

Environment



Hawai'i
a monthly newsletter

The PUC's Fuelish Decision

Time and again, the Public Utilities Commission has seemingly thumbed its nose at the law requiring it to consider the impact its regulated industries have on greenhouse gas emissions when deciding to approve power purchase agreements and rate hikes.

And now, time and again, the Supreme Court is knocking back those decisions. The most recent case involves the PUC's approval of The Gas Company's rate hike request that would let it recover costs associated with infrastructure allowing imports of liquefied natural gas, among other things.

This remand, the subject of our cover piece, comes in addition to another one, involving the power purchase agreement between Hawaiian Electric and Hu Honua. An update to that one is reported on Page Two.

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Court Rebukes PUC Over Approval Of Rate Hike Tied to Liquefied Natural Gas

The Hawai'i Supreme Court has issued a ruling that makes clear what it thinks of the Public Utilities Commission's effort to push the companies it regulates to reduce greenhouse gas emissions.

And that is: Not much.

In a decision issued June 9, the four justices who heard the case found unanimously in favor of the two groups who had appealed a PUC decision allowing The Gas Company, LLC, to raise its rates. The rate increase was needed, the company said, to allow it to recoup costs associated with construction of infrastructure required to import liquefied natural gas (LNG). Although The Gas Company did not specify the exact sources of the fuel, the groups that appealed suspect that much of it would come from fracking, the controversial practice of extracting fossil fuels from deep underground by injecting pressurized liquid into bedrock formations.

Three groups – Life of the Land, Hui Aloha 'Aina o Ka Lei Maile Ali'i, and 350 Hawai'i – sought to intervene when The Gas Company, doing business as

Hawai'i Gas (HG), petitioned the PUC for the rate hike. The PUC did not allow them full intervenor status but did permit them to participate on a limited basis on the question of whether the PUC should disallow as unreasonable costs associated with importing LNG “due to the effects of HG's use of imported LNG on the state's reliance on fossil fuels and greenhouse gas emissions.”

The PUC specifically forbade them to discuss how Hawai'i Gas's use of LNG might impact the environment beyond the state's borders. It also ruled out of bounds any mention of the link between greenhouse gas emissions and climate change, and generalized statements about LNG and fracking.

On December 21, 2018, the commission issued its order allowing Hawai'i Gas a rate increase of 8.39 percent, amounting to about \$9 million a year and giving the company a rate of return on investment of roughly 7.1 percent. The 233-page order was dismissive of the concerns raised by the three groups. Instead, it quoted argument from Hawai'i Gas that concerns over fracking were



PHOTO: DEPARTMENT OF ENERGY

A vessel carrying liquefied natural gas.

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NEW AND NOTEWORTHY

FKW POPs: Since 2012, the Main Hawaiian Islands population of false killer whales has been on the federal endangered species list. For even longer, the whales have been known to suffer serious injury and even death from interactions with fishing gear. Lack or shortages of prey species have been another factor suspected to contribute to the rapid decline of this population over the last three decades.

Finally, as top predators, the animals are threatened by harmful, long-lived pollutants that cannot be metabolized but rather bioaccumulate in their fatty tissue. A recent paper published in *Science of the Total Environment* adds substantially to what is known about just how much these persistent organic pollutants—POP—have ended up in the whales and how they have the potential to disrupt the animals' social structure and ability to reproduce. (See "Life history and social structure as drivers of persistent organic pollutant levels and stable isotopes in Hawaiian false killer whales," by

Michaela Kratofil, Gina Ylitalo, Sabre Mahaffy, Kristi West, and Robin Baird.)

The authors looked at more than 100 samples of blubber and skin taken from animals in all three populations in Hawaiian waters—the Main Hawaiian Islands population, that of the Northwestern Hawaiian Islands, and the pelagic population. The samples were then analyzed for the presence of 79 POPs, including DDT, PCBs, dieldrin, aldrin, heptachlor, chlordane, and other related contaminants. Four of the samples from stranded whales revealed PCB concentrations that were practically off the charts, with the lowest concentration measured, 43,000 nanograms per gram, more than twice the highest suggested health threshold for PCBs. The highest concentration was 110,000 nanograms/gram.

Females that have given birth have lower levels than adult males, since they are able to pass on much of their load of contaminants to nursing offspring. Females that are not known to have given birth had much higher levels, as did sub-adults and juveniles of both sexes.

Analysis of the samples by the clusters to which the MHI whales are known to belong allowed the authors to link the relative levels of contaminants to their likely foraging areas. For example, high levels of agricultural pesticides measured in one cluster could be linked to their habituation of areas off eastern O'ahu, Moloka'i, Lana'i, and western Maui, including areas where pineapple was the primary agricultural crop and heptachlor and related chemicals were heavily applied for decades.

The authors suggest that work be done to assess the long-term effects of these chemicals on the health of the false killer whale populations. They write, "given the longevity of this species . . . , we recommend incorporating the risk of POPs and potential adverse health effects associated with them into management of all three false killer whale populations when considering their long-term viability."

Hu Honua on Pause: More than a year ago, the state Supreme Court reversed a decision by the Public Utilities Commission and, as Life of the Land had requested, found that the agency had failed to consider the impact of greenhouse gas emissions by the Hu Honua biomass power plant being built on the Hamakua Coast just north of Hilo. The commission was instructed to reconsider its approval of the power purchase agreement between Hu Honua and Hawaiian Electric, this time weighing the plant's greenhouse gas contributions.

In May and again in June, Hu Honua wrote the commission, requesting that it "establish a reasonable procedural schedule for the remainder of this proceeding at the earliest."

Henry Curtis, executive director of Life of the Land, asked the commission to strike Hu Honua's letters from the record, arguing that they included erroneous claims.

"Even if all discretionary permits were issued this year," he wrote, "Hu Honua could not become operational this year, since they are fighting a legal requirement" with Hawai'i County not yet having issued a permit that will allow the company to use part of its leased land for a truck scale and storage of the logs it intends to burn.

Hu Honua's attorney Bradley Dixon countered that the matter has no impact on the company's operational ability. "These uses on the adjacent parcel are being sought by Hu Honua to improve the efficiency of Hu Honua's operations, but they are not required," Dixon stated. The PUC had not replied to either party by late June.

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Quote of the Month

*"I was very disappointed with
[the fishers], to tell you the truth.
They didn't seem to recognize ...
the urgency."*

— Ray Hilborn, Wespac Scientific
and Statistical Committee

EDITORIAL

Reflections on Turning Thirty

Thirty years. Three decades. Three hundred and sixty issues. If you lined up all that we've written on a bookshelf, you'd need a long one. I've lost count of the number of pages, but it comes to well over 10,000.

And almost all of that has been original reporting from the two career journalists that make up the *Environment Hawai'i* staff: Teresa Dawson, who has been writing for the newsletter since 1997, and I, who was in on its birth back in July 1990.

The changes since have occurred at a breakneck pace. The internet wasn't a thing back then, and now it seems as though it's all-consuming. Honolulu had two daily papers, now reduced to one – with an ever diminishing staff, at that.

In 1990, the cost of a subscription was \$35 a year for individuals; it is now twice that, and still covers just a fraction of our costs. (Reduced-rate subscriptions remain available at \$45, just because

we want to put our newsletter into the hands of anyone who wants it.)

So yes, changes have been momentous.

But throughout, there has been a constant: our dedication to bringing you independent, deeply researched, non-partisan reporting on matters of utmost importance to Hawai'i's natural resources and the state's lived environment.

The work – all of it available at our website, most of it free of charge – speaks for itself. It has wrought changes in policies and personnel at the federal and state levels: from new rules for the Conservation District to the dismissal of Libert Landgraf; from blowing up plans for the Ka 'u spaceport to detailing the punking of NELHA by a con artist; from state agencies' overpayment for land to the inside stories of Kitty Simonds' Wespac fiefdom. And so very much more.

We hope you appreciate the work

we have done and the contributions we have made over the years. And we want to be able to keep on providing readers with uncompromising reports that have immediate import but that also help to build a record. Over the last 30 years, innumerable critical events that provide insight into why things happened the way they did would have gone unremarked without our reports.

The best way to show your appreciation is by making a donation to help ensure we are able to continue bringing you the best environmental journalism in the state. Any amount is appreciated, but we will be giving special acknowledgement to donors of \$300 or more (just \$10 for every year we've been around).

On a personal note, I have naught but gratitude to our readers for giving me the privilege of decades of work that I have found meaningful. Few journalists could ask for more. *Mahalo nui!*

— **Patricia Tummons**

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“inapposite” to the proceeding.

Two of the groups – Life of the Land and Hui Aloha 'Aina – then filed their appeal to the Supreme Court.

No Room to Quibble

The Supreme Court's judgment leaves no room for further quibbling about the PUC's responsibility to consider greenhouse gas emissions and the impact of climate change in the matters that come before it.

In a succinct summation of the issues raised in the appeal and the resolution of them, Chief Justice Mark Recktenwald and Associate Justices Paula Nakayama, Sabrina McKenna, and Richard Pollack (Associate Justice Michael Wilson recused himself after oral arguments were made), first dispense with the issue of standing. Hawai'i Gas had argued that the groups should not have been granted standing to appeal to the court.

The justices dismissed the claim. The appellants met the two-pronged test for standing to bring the appeal since “they demonstrated their members' right to a clean and healthful environment was especially, personally, and adversely affected by the PUC's Decision and Order, and they were participants in HG's contested case.”

As to the question of whether the PUC had complied with the Hawai'i law requiring it to consider the need to reduce the state's reliance on fossil fuels, the court found that the commission “did not fulfill its obligations under [Hawai'i Revised Statutes] Section 269-6(b) because the Decision and Order simply reiterated HG's representations that its LNG projects would decrease GHG [greenhouse gas] emissions. Further, the PUC's geographic limitation demonstrated that the PUC did not intend to consider GHG emissions from production, development, and

transportation of LNG occurring outside of the state. Without that information, however, the PUC could not have explicitly considered the hidden and long-term costs of the state's reliance on fossil fuels.”

The Supreme Court also determined that the PUC had violated the groups' due-process rights by denying them the opportunity to discuss greenhouse gas emissions.

On two questions relating to constitutional obligations to protect native Hawaiian practices and to exercise its role as trustee of Hawai'i's natural resources, the court determined that because the PUC had improperly curtailed the ability of the groups to raise substantive questions on these issues, “the record is not sufficiently developed” for the court to address them. “On remand, the PUC should consider its constitutional obligations,” the justices wrote.

Continued on next page

One matter the groups raised was definitively rejected by the court. The groups had argued that the PUC abused its discretion by not promulgating rules to assess greenhouse gas emissions. “The PUC did not attempt to bypass a rule, amended rule, or pending rule concerning how it should measure GHG emissions,” the justices found.

Beyond the Borders

The court put the PUC’s order in context. It noted that in December 2017, just four days before the PUC set its procedural schedule for hearing the rate increase request, the court issued its opinion in an appeal of an earlier PUC decision involving a power purchase agreement between Maui Electric Co. (MECO) and HC&S, which operated a power plant at Pu‘unene.

The Sierra Club had asked the PUC to be granted intervenor status or, failing that, to be allowed to participate in the proceeding. The PUC denied the request on both counts, and the Sierra Club appealed. In deciding that appeal, the justices said, “we held that there is a ‘protectable property interest’ in the ‘right to a clean and healthful environment,’” as guaranteed in the Hawai‘i Constitution and in HRS Chapter 269, the law governing the PUC. The case was remanded to the Intermediate Court of Appeals, which was instructed to address the matter of whether the PUC had abused its discretion in denying the request of the Sierra Club to intervene. (By the time the Supreme Court issued its decision in the Maui Electric case, the Pu‘unene plant, owned by Alexander & Baldwin, had been removed from service. In January 2018, the Sierra Club withdrew its appeal.)

In an order issued in the Hawai‘i Gas case on February 6, 2018, the PUC denied the groups’ request to intervene but did grant limited standing to participate in the proceeding.

Just how limited?

The PUC summed up issues the groups could address in one sentence: “whether the commission should disal-

low as unreasonable [Hawai‘i Gas’s] LNG costs due to the effect of [its] use of imported LNG on the state’s reliance on fossil fuels and greenhouse gas emissions.”

On the other hand, the list of issues deemed to be “outside the scope of this rate proceeding” ran on for several hundred words. Among those out-of-bounds subjects was the participants’ “asserted interest in a clean and healthful environment beyond the state’s borders...,” “evidence of a causal connection between greenhouse gas emissions and climate change,” whether the company’s use of LNG should be banned or prohibited by law, and whether fracking and all new oil, coal, and gas projects should be banned.

The participants’ interest in a healthful environment outside the borders of Hawai‘i, the PUC said, was not guaranteed by the state Constitution. As to the link between greenhouse gas emissions and climate change, the PUC dispensed with this by merely taking “official notice” of legislative actions that made such connection explicit.

With those constraints, the PUC had little difficulty finding in favor of Hawai‘i Gas. The groups opposed to the rate increase, the PUC stated in its order, “have not produced any credible evidence” that contradicts the company’s evidence or its statements that greenhouse gas production inside the state would increase with the use of LNG. Instead, the groups “rely on general assertions, without credible evidentiary support, that [HG’s] use of imported LNG will increase greenhouse gas emissions.”

‘Appellants Are Correct’

The court didn’t buy it. The commission, it found, violated the specific language of HRS Section 269-6(b), which requires it to “explicitly consider, quantitatively or qualitatively, the effect of the state’s reliance on fossil fuels on ... greenhouse gas emissions.”

Both the PUC and Hawai‘i Gas argued to the court that the “plain language” of the law doesn’t require con-

sideration of greenhouse gases beyond the state’s borders. The company’s own analysis of the impact on greenhouse gas emissions that would result from the use of LNG in Hawai‘i, the PUC argued, provided the “only credible evidence in the record.”

On this point, the court wrote, “Appellants are correct.” In contrast to the PUC’s reading of the “plain language” of the law, “We note that the plain language of HRS Section 269-6(b) does not limit the PUC’s consideration of [greenhouse gas] emissions to those only occurring within the state.”

The court went on to point out that in the Maui Electric decision, “we noted ‘a primary purpose’ of the statute is to ‘require the [PUC] to consider the *hidden and long-term costs* of reliance on fossil fuels, which subjects the state and its residents to ‘increased air pollution’ and ‘potentially harmful climate change due to the release of harmful greenhouse gases.’”

In the present case, the justices agreed with the groups that the company “has quite literally ‘hidden’ the GHG emissions impact of its imported LNG. The ‘hidden’ GHG emissions impact Appellants are concerned with include GHG emissions from the extraction, development, production, and transportation of imported LNG, which occur out-of-state, but which, nonetheless impact Hawai‘i due to the global nature of GHG emissions. We agree with this contention.”

Referring to Act 234 of the 2007 Legislature, which established the Greenhouse Gas Emissions Reduction Task Force, the court noted that even then, the Legislature was concerned with minimizing “leakage” – the reduction of in-state emissions that comes at the cost of increases elsewhere.

“In this rate proceeding, HG and the PUC have largely disregarded any possible GHG emission leakage from imported LNG,” the court wrote. In this, “the PUC’s action was contrary to law and, therefore, an abuse of discretion.”

Continued on next page

Court Upholds Lana'i Resort's Use Of High-Level Aquifer for Irrigation

The Hawai'i Supreme Court has upheld the decision of the state Land Use Commission in a dispute over water on Lana'i that goes back three decades, allowing the use of brackish water from the island's high-level aquifer to be used to irrigate Lana'i Resort's Manele golf course.

But the decision in *Lanaians for Sensible Growth vs. Land Use Commission et al.*, released on May 15, has to be counted as one of the more fractured ones in the court's history, with three of the five justices writing separate opinions. One attorney involved in the litigation described it as convoluted. Ben Kudo, who represented Lana'i Resorts, LLC, told *Environment Hawai'i*, "At this time we are still analyzing different aspects of the Supreme Court holding so we don't have all of the answers."

Counsel for the Native Hawaiian Legal Corporation, which brought the appeal to the Supreme Court, did not respond to several requests for comment.

The opinion of the court was unreservedly agreed to by just two associate justices—Richard Pollack, who authored it, and Sabrina McKenna, who joined with him. Associate Justice Michael Wilson joined in part, but dissented from the conclusion. Chief Justice Mark Recktenwald, joined by Associate Justice Paula Nakayama, dissented from Pollack's analysis but joined in the judgment.

In other words, the decision was 4-1, with Wilson alone in wanting to see the dispute remanded to the LUC, giving it a fifth bite at the apple. (Previous LUC votes on the matter occurred in 1991, 1996, 2010, and 2017.)

The history of litigation is extensive. At the crux of it is the question of exactly what the commission intended when it included Condition 10 in the original 1991 decision and order, which approved the petition of Castle & Cooke Resorts to develop the Manele golf course.

That condition provides that the resort "shall not utilize the potable water from the high level groundwater aquifer for the golf course irrigation use, and shall instead develop and utilize only alternative non-potable sources of water (e.g., brackish water, reclaimed sewage effluent) for golf course irrigation requirements."

As the LUC noted in its 1996 decision on an order to show cause as to why the resort should not be found to be in violation of that condition, "Throughout the original proceedings ... Petitioner [the resort] used the term 'high level aquifer' to be synonymous with potable water. Petitioner defined alternative sources of

Continued on next page

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'Just a Rate Case'

In defending its order approving the rate hike, the PUC noted that this was 'just a rate case,' with the commission already having met the requirements of the law in earlier dockets that approved the projects associated with the importation of liquefied natural gas.

Specifically, with respect to LNG, Hawai'i Gas sought PUC approval in 2014 for investing in improvements that would allow it to displace 30 percent of its synthetic natural gas, produced from imported oil, with LNG. As with this case, Life of the Land sought to intervene, but, again as in this case, was granted only participant status on the limited issue of whether the project for which Hawai'i Gas was seeking approval was reasonable. The group submitted articles and statements of position that pointed to the dangers inherent in fracking, employed by the British Columbia firm that was providing LNG to Hawai'i Gas, outlined the threats posed by climate change brought on by increasing use of fossil

fuels, and even cited to HRS Section 269-b(b). The gas company objected, arguing that the group's arguments went well beyond the narrow scope under which its participation was allowed. In the end, Hawai'i Gas was allowed to make the investment, on the condition, however, that it would not be able to "pass through to its customers any costs associated with the project ... without subsequent commission approval."

Life of the Land did not appeal that decision. However, by 2018, the legal landscape had changed. For one thing, Hawai'i law changed in 2016 to allow direct appeals to the Hawai'i Supreme Court of decisions from the PUC and other regulatory agencies. For another, the Supreme Court had issued its decision in MECO.

That decision was pivotal. In MECO, the court had affirmed the obligation of the PUC to address greenhouse emissions, writing that the requirement for the commission "to reduce reliance on fossil fuels and to consider greenhouse gas emissions applies to the

fulfillment of all of the commission's duties." Here, in approving the gas company's rate hike, the commission failed to meet that requirement in that, first, it didn't "explicitly consider all of the GHG emission impacts" of the company's projects tied to LNG since it had "erroneously previously determined that the out-of-state GHG emissions ... were beyond the scope of the rate proceeding," and, second, that it "merely restat[ed], without substantiating, HG's representation that its LNG projects would decrease GHG emissions."

By so stringently limiting the scope of the arguments that the groups could raise, the PUC also violated their due-process rights, the court held. This had the effect of "truncating appellants' property interest in a manner not required under the plain language of HRS Section 269-6(b), and in a manner contrary to MECO."

The order approving the rate hike was thus remanded to the PUC.

— **Patricia Tummons**

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water as water sources outside of the high level aquifer. Petitioner's definition also included water reclamation and effluent. Petitioner noted that alternate sources were 'everything outside of the high level aquifer or outside of the influence of or external factors that would influence the high level aquifer.'

At the time of the hearing on the show-cause order, the resort was drawing brackish water from Wells 1 and 9 in the high-level aquifer for irrigation purposes. The outcome of the hearing was a finding that the resort's use of that water was a violation of condition 10. The resort was ordered to cease that use and inform the commission of how it was intending to develop other sources of water.

Appeals and remands followed, culminating in the LUC issuing an order in 2017 that became the subject of the most recent Supreme Court ruling.

That 2017 order qualified Condition 10, allowing the resort to draw irrigation water from the high level aquifer so long as it did not meet Maui County drinking water standards. The LUC found that the resort had shown the water was, indeed, brackish and per se "non-potable," and therefore using it for irrigation purposes was allowed under the original Condition 10.

Yet some brackish water is potable, if the chloride content is low enough. This fact was at the heart of the direct appeal to the Supreme Court made by the Lanaians for Sensible Growth, which also argued that the LUC had violated the public trust doctrine in its order.

Pollack discussed at length the distinction between potable and brackish water, finding that the LUC had departed from the "plain meaning" of brackish and instead used a "special interpretation of the term."

"Thus," the order states, "the 2017 LUC's interpretation divorces the term 'brackish' from Condition 10's overarching requirement that the water utilized by the resort be non-potable in the first instance. ... Simply being brackish,

however, does not make water non-potable within the meaning of Condition 10. The key inquiry instead is whether the water at issue fulfills the common meaning of the term 'potable,' which this court has stated to be 'suitable for drinking.' ... Brackish water is therefore 'potable' if it is suitable for drinking under county water quality standards and 'non-potable' if it is not."

Chief Justice Recktenwald parted company with his colleagues over this point. In referring to county water standards, he writes, the majority "creates a standard contrary to the text of the condition, deprives the resort of fair warning of its ongoing obligations under the LUC's order, and provides little useful guidance to the resort for future water use."

Nothing in Condition 10 prevented the resort from using brackish water from the high level aquifer, Recktenwald wrote. In the earlier Supreme Court decision involving the Lana'i resort's use of Wells 1 and 9, tapping from the high-level aquifer, Recktenwald pointed out, the court had agreed with the resort that Condition 10 did not preclude their use as a source of irrigation water and instead "suggest[ed] that the use of these wells, and their brackish water supply, was permissible."

Associate Justice Wilson agreed that the LUC had failed to define the terms "potable" and "non-potable" in Condition 10. But he did not agree with Pollack's finding that the LUC had not abused its discretion in improperly applying the term "potable." "In my view," he wrote, "if the correct standard had been properly applied by the LUC in 2017, its finding in 1991 that the water from Wells 1 and 9 was not potable would not have been clearly erroneous."

In other words, Wilson's position is that the wrong standard of potability was used by the LUC in 1991 and that it abused its discretion in 2017 by upholding an order that was based on that standard. Because of that, he would have had the case remanded to the LUC

for an evidentiary hearing to determine whether "potable" brackish water was being used by the resort, in violation of Condition 10.

Maui County Standards

The on-the-ground effect of the ruling, which affirmed the 2017 LUC order, would seem to be limited. According to the resort-owned Lana'i Water Company, Wells 1 and 9 are currently out of service.

Should the company wish to begin pumping from them again, the water would need to have a chloride content in excess of what Maui County would allow in its potable water.

According to Jeff Pearson, director of the Maui Department of Water Supply, the county uses secondary drinking water standards set by the state Department of Health, which in turn is charged with enforcing standards of the U.S. Environmental Protection Agency. "The USEPA secondary standard for chloride is 250 mg/L," he noted. "The DWS may occasionally blend groundwater with high chlorides with other sources for aesthetic reasons (salty taste) or technical effects (corrosion of pipes and material). However, high chlorides may be an indication of aquifer upconing, so that reduced pumpage of the well in question is the preferred action long-term."

The Maui County Code defines potable water as "water that meets the standards established by the [state] Department of Health as suitable for cooking or drinking water purposes. A supply of water that at one time met the standards established by the Department of Health as potable water may not be used for golf course irrigation or other non-domestic uses, regardless of whether it is rendered non-potable through such activities including, but not limited to, mixing or blending with any source of non-potable water, storage in ponds or reservoirs, transmission through ditch systems, or exceeding the established pump capacity for a groundwater well."

— *Patricia Tummons*

Council Looks to Ease Fishing Restrictions As Industry Grapples with Pandemic Impacts

Book-ended by opening and closing Christian prayers from chair Archie Soliai, the federal Western Pacific Fishery Management Council's June meeting included the near-unanimous approval of a letter to President Donald Trump, commending him for lifting the commercial fishing ban in the Northeast Canyons and Seamounts Marine National Monument established by President Barack Obama.

The letter also thanks Trump for the millions of dollars in funding to fishery participants affected by the COVID-19 pandemic, including \$4.3 million to the state of Hawai'i, \$2.5 million to American Samoa, and \$1 million each to Guam and the Commonwealth of the Northern Mariana Islands.

But according to testimony from Hawai'i Longline Association executive director and former council staffer Eric Kingma, that money is just a fraction of the losses suffered this year due to government restrictions aimed at stemming the spread of the deadly virus.

What's more, he noted in a summary submitted to the council, Hawai'i longline vessels did not access any of that federal funding because their "operational and employment structure do not readily fit the [small business assistance] program criteria (e.g. captains and crew are 1099 independent contractors with large percentage of crew foreign workers; little to no loans, rent, or utilities)."

The Hawai'i longline fishery has lost \$15 million in vessel revenue alone in the past three months, Kingma told the council. He added, "If these conditions persist through the end of the year, we're looking at a \$50 million loss through our fleet. I'm kind of optimistic and pleased no vessel has packed it in and gone out of business. If these conditions persist ... we are going to lose some vessels. Without tourism opening up in Hawai'i, our market is in a weak position," he added.

Hawai'i Gov. David Ige last month announced that visitors may forgo the current 14-day quarantine if they get a test showing they are coronavirus-free shortly before they depart. With tourism possibly increasing under these new conditions, council member Michael Goto expressed his hope that the pelagic longline market will recover. "Hopefully, we've gotten

through the worst bit," said Goto, who also runs the Honolulu fish auction.

To aid the recovery, the council recommended that the National Marine Fisheries Service not draft any burdensome management measures to address the take of federally protected species by the Hawai'i deep-set or American Samoa longline fleets. The council pointed to two recent executive orders issued by Trump, one regarding the promotion of American seafood competitiveness and economic growth, and another regarding regulatory relief to support economic recovery.

The National Marine Fisheries Service is in the process of completing biological opinions (BiOp) and incidental take statements for those fleets that will allow for limited bycatch of protected species. As with last year's regarding the Hawai'i shallow-set fishery, those BiOps will include reasonable and prudent measures (RPMs) to protect endangered loggerhead and leatherback sea turtles and threatened oceanic whitetip sharks and giant manta rays.

Among other things, the BiOp for the Hawai'i shallow-set longline fishery, which targets swordfish, called for an annual catch limit on the take of leatherbacks, as well as vessel and trip limits for both turtle species. In comment letters on NMFS's proposed rules to implement the protection measures in the BiOp, both Earthjustice — which represents conservation groups who have sued NMFS over its management of the shallow-set fishery — and an attorney for HLA have criticized various components as too lax or too restrictive, respectively.

While the final rules have not yet been released, the council argued that similar measures should not be applied to the Hawai'i deep-set and American Samoa longline fleets because they have a relatively small impact on leatherbacks, giant manta rays, and oceanic whitetip sharks compared to foreign fisheries. Also, neither fleet has 100 percent observer coverage, which is required in the shallow-set fishery.

The council plans to come up with specific RPMs at its September meeting. These will likely include a recommendation regarding improved handling techniques.

At the council's Scientific and Statistical Committee meeting, held early last month, chair Jim Lynch said proper handling techniques could be very important to reducing the amount of trailing gear on animals that are hooked and released.

While the committee has supported the development by the fishing industry of protective measures, the industry hasn't yet offered anything specific.

"In our conversations with the industry, I was very disappointed with them, to tell you the truth. They didn't seem to recognize what I would call the urgency. They're either going to be told what to do or develop what to do. They didn't seem to have the organizational motivation to produce their own plan," committee member Ray Hilborn said of a recent meeting between SSC members and Hawai'i longline fishery members.

"They say, 'Well, we could do some better crew training ... and we'll call it a day.' I have a feeling that's not going to wash," he added.

Committee member Steve Martell echoed Hilborn's sentiment, adding that one approach might be to have the industry develop a legally binding bycatch plan. "That puts the onus on them to self-regulate to certain limits. However you want to manage it," Martell said.

Given the fishery's current circumstances, Martell conceded that Kingma has "been under a lot of duress with sales and fleet panicking."

Committee member Milani Chaloupka then reminded members that the Hawai'i deep-set and American Samoa longline fisheries catch very few loggerheads or leatherbacks. "It's important not to impose unnecessary economic burdens," he said.

Kingma testified, "For obvious reasons we've been focused on significant impacts of COVID. ... I think the timing is such that if COVID never happened, we'd be further along. [It's] not necessarily the greatest excuse, but it is a reality."

"We are a small percentage of effort in the Pacific. It's tough for us to swallow sometimes when we're faced with restrictive fishing measures," he said. If given the chance to devise its own plan, Kingma said he thought the Hawai'i fishery has an opportunity to lead other countries.

At the council meeting, a handful of conservationists testified in support of setting a catch limit for oceanic whitetips

Continued on next page

and of identifying handling techniques that would increase the likelihood that sharks released alive will survive.

Brett Hardy of Earthjustice reminded council members that their recommendations to protect the sharks must address the international overfishing, as well as the U.S. fleets' contribution to that overfishing. According to a draft 2019 Stock Assessment and Fishery Evaluation report, the American Samoa longline fishery caught an estimated 892 oceanic whitetips last year, and the Hawai'i deep-set longline fleet caught an estimated 2,122 of them.

Even if the relative impact of U.S. vessels is small, the council is still required to develop measures that address that U.S. contribution to overfishing. "They must do something," she said.

Executive Orders

In response to Trump's executive orders promoting American seafood competition and supporting economic recovery, NOAA Fisheries assistant administrator Chris Oliver has asked regional fishery councils to prioritize a list of actions to ease burdens on domestic fishing, including what regulations should be rescinded or modified. The list is due in November.

In addition to the letter Soliai and Simonds already sent to Trump, Simonds encouraged council members to add to a list that staff had drafted.

"One of our biggest issues has been protected species. ... Our shallow-set BiOp took 435 days to completion. The fishery is not operating under the new [rules]. The feds are working on comments. If you add that in, it's 600 days. It's unconscionable," she said.

The SSC voted at its June meeting to establish a subgroup to work with council staff on drafting recommendations.

Guam council member Michael Duenas suggested the renegotiation of the Compact of Free Association to regain fishing grounds lost to the Federated States of Micronesia. He also wanted Congress to revisit the Billfish Conservation Act, which prohibits the sale to the U.S. mainland of billfish caught in the Pacific. "It's just not right that billfish in our area for the most part is not overfished. We should be able to get our fish to the mainland," he said.

Chair Soliai complained about what he said were NOAA's "very unfair" recusal determinations for council members,

which prevent employees of companies with potential conflicts from voting on matters that affect those companies.

Hawai'i council member Ed Wata-mura also raised his concerns about the billfish act, as well as the marine national monuments. He criticized former President Barack Obama's extension of the Papahānaumokuākea Marine National Monument out to 200 nautical miles as "underhanded and deceptive."

With regard to protected species, Wata-mura called fishing restrictions under the Endangered Species Act and Marine Mammal Protection Act unnecessary and unwarranted. "The least impactful threat is from our fishers," he said. He added that the current closure of fishing groups south of the Main Hawaiian Islands (known as the Southern Exclusion Zone, or SEZ) to protect false killer whales was unconscionable, as was NMFS's closure last year of the Hawai'i shallow-set fishery due to excessive take of loggerhead sea turtles.

Goto also pushed for the reopening of the SEZ, especially since a recent stock assessment by the Pacific Islands Fisheries Science Center suggests that the pelagic population of false killer whales is larger than previously thought. "It's just another part of the U.S. EEZ we're being denied access to," he said.

In response to Duenas's suggestion regarding Guam's marine boundary, Michael Brakke of the U.S. State Department said any action to remedy that falls outside the scope of the executive orders. NMFS Pacific Islands Regional Office administrator Mike Tosatto also urged council members to make recommendations that fall under what is being requested in the orders.

"Clearly there are some that could increase productivity of the fisheries. To the extent we remain consistent with ESA and MMPA, these can be considered. Let's keep focus. Because some of them frankly would not be, removal would not be consistent with those acts. It's not the best use of effort to expend, going down those roads," Tosatto said, adding, "I think you should think big, then curtail the focus to those with a chance of success."

Recommendations that would require a change in the law (such as the Billfish Conservation Act), would not likely be successful, he added.

HLA director Eric Kingma testified in support of opening the SEZ. "With

the most recent information about false killer whales, it's likely the fishery was never a strategic stock. [The fishing ban in the SEZ] could be lifted very, very quickly and do a lot of good," he said. (The National Marine Fisheries Service is in the process of evaluating criteria to reopen the SEZ.)

"There are things we can identify quickly and the Fisheries Service can act on it quickly, rather than waiting for the fall. ... I recommend we move as fast as we can," he said.

Tosatto reminded the council that the executive order on seafood competition calls for more than just a list of recommendations. Those recommendations must also include a proposal to implement or initiate within a year. "You have a task that is more than removal of burdens on the fishery," he said.

Simonds said the council was aware of its obligations, but that covering everything in the order at the June meeting would be burdensome. "This was just one item that was chosen from the EO. People understand the council is going to be following both EOs. We just concentrated on section 4 [regarding regulations to be removed]. The report is going to be presented to the council at its September meeting. There's a lot of work. We can't just say 'Remove this, remove that.' We have to explain, have examples," she said.

David Sakoda, representing the state of Hawai'i on the council, said the state would like an opportunity to review the list of recommendations before it's finalized and submitted to the council for approval. "And every member should have that opportunity, too," he said.



Hawai'i Reps Continue Standoff with Council

In recent months, the state of Hawai'i's representatives on the council have clashed with the council and staff from the National Oceanic and Atmospheric Administration over a variety of issues, mainly those concerning the council's involvement in the management of state marine resources.

At the council's March meeting, Ryan Okano, who was then the state's represen-

Continued on next page

tative on the council, objected to the inclusion in the agenda of a status update by the state on the aquarium fishing trade, which is the subject of ongoing litigation and occurs exclusively in state waters. The council chose to keep the matter on the agenda, but Okano warned that when the time came to hear it, "you guys can talk about 'em. We not gon' present nothing."

When the time came, attorney Jim Lynch, chair of the council's Scientific and Statistical Committee, updated the council. In his private practice, Lynch represents a group of commercial aquarium fishers.

The June meeting saw a continuation of that friction.

On May 8, in response to an invitation from Peter Navarro of the U.S. Office of Trade and Manufacturing Policy during a conference call on the executive order promoting American competition, Simonds and Soliai sent a letter to Trump asking him to "please consider lifting the fishing restrictions in the Pacific marine national monuments," including those for the Northwestern Hawaiian Islands (known as Papahānaumokuākea) and the Pacific Remote Island Areas.

"[Fishing] restrictions in the Pacific marine national monuments are impeding America's three main tuna fisheries in the Pacific and the StarKist tuna cannery in American Samoa from operating at optimal levels and that these fishing restrictions are unnecessary as they have no proven conservation benefit," they wrote. (Soliai is in charge of government and community relations at StarKist Samoa.)

David Sakoda, who represented the state's interest at the June meeting, informed the council that the state didn't necessarily agree with the letter Soliai and Simonds sent. "We don't feel the fishing has been hurt by [the monuments]. And there are conservation benefits," he said.

When it came time to vote on the contents of another letter to Trump, which included the commendation for opening the marine national monument in the Atlantic, Sakoda balked. "I don't know if the state can support the portion that thanks the president or commends the president for modifying the Northeast Canyons and Seamounts Marine National Monument. So I'm going to be voting no," he said.

The rest of the council members voted in favor.

The most pronounced disagreement between the state and the council centered on the approval of a new marine conservation plan for the Pacific Remote Island Areas. (The existing plan expires in August.) Under the Magnuson-Stevens Act, the plan must include Western Pacific community-based demonstration projects and "other coastal improvement projects to foster and promote the management, conservation, and economic enhancement of the Pacific Insular Areas," according to a council summary.

Projects included in the plan would be paid for through the council's Sustainable Fisheries Fund, which receives penalties paid for violations within the U.S. Exclusive Economic Zone in the Western Pacific region, as well as money paid by Hawai'i longliners to Pacific island territories for bigeye tuna quota.

At the council's March meeting, which is when staff first recommended the plan for approval, state Department of Land and Natural Resources director Suzanne Case complained that the state had not been consulted during the council staff's drafting of the PRIA MCP. The draft plan included projects to be undertaken in Hawai'i and Case said she would rather they not be included. Rather, the projects should stick to fisheries under federal jurisdiction, such as pelagics or bottomfish.

Citing a critical investigation published last year by the online news site Civil Beat on the council's use of the Sustainable Fisheries Fund, Case said she wanted to keep a close eye on future council expenditures.

"I've asked for expenditures from the Sustainable Fisheries Fund and haven't gotten any. If there's a place we can look online?" she asked.

When the matter returned to the council last month, Sakoda, representing Case, asked for several amendments to the draft plan, including the inclusion of language requiring transparency and accountability regarding the use of the fund, as well as state concurrence on projects.

Council staff dismissed both of those requests. The plan eventually did include language requiring collaboration with the state, which Sakoda said sufficed. But he questioned the resistance to the transparency language.

NMFS Pacific Islands Regional Office administrator Mike Tosatto replied

that the plan is merely a list of projects that NOAA can provide funding to, in accordance with "a slew of guidelines," including accountability. He said his agency was not looking to add extraordinary requirements.

Simonds added that staff provides reports on how much money has been spent from the Sustainable Fisheries Fund and how much is left. She claimed that contractors and sub-awardees provide reports and that those reports are provided in the council's newsletters. She added, "On the website, I'm not sure if we list all the financial things. ... Maybe you should look at our reports after every meeting that we have. ... They're available to the public." (The council consistently omits links to financial reports in its list of online documents for each council meeting. And for those documents on agenda items that are available online, the staff has a policy of keeping them up for only two weeks after the council meeting.)

"If you could send us those reports, that would be great," Sakoda said, adding that the state just wants to make sure there aren't questions about how the money was spent.

"We'll show you what we do provide that is to the public and talk about it later," Simonds said.

With regard to Case's and Sakoda's request that projects that occur in areas under state jurisdiction not be included in the MCP, Simonds, Tosatto, and NOAA general counsel Fred Tucher rejected that, as well.

Simonds noted that the council funded the fishpond restoration at He'eia Kea in windward O'ahu. Tosatto said the fund could also be used for fisheries education and training.

Tucher said MCP projects aren't necessarily limited to federally managed fisheries. "I appreciate the state's concern, but we do not agree," he said.

"Is there another way you can suggest addressing the state's concerns for things that are primarily not council-managed fisheries?" Sakoda asked, suggesting that the state might object to an MCP project that involved advocating for or against state community-based fishing areas.

"We don't necessarily look at the message to be communicated," Tucher replied.

In the end, the council approved the plan. Sakoda was the sole dissenter.

— *Teresa Dawson*

BOARD TALK

Subsistence Fishing Area at Ha'ena Proves Effective in Protecting Resources

Monitoring confirms it: The Ha'ena Community-Based Subsistence Fishing Area (CBSFA) works.

In October 2014, the Board of Land and Natural Resources approved rules establishing the area over the objections and a contested case hearing request by commercial fishermen Michael Sur and Makani Christensen. Christensen has occasionally worked for the Western Pacific Fishery Management Council.

The Ha'ena CBSFA was the first in the state. Its objective was to protect marine resources by prohibiting the sale of any marine life taken from the area (except invasive seaweed) and by strictly limiting the amount of resources removed, as well as the gear used to do it.

At the Land Board's June 26 meeting, community members, staff with the Department of Land and Natural Resources' Division of Aquatic Resources (DAR), and University of Hawai'i scientists provided a five-year status update on the Ha'ena CBSFA.

According to DAR biologist Heather Ylitalo-Ward, division staff from Maui, O'ahu and Kaua'i all helped collect data from the area. Emily Cadiz, program director for Hui Maka'ainana o Makana, added that her organization developed a community-driven marine monitoring program that looks at the whole watershed. It monitors seasonal trends and cycles, logs catches of local fishermen, determines catch rates, and looks at reproductive organs of fish caught, among many other things, she said.

Every July, the non-profit organization hosts more than 100 families at its workshops, where they learn about sustainable practices, Cadiz said. Since the CBSFA has been established, she said the organization spends more than 10,000 volunteer hours a year engaging the community, particularly its youth.

University of Hawai'i biologist Ku'ulei Rodgers presented some preliminary results of the collaborative efforts of DAR and UH to determine the efficacy of the Ha'ena CBSFA's management plan.

Between 2016 and 2019, she said, more

than 100 surveys a year have been done for the fish, limu and invertebrates. The results were compared with surveys done in 2013-2014 before the establishment of the CBSFA. Separately, she said, DAR and UH continue coral reef surveys at Limahuli, within the CBSFA reserve, that have been going on for decades.

"In 2016, the first year we compared the results, we found significant differences only in the number of fish. No significant differences in biomass inside and outside the CBSFA," she said.

But in 2017, she continued, "we found there was a statistically significant increase in fish populations, in biomass, abundance, number of species, and endemic species. ... After two years, it appeared the reserve was working as intended."

She added that long-term monitoring is important because of short-term fluctuations due to bleaching events, storms, or tsunamis.

In April 2018, Ha'ena experienced a massive flooding event that caused a decline in some fish resources. "We were able to look at these declines and tie them to the freshwater event," she said, adding that the only species impacted were those in shallow waters.

Despite the decline in some fish factors, in 2019, the fish community continued to increase, she said.

"In summary, when we average data across all four years, there was an increase in fish abundance, number, largest size class and diversity of fish. It is higher inside the CBSFA compared to outside," she said.

Hui o Maka'ainana o Makana president Presley Wann said consistent education and enforcement are challenges. "The main problem for us has been consistent community participation," he said. "It is a volunteer group. Even though we did over 100 informational meetings, we're still experiencing over-harvesting of limu — trash bags full — spearfishing and night diving."

He said his organization is working on creating an educational website and on

getting a full-time Makai Watch coordinator to organize volunteer monitors. "It is a full-time job," he said.

He said invasive species are also a concern, particularly the black-lipped tilapia, which "could be one of the greatest threats to our fisheries."

Last year, the group, along with Moloka'i's Hui Malama o Mo'omomi, received the prestigious Equator Prize for their work on resiliency in the face of climate change. Wann said that the international award has led to a lot of different funding organizations wanting to help out. "Where we're lacking now is education. We don't want to burden DOCARE [the DLNR's Division of Conservation and Resources Enforcement]. We want to educate, rather than enforce," he said.

Maui Land Board member Jimmy Gomes thanked Wann for his group's hard work, which also includes helping manage sites within Ha'ena State Park. Gomes asked if the group's key people could help efforts to establish a CBSFA at Mo'omomi.

In 2018, the Land Board approved a request by DAR to hold public hearings on a CBSFA at Mo'omomi, the creation of which was led by Hui Malama o Mo'omomi. But because of opposition from state Rep. Lynn DeCoite and a number of commercial and recreational fishers, the process stalled.

"There is so much pushback from our representative DeCoite [and others.] ... Any kind of help we can get to educate that community there would be greatly appreciated," Gomes said.

Wann said he planned to attend meetings on the Mo'omomi CBSFA. "All we do is when we go there, we're not going to be there to tell them what to do, [but just] tell them what works for Ha'ena. In Ha'ena, it is working," he said.

"Right now, they're the model for Hawai'i. They're a great model. Every island is looking toward them," said Kaua'i Land Board member Tommy Oi.

DAR administrator Brian Neilson said the planned public hearings on the Mo'omomi CBSFA had to be postponed because of the COVID-19 pandemic, but have been rescheduled for mid-August. The public will be able to participate in a virtual format or in person, in a socially distant way, he said. — T.D.

Commission Grants Contested Case On Wailuku Water Waste Allegations

On June 16, the Commission on Water Resource Management granted Wailuku Water Company's (WWC) request for a contested case hearing on allegations that it dumped water diverted by its Waihe'e ditch into a dry stream bed over 16 days between September 2019 and January of this year.

In February, staff had recommended that the commission find the company guilty of a waste violation based on evidence provided in a complaint filed by the community group Hui o Na Wai Eha. Staff had also recommended fining the company \$24,500, directing it to improve communications with its water customers, develop a management plan to address excess supply, seal the release gate where the water was allegedly being dumped from, and make other system repairs.

While a handful of Hui members flew from Maui to Honolulu to testify in support of the recommendations, WWC president Avery Chumbley requested a contested case hearing before any members of the public could testify.

In its petition, WWC contested the waste allegations, as well as the commission's ability to order system repairs and improvements and the development of a management plan.

In addition, the company noted that it had informed commission staff during its investigation last November that diversion structures had been vandalized. Commission staff suggested that the company report it to the police.

"From review of the [February staff] report, WWC learned that the commission staff had received information from the complainant [the Hui] ... to which information WWC had not been given an opportunity to respond. ... Further review of the report made clear that the commission staff did not include information about the vandalism that occurred, and continues to occur, to the diversion and control structures, which would have an impact on the claims of unlawful waste," the petition states.

With regard to the Water Commission staff's February recommendations regarding system improvements, the petition states that as a regulated public utility, WWC cannot borrow funds to improve

the ditch system, purchase equipment, or change water delivery rates without approval from the Public Utilities Commission.

At the Water Commission's meeting June, where staff recommended granting the contested case hearing and authorizing the commission's chair to appoint a hearing officer, Hui president Hokua Pellegrino and the group's attorney, Earthjustice's Isaac Moriwake, asked for clarification on what, exactly, the hearing would be about, since the commission was preempted from taking action in February. They both asked that the commission deny the contested case hearing request and first "flesh out" what the case would cover.

To Water Commission member Keith Kawaoka, representing the Department of Health, Moriwake posited, "Imagine if a violator preempted the DOH investigation process by requesting a contested case before an NOV [notice of violation] is even issued."

"Who are the necessary parties? ... Why isn't the Hui made a lead party?" Moriwake asked, noting that the group was not mentioned in the staff report.

"This is just a free-for-all. We recognize Wailuku Water's right to a contested case if the commission issues a notice [of violation]. It's not ripe. The commission hasn't done anything," he said.

Attorney James Geiger, representing

WWC, said he thought a contested case hearing would be the most efficient way to have all of the evidence presented to the commission. He added, "We fully expect the Hui should be a participant in this because they are the complaining party."

Given that the hearing officer would have access to the commission's meeting minutes, which would explain the scope of the case, and that WWC intends the Hui to be a party, the commission approved the staff's recommendations. Commissioner Kamana Beamer voted in opposition.



Joint Funding Of USGS Water Budget Model

Also at its June meeting, the commission approved a joint funding agreement with the U.S. Geological Survey for a \$100,000 study to determine what kinds of data should be collected to determine impacts of native and non-native plant species on freshwater availability in different regions of Maui.

The study is part of a larger project that started in April 2016 and includes similar work in regions throughout the state. During phase 1A, the USGS was supposed to study various aspects of species-associated transpiration and infiltration rates and develop a phase 1B plan for field monitoring "to quantify plot-scale rates of rainfall, net precipitation, cloud-water interception, evapotranspiration, and

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groundwater recharge for different plant species," a commission report states.

However, the USGS faced a number of problems in phase 1A and decided to shift the focus of phase 1B, the agency's Alan Mair told the commission.

Commission staffer Lenore Ohye explained that the USGS had some difficulty finding paired plots in various regions: Leeward, windward, above and below the cloud base, areas with different species compositions, and so on.

"We had difficulty with site reconnaissance," Mair added. Considering all of the different potential forest sites throughout the state that would need to be studied, as well as the long list of non-native species that had been identified through workshops, "it became clear it would be very challenging to find different sites in all these different environments," he said. He added that the agency also found in the first phase that plants behaved differently in different environments. "One set of data is not going to answer the question," he said.

Instead of pursuing fieldwork, the USGS has proposed to use the data collected in phase 1A to conduct water budget modeling.

Commissioner Mike Buck, a former administrator of the state Division of Forestry and Wildlife (DOFAW), pointed out earlier in the meeting that in his opinion, the type of landscape structure matters more in terms of water infiltration rates than whether the forest species are native or non-native.

"If we talk about groundwater on Maui, it's clear any forest land is better than grass land. The infiltration rates between native and non-native is unclear. ... If you're going to focus on certain species, there are certain non-natives that change the structure of the forest," he said.

Ohye stressed the project's importance to both the commission's work and that

of the DOFAW, which manages the state forest reserves and oversees public-private watershed partnerships.

"The reason we're doing this is to support watershed partnerships. ... There is often a question from funders: Is this a good return on investment? Are we going to get good watershed recharge?" Ohye said. She added that the studies will also

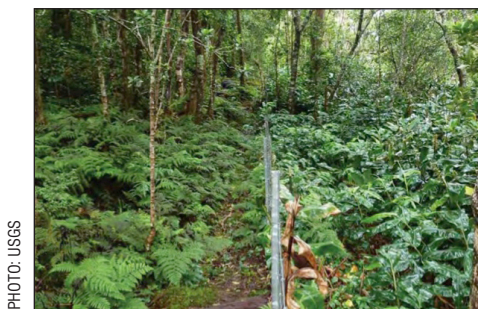


PHOTO: USGS

A fence separates native (left) and non-native (right) forest.

help the Water Commission staff determine groundwater recharge estimates that are necessary to determine sustainable yields for aquifers throughout the state.

Commissioner Neil Hannahs raised concerns about some of the data the USGS had collected in phase 1A. At Maluhia on the windward side of West Maui, he noted, data showed that infiltration rates were significantly higher in plots dominated by invasive strawberry guava compared to plots dominated by native uluhe fern.

"When you look at it in a very limited way like this, it's also dangerous when it can be looked at and picked out of context to suggest a pathway forward in terms of managing our forest in a way that most of us would agree would be disastrous. How do you prevent that kind of abuse of data once it's produced? ... I think that as Mike was suggesting, when you look at things in a very single dimension, you lose sight of the whole. How do you ensure that your data is presented in a way that really considers and has the footnote at

least that those other things do matter?" Hannahs asked Mair.

Commission chair and Department of Land and Natural Resources director Suzanne Case noted that uluhe typically grows in disturbed, open areas. "Maybe uluhe compared to strawberry guava is the wrong kind of comparison because you're not comparing a strawberry guava forest to a native forest," she said.

"And strawberry guava is habitat-transforming, so once you kind of start, it continues to rage through the forest," Hannahs added.

Mair said that the USGS publishes its data releases without any interpretive analysis. He added that another comparison between uluhe and strawberry guava in a different region of Maui, Kahoma, found that the infiltration rates were not very different between the plots.

Rather than continuing to do plot comparisons in phase 1B, "we thought a better approach would be to do some more modeling to guide the data collection efforts," he said.

Hannahs asked if the study could take a multidisciplinary approach that might include reaching out to cultural practitioners and incorporating their data points.

Mair said more information on species distribution and on what the forest used to look like would give the USGS more confidence in a water budget model.

The joint funding agreement, which was unanimously approved, covers the first \$50,000 of study costs, which the USGS will provide. "The Commission had allocated \$50,000 in FY 2020 to match the USGS' available funding. However, due to the economic fallout associated with the COVID19 virus, use of Commission funds has been restricted. Therefore, the USGS is now proposing to solely fund this water budget sensitivity study," the staff report states. — **T.D.**