

Something's Fishy

The pet industry trade association dangled a hook before the members of the state Board of Land and Natural Resources, but no one took the bait.

After the Hawai'i Supreme Court determined the Department of Land and Natural Resources would need to have an approved environmental review document before allowing the collection of aquarium fish to resume, the industry association stepped forward to do the job. Its environmental impact statement anticipated the award of 10 commercial permits for the West Hawai'i Regional Fishery Management Area, perhaps in the expectation that by limiting the number of permit holders, the board would give it a pass.

That didn't happen. Shoddy science, inadequate or even non-existent bag limits, lack of data – all that and more led the board members to a unanimous vote rejecting the document.

The trade association took a chance. Now, go fish!

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Land Board Rejects Impact Statement On Aquarium Collecting in West Hawai'i

On May 22, after hours of public testimony and a long executive session to discuss legal matters, the Board of Land and Natural Resources unanimously voted to deny a recommendation from the Department of Land and Natural Resources' (DLNR) Division of Aquatic Resources to accept a final environmental impact statement (FEIS) for aquarium species collection in West Hawai'i.

The Virginia-based Pet Industry Joint Advisory Council (PIJAC) released the document on April 13. Its preferred alternative was the issuance of aquarium collecting permits for the West Hawai'i Regional Fishery Management Area to 10 unnamed fishers. In September 2017, the Hawai'i Supreme Court found in *Umberger v. Department of Land and Natural Resources* that the department had improperly issued dozens of aquarium collecting permits over the years without ever assessing the industry's environmental impacts. In accordance with that ruling, the 1st Circuit Court issued an order in October 2017 invalidating all aquarium collection permits and requiring that an environmental review under the Hawai'i Environmental Policy Act (HEPA) be done before the department issued any more.

The decision effectively ended all aquarium species collection in the West *Continued on Page 7*



Enforcement officers seized and later released these fish on February 20 after receiving information regarding alleged illegal harvesting of aquarium fish in waters off Kawaihae, Hawai'i. A vessel inspection found aquarium fishing gear, including a small mesh net, and 550 live tropical fish of various species in the hold, according to a Department of Land and Natural Resources press release.



NEW AND NOTEWORTHY

Finally! An 'Ohi'a Rust Rule: In 2005, a new invader to the islands was discovered on trees in the myrtle family, including Hawai'i's iconic 'ohi'a tree. Some species, especially rose apple, were devastated by *Puccinia psidii*, a rust-type fungus that appears to have hitched a ride to the islands on imported ornamental plants.

In 2007, the state Board of Agriculture imposed a one-year emergency rule restricting imports of Myrtaceae plant material. That expired in 2008, and it wasn't until February 2015 that the BOA approved a draft rule for review by various agencies before taking it to public hearings.

More than four years passed before the BOA approved a final version of the rule, which was then sent to desk of Gov. David Ige for his approval, necessary before the rule could take effect.

Last October, the Department of Agriculture advised shippers and importers of the pending rule. In a news release, Phyl-

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other plant pests and pathogens."

Finally, on May 8, fifteen years after the potentially devastating rust was first detected in Hawai'i, Ige signed the rule, which took effect May 15.

The rule applies to domestic shipments. A similar rule that would restrict international imports has yet to be promulgated by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service.

(*Environment Hawai'i* reported on the delays extensively in April 2015. The article is available free of charge at environment-hawaii.org.)

The Other East Maui Case: On August 3, a jury-waived trial for the Sierra Club of Hawai'i's case against the Board of Land and Natural Resources is scheduled to begin.

The organization sued the Land Board in 2019 after the board voted to issue revocable permits to Alexander & Baldwin and its subsidiary, East Maui Irrigation (EMI), for the diversion of up to 45 million gallons a day (mgd) of stream water from 33,000



"Recycling water pays for itself, dumping does not."

— Steve Holmes

acres of state land in East Maui.

Those permits are central to another case we discuss elsewhere in this issue that has focused on whether an environmental review should have been done.

The Sierra Club's case focuses on the fact that the Land Board, in its 2018 permit renewal, did not provide for the protection of 13 diverted East Maui streams that were not part of the Commission on Water Resource Management's recent efforts to establish interim instream flow standards.

"Their decisions allow the removal of all the baseflow from these 13 streams. They have allowed A&B to drain these streams completely dry and reduce the habitat units by-according to A&B's own consultant – 85 percent," David Frankel, the group's attorney, stated in a filing to the court last month.

The Maui Department of Water Supply relies on A&B for the delivery of a few to several million gallons of water a day for municipal use and has advocated for the company's continued ability to divert water from East Maui.

Frankel argued that A&B is using the county as "a human shield" and stated that the Sierra Club has no desire to diminish the county's water supply.

He pointed out that the county has been receiving less than 2.52 mgd.

"The Sierra Club has not opposed the continued diversion of ten times that amount (25.75 million gallons) to ensure that the county's needs, and some agricultural needs, are met," he wrote.

The Sierra Club is asking the court to prevent an increase in the amount of water diverted from East Maui. "An injunction will allow the BLNR defendants to properly fulfill their trust duties and strike an appropriate balance," Frankel wrote.

Ist Circuit Judge Jeffrey Crabtree held a hearing last month on motions for summary judgment from the group and from A&B/EMI. He had not issued a ruling by press time on whether to grant or deny either of those motions.

Decades-Long Dispute Over Maui Water Finally Reaches State Supreme Court

When, exactly, should an environmental assessment or impact statement be done for a state action?

Regarding the century-long diversion of water from dozens of East Maui streams for sugarcane and now diversified agriculture and municipal uses, Alexander & Baldwin's efforts in May 2001 to obtain a 30-year lease for the water was what triggered the environmental impact statement that the company released a draft of last September.

But well before A&B's request for a lease came to the Land Board, native Hawaiians and members of the conservation community opposed the board's practice — which began in the late 1970s — of annually granting revocable permits (RP) to A&B and its subsidiary, East Maui Irrigation Company, to allow them to continue to divert water from

East Maui. Under those permits, the companies diverted so much that streams and taro fields in East Maui were left with insufficient water.

Now, some 40 years

after the Land Board first started issuing and renewing those permits, the matter of whether an environmental review of their impacts is required has reached the Hawai'i Supreme Court.

On May 5, the court heard oral arguments from attorneys representing native Hawaiian residents from East Maui, A&B, and the Land Board on whether an environmental impact statement should have been done on the permits.

In 2015, on behalf of Healoha Carmichael and Lezley Jacintho, and the nonprofit group Na Moku Aupuni o Koʻolau Hui, the Native Hawaiian Legal Corporation sued in 1st Circuit Court, arguing that the annual permit approval violated the Hawaiʻi Environmental Policy Act (HEPA, Chapter 343 of Hawaiʻi Revised Statutes). The four permits — for the Nakihu, Keʻanae, Huelo, and Honomanu areas — allow the companies to use some 33,000 acres of state land for the diversions, which now average tens of millions of gallons a day (mgd), but which in the past would regularly exceed 100 mgd or more.

The Circuit Court ruled in January 2016 that those permits were invalid because there were meant to last only a year and not be annually renewed for more than a decade — but it did not find that the Land Board's annual renewals were actions that required an environmental review under HEPA.

In June 2019, the Intermediate Court of Appeals overturned that decision, finding that the state's law regulating the disposition of public lands gave the board the flexibility to issue holdover revocable permits. The ICA cited HRS 171-55, which states: "Notwithstanding any other law to the contrary, the [Land Board] may issue permits for the temporary occupancy of state lands ... by direct negotiation without public auction, under the conditions and rent which

"You can't rely on public hearings instead of environmental assessments ... You can't punt it to the public and rely on that testimony." — Associate Justice Richard Pollack

> will serve the best interests of the state. ... [T]he board may allow the permit to continue on a month-to-month basis for an additional one year period."

> "We conclude that just as this language served to nullify the maximum term of one year prescribed by 171-58 (governing water use permits), it also nullified HRS chapter 343 EA and EIS requirements for temporary permits issued under 171-55," the ICA wrote in its decision.

> During oral arguments before the Supreme Court last month, Associate Justice Mike Wilson asked NHLC attorney Summer Sylva what the boundaries are of the legal exemptions provided by 171-55.

> Whenever an RP is issued under 171-55, all other environmental laws no longer apply? he asked.

Sylva replied that she did not think that was the case and that the plain meaning of the "notwithstanding" language was actually quite narrow. It simply meant that the permits were not required to be issued through a public auction, which is normally how public lands are required to be disposed of.

"The legislative history behind this 'notwithstanding' clause exposes that this language was urged by the thenchair of the Land Board and the office of the Attorney General [to reflect] that the Land Board's desire was to exempt it from the public auction mandate. ...The Legislature did so by inserting language by allowing permits via direct negotiation," she argued.

Associate Justice Richard Pollack seemed to agree. "It seems to me that the legislative history and language of the text is quite clear," he said.

Given that, should an environmental assessment or impact statement have been done on the permits? While the Circuit Court ruled that the permit renewals did not constitute an action subject to HEPA, the Hawai'i Supreme Court ruled more than a year later in Umberger v. Department of Land and Natural Resources that the department's

issuance of aquarium collection permits over the years constituted an action subject to HEPA. The permits were found to be invalid and an environmental review of the collectors' impacts on fish

populations and the environment was required. (See our cover story in this issue for more.)

Sylva cited the *Umberger* decision in arguing that A&B's permits should be invalidated and an EIS should be done. In the course of a contested case hearing on the permits, initiated by NHLC's clients in 2001, an assessment of the impacts of the company's diversions on some East Maui taro farmers was done to determine how much water should be released to them pending a determination by the state Commission on Water Resource Management of how much water should remain in more than two dozen East Maui streams.

That assessment resulted in the return of some water to only one of those streams, Sylva pointed out. She added that there has been no comprehensive analysis of the diversions' impact on the 33,000 acres covered by the permits, nor has there been a cultural impact analysis. "The renewals were legally significant actions. ... If the permits expired, so too would A&B's rights to divert state waters," she said.

Pollack appeared to agree that that might be enough to counter the arguments by the state and A&B that an EIS need only be done for the proposed lease.

"Isn't significant effect the determining factor, not how long [the disposition]? Couldn't a short-term [action] have a significant impact?" he asked.

"You are absolutely correct," Sylva said. She also pointed out that while the permits in this case may have been short-term dispositions, "this permitting scheme has been the functional equivalent of a lease."

Deputy attorney general Linda Chow, however, argued that the continuation of the permits was required for the Land Board to fulfill its public trust duties, including providing water necessary for municipal use by the county. She also cited the ICA's decision regarding the apparent exception provided by HRS 171-55.

Associate Justice Sabrina McKenna suggested that if the court invalidated those permits, the Land Board could immediately issue a permit to the county for that water.

She also pointed out that the ICA's decision "did not even touch upon this court's holding in *Umberger* that HEPA does, in fact, apply to ... aquarium permits for extraction of fish. This is extraction of water. All natural resources." She then asked Chow how she distinguished the issues in the East Maui case from *Umberger*.

Chow first addressed the issue of a county water permit. She pointed out that the county doesn't run the diversion system and has already stated that it doesn't have the expertise to divert the water into the county system.

With regard to the *Umberger* case, she said the board's decisions on the East Maui permits were more focused on public trust issues. She said when the Land Board decided to renew the holdover permits in 2014, it heard testimony from 45 people and "had to take into consideration all the conflicting uses."

To this, Justice Pollack replied, "I thought our law was pretty clear, you

can't rely on public hearings instead of environmental assessments. ... You're not going to get full information. You can't punt it to the public and rely on that testimony."

Chow agreed, and said the Land Board knew when it voted to approve the permits that it was going to go into a contested case where further information would be developed.

"In other words, it's OK for the board to wait 17 or 18 years to get in the information for an EIS. That seems to be the ramification of your response," Pollack said.

Chow stressed that the board has made "informed decisions along the way that furthered the balancing of the public trust uses." She also argued that the evidence presented in support of the interim release of water years ago only justified the return of flow to one stream. She suggested that no one had anticipated that it would take the Water Commission so long — more than a decade — to come to a decision on the interim instream flow standards for that stream and the others.

When Justice McKenna asked A&B's attorney, David Schulmeister, how he distinguished the *Umberger* case from the East Maui case, he said that the permits issued to the aquarium collectors were new uses, compared to the East Maui water diversions, which were continuing uses.

McKenna said she thought the DLNR had been issuing aquarium collecting permits "for a while."

Even so, Schulmeister said, preparing an EIS prior to acting on A&B's water use permits would have been impossible without interrupting its use. "You're going to have this gap. One day or one month, whatever it is. You're having this interruption in use," he said, adding that *Umberger* didn't deal with the same statute that has allowed for permit renewals.

Chief Justice Mark Recktenwald then asked if there is a point at which the holdover permit is allowed so many times that an EIS should be done. "If we accept your argument, it shouldn't be done in year one. If we get up to year five, ten or more ... At some point should the board have stopped the annual holdovers and required an EA?" he asked.

Schulmeister asked his own questions in response. What would an EIS on the permits measure? He pointed out that there had been an interim release of water in 2007 and that more water was returned to streams following the Water Commission's decisions on interim instream flow standards (IIFS) years later.

"How are you going to measure the environmental impacts without knowing what is going to be left in the stream? Everybody recognized that had to occur no matter what," he said.

Even so, Justice McKenna pointed out, in the years before the Water Commission came to its ultimate decisions on instream flows, A&B was withdrawing about 165 mgd.

The Water Commission's IIFS decisions were a separate issue from the impact of the diversion, she said. "You keep referring to how petitioners basically ... received the water that they needed. Isn't it true that the role of an EIS is not just to measure the impact on people that request the EIS, but on the entire the environment and people who are not parties to lawsuit requesting an EIS?" she asked.

While many of the questions and comments by the justices suggested that they may agree that an environmental review should be done for the permits, they also voiced concerns about the county's water supply.

Justice Paula Nakayama said she was struggling with the practicalities that, first of all, A&B owns the ditch system, and second, that the county, even if it did have access to it, does not have the personnel to operate the system to meet its needs.

Pollack said the court could suspend or invalidate the permits in part.

Sylva also suggested that the license area closest to the county plant could meet the county's needs. In any case, she asked the court to "restore justice long overdue." She noted earlier in the hearing that a number of the original parties to the 2001 contested case hearing on the permits — Sam Akina, Marjorie Wallet, Beatrice Kekahuna — have passed away.

The court had not issued a ruling by press time. -T.D.

From the Archives Complex Legal Issues Surround A&B's Taking of East Maui Water

The following article was originally printed in our August 1997 edition. In the decades since, it is one of our many early pieces that have served as a good primer on the complex and convoluted discussions regarding East Mauistream water that are still occurring today and which we report on elsewhere in this issue. It has been edited for length.

The term of the first water license granted to Alexander and Baldwin was 20 years. Now, more than a century after that first license expired in 1896, A&B and its subsidiary, East Maui Irrigation Company, Ltd., take water from the East Maui watershed under four short-term, year-to-year revocable permits issued by the Board of Land and Natural Resources.

Each June, when the permits are up for renewal, the Land Board approves

a trade of the permits, so that A&B and EMI hold the permits on alternating years. (By an accident of history, three of the permits – covering lands in the ahupua'a of Honomanu, Huelo, and Ke'anae – are held by one

of the two entities in any given year. The permit covering Nahiku is held by the other.)

The First Lease

The first license granted to A&B and their partners in the Hamakua Ditch Company to take water from East Maui lasted until September 30, 1898 - 20 years past the completion date of the first ditch.

Claus Spreckels soon began working on the second ditch in 1879, but apparently he was not given a license to take water from it until 1881. In that year, thirteen residents of Ke'anae learned of the proposal to grant water rights to Spreckels and protested in a letter to Henry A.P. Carter and J.S. Walker, commissioners of crown lands.

"We, the committee, whose names are below, request of your kindness not to dispose any of the water rights of the Crown Lands, that is from Honomanu, Ke'anae, Wailua, to the millionaire (Claus Spreckels), of Kamaomao. Because, if any of the water rights of the above-described Crown Lands are disposed of, then the king's subjects, living on said lands, will be in trouble. Because, what the millionaire has done with the waters of other lands is well known, and on account of this trouble which is known, that is why we make this application. It is not proper to come for the water of the lands above described."

Despite the concerns, Spreckels obtained a 30-year license to take water from East Maui. During that period, his company, Hawaiian Commercial & Sugar, was absorbed into what became known as Alexander & Baldwin.

For a period of some four years after

"We, the committee, whose names are below, request of your kindness not to dispose any of the water rights of the Crown Lands, that is from Honmanu, Ke'anae, Wailua, to the millionaire Claus Spreckels."

— 13 Residents of Ke'anae, 1881

the first water license expired, A&B and the government of the territory of Hawai'i appear to have negotiated terms of its renewal.

By February 1902, the government appeared prepared to renew the licenses through issuance of a lease at public auction (although no bidders were expected other than A&B). Once more, residents of the area learned of the plan and protested vigorously. On February 21, 27 residents of Nahiku signed a petition to Governor Sanford B. Dole asking him to stop the auction. They noted that they had "at great expense and much hardship undertaken to develop this previously uncultivated tract and to make homes for ourselves." The sale of a lease of all government lands adjoining their lots, they said, would give "the highest bidder the control of all the water which should belong to this district."

Despite the appeal, the auction went forward and, on February 26, 1902, Henry P. Baldwin signed a series of agreements with the territory giving him continued rights to take water from the East Maui watershed. A clause common to all agreements provides that the rights granted are subject to "all vested interests in water of land-owners in Ke'anae and Wailuanui and of all other third parties."

In 1938, the territory of Hawai'i and East Maui Irrigation Company entered into an agreement intended to set the stage for competitive bidding when the existing water licenses expired. "In the agreement, both parties granted easements to each other for portions of the aqueduct facilities that crossed land owned by each respective party," Land Board Chairman Jim Ferry was later to write. He continued: "This agreement allows competitive bidding on each of the four water leases since any prospective state lessee has the right to convey his proportionate share of water over the

> jointly owned systems and at the same time ensures that the EMI Co. will have the same privilege of conveying water over the systems even if they themselves were not the lessees on any one of the leased areas."

(Another aspect of the agreement set forth the manner in which the state was to charge for water collected. The amount charged was to be in inverse relation to the distance between the source and the delivery point. Thus, the government received less for Nahiku water, which had to travel the greatest distance to Central Maui fields, than it did for water taken from the Huelo license area, which was the closest of the four areas.)

Making Waves

For most of this [20th] century, A&B enjoyed the use of water from the East Maui watershed with a minimum of controversy. However, the desirability of the ultimate outcome – continued rights to East Maui water – seems not to have been subject to meaningful challenge.

The first sign of trouble appears to Continued on next page have come in 1965, when the Legislature amended the law relating to sales of water rights. Under the new language, leases granting water rights had to be sold at public auction or, in the case of temporary use, could be granted on a month-to-month basis subject to a maximum term of one year. (This language appears in Section 171-58, Hawaii Revised Statutes.)

The change did not affect existing leases, but was invoked 11 years later, in 1976.

On July 8 of that year, Anthony N. Hodges, executive director of Life of the Land, and Brian Chikowski, the group's legal researcher, wrote to the Board of Land and Natural Resources. Their purpose was to object to a staff recommendation that the board grant A&B a one-year holdover tenancy on the Nahiku license, which expired June 30 of that year. Specifically, Hodges and Chikowski objected to the difference between the price paid to the state by A&B for water collected in the Nahiku license area and the price paid to A&B by the Maui County Department of Water Supply for the same water. "For at least the past 15 years," they wrote, "this license has enabled EMI to profit grossly from the sale of state-owned water to the county of Maui. Under the lease EMI pays to the state 0.0018 cent per thousand gallons of water and sells this same water to the County of Maui at a rate of 6 cents per thousand gallons. This constitutes a 'mark-up' of 3300 percent."

The changes to state law approved in 1965, they continued, were undertaken "with the intent of halting the commercial exploitation of state water leases when the water is resold by the lessee for a public purpose.

Calculations accompanying their letter suggested that sale of water to the county from the Nahiku license area resulted in a net profit of \$21,445.54 to EMI.

Only in a postscript to the letter was the question raised about the legality under this same law of awarding a revocable permit, year after year, to the same party. "Our review of your files indicates that the Ke'anae lease for a water license expired in 1972, and that EMI is presently on a revocable permit for use of the waters from that area," Hodges and Chikowski wrote. "In light of the fact that HRS §171-58 limits a permit upon expiration of the lease to one year, the present permit is illegal. A public auction of a new lease is long overdue. We request that an immediate public auction of these waters be held."

The board decided to grant a 30-day extension of the Nahiku license, during which time staff was instructed to investigate the allegations of Life of the Land. In a July 13, 1976, letter to Phil Scott, then vice president and manager of EMI, DLNR Land Management Administrator James Detor asked for comments, if any, that EMI had on Life of the Land's concerns. At the same time, the state's attorney general was asked for advice on the subject of the proposed holdover tenancy.

Insufficient Water

On July 28, 1976, both EMI and the Department of Attorney General conveyed to the Land Board their respective responses.

EMI's Scott replied with a lengthy description of the governing agreement his company had carved out with the county Board of Water Supply concerning the collection, storage and delivery of water from East Maui to the county's system. "Most of the water that has been delivered by EMI to BWS comes from the Waikamoi watershed area, not the Nahiku license area," Scott wrote. "Indeed, EMI measurements show that the Wailoa Ditch system, which includes the Nahiku license area, constitutes only 14.5 percent of the total volume of water delivered to BWS by EMI. Further, the total volume of water collected from private lands in the Wailoa Ditch system in 1975 greatly exceeded the volume of water delivered by EMI from the Wailoa Ditch system to BWS in 1975. EMI has not in any way made a \$21,000 profit from the delivery of water collected in the Nahiku license area."

In any case, Scott continued, the expense of fulfilling EMI's obligations to provide the county with water, under terms of a 1973 agreement, outweighed any revenues. "For example," he wrote, "over \$170,000 has been spent to date by EMI to improve the Waikamoi systems. In order to assure that the t6 million gallons from the Wailoa Ditch system can be delivered to BWS without damaging agricultural production, EMI will have to construct a pumping station at Hanawi at an estimated cost in excess of \$1,500,000."

"EMI has entered into an arms-length agreement with BWS," Scott concluded. "The agreement is the result of long, difficult and hard negotiations. EMI firmly believes that the agreement is more than fair to BWS. EMI believes that it is in the public interest for this board to respect the terms of the agreement and allow it to continue without amendment."

The response from deputy Attorney General Eric Y. Marn was far briefer. The holdover was allowed by state law, Marn wrote, "for a period not exceeding one year." Otherwise, it could grant a revocable permit "under such conditions which will best serve the interests of the state, for a maximum term of one year as authorized under Section 171-58, HRS."

Marn's comments were restricted to the Nahiku license. He did not address the Ke'anae license, which by then was in its sixth year of a revocable permit.

In the end, on August 27, 1976, the Land Board approved a one-year holdover tenancy to the Nahiku license, which was then converted to a revocable permit. As the other leases expired, they, too, were turned into revocable permits.

By alternating the name on the permits from year to year, one source close to the issue has recalled, A&B would benefit from having lower property taxes, since tenures of a year or less were granted more favorable taxes than those of longer duration. It was later determined that this same arrangement would work to get around the letter, if not the spirit, of the law limiting such permits to a maximum term of one year.

Another element of the permits is that A&B is charged a fixed rate for the water, rather than paying a rate based on the volume of water taken. In addition, because the permits are short term,

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the state's appraiser has discounted the rental to be charged by 25 percent. Altogether, the state collects about \$160,000 a year on the four permits.

Language in the permits allows the state to take water from the area, "subject to not less than one-year advance written notice" this despite the fact that, according to another term in the permits, the permits themselves are cancelable by the state "for any reason whatsoever" on 30 days' notice.

A Long-Term Lease?

Everyone involved in the issue agrees on the idea that the revocable permits should, eventually, give way to one or more long-term leases. However, over and above the threat of competitive bidding at public auction, there are additional complications.

For the last quarter century, the legal right of water users to transfer water from

Fish from Page 1

Hawai'i Regional Fishery Management Area. Under the DLNR's administrative rules, an aquarium collecting permit is required to fish there.

Across the rest of the state, however, the DLNR has continued to allow the collection of aquarium species for fishers holding a commercial marine license, which is required for the commercial catch of any species within state waters. The department has taken the position that aquarium species collection is permitted so long as fine-meshed nets — the gear universally employed in the industry — are not used.

Some of the plaintiffs in the lawsuit that spurred the current ban filed a lawsuit in January against the DLNR's use of what it sees as a legal loophole for the aquarium collecting industry. On June 24, the 1st Circuit Court will hold a hearing on a motion for summary judgment on the complaint filed by Willie and Ka'imi Kaupiko, Mike Nakachi, Free the Fishes and the Center for Biological Diversity.

The outcome of that case may impact the demand for aquarium fish from West Hawai'i, should an FEIS ever be approved and permits issued for the area. In the meantime, the board was streams to areas that were traditionally dry has been hanging under a cloud known as *McBryde v. Robinson.* The lawsuit, filed originally in 1973, pitted the McBryde Sugar Company against Gay and Robinson Sugar Company, which was, McBryde argued, diminishing McBryde's source of water by taking water from high in Hanapepe Valley and transporting it out of the watershed.

After years of litigation, including an appeal to the U.S. Supreme Court (denied), the decision of the Hawai'i Supreme Court in *McBryde* remains the law of the land. That decision found in favor of *McBryde*, to the extent that the court held that Gay and Robinson had no vested right to transfer its share of the water out of the watershed. The *McBryde* decision has not been decided with any finality, however, since the matter at issue was determined to be unripe for litigation.

Finally, it would seem clear that the

under pressure to either accept or reject the FEIS for West Hawai'i permits at its May 22 meeting. Otherwise, under DLNR rules, the document would be deemed automatically accepted.

When it came time for the Land Board to vote, board members expressed their concerns with what seemed to be a lack of or possible misuse of information in the document.

What's more, for the 10 proposed West Hawai'i permits, PIJAC proposed just a single special condition: a daily bag limit of five for Achillles tang, one of a number of collected species in the region whose population is declining.

Under the department's rules, 40 different species may be collected for aquarium purposes. "The fact that there are really no limits on the number of fish to be taken is very challenging. I don't know how you analyze impacts when you don't know how many fish will be taken out," board chair Suzanne Case said in explaining why she was voting to reject the FEIS.

She and other board members also worried about the possible effects of removing a whole suite of herbivores that could help corals recover from the damaging effects of climate change. That, Case said, "is something that really Legislature, in enacting the state Water Code, desired that significant water disputes would be heard and decided by the state Commission on Water Resource Management. Under the present system of allocating water – as a license granted by the Board of Land and Natural Resources – the Water Commission is out of the loop.

If any of the East Maui parties were to petition for an amendment to the interim instream flow standards, the Water Commission would become involved. Similarly, if the use to which A&B put the water changed substantially – as happened with Amfac and the Waiahole Ditch on O'ahu – the Water Commission also would step into the fray.

Barring any action on the legal front, however, it would appear as though the annual changing of the names on the revocable permits will continue to be a June ritual for the Board of Land and Natural Resources. — *P.T.*

needs much deeper review." Finally, she complained that there just isn't adequate, local data sufficient for a statistical analysis of impacts of removing the fish.

The lawsuit plaintiffs applauded the board's decision. "This is a huge win for me and my family, and for our way of life," Willie Kaupiko said in a press release. Both Kaupikos, father and son, are subsistence fishermen from Miloli'i, where aquarium collection is prohibited but happens nonetheless, they say.

Earthjustice attorney Mahesh Cleveland added, "The law demands that the environmental review process fully and publicly examine the effects of a proposed action, rather than simply justify and rationalize a predetermined outcome. Fortunately, the board asked the right questions, listened to what the public had to say, and correctly applied the law to the decision before it."

'Right Questions'

One of the first questions Land Board member Chris Yuen asked regarding the proposed permits was, "Can they ramp up?"

The FEIS found that based on catch data from 2000-2017, the likely annual catch would equal 1 to 2 percent of the *Continued on next page* populations of the aquarium fish species around Hawai'i island. That rate of catch, the authors argued, was sustainable.

But suppose Disney came out with a movie about the kole (Goldring surgeonfish) and everybody then wanted a kole in their tank, Yuen said. "We don't know the level of catch by species that would ultimately be allowed if this FEIS is granted and we don't really have that analyzed," he said.

To this, PIJAC's attorney James Lynch said that the EIS only needs to consider reasonably foreseeable actions. "Wer'e not required to analyze an asteroid striking the earth," he said.

Even so, Yuen said that there was nothing to prevent the permittees from increasing their catch level or shifting their target species, other than the proposed Achilles tang bag limit.

Since PIJAC had proposed that limit, board chair Case asked why the FEIS

didn't also propose limits on the permittees' overall catch based on their historical catch.

"If there is a rational basis to do so ... that's possible. We're trying to balance conservation with the practicalities, trying to avoid unnecessary constraints," Lynch replied.

"So you're saying that we can rely on their historical catch rates as our guarantee, without putting any limits?" Case asked.

Lynch replied simply, "You Kol cannot be arbitrary and capricious in putting limits on these permits. ... They need maximum flexibility to catch fish consistent with conservation."

Poor Data

The FEIS concedes that when the full range of impacts to collectable aquarium species in West Hawai'i are considered (e.g., recreational aquarium collection, non-aquarium commercial fishing, recreational fishing, tourism, climate change), there is a significant cumulative impact to some of those species. However, it continues, the proposed to permits would be an insignificant contributor to that effect.

Population declines in 12 of the fish species in the area "are occurring in both areas open and closed to commercial aquarium fishing for all but one species, indicating that aquarium collection is not driving the decline," it states.

With regard to climate change, the FEIS states that based on studies of the Great Barrier Reef, "fishing pressure had minimal effect on [coral] bleaching." It goes on to note that on Hawai'i island, the total cover of hard coral decreased between 2003 and 2017 in both protected and open areas, with the smallest decline seen in open areas. "Given that open areas did not see a more severe decline than areas closed to commercial aquarium collection, it is anticipated that commercial aquarium collection has aless than significant impact on coral declines," the FEIS states.

In written testimony, Greg Asner, Shawna Foo, Roberta Martin, and Rachel Carlson with the ASU Center for Global Discovery and Conservation Science in Hilo, argued that the FEIS failed



Kole, or goldring surgeonfish.

to adequately assess the environmental costs of the proposed activity.

In relation to climate change, they argued that FEIS's curt discussion of the aquarium fish species that are herbivorous was a substantial oversight. "Herbivores are the critical maintainers of coral-algal dynamics and are key in promoting reef calcifiers (e.g. Scleractinians and crustose calcifying algae) over fleshy macroalgae. This, in turn, is paramount for reef recovery after bleaching events, especially important for Hawai'i which is still recovering from the 2014-2015 and 2019 bleaching events," they wrote.

They noted that nine of the top 10 collected aquarium fish species in Hawai'i are herbivores and represent 97.7 percent of total aquarium catch in 2017. Even though the FEIS states that data from the DLNR's Division of Aquatic Resources shows that herbivore biomass in West Hawai'i has not changed since 2003, the ASU scientists pointed out that the data came from just eight sites and "is not at all representative of the entire west coast of Hawai'i Island."

They also argued that the FEIS failed to acknowledge the impact of ocean warming on the fish themselves, which will likely experience physiological stress during heat waves. "[T]heir ability to recover following a heat wave depends on levels of human disturbance. Elevated water temperature also negatively impacts coral reef fish reproduction where we can expect to see much lower recruitment rates with ongoing climate change," they wrote.

The scientists also took issue with the purported minimal impact the aquarium collecting would have on the island's

fish populations. As the basis for determining that the permittees' catch would be less than 2 percent of the populations of any of the fish species to be collected, the FEIS used a population estimate for the entire island provided by the National Oceanic and Atmospheric Administration.

To this, the ASU group argued, "The use of island-wide population estimates to evaluate impact is only appropriate if larval connectivity around the island is absolute, which is not the case.

In reality, numerous publications indicate only minor connectivity between East and West Hawai'i, and within these regions, ephemeral ocean features concentrate larvae in some areas more than others."

The scientists and other public testifiers also criticized the use of a 2006 report on aquarium fish species in the Philippines to arrive at sustainable catch rates on Hawai'i island.

The FEIS authors cited a lack of data on Hawai'i species to determine sustainable catch rates for the species collected in the local industry as their reason for using the Philippines paper. That paper, the Marine Aquarium Trade Coral Reef Monitoring Protocol data analysis and interpretation manual by *Continued on next page*

'Unprecedented' Permit Extension is Granted For Rock Revetment Fronting Maui Condos

On May 8, the state Board of Land and Natural Resources extended, for the third time, a Conservation District Use Permit for a controversial shoreline erosion control project fronting the Hololani Resort Condominiums in West Maui.

Under the original permit issued in 2014, construction had to start within one year and be completed within three years. The project — a 370-footlong rock revetment — was intended to protect Hololani's two eight-story towers that are at risk of becoming uninhabitable due to beach erosion that has been exacerbated by storms, a seawall on a neighboring property, and sea level rise.

The board twice extended the permit, in 2016 and 2018, to accommodate delays due to design changes requested by the state Office of Conservation and Coastal Lands (OCCL) and the Maui Planning

Fish from Page 8

Domingo Ochavillo and Gregor Hodgson, determined that between 5 and 25 percent of the populations of dozens of species could be sustainably removed from the reef.

"Successful management and rebuilding of depleted fish populations has been achieved at local scales but requires solutions tailored to the local context. Thus, using a manual that is based on species in the Philippines is not the best way to determine whether aquarium collection catch rate is sustainable, especially as this rate will be specific for each species," the ASU scientists wrote.

The Motion

Before public testimony closed, Earthjustice attorney Cleveland informed the board that even if it accepted the FEIS, a decision on permits could not happen right away. The October 2017 Circuit Court order stated that the DLNR could not issue any aquarium fishing permits without an order from the court affirming that doing so would comply with HEPA, he said.

"The court will be paying very close attention to what you do here," he said

Department, as well as a delay in the board's approval of an easement for the portion of the structure that would encroach onto the public beach.

That easement, approved by the Land Board in January 2018, also required consent from the Legislature, but the Senate Concurrent Resolution that would have achieved this never got a hearing in the House.

In March 2018, community groups Na Papa'i o Wawae 'Ula'ula and West Maui Preservation Association, and Felimon Sadang, whose property lies along the same eroding Kahana Bay shoreline, requested a contested case hearing on the Land Board's second permit extension. It later sued the board in Circuit Court after their request was denied.

To get around the lack of an easement, Hololani decided in 2019 to keep the revetment off the beach and on its own property. With consent from

before urging the board to reject the document.

In the end, board member Yuen moved to do just that, saying the FEIS failed to adequately describe the proposed action.

It assumed that the historical catch data from the 10 would-be applicants was sufficient to project the future limits of the fishery. "I don't find that convincing," Yuen said, adding that those fishers could later shift the species they target or increase their catch.

He also cited the issues raised in the letter by Asner and his colleagues, particularly with respect to herbivores and climate change, as well as the criticisms over the use of the Philippine manual's "sustainable" catch rates of 5 to 25 percent in combination with recreational and illegal take.

Board member Sam Gon, who seconded the motion, said he agreed with many of Yuen's statements. "Inadequacy of the description of the project goes hand-in-hand with the non-disclosure of the applicants," Gon said, adding later, "We received credible testimony today of the flawed interpretation of data."

Gon also said he agreed with public testimony that there had been insuffi-

the county Planning Department, the condo installed a sheet pile bulkhead. Before Hololani could do anything more, the community groups sued it, the county Planning Department, and the state Department of Land and Natural Resources over the lack of a county Special Management Area (SMA) permit and the condo's failure to comply with the state's environmental review law.

The court found that the state did nothing wrong, but that the county and Hololani should have done an environmental assessment for the revetment. Before issuing a final judgment, the court ordered the parties into mediation. Early last year, the county, Hololani, and the groups reached a settlement, under which Hololani would delay constructing the revetment for five years to allow for the environmental review and permitting for a regional beach nourishment project that was in the works. Under the SMA permit the county has issued for the revetment, it must be removed once the beach restoration at

Continued to page 10

cient consideration of cultural impacts. A number of testifiers noted that 50 of the 52 native Hawaiians consulted in the FEIS's Cultural Impact Assessment (CIA), had expressed misgivings about the aquarium trade. "There was a lot of very eloquent statements [in the CIA] by a number of highly respected practitioners in West Hawai'i," Gon said.

Despite their overwhelming sentiment, the CIA concluded that because the issuance of the permits wouldn't significantly affect the fish populations or their habitat, there would also be no cultural impact.

After the board voted unanimously to reject the FEIS, chair Case stated in a press release that the vote reflected the board's view that "the aquarium fishers' proposal, without meaningful limits on future catch, without enough attention to our highly depleted stocks like paku'iku'i (Achilles tang) and other low-number species, and without adequate analysis of the near-future effects of climate change, ocean warming and coral bleaching on our reefs, did not adequately disclose the potential environmental impacts of the proposed ten permits." - Teresa Dawson

As Habitat Is Lost, So, Too, Are The Songs of Kaua'i Forest Birds

The distinctive vocalizations of three Kaua'i honeycreepers are disappearing.

Once, and not that long ago, an 'akeke'e, or a Kaua'i 'amakihi, or an 'anianiau could be identified by its song without setting eyes on the bird. Today, the calls of the three are so similar, you need visual confirmation to know which species you are hearing.

And the birds' calls are not only growing increasingly similar. They're becoming simpler.

The trends were reported in a paper published last year in the journal *Royal Society Open Science*. The lead author is Kristina Paxton, a post-doc in the Listening Observatory for Hawaiian Ecosystems lab at the University of Hawai'i-Hilo, under the direction of Patrick J. Hart, who is also a co-author of the paper, "Loss of cultural song diversity and the convergence of songs in a declining Hawaiian forest bird community."

As the authors note, "the reduction in song complexity and diversity and the convergence of songs not only signals a loss of culturally transmitted behaviors in these endemic Hawaiian honeycreepers, but also potential challenges to the recovery of these rapidly declining species." In addition, they write, their study of bird songs "highlights the hidden cost to declining populations beyond just the loss of individuals that is not often considered, the loss of culturally transmitted social behaviors."

Lost Cultural Diversity

In the late 1970s, Douglas H. Pratt, widely respected for his knowledge of Hawaiian birds, recorded the songs of Kaua'i honeycreepers. The recordings were deposited with the Macaulay Library at Cornell University's Ornithology Lab, which provided the tapes of the Kaua'i 'amakihi, the 'anianiau, and 'akeke'e to Paxton and her colleagues to compare with recordings of the same species made in the early 2000s and in more recent years.

When the frequencies and syllables of songs were plotted, the results were clear: For all three species, songs recorded in the 1970s were more intricate and distinct for each species than songs recorded in the present day. The songs recorded in the early 2000s were intermediate between the earlier and later periods.

The authors describe how these trends are tied to the rapid decline in the birds' populations in their core ranges.

At present, their range is limited to between roughly 5,000 and 10,000 hectares on Kaua'i's Alaka'i Plateau, less

Kahana from Page 9

Kahana Bay is complete. In exchange for the five-year delay, the community groups agreed not to oppose Hololani's attempts to extend its CDUP.

At the Land Board's May 8 meeting, OCCL administrator Sam Lemmo recommended extending the construction and completion deadlines for the revetment to 2025 and 2026, respectively. Lemmo admitted that it is unusual for his division to keep extending a permit for ten years. "It's sort of unprecedented," he said. But in reviewing the case, he continued, "I don't see Hololani being at fault here for not being able to initiate construction. ... If we saw some culpability on the part of the applicant, we would say, 'Enough's enough. Come back when you're ready." Land Board member Sam Gon agreed with Lemmo's assessment. Member Jimmy Gomes, the Maui representative on the board, did not.

"I think we've given them enough time. ... They can come back to the board," Gomes said.

Attorney Pamela Bunn, representing Hololani, argued that the condo needs to protect its foundation. "There is no guarantee beach nourishment will go through," she said.

Indeed, the source of funding for the multi-million-dollar project, which would protect Hololani, Sandang's property and eight other condominiums along the bay, is still unclear. The establishment of a county community facilities district was recently proposed to allow for the issuance of a bond that than a quarter of their maximum range in 1968. Their populations have fallen dramatically as well, due in large part to avian malaria. Between 1981 and 2012, the authors write, within the species' core ranges, the 'amakihi population fell 16 percent, that of the 'anianiau fell 17 percent, while that for the 'akeke'e dropped by nearly half – 48 percent. Fewer than 1,000 'akeke'e individuals are now thought to exist.

"Song diversity and complexity arises through the creation of new song elements during song learning via cultural mutations ... and the cultural transmission of new songs among dispersing individuals," they write. "However, based on changes in honeycreeper densities and range contractions during the course of this study, there was a two- to sevenfold decrease in the density of available tutors for Kaua'i honeycreepers to learn from, along with a 60-77 percent reduction in the area from which young birds could sample songs."

With regard to the birds' songs losing their complexity, one reason for it may be "random drift," with the songs of all three species "consisting of one to four unique syllables repeated on average over nine times... The loss of song complexity has led to present-day honeycreeper songs containing fewer unique syllables and fewer frequency changes within and among syllables," the authors say.

Another reason could be that the birds Continued to page 11

would be paid off by unit owners over the next 20 years. The County Council has yet to approve the idea.

In the meantime, the clock is ticking on the five-year stay on the revetment construction.

"The only thing I believe will change in five years, if there is no beach nourishment project, is the need for [the revetment] will only become more urgent," Bunn told the board.

Land Board member Chris Yuen moved to approve the CDUP extension, given the settlement conditions. "The beach nourishment project may or may not happen. I'm OK with the status quo," he said. Gon seconded his motion, which was approved.

Gomes and member Kaiwi Yoon voted in opposition. —*T.D*

of one species incorporate elements from the songs of the other honeycreepers as the young birds have fewer and fewer older birds of their own species to learn from. This could help explain why, even though densities of all three species have declined, density estimates for the 'akeke'e and Kaua'i 'amakihi are the lowest – and their songs were also the most similar, the authors write.

Impacts on Reproduction

The cultural losses could well impact the survival of all three species. "While the consequences of population declines are typically thought of in terms of the loss of genetic diversity," the authors note, "the disruption or loss of learned traditions can also affect species persistence, particularly when social learning is an important driver of behaviors that influence survival and reproduction."

"The complexity of vocal signals such as song can serve as an honest signal of an individual's quality as well as the viability of a population," the authors write.

Hart elaborated on that point. In the field of behavioral ecology, he said, "an honest signal is one that takes energy to perform. The ability to sing well may be an honest signal of a bird's fitness – it's doing well, eating well, had a good upbringing, grew up in a large population. It's a signal that they can't fake and can be used by other individuals to judge their fitness.

"Up to 30 percent of a bird's brain capacity has been shown to be related to song production and interpretation. It's reflective of their early years; if they grew up in a good environment and are fit, they'll have a more complex, desirable song."

But why should the diminished richness of songs possibly lead to lower population growth?

"It's hard to say for sure," Hart said. "It just may be that it doesn't entice mating as much. Just like with humans, the song is supposed to entice the female to want to come and mate."

What's more, Hart and his co-authors suggest the impoverishment of the honeycreepers' songs and their convergence "could lead to a breakdown in species barriers."

Does that mean that hybridization is possible among these species?

"Well, yes, I think it is definitely a possibility," he said. "We know that 'i'iwi and 'apapane can hybridize. Kaua'i birds are closely related. If a young 'akeke'e mostly learns songs of 'amakihis, then it might be attracted to an 'amakihi song when it's an adult, since that's what it knows more.

"They're learning each other's songs, which leads to a higher potential for hybridization," he said. Or, he said, alternatively, a male and female from different species could pair up but fail to have any offspring at all.

"Neither possibility is good."

Songs of the 'Alala

The loss of song complexity has been observed in other species, including the 'alala, the Hawaiian crow. Ann Tanimoto, a graduate student working closely with Hart, examined differences in the vocal repertoire of 'alala in the wild, recorded in the early 1990s, from those held in captive breeding aviaries.

"They lost a lot of elements," Hart said. "Whole things like territorial songs, things like that, had just disappeared in the aviaries. Now we're tracking the individuals released into the wild and how their songs are becoming much more rich and complex again."

Hart said one of his grad students continues to go twice a week to the area where the 'alala were released, "videoing the 'alala, cataloguing all their vocalizations, looking at dominant and



Akeke'e

non-dominant birds, and comparing it to the aviary birds."

In another study, students from Hart's lab compared the songs of 'amakihi in a low-elevation population on the Big Island with those of populations in mid- to high-elevation sites. "The reduced complexity of 'amakihi songs at low-elevation sites is most likely shaped by the effects of habitat fragmentation and a disease-driven population bottleneck associated with avian malaria and maintained through isolation, localized song learning and sharing, and cultural drift," wrote authors Joshua Pang-Ching, Kristina Paxton, Eben Paxton, Adam Pack, and Hart ("The effect of isolation, fragmentation, and population bottlenecks on song structure of a Hawaiian honeycreeper," Ecology and Evolution, 2018). (The Hawai'i 'amakihi is a different species from the Kaua'i 'amakihi.)

For more information on the work Hart and his colleagues are doing, visit the LOHE website: www.lohelab.org. *—Patricia Tummons*

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Maui, Hawai'i Counties Sit Tight, Awaiting Final Ruling on Wastewater

The Supreme Court's April decision in a case involving effluent from the Lahaina, Maui, sewage treatment plant may have ramifications for a host of other facilities in Hawai'i.

That ruling found that where there was a close connection between the source of pollution and nearshore waters, a permit under the Clean Water Act would be needed. In Maui alone, the county's two other sewage treatment plants – in coastal areas of Kahului and Kihei – rely on injection wells to dispose of partially treated effluent. In fact, a study of pollutants in ocean water off the Kihei plant turned up many of the same indicators of sewage effluent as were found off Lahaina.

In Hawai'i County, county-run sewage treatment facilities at Honoka'a, on the Hamakua Coast, and at Kaloko, near the Kona Coast, rely on injection wells to dispose of effluent. The county's sewage treatment plant at Kealakehe does not use injection wells but rather runs effluent through a series of aerated lagoons just a few hundred yards from the coast and the state's small boat harbor at Honokohau. Finally, the treated effluent is pumped to an unlined pond immediately mauka of Queen Ka'ahumanu Highway, where it percolates into the ground.

So are the two counties preparing to apply for National Pollutant Discharge Elimination Permits (NPDES) for these facilities, as the court's decision would seem to require? *Environment Hawai'i* posed the question to Scott Rollins, acting head of the Maui County Department of Environmental Management's Wastewater Reclamation, and William Kucharski, administrator of Hawai'i County's Department of Environmental Management.

Rollins said that although the high

court remanded the issue to the 9th Circuit Court of Appeals, which would ultimately decide whether a NPDES permit would be required, the county was trying to avoid the need for that.

"The mayor, the County Council, and our department decided to go forward with minimizing injection well use," Rollins said. He noted that substantial capital improvement funds had been appropriated for upgrades to all three county sewage treatment plants.

At Lahaina alone, \$13 million had been appropriated for improvements to that facility, including adding pump stations that would elevate reclaimed RI water, acquiring land from Maui Land and Pine for a storage reservoir that would allow 24-hour-a-day draw-downs on treated water, and expansion of the service area, among other things, Rollins said. (RI is water that has undergone oxidation, filtration, and disinfection; it may be used for irrigation, dust control, some cleaning, and other purposes.)

At Kihei, he said, the county had just recently brought online a second milliongallon storage tank for reclaimed water and would be upgrading its ultra-violet treatment capacity, allowing all effluent to be treated to RI standards. Also, the county would be upgrading and replacing lines that carry water to the Maui Research and Technology Park and beyond, he added.

The Kahului wastewater plant treats only to the R2 level, which is of limited use. "We're going to build a treatment basin in Waikapu," Rollins said, acknowledging that a basin relatively distant from the wastewater plant would require installation of force mains and pump stations. Potential users of the reclaimed water from the Kahului plant could include Mahi Pono, which owns most of the former Alexander & Baldwin cane land, and the Maui Lani golf course. As to the site for the treatment basin, he said, "Mahi Pono may give us the land."

Hawai'i County's Kucharski noted that the 9th Circuit's standard for requiring an NPDES permit – the standard that the high court rejected – was that discharges be "fairly traceable" to a given source.

"From my perspective, until such time as the 9th Circuit determines the conditions" under which permits are required, he added, the county will sit tight.

Steve Holmes, former Honolulu City council member, has had a long-term interest in the proper management of wastewater treatment plants. In comments to *Environment Hawai'i*, he noted that the Lahaina plant was supposed to be a water recycling plant, as its very name – the Lahaina Wastewater Reclamation Facility – denotes.

"By not throwing away the water resource into injection wells and polluting the coast in the process, the need for a permit goes away," Holmes said.

"Recycling water pays for itself, dumping does not. Recycled water is drought-proof and frees up potable water, extending sustainable yield in the aquifer," he said. The point of the lawsuit brought against Maui County was not to force the county to obtain a permit, but to require it to use water wisely, he added.

"The same is true at Kealakehe in Kona," Holmes continued, "which has been dumping wastewater into a hole in the ground for 25 years and polluting the coast."

"We don't want them to get a permit—we want them to do recycling and to end the pollution.... Dumping literally flushes taxpayers' dollars down the drain," he said.

Hawai'i County's plans to upgrade Kealakehe plant's wastewater treatment to RI standards and increase its storage and distribution capabilities have been delayed – the result, Kucharski said, of backlogs in compliance reviews by the state's Historic Preservation Division. —*P.T.*