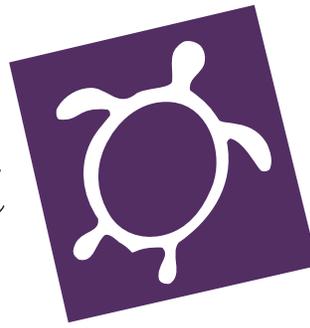


Environment



Hawai'i

a monthly newsletter

As the Wind Blows

If anyone thought the state Board of Land and Natural Resources would rubber stamp the recommendations of its hearing officer in the contested case over the Na Pua Makani wind farm's habitat conservation plan and incidental take license, they were wrong.

Not only did the majority of its members recommend approving the plan and license, it filled nearly 100 pages making its case for why the 25-megawatt, eight-turbine facility planned for the North Shore of O'ahu was unlikely to jeopardize the populations of any of the native bats or birds that may be killed or injured by the wind farm's enormous spinning blades.

In short, the board chose to trust the recommendations of its Division of Forestry and Wildlife and the scientific experts with the Endangered Species Recovery Committee.

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CREDIT: NA PUA MAKANI EIS

An artist's rendering of the Na Pua Makani wind farm at night, looking north from a walking path along a section of Kamehameha Highway.

North O'ahu Wind Farm Wins License To Incidentally Kill Protected Bats, Birds

On May 18, the majority of the state Board of Land and Natural Resources rejected its hearing officer's recommendation to deny a Habitat Conservation Plan (HCP) and Incidental Take License (ITL) for the proposed 25-megawatt Na Pua Makani (NPM) wind farm in Kahuku, on O'ahu's North Shore. Instead, the board backed its own team of experts with the Endangered Species Recovery Committee (ESRC) and the Department of Land and Natural Resources' Division of Forestry and Wildlife (DOFAW), which both recommended approval in 2016.

Mike Cutbirth, manager of Na Pua Makani Power Partners, told the board in 2014 that the project will be the "lowest cost wind energy project in the history of Hawai'i," and that it will contribute \$2 million to a community benefit fund as long as it's operating.

Despite the wind farm's obvious benefits to the state's renewable energy portfolio, the non-profit Keep the North Shore County (KNSC) and some Kahuku residents opposed the facility. Some complained that the facility would be too close to homes — within half a mile — while others wor-

ried about the potential effects the spinning turbines would have on endangered native bats and birds. The HCP and ITL came to the Land Board for approval in November 2016, but KNSC and Kahuku resident Elizabeth Rago requested and were later granted a contested case hearing on the matter.

After taking evidence and witness testimony the following year, hearing officer Yvonne Izu released her proposed findings of fact, conclusions of law, and decision and order last October. She mainly found fault with the HCP's treatment of the endangered Hawaiian hoary bat, which has been killed in unexpectedly high numbers by wind farms throughout the state.

Izu questioned NPM's decision to use the adjacent Kahuku Wind project as the sole surrogate for estimating the total number of incidental bat deaths likely to occur during the 20-year life of the project, despite the ESRC's position that this approach was appropriate. Based on the Kahuku project's low level of bat deaths, NPM anticipated that it would take 34 to 51 bats during the life of the project. However, Izu wrote that the company should have analyzed bat

continued to page 4



NEW AND NOTEWORTHY

Waikoloa Woes: The long-stalled rural development known as Waikoloa Highlands, just outside of Waikoloa Village in the Big Island district of South Kohala, is in jeopardy of losing its development rights granted by the Land Use Commission.

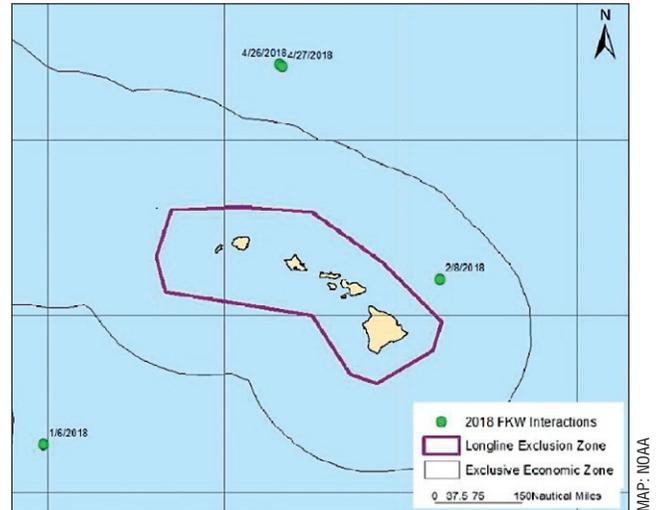
In 2008, the LUC approved a redistricting petition seeking to reclassify 731 acres owned by Waikoloa Mauka, LLC. Since then, the developer has failed to move forward in any visible way with the planned residential community of nearly 400 large-lot homes.

Under the LUC's order approving the redistricting, from the state Agricultural district to Rural, substantial "buildout" – the backbone infrastructure required for the sale of individual lots – had to be completed within 10 years of the approval date of June 10, 2008. The Hawai'i County rezoning ordinance also had a deadline that passed two months ago: By March 21, 2018, work on the first 50 lots of the subdivision had to be completed.

On May 23, the LUC met to discuss the status of the project. No representative of Waikoloa Mauka attended, although the LUC staff made diligent efforts to notify the developer of the meeting. Sidney Fuke, the Big Island planning consultant who at one point worked for the company, informed the LUC he was no longer involved. Fuke last submitted an annual report on Waikoloa Mauka's behalf to the LUC in 2016.

Following a brief recap by Hawai'i County Planning Department deputy administrator Daryn Arai as to the project's status with the county, Land Use commissioner Jonathan Scheuer made a motion to have the commission chair and staff prepare an order for Waikoloa Mauka to show cause as to why the redistricting should not be revoked.

After several other commissioners chimed in with their support for the motion, it passed unanimously. (The November 2016 issue of *Environment Hawai'i* reported on this project in greater detail.)



Map shows Hawai'i longline fleet's interactions with false killer whales in 2018

that the whales will straighten the hooks and free themselves, the captain ordered the line cut in this case to prevent gear from flying backward and injuring crew members. As a result, the whale was released with a hook in its mouth and trailing about half a meter of wire leader and 1.5 meters of monofilament line, according to an incident report. The following day, during the same set, a 20-foot false killer whale got caught on the line, but somehow broke free as the crew retrieved the gear.

The incidents bring the total FKW interactions with the longline fleet in 2018 to four. Only one of those have occurred within the 200 nautical mile exclusive economic zone (EEZ) around the islands. Should another whale be killed or seriously injured by the fleet within the EEZ this year, a large swath of fishing area south of the islands will close to longlining for the rest of the year.

Correction: In our April story, "Court Finds Federal Agencies Violated Law In Granting Permit, Setting Loggerhead Cap," we misspelled the name of NOAA's Kristen Johns. We regret the error.

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Hook, Line, and Sinkers: In April, the Hawai'i longline fleet furthered its trend of interacting with false killer whales on the high seas. On the 26th, a deep-set longline vessel hooked a 13-foot whale. While handling guidelines call for lines to be kept taut, thereby increasing the chance

Quote of the Month

"There might be a way to think about phasing. ... We can't just do this all everywhere, all at once."

—Tetra Tech's Kitty Courtney
on implementing climate change adaptation measures

Early Developers of Leilani Estates Ignored the Eruption in Their Back Yard

On May 26, 1959, representatives of the Hawai'i Land Hui, a group of three Honolulu businessmen, met with Hiroshi Kasamoto, director of the Hawai'i County Planning and Traffic Commission.

As their attorney, Masanori Kushi, later described the encounter, the investors were assured by Kasamoto that “a road bond as such is not necessary and that a written guaranty would suffice” to give the county assurance that roads would be built in the subdivision they were proposing in the Puna area known as Keahialaka.

With this promise in hand, the investors proceeded to purchase 2,400 acres from the Ola'a Sugar Company on June 10, 1959, “for a sizable consideration.”

“The capital raised by the Hui took into account the purchase price of the land, survey expenses and road construction costs, and other subdivision expenses,” Kushi wrote, “but the road bond requirement” — imposed by the county commission when it approved the subdivision — “was not taken into account.”

The commission then waived the bond requirement and by early 1960, the hui — made up of Maurice Takasaki, Ramon Chiya, and Kenneth Ing — began its efforts to sell off the first lots in the Leilani Estates subdivision. Advertisements enticed buyers with the prospect of “fee simple land as low as 4¢ per sq. ft.” and “one acre lots as low as \$1695.00.”

At the same time as the subdivision was being considered by the county government, just a few miles distant, residents of the village of Kapoho were struggling to save their homes, farms, offices, and shops from being overrun by the lava that, on January 13, 1960, began to erupt from a series of fissures along the east rift zone of Kilauea volcano.

The devastating eruption lasted for six weeks, obliterating Kapoho, taking out the Coast Guard lighthouse station, consuming homes, and leaving what had been fertile fields of coffee, papaya, and orchids buried under dozens of feet of fresh lava.

The outbreak left a new cinder cone on the east rift, joining a series of others along an almost straight line leading back to the Kilauea caldera—a line that crossed through the heart of the new subdivision.



PHOTO: USGS

The Fire of Laka

Generations before the subdivision was a glimmer in the hui's collective eyes, a Hawaiian community had lived in the area, known to them as Keahialaka, a name that, literally translated, means the fire of Laka, goddess of hula.

According to Hawaiian legend, this was the place where Pele first made her presence felt in Puna, where Pele dug a crater in which Laka built a fire.

The new name, Leilani— heavenly lei, or, figuratively, royal child — effectively erased any hint that the older name gave about the volcanic nature of the place.

Instead, prospective buyers in California who read the California Division of Real Estate report on the subdivision were told that the division “has no information as to the hazards of volcanic eruption as it may affect this subdivision.” For further information, buyers were referred to the volcanologist in charge at the Hawai'i Volcano Observatory.

By May of 1961, the hui had sold 90 lots, “the majority of them being on terms of \$15 down and \$15 per month.” By this time, the hui was hoping to work with promoters in Arizona to sell “our entire subdivision in the shortest time possible,” Takasaki stated in a letter to the county Planning and Traffic Commission.

The problem of roads would not go away, however. Although sales promotions mentioned that roads would be developed and one of them “paved to county standards,”

An aerial view of an erupting fissure 7 in Leilani Estates and below, an ad (circa 1960) for Leilani Estates.

the hui was unable to follow through with payments to contractors.

In November 1962, the California Division of Real Estate ordered the Hawai'i Land Hui to “desist and refrain from selling or offering to sell ... lots or parcels” in Leilani Estates. In an effort to get the project back on track, Takasaki informed the county in December that he and his partners “have mortgaged our homes to finance construction of road and engineering” in the first increment of the subdivision.

“It is true that we have tried practically every financial institution in Honolulu to grant us a loan on our sales contracts but none of them have come through with a loan,” he wrote. “One of the reasons was that the buyers were mainland persons and not local residents.”

At its meeting in May 1963, the subdivision committee of Hawai'i County met and effectively voided the subdivision approval and approved a motion asking the county attorney to take legal action to force completion of the three and a half miles of roadway that the developer had promised to pave to county standards.

Nearly three years later, the Puna Sugar Company requested the county Planning Commission “reactivate” the subdivision on the same conditions as before, so that the company could “dispose of the [land] to a responsible developer.”



Wind from page 1

mortality at other wind farms in the state that had been operating longer than the Kahuku project.

Izu suggested that NPM had failed to factor into its bat take estimates the possibility that its much-taller turbines could kill more bats. She also found that NPM's plan to start spinning its blades when wind speeds reached a minimum of 5 meters per second (again, following ESRC guidance) fell short of the state endangered species law requirement that the facility minimize and mitigate its effects to the maximum extent practicable.

"[T]he best scientific knowledge currently available suggests that increasing cut-in speed to 6.5 m/s, rather than 5 m/s, would minimize impacts to the maximum extent" and NPM failed to prove that the higher cut-in speed was impracticable, she wrote.

Sole Proxy

In its 98-page decision, the Land Board detailed its many reasons for supporting a permit and take license for the wind farm. The board rebutted Izu's contention that using the Kahuku facility as the sole surrogate was inadequate. Instead, it determined that the Kahuku wind farm was, in fact, a suitable model upon which NPM could base its estimated bat take.

To start, the Kahuku facility is less than a quarter mile from the NPM site and has similar terrain.

By the end of December 1968, a new developer was in place: The Realty Investment Company, Limited, whose principal was then-Senator Richard Henderson.

Of the more than 2,000 one-acre lots carved out in the subdivision, by the time the fissures began to break out early last month, homes had been built on just around 800. The population was thought to number around 1,600.

Leilani Estates was just one of dozens of subdivisions approved in this period. As George Cooper and Gavan Daws point out in *Land and Power in Hawai'i*, "Evidence of Hawai'i County's real attitude in the early boom years toward controlling or restricting development in general could be seen in a Big Island Planning Commission move in 1962, on the eve of the effective date of the Land Use Law, when on a single day 42 new subdivisions involving 3,500 lots were approved, 'in order to beat the [Land Use] law deadline,' according to the Honolulu Star-Bulletin." — *Patricia Tummons*

KNSC contended that the HCP should have considered bat take data from the Kawailoa wind farm, which is about 4.5 miles distant, lying between Haleiwa and Waimea Bay. The Land Board disagreed.

As of mid-2015, that much larger wind farm, which consists of 30 turbines compared to Kahuku's 12, had more observed bat fatalities than the other five wind farms in Hawai'i combined, the board noted, adding that the Kawailoa site also had about ten times the bat activity of Kahuku.

The board also pointed to a study of the Ko'olau mountains completed a few years ago, in which researchers detected bats less often in the windward northern areas (such as the Kahuku and NPM sites) than in the leeward southern parts of the study area (where the Kawailoa farm is).

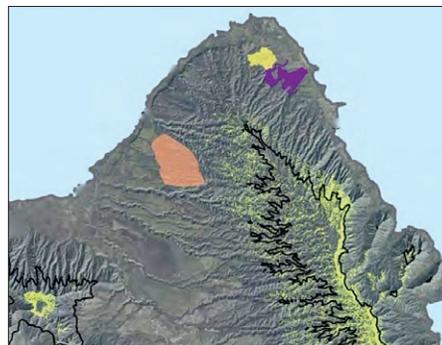
Citing comments by ESRC members that the Kawailoa facility was an "outlier" with its high number of bat deaths, the board concluded that the preparers of NPM's plan "consciously, and correctly," chose not to incorporate any Kawailoa bat take data in its estimates.

Height, Rotor-Sweep

The board also concluded that scientific evidence presented during the hearing failed to prove a direct correlation between turbine height/rotor-sweep area and bat mortality at the elevations of the NPM turbines. And even if there were such a correlation, the board found, "the conservative assumptions made by the NPM HCP would more than accommodate an adjustment based on the greater height and rotor sweep area of the NPM turbines vs. the Kahuku turbines."

With regard to a 2007 study that showed that taller turbines killed more bats, the board suggested it was only because the taller blades in that case reached high enough to interact with migrating bats. "This may not necessarily apply to the ope'ape'a, which do not migrate," the board wrote.

The board also cited a 2009 study, which



This map of North O'ahu shows the Na Pua Makani (purple), Kahuku (yellow), and Kawailoa (orange) wind farm sites.

stated that fatality rates would be low at sites with little bat activity (i.e., Kahuku and NPM) because "there are few bats to be killed, and **tower height is inconsequential.**"

"The remaining sources cited for the proposition that bat take increases with height are secondary (in the sense that they rely on other studies)," the board wrote, adding, "Without more, we cannot conclude that these studies demonstrate a difference due to the height differences between Kahuku and NPM."

The board acknowledged that it was plausible that more bats would be killed with a larger rotor-sweep area. However, "the two studies in the record which directly address this question came to contrary conclusions," the board wrote.

In any case, the board noted that the HCP already estimated the number of expected bat deaths by 20 percent over what it would be using the statistical analysis employed at Kahuku. What's more, the board took into account NPM's announcement late in the hearing that it was reducing the total number of turbines from nine to eight. "This would cause an 11 percent decrease in the expected take calculated on a per-turbine basis," the board wrote.

The board also found that the NPM and Kahuku facilities would have similar total rotor-sweep areas, with NPM having fewer, but large turbines, and Kahuku having more, smaller ones. Given that the Kahuku facility has averaged about one bat death per year in the period analyzed, "this strongly indicates that the NPM HCP estimate that it will have 1.7-2.5 bat takes per year is reasonable," the board wrote.

Cut-In Speeds

Despite Izu's arguments that the HCP should require a cut-in speed (the speed at which the turbines start to turn) of 6.5 meters per second, rather than the 5 m/s recommended by the ESRC, the board found that the studies she relied on are inconclusive as to whether the higher cut-in speed is any better.

But even if it were, the board noted that NPM's Cutbirth testified during the hearing that generating electricity only when winds are blowing at 6.5 m/s and higher "could potentially put us in a situation where we're not meeting our [HECO power contract] production requirements."

"Lost power output is not just an economic issue for the applicant. There is also a cost to the public: it reduces the amount of renewable energy generated," the board added.

What's more, the Ko'olau bat study showed that bats were more likely to be pres-

Environmental Planning Office Closes, Victim of Cuts to Federal EPA Budget

Without so much as a news release, the Hawai'i Department of Health has shuttered its Environmental Planning Office. Effective May 2, the office — which was instrumental in coordinating the Department of Health's strategic plans, reviewing land use and environmental disclosure documents for compliance with health requirements, and reporting annually on the state's progress toward its environmental health goals — shut down.

The reason?

According to DOH spokesperson Janice Okubo, cuts in the federal budget made it impossible to continue funding the office.

"The DOH Environmental Planning Office was funded by seven different grants from the U.S. Environmental Protection Agency," Okubo said in an email response to questions posed by *Environment Hawai'i*. "The full-time positions that staffed the office were each split-funded among five or six different grant areas. ... For federal fiscal year 2017, the total grant funds for all of these areas were \$5,693,230, and in federal fiscal year the grant funds totaled \$5,013,818."

Okubo said that the DOH was made aware of the reduction in federal funds at the beginning of the year. "The president's budget FFY 18 [federal fiscal year 2018] pro-

posed the following budget cuts: air pollution control program, 28.9 percent; nonpoint source management, 100 percent; water pollution control — surface water, 28.9 percent; public water system supervision, 29.1 percent; hazardous waste management, 28.4 percent," she stated.

The EPO provided a number of services, including strategic planning services for nearly all of the programs within the DOH's Environmental Health division. It also commented on environmental assessments, environmental impact statements, and other planning documents to ensure that DOH's environmental requirements were taken into account in the planning and permitting of new projects.

Each year, the office prepared an Environmental Health Management Report, describing the state's progress toward environmental health goals. In addition, it maintained data on environmental health indicators as gathered through monitoring and sampling, developed the Environmental Geographic Information System, assisted in the Department of Health's environmental justice programs, and represented the DOH on the state's Interagency Climate Change Mitigation and Adaptation Commission.

Okubo said that there were no terminations as a result of the office shutting down. "All of

the positions were reduced through attrition or placement in another position ... within another program," she stated.

During the legislative session, the DOH acknowledged the federal budget cuts in its testimony on the state's spending bill, but did not mention that it would be eliminating the EPO. Instead, there is only this, offered in testimony on March 7, regarding the DOH's environmental health administration:

"The Environmental Management Division is requesting to change means of financing from federal funds to general funds for 1 permanent Environmental Health Specialist IV for water pollution control enforcement. The projected reductions in EPA funds will not support this position, however the department needs to meet its legal obligations for compliance oversight of the Hawai'i National Pollutant Discharge Elimination System regulated facilities. (\$46,932). The Environmental Management Division is also requesting to change means of financing from federal funds to general funds for two permanent Environmental Health Specialist VI positions for supervision of the Underground Storage Tank Section. With declining federal funding, the Department of Health is still responsible for statewide monitoring, inspection, and enforcement of underground storage tank owner and operator compliance. (\$154,836)."

The final budget reflects the changes, with three permanent full-time positions added to the general fund allotment to the division. — *P.T.*

ent, at least at Kawailoa, when mean wind speeds were less than 4.6 m/s, and about 80 percent of bat observations occurred when mean wind speeds were less than 5 m/s, the board noted.

"To require LWSC [low wind-speed curtailment] at 6.5 m/s at the outset of operations, rather than as a part of adaptive management, is not necessary to minimize and mitigate the impacts of the take of opē'ape'a to the greatest extent practicable," the board concluded.

Deterrents

To make up for all the expected bat deaths, the HCP commits to various habitat management activities at Poamoho ridge, such as fencing and ungulate and invasive weed removal. For a take level of 34 bats (Tier 1), NPM must pay \$1.758 million, whether or not it takes all the bats allowed. If it looks like the facility is going to kill more than 34 bats, Tier 2 mitigation projects are

triggered, and the company must pay an additional \$894,000 for them.

Because ultraviolet and acoustic deterrent technologies aren't yet proven effective, they — and research into them — can't be considered as part of a mitigation plan under the Endangered Species Act. Even so, the board found that it had the authority to require such research and implementation "if they are shown to be effective, in addition to the mitigation currently required."

The board then required NPM to contribute \$100,000 toward research into deterrence and to implement it — after consultation with the ESRC — if it proves effective and commercially viable.

"The resulting research may also utilize other funding sources. The research project or projects shall be approved by DOFAW and results shall be made publicly available," the board wrote.

Final Vote

The board members who voted in favor

included chair Suzanne Case, Chris Yuen, Tommy Oi, Jimmy Gomes, and Sam Gon. After oral arguments in January, KNESC filed a motion seeking Gon's recusal because he was an ESRC member when it recommended Land Board approval. The board ultimately decided to keep him in the loop.

Board member Keone Downing dissented and member Stanley Roehrig recused himself for having inadvertently discussed the case with a state legislator.

"The project should stabilize electricity rates and create new jobs. The project will spend up to \$4.6 million dollars to assure there will be no negative impacts to Hawai'i's environment and native and protected species," the DLNR stated in a press release announcing the board's decision. The \$4.6 million covers mitigation for the incidental take of bats, the Hawaiian short-eared owl, and several species of waterbirds, including the endangered nene, coot, and moorhen.

— *Teresa Dawson*

Sea Level Rise Report Spawns Many Bills, But Legislators Let Nearly All of Them Die

The state Legislature tried to make great strides to address the flooding projections in the Sea Level Rise Vulnerability and Adaptation Report (SLR report) issued just before the session began, but wound up taking a baby step.

Armed with the sobering details in that report—6,500 structures will be chronically flooded, 28 miles of coastline will become impassible, 20,000 residents will be displaced with a 3.2 meter rise in sea level—several legislators introduced more than a dozen measures to force both the public and private sectors to take action.

House Bill 2106, introduced by Rep. Chris Lee, was perhaps the only SLR-related bill to make it to the governor's desk. It directs the Environmental Council to adopt rules requiring all environmental assessments and impact statements prepared pursuant to the state's environmental review law to consider sea level rise, using the best science available.

More than a dozen other SLR-related measures died, as did a handful of bills that attempted to reduce the state's greenhouse gas emissions.

Report Recommendations: Senate Bill 3068, introduced by Sen Kalani English, basically directed state and county agencies to do everything recommended in the SLR report, a tall order for even the most flush. To start, every state agency and every county

would have had to review their policies, processes, and rules to assess whether they supported “the smart redevelopment of urban areas as part of sea level rise adaptation planning.” The first review would have had to be done by July 1, 2019.

The counties also would have been required to do about a dozen more tasks, including assessing market conditions of urban regions, identifying priority redevelopment areas, and updating plans for capital improvements to reflect rising sea levels.

The state Office of Planning (OP) was tasked with integrating the SLR report's recommendations into state planning, maintaining an inventory of lands suitable for development outside of sea level rise exposure areas, establishing a committee to assess risks in urban areas vulnerable to sea level rise effects, and develop a “willing seller” program to identify property owners who are willing to sell or relocate to safer areas.

Also, by the 2021 legislative session, the OP was expected to have developed a financing strategy to address the costs of sea level rise adaptation.

The bill assigned additional duties specifically to the Office of Environmental Quality Control, the Board of Land and Natural Resources, the Office of Hawaiian Affairs, the Department of Health, and the state Climate Change Mitigation and Adaptation Commission.

Some of those agencies stated in testimony that they supported the intent of the bill, but worried about the costs and resources required, as well as the bill's attempt to make law out of what was meant to be merely a guidance document.

“[I]t is currently premature to require state and county agencies to use data and integrate recommendations from the SLR Report in their planning

and inventory of lands, as the SLR Report explicitly states that it is only useful as a ‘screening-level resource’ and should not be used for ‘legal purposes,’” OP director Leo Asuncion wrote, adding that his agency alone would need \$2.35 million in additional funding to hire the consultants needed to carry out the tasks outlined in the bill.

Josh Stanbro, executive director of the City and County of Honolulu's new Office of Climate Change and Sustainability, also worried about paying for all the work prescribed by the bill. “[W]e are concerned that this bill mandates city actions and reporting without funding to carry them out. These are not one-time costs, but reflect an ongoing commitment,” he wrote, before asking that permanent funding be included in the bill “to assist the city and other counties in this work.”

Land Board chair and Department of Land and Natural Resources (DLNR) director Suzanne Case recommended that more time be given to agencies to digest the SLR report recommendations and to return to the Legislature the next session with their own recommendations.

In the meantime, Case pointed out that the Climate Commission planned to set an aggressive agenda over the next several months to meet carbon emissions reduction and sea level rise adaptation goals.

“The department envisions forming a Sea Level Rise working group that will work with state and county agencies, the business community, and the public on efforts that must be undertaken to improve our resiliency in the face of sea level rise. We will surely be developing a legislative package for next year's session,” she wrote.

The departments of Transportation and Health echoed points raised by Case, Asuncion, and Stanbro.

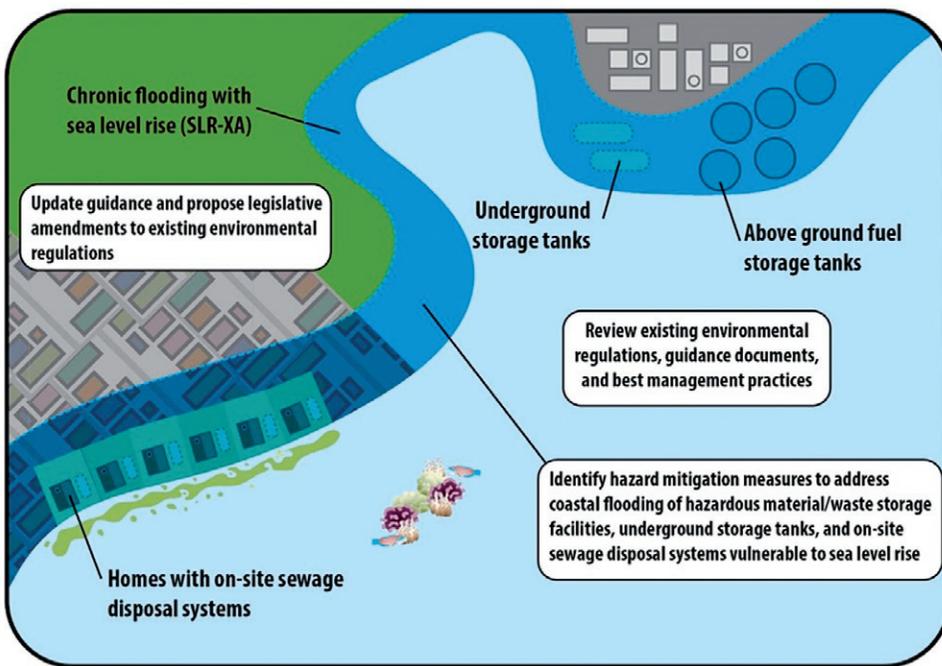
“The department currently does not have the staff and expertise to conduct a sea level rise mitigation review of hazardous material and waste storage facilities, underground storage tanks and on-site sewage disposal systems or wastewater treatment facilities. Therefore, the department recommends studies such as these should be in collaboration and concert with the Hawai'i Climate Change Mitigation and Adaptation Commission as part of a more comprehensive examination of sea level rise impact,” the DOH wrote.

The bill made it through crossover, but eventually died in the House.

Shoreline Encroachments: HB 2653 was the DLNR's latest attempt to get the Legislature to give it some leeway in setting rent for



At Kualoa Beach Park in Windward O'ahu, waves have severely eroded the coastline and washed sand and debris far inland.



Some of the recommendations from the Sea Level Rise Vulnerability and Adaptation Report.

shoreline encroachment easements by legally built structures that now sit on public land due to erosion and/or SLR. Under current law, the department must charge fair market value for the easements. In past years, the DLNR sought to be able to charge less than fair market rent for perpetual, non-exclusive easements for shoreline encroachments. Many people, including some legislators, thought this would encourage inappropriate shoreline development and the proposals repeatedly failed.

This year, however, the bill was amended to encourage retreat from the shoreline. Under House draft 1, the Land Board would be allowed to charge less than fair-market rent for easements with terms, including extensions, of up to 35 years.

“The limited term duration of the easement provides the board with greater oversight and the flexibility to implement future policies in regards to shoreline protection structures. Additionally, it provides the Legislature with time to evaluate and enact laws to address the impacts of sea level rise. The state can better focus its limited resources on working to find a solution to sea level rise rather than in conflict with private landowners,” wrote Land Board chair Case in her testimony strongly supporting the bill.

The bill made it to crossover, but died in the Senate. The Senate version, SB 3093, never got a committee hearing. (For more background on this issue, see “Land Board to Legislature: Please, Consider Shoreline Easement Bills,” from our February 2018 issue, available at environment-hawaii.org.)

Real Estate: Perhaps people wouldn’t build so close to the shore, or buy a house in an eroding or low-lying coastal area if they knew of the potentially disastrous problems that lay ahead. Senate Bill 694 tried to mitigate that. It would have required people buying or receiving real estate to execute a statement acknowledging that they have reviewed the appropriate hazard exposure map from the SLR report and that they accepted the risks of acquiring property that is vulnerable to climate-related exposure. That bill faced opposition by the Hawai'i Association of Realtors (HAR) and sank after its first and only hearing. A similar measure, SB 2442, never even made it that far.

HAR disputed that the measure was needed, since its members already require something similar in the case of oceanfront properties. In testimony, it asked for a delay in the effective date so its members could update their standard forms, should the Legislature pass the bill.

SB 3068, which also failed (see above), included a section that would have required sellers to disclose whether their residential real properties were located within a sea level rise exposure area identified in SLR report maps.

(For background on this, see, “Bill Would Ensure Land Purchasers Know Of Sea Level Rise Threat,” from our March 2018 issue.)

Hazard Mitigation: SB 2334, introduced by several legislators led by Sen. Laura Thielen, was also a sweeping bill that would have required action from a variety of agencies, but was much more manageable than SB 3068.

The final version (Senate Draft 2) called for the state and counties to incorporate “evaluations, predictions, and recommendations (including those in the SLR report) pertaining to climate change hazards and mitigation into their respective multi-hazard mitigation plans.”

This bill made it to conference committee, but didn’t make it out.

Vern Miyagi, the then-administrator for the Hawai'i Emergency Management Agency, testified that the actions called for in the bill were already underway for the state’s update of its Hazard Mitigation Plan. “The [SLR report] will be a major consideration in the state hazard mitigation plan update which is due in October of 2018,” he wrote.

Miscellaneous: Some bills would have placed restrictions on leasing or development. Under HB 2380, for example, before leasing lands at state boating facilities, the Land Board would have to find that 1) a prospective lessee had considered SLR risks and 2) that the effect of SLR on the proposed lease area would be minimal during the lease term. However, the Legislature could exempt the board from having to make those findings, if the board proved extraordinary circumstances necessitated it.

HB 2469 would have prohibited a county or state agency from approving a permit to construct or operate a new grid-connected electrical generation facility in excess of five megawatts or storage facility in excess of 50 megawatt hours if located in a sea level rise exposure area.

SB 2969 would have required county authorities to consider sea level rise when reviewing and approving all developments.

Beach Preservation: HB 2468 would have created a special fund under the DLNR to acquire lands for beach preservation with prior legislative authorization, and a working group within the Climate Commission to determine appropriate funding mechanisms and established a three-year North Shore Oahu pilot program to explore managed retreat options. The bill never made it to the Senate.

Climate Refugees: A handful of resolutions — House Resolution 202, House Concurrent Resolution 232, Senate Concurrent Resolution 120, and Senate Resolution 77 — called for changes to U.S. immigration laws to allow migrants displaced from their homes by climate change to be granted refugee status. All failed. —*T.D.*

City Climate Change Commission Drafts ‘Revolutionary and Inconvenient’ Rules

State legislators haven't been alone in their efforts to codify recommendations from the December 2017 Sea Level Rise Vulnerability and Adaptation Report (SLR report) prepared for the Hawai'i Climate Change Mitigation and Adaptation Commission in accordance with Acts 83 and 32 of the 2014 and 2017 legislative sessions, respectively.

City and County of Honolulu Climate Change Commission members Charles Fletcher and Makena Coffman, both with

- Prohibit public infrastructure within the 3.2-ft. SLR-XA “if not specifically designed to withstand sea level rise impacts.”

- Adopt six feet of sea level rise as the basis for planning on new development and infrastructure projects that would last into the second half of the century, or which “for any other reason are deemed to be development with low risk tolerance.”

- Adopt the exposure areas associated

the staff nor the funds to implement the recommendations, which she seemed to support in concept.

What's more, she said, “We're being pulled in different directions. Lots of priorities, lots of competing interests. [It's] a balancing act.”

“Do you have recommendations for language that doesn't put you in a corner?” Fletcher asked.

“It certainly does put us in a corner. Thank you for acknowledging that. ... These issues have been brought to our attention on numerous occasions. We're looking for assistance [and] may be able to address these issues sooner rather than later,” she replied, adding that she would try



the University of Hawai'i, last month introduced draft recommendations to the city for dealing with sea level rise. Not only do they factor in the SLR report, they also incorporate recent guidance issued by the National Oceanic and Atmospheric Administration on how to plan for development or infrastructure projects that have varying levels of risk tolerance.

Among other things, Fletcher's and Coffman's recommendations would require the city to do the following:

- Adjust Special Management Area boundaries to include all areas depicted in the SLR report's maps showing the sea level rise exposure areas (SLR-XA) at increases of 3.2 feet and six feet.

with rises in sea level for 3.2 and six feet as hazard overlays for planning under the city's sustainable community development plans.

- Ensure that major transportation corridors that are vulnerable to the effects of a rise in sea level of 3.2 feet have the flexibility to remain viable, even if it rises by six feet.

After hearing from the public, including some division heads with the Department of Planning and Permitting, the commission committed at its May 8 meeting to ensuring that whatever guidance it gives the city is feasible.

DPP permits division chief Katia Balassiano testified that the city had neither

to come up with alternative language.

“I don't want to be diluting the good work you've done, but I'm a little cautious about making promises or raising expectations [and] getting into legal liability that may result from this particular language,” she said.

Fletcher stressed that the commission did not want to create an unfunded mandate.

“This is a revolutionary and inconvenient set of regulations,” he added.

Given that climate change effects are occurring and will continue, Balassiano suggested that government agencies “don't really have a choice” but to deal with them.

The Sierra Club, Hawai'i Chapter's Dave Rancy said he thought the draft guidance

document Fletcher and Coffman presented was excellent. “It takes you from the vague thing of, ‘We should be considering sea level rise’ ... down to the TMK [tax map key] level,” he said.

Tetra Tech’s Kitty Courtney, who was instrumental in the creation of the SLR report, also supported the kinds of recommendations that had been drafted. Given the huge amount of work and resources involved in implementing them, she said, “There might be a way to think about phasing, beginning with the next sustainable communities plan update.” As reported in last month’s issue of *Environment Hawai’i*, Tetra Tech is working with Sea Grant on preparing a white paper for the DPP on how to address sea level rise in its upcoming update of the Primary Urban Center Community Development Plan, which covers the island’s urban core.

“We can’t just do this all everywhere, all at once. ... [Tackling the plans] one by one. I think that would be helpful,” she said.

So it may be awhile before the plans for the entire island are updated to address sea level rise effects. The DPP’s transit-oriented development division, which focuses on urbanization around the Honolulu rail project, would also have some major catching up to do if Fletcher’s and Coffman’s recommendations were adopted unamended.

Like Balassiano, division administrator Harrison Rue seemed open to the kinds of things they had proposed. “It’s what we asked you for. Thank you,” he said, before admitting that seeing the recommendation to incorporate flexibility in developments so that they can adapt to a 6-ft. rise in sea level by the second half of the century “was a jaw-dropping moment.”

He said he was going to put the recommendations on his sub-cabinet’s next agenda.

“We have started using the 3.2 figure in thinking of infrastructure, as well as specific project planning,” he added.

‘Locked in’

When it comes to the city’s impending multi-billion-dollar rail system, which will connect Kapolei to Waikiki, representatives from the Honolulu Authority for Rapid Transit (HART) acknowledged that portions of the line fall within the exposure areas identified in the SLR report.

But, basically, it’s too late to reroute anything, said Ryan Tam, HART’s assistant deputy director of planning. In December 2006, the city council picked its preferred alternative and in February 2007, it selected the route for the first 20 miles and completed

an environmental impact statement in June 2010, he said.

“In December 2012, it signed a contract with the federal transit administration and got \$1.55 billion. It locked us into what we’re doing now,” he said.

For those parts of the system that might be vulnerable to the effects of sea level rise, HART’s strategy is to have “public-private partners and design builders identify options for what potential solutions are, potentially raising station entrances, stairs and ramps. Currently, those features are not in the design,” he said. He added that those decisions will need to be made by the community when the time comes. “Is our community going to retreat or are we going to raise the roadways?” he asked.

He noted that HART has made an effort to keep stations, such as the one slated for Ala Moana, out of the flood zone.

“What do you mean by flood zone?” Fletcher asked.

“Flood zones as, I think, currently defined” by regulations, Tam replied.

To this, Fletcher pointed out that Congress has stood in the way of updating flood insurance maps so that they reflect anticipated effects of sea level rise.

Tam replied, “We are an agency of the city. We are bound by the regulations of the city. As this evolves, we’ll have to take appropriate measures at that time.”

When Fletcher asked Tam whether HART even had the ability to take into account sea level rise or any other kind of constantly evolving information, Tam replied that his agency’s approach has been to focus on existing regulations and requirements. That said, Tam added that his agency gives its contractors “whatever best information we have now.”

Fletcher noted that HART had considered a rise in sea level of only 2.33 ft. in planning for the system. Given Tam’s statement that the rail would have a lifespan of 50-100 years, Fletcher asked him whether

he was interested in looking at sea level rise information for the 50- to 100-year time frame.

“I can’t make any commitments ...” Tam replied.

He seemed to acknowledge, however, that whatever restrictions HART must operate under, there will need to be a comprehensive strategy to deal with what’s likely going to happen to low-lying, coastal, urban areas such as Kaka’ako.

“If streets in Kaka’ako have to be raised, we have to think about clearance between the top of the roadway and the bottom of the [rail] guideway. ... It’s not just rail. It’s the whole community. What’s the strategy?” he asked.

Fletcher added, “If they fall into the sea level rise exposure area, it’s not just the [rail] stations, it’s access to the stations. ... What good is raising an elevator or escalator if you can’t drive to the station?”

TOD division administrator Rue interjected that some of those questions would be better directed to his agency. “Their job is the rail. Our job is the improvements around the stations,” he said.

“I’m sort of wondering what will trigger the direct addressing of sea level rise. ... At what point will you guys actually embrace this issue?” Fletcher asked.

Rue said his division has started addressing the issue “at least the day after I arrived four years ago. I asked HART, ‘What are you doing about the stations?’ We decided to focus on a few key projects in the Iwilei-Kapalama area, one of the areas partially inundated under your [sea level rise] viewer, as well as Pearlridge. We’re looking at riverine flooding in Waipahu and Kapalama. We don’t have the solutions now. Should we elevate, should we walk away?”

Discussion of the draft recommendations continued at a subsequent meeting later in the month, but no decisions have yet been made on them. — T.D.



Honolulu Climate Commission members Charles Fletcher and Makena Coffman.

Group Sues Kaua'i County, Grove Farm Over Water Line Tied to Blue Hole

If the state Board of Land and Natural Resources grants permission to one entity to divert water from a stream for a particular use, can that diverted water then be used for other things by other entities that don't have a board permit? Alexander & Baldwin, Inc. and its East Maui Irrigation Company, for example, have permits from the Land Board to divert East Maui streams and they provide some of that water to the Maui Department of Water Supply for municipal use.

However, in the case of Grove Farm using — and getting paid to transmit to the Kaua'i Department of Water's (KDOW) system — water diverted from the North Fork of the Wailua River under a permit granted to the Kaua'i Island Utility Cooperative (KIUC), the community group Kia'i Wai O Wai'ale'ale has argued that shouldn't be allowed unless Grove Farm also has a permit.

On April 23, the group's attorney, Linda Paul, filed a complaint in 5th Circuit Court seeking to invalidate an environmental assessment prepared for the department's Kapaia Cane Haul Road water main project. Among other things, the group asked that the court declare that water resources that are "necessary and subject to the proposed action are unlawfully being consumed outside of a BLNR water lease or revocable permit."

From the discussion by Land Board members last December about whether or not Grove Farm also needed a water use permit, it seemed like most of them didn't think so, at least not for water from the Blue Hole diversion used by KIUC. Whether Circuit Judge Kathleen Watanabe agrees remains to be seen.

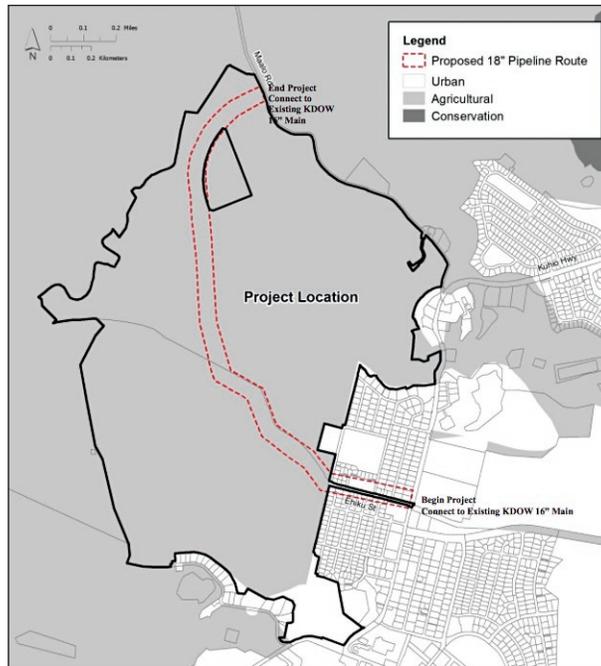
Should she find in Kia'i Wai O Wai'ale'ale's favor, the 1.7-mile, \$3 million project would be on hold "until compliance with all applicable laws is achieved," the complaint states.

Consumptive Use

Opposition to KIUC's use of water from the North Fork via the Blue Hole diversion goes back at least to December 2004, when the utility sought a 65-year lease so that it would have a secure source of water for its hydropower plants. The Office of Hawaiian

Affairs challenged the utility's claim that it was a non-consumptive use and requested a contested case hearing.

"Based on information from the staff submittal . . . we understand that the water is diverted from the North Fork of the Wailua River [from Wai'ale'ale and Waikoko



streams, specifically], run through the hydro power plants, and run into the South Fork. If that is the case, then the diversion clearly affects the amount of water in 'the stream,' in this case the North Fork of the Wailua

**"If a stream was meant to be dry it wouldn't be a stream."
— Keone Downing, Land Board**

River. Hence, the use would be consumptive under law," wrote then-OHA director Clyde Namu'o in a letter to then-board chair Peter Young.

"In light of the fact that the sale of this lease will enable a major diversion of some of Hawai'i's most significant streams for the next 65 years, it would seem clear that this kind of project is precisely the kind of activity that the [state's environmental review] law was intended to encompass," Namu'o continued.

To avoid a contested case hearing, KIUC entered into a memorandum of agreement

with OHA: KIUC agreed it would submit a cultural impact assessment and stream biota study to OHA for review and approval.

Fast forward to December 2017: After hours of public testimony, the Land Board narrowly voted (4-3) to renew a one-year holdover permit to KIUC for its use of water from the Blue Hole diversion. Before the vote, a representative from Kia'i asked for a contested case hearing, which the board denied after discussing the matter in executive session.

The group, as well as several other Kaua'i residents who had flown to the board's meeting in Honolulu to testify, argued that the diversion left about a quarter mile stretch of the stream dry, depriving fauna of habitat and native Hawaiians of their ability to fully exercise their traditional and customary rights. It should be noted that a year earlier, vandals blocked the Blue Hole diversion with rocks and lowered a spillway to redirect flows back into the stream.

Even so, kuleana landowner and Kaua'i taro farmer Debbie Jackson told the board that by allowing the diversion to continue, "You violate my rights as a beneficiary. . . . You violate your fiduciary responsibility by not protecting natural resources . . . severing my ohana's ability to practice. You violate the public trust doctrine. . . . I am personally negatively affected — spiritually, physically — by the taking of 100 percent of these waters. . . . I order you to stop."

Bridget Hammerquist of Kia'i O Wai'ale'ale testified that Grove Farm takes the water diverted by KIUC into its Waiahi Surface Water Treatment Plant and gets paid \$2 million a year to deliver about 2-3

million gallons a day to the county. (The plant receives water from the Blue Hole diversion, as well as several other streams located on Grove Farm lands, via the Kapaia Reservoir.)

"Are you suggesting Grove Farm has to get a permit?" asked board member Stanley Roehrig.

"Yes . . . since 2004," she replied.

Roehrig asked Linda Chow, the deputy attorney general advising the Land Board, whether the state was entitled to the income from the transmission of water across private property and sale to the county.



PHOTO: CWRM

The Blue Hole diversion directs water away from Wai'ale'ale Stream.

“No. Because they’re not selling the water. They’re selling the cost of transmission,” she replied.

Representatives from the Commission on Water Resource Management informed the Land Board that it was in the process of doing an instream flow standard assessment for the streams that feed into the Wailua River. If and when the Water Commission revises the interim instream flow standards (IIFS) of any or all of the streams covered in the assessment, it will no doubt seek to meet the Department of Hawaiian Home Land’s water needs and ensure mauka-to-makai connectivity to benefit any native amphidromous stream organisms.

“We are looking to develop IIFS for the section below Blue Hole diversion,” reported CWRM stream protection branch head Dean Uyeno. “Typically we would look at the watershed as a whole. We do have a USGS study of southeast Kaua’i. We’re waiting for that study. Typically we would wait ‘till it’s done, but Ayron [Strauch, also with CWRM] has done some stream work to determine flows,” he said.

“Your investigation includes whether or not there should be a partial diversion?” Roehrig asked Strauch.

“It’s to assess all instream uses. If there’s no water, obviously uses are impacted,” Strauch said.

Given that the Water Commission was preparing to propose flow standards for the affected streams, Kaua’i board member Tommy Oi moved to approve KIUC’s permit.

Board member Chris Yuen seconded the motion with conditions. One was that within one year, he wanted to see a proposal brought to the board for partial restoration of flows to the North Fork of Wailua River, especially if no new IIFS were adopted by then.

“The diversion has gone on a long time. I don’t think we can come up with numbers on the fly. I do sympathize with having some basic restoration to the stream,” he said.

Board members Roehrig, Keone Downing, and James Gomes, however, said they thought KIUC had had more than enough time to restore streamflow voluntarily.

“I probably agree with a lot of what you said,” Downing told Yuen. “I’m still going to be voting no. People gotta look at being proactive, not reactive. If a stream was meant to be dry it wouldn’t be a stream,” he said.

“I’m also voting no. I do believe those streams were utilized by our kupunas. . . . I think it’s been going on long enough,” Gomes added.

In April, shortly before Kia’i filed its complaint, the commission issued its instream flow standard assessment for the Wailua River. In it, the authors state, “One diversion that was restricting recruitment [of stream organisms] was the Blue Hole intake on the West Branch of the North Fork. However, damage from vandalism and the current operators management has

resulted in continuous flow over the dam since the fall of 2016.”

‘Relief Main’

Kia’i did not fight the Land Board’s decision in court after being denied a contested case hearing. It did, however, take up the fight over all of the stream diversions that feed into the Waiahi treatment plant, which is the county’s primary source of water to Lihu’e. The environmental assessment for the Kapaia water main project provided the hook for the action.

On paper, the project seems almost mundane: According to its environmental assessment, a section of the KDOW’s water main is too narrow, causing flow rate and pressure limits to be exceeded. To bring them down to acceptable levels, the department wants to add a “relief line,” about two inches wider, that will run along that section and be connected at both ends, forming a loop. The

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second line will also provide badly needed redundancy, ensuring that critical facilities such as the Wilcox Medical Center and Wilcox Elementary School would continue to receive potable water in the case of a line break, the EA states.

Because the new line would serve Grove Farm's development needs, as well as the county's, the company is footing a third of the line's construction costs.

The finding of no significant impact was published by the Office of Environmental Quality Control on March 23.

One of the problems, Kia'i states in its complaint, is that KDOW approved the project, which uses state lands and water, "even though neither Grove Farm or its subsidiaries, nor KDOW holds a water lease or revocable permit from the (BLNR) authorizing their use of southeast Kaua'i's freshwater resources."

"The Waiahi SWTP obtains water from the Kapaia reservoir, into which flows water from at least the Hanama'ulu stream, amongst other freshwater resources," the complaint states, adding that the water provides for residential, public, commercial, industrial, and resort uses.

Native Hawaiian members of Kia'i have suffered as a result, the complaint argues. "Diversion and reduction in natural flows to the Wailua stream complex has left Native Hawaiian members' auwai dry. Water must be trucked in ... at some affected areas. ... Plaintiffs seek a declaratory judgment stating that plaintiffs' Native Hawaiian members' constitutional rights to native Hawaiian

traditional and customary practices have been violated by defendants' conduct," it states.

The complaint, referencing the Hawai'i Supreme Court's *Kaua'i Springs* decision, also points out that the county has "an affirmative duty to conserve and protect Hawai'i's public trust resources, including Kaua'i's threatened and endangered species and its freshwater resources."

"The waters of Wai'ale'ale are an essential component of the habitat of several threatened species including the highly endangered endemic Newcomb's snail, the endemic wetland birds 'alae'ula (moorhen) and 'alae ke'oke'o (coot), and the native Hawaiian stream gobies (o'opu)," it states, adding that the group wants a declaratory judgment that the county violated its obligations as a public trustee by failing to conduct an EA in compliance with state laws.

What's more, Kia'i argues that the relief line will foster increased water use, despite the fact that the EA claims that it won't increase the system's capacity. And the group bases a number of its arguments on the belief that the line is actually a segment of a larger community development plan prepared by Grove Farm decades ago.

"The [final EA] stated that the project would not result in the loss of any natural resources because the existing volume of water output from certain wells and the Waiahi SWTP would not increase, but did not comment on known future increased water output under the Lihu'e Development Plan," it states. This, despite the fact that

"KDOW acknowledged that the project is required to provide transmission facilities for the Grove Farm Lihu'e Development Plan's master planned community," it added.

Viewed in that light, the group argues, the EA "did not identify potential impacts, evaluate the potential significance of each impact, or provide for detailed study of significant impacts on Southeast Kaua'i's surface or ground natural freshwater resources, nor any of the potential direct, secondary, indirect, or cumulative impacts of increased consumption of those resources." Given that, Kia'i is seeking an order declaring that the EA was "impermissibly segmented and is therefore invalid."

With regard to the need to bring the water system into compliance with flow rate and pressure limits, Kia'i argues that reasonable alternatives to the relief line, "such as the installation of appurtenant hydraulic fixtures, including pressure relief valves or pressure reduction valves," weren't considered. — T.D.

For Further Reading:

- "Hawaiians, Conservationists Challenge Diversions of Streams in East Kaua'i," January 2005;
- "Letters (Kaua'i Water: Another View)," April 2005;
- "Board Talk (East Kaua'i Diversion)," September 2005.

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