'eia Stream.

In recommending the new bulkhead, commission staff noted that the "substantial ecological and cultural values supported by He'eia Stream, including habitat for native amphidromous species, restored native riparian environment, a healthy estuarine and near-shore ecosystem, recreational and aesthetic values, as well as the productivity of the He'eia fishpond and wetland

Continued on next page

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"[W]e are more organized as an ownership group than we have ever been in the twelve years that I have been an owner," Holowaychuk wrote.

Board member Char disagreed with Holowaychuk's suggestion that the state had some culpability in reservoir maintenance because it allowed the lands under the reservoir to be developed into CPRs.

According to the state Department of Commerce and Consumer Affairs, a landowner creates a CPR when the declaration, association bylaws, a map, and a master deed or lease submitted to the state Bureau of Conveyances or the Office of the Assistant Registrar of the Land Court is recorded.

"If the condominium was set up, it was set up by the developer. It was his responsibility to understand what the relationship to the dam was and in turn," turn that responsibility over to future owners, Char said.

Holowaychuk said that was a legal issue that he would leave to others to decide. "I don't want to go there. ... Let's work together," he said.

The newest owner, Theresa Drake, testified that she can't even see the reservoir from her lot and didn't know

anything about it when she bought it in 2018.

"I would like to cooperate, of course. I'm not wealthy. I feel like this could be a money pit for me," she said. Drake is one of the owners who have been regularly reporting on seepage to the Engineering Division since January.

"As a newbie, I'm freaked out about the threats of more fines and more fines and more fines. ... I don't know how I'll be able to manage it in the future. I'm doing what I can now," she said.

She said that the reservoir level is currently at seven feet. "I would be happy to keep it at that level. ... It's still pretty," she said.

Who's Responsible?

In response to some of the issues Holowaychuk raised, Chang noted that maps of the inundation zones beneath each of the state's reservoirs are available online at the Engineering Division's website.

He also said that should a dam failure become likely, the county's emergency management agency would be involved in notifying the public.

The division's Edwin Matsuda added that dams are required to have emergency action plans and that the division worked

with some of the Waiakalua owners on updating theirs a few years ago. He added that the DLNR paid to install water level gages in the reservoir that it monitors, as well.

He stressed the need to have the trees removed. Some dams can withstand overtopping, which causes erosion, but if there are a lot of trees, they create irregularities in flow, he said.

"You start to get more channelized erosion quicker," he said.

If it overtops and erodes, the concern is that an earthen dam will then have a catastrophic failure and all of the water will rush out, Case added.

Matsuda said the division has identified 21 parcels in the inundation area of a simulated dam breach at Waiakalua.

When Holowaychuk noted that the state does not notify people that they are in the inundation zone, Case replied, "There is an implication in your question that it's the state's responsibility to ensure safety. That is the dam owners' responsibility to ensure safety."

In the end, the board unanimously approved the Engineering Division's recommendations, with the added language that the reservoir owners are jointly and severally liable for all fines.

— *Teresa Dawson*

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to support a biocultural food production system, merits restoration of He'eia Stream to pre-tunnel baseflow. ...

"Such action would increase spring flow in Ha'ikū while providing a more reliable source of water supply for HBWS. This solution is expected to increase the natural capacity of the high-elevation groundwater system to store and discharge water to streams and springs in the moku of Ko'olaupoko."

If the BWS determines that constructing the bulkhead is feasible, it has three years to complete construction. Commission staff will then "evaluate the resultant effects on stream baseflow and may amend the interim IFS or amend the HBWS water use permit as needed."

If the BWS finds a new bulkhead infeasible, commission staff will recommend a new IIFS or amend the BWS's water use permit as needed.

Modeling Results

At the commission's April 19 meeting, USGS hydrologist Scot Izuka presented preliminary results from a model of the He'eia and adjacent Waihe'e-Kahalu'u watersheds. Izuka stressed upfront that the results were preliminary and subject to revision, and that they were also based on a model created for a different island-wide study. As a result, the model was "rather coarse"—its resolution, at 500 square feet, is much wider than a stream. It also did not factor in all of the stream reaches.

The He'eia watershed study was done in cooperation with the BWS, while the Waihe'e-Kahalu'u study was done in cooperation with the Water Commission.

Izuka presented maps showing the effects of BWS groundwater wells and tunnels in Ha'ikū, Kahalu'u and Waihe'e, six sources in total.

The map for Ha'ikū tunnel, which was assumed to have withdrawals of 0.53 mgd, showed that the tunnel lowers groundwater levels by at least two feet beyond the immediate watershed.

The tunnel also reduced stream flow not just in He'eia, but in Kahalu'u and "all the way to Waihe'e, probably even farther," he said.

The stories for the other five sources were the same: the effects of BWS withdrawals on groundwater and stream flow extended well beyond the immediate watersheds, even as far as the leeward side of the island.

Water does not care about topography, but follows the path of least resistance,



PHOTO: NOAA

He'eia Stream.

Izuka explained.

When looking at the effect of all six sources, the area impacted was much larger. A total of about 5 mgd was estimated to be withdrawn from the three tunnels, and 1.67 mgd came from the three wells. Those withdrawals resulted in a reduction in stream flow of 3.19 mgd in the Waihe'e - Kahalu'u watershed.

He said the results were not "earth-breaking news," since it was always known the withdrawals would affect stream flow. However, the USGS studies have gone a long way toward quantifying those effects.

Water Quality

After Izuka's presentation, commissioner Mike Buck asked how the USGS results might inform the commission's decisions

on IIFS.

While Izuka sidestepped the question, Dean Uyeno, head of the commission's stream protection and management branch, said that the USGS work supports a lot of the work Strauch had already done.

Strauch added, "We will be developing IFS, understanding that it's pretty much a one-to-one relationship." He said that the commission would be using the information from the USGS studies "as we move forward across Windward O'ahu. We're still digesting the data for now. But yes, we are definitely moving forward on using this."

Usagawa of the BWS seemed concerned that the study results would be used to justify further reduction in withdrawals

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from the tunnels and wells.

He questioned the confidence with which management decisions could be made based on information from a coarse model that did not account for individual dikes.

To conserve water, he also asked whether there was a way to pipe some of the water in He'eia Stream to the lo'i kalo being farmed near the fishpond, rather than letting it flow into the wetland. "The conveyance system should be looked at for losses in addition to cutting us back more," he said.

"Lastly, I was wondering if the study ... would look at water quality, not only quantity," he said.

He noted that the Kahalu'u estuary is "one of the most cesspool-polluted estuaries on the island," with 740 cesspools in the area, he said.

"If you're restoring [land] for farming, the Food Safety Modernization Act lays a lot of food safety conditions on farmers. ... Would you eat leafy vegetables if it

was irrigated with cesspool-contaminated water is my question. I was wondering if at least that would be mentioned in the study or not," he said.

He added that in the course of conducting an environmental impact statement for a proposed learning center in Waihe'e, the BWS discovered that part of the Waihe'e Valley and the neighboring Ka'alaea Valley had unexploded ordnance from the time the area was used for target practice during World War II. He said testing by the federal government found 19,000 mg/L of lead, as well as arsenic and the explosive contaminant RDX.

"That contamination affects farming, to me. If you're only taking two samples and the two are positive and are that high, there are some public health issues there," he said. He added that the BWS has talked to the Army Corps of Engineers and U.S. Rep. Kai Kahele about the possibility of remediating the ordnance sites.

"Unfortunately, there's a ton of these sites around the world they need to remedi-

ate, but I think that needs to happen before we can think about how much water we can return to the stream to promote agriculture when the water and the soils are contaminated," he said.

In any event, the BWS would continue to work with the community and government agencies toward a balanced solution, he said. One possible solution may be pumping a well on land near the state hospital in Kane'ohe.

Commission chair Suzanne Case asked Izuka whether closing a tunnel would increase storage capability in the dikes it taps and increase stream flows on a broader basis.

"Theoretically, yes," Izuka said, adding that it would depend on how the tunnel was closed.

"Bulkheads are usually built at a dike. So if you were to restore it completely to its natural condition, plug up the dikes, it would depend on climate. Climate is a little different from what it was in the 1940s. It may take a little bit longer to restore, but, theoretically, it would restore," he said.

He noted that given the evidence indicating that the tunnels and wells are affecting streams outside the valleys in which they occur, plugging tunnels would restore water to all of the streams from whence it came.

"Just using Ha'ikū tunnel as a mental experiment, if you were to plug that up and the head would build up, it would restore some of the flow in He'eia Stream," he said, noting that some would go to Ioleka'a Stream and as far away as Kahalu'u Stream.

(For more background on issue, see, "Commission Pressures BWS to Meet Proposed He'eia Stream Flow Standards," from our March 2021 issue, and "Water Commission Orders Honolulu BWS To Take Steps to Restore He'eia Stream," from our July 2021 issue. Both are available on our website, www.environment-hawaii.org.)

— T. D.

