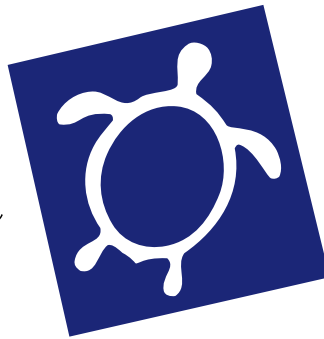


# Environment



# Hawai'i

a monthly newsletter

## Fish Stew

From false killer whales to turtles, from bottomfish to tunas, the range of marine animals managed by federal agencies is huge. And at the recent meeting of the Western Pacific Fishery Management Council, disputes over their management came to the fore.

Our lead article and sidebars summarize many of those conflicts.

Also featured in this issue is the Department of Agriculture. While the board that governs that department is to be commended for – finally – moving forward on a rule addressing the threat of ‘ohi’a rust, one can only wonder why that action was delayed for too many years.

The attitudes of DOA staff, betrayed in an unintentionally released email thread, may go far to explaining that unhappy situation.

## Plan to Protect Rare False Killer Whales Is Scrutinized After Serious Injuries Spike

Last year, the Hawai'i deep-set longline fleet interacted with more Hawaiian false killer whales than it had in more than a decade and most of those interactions resulted in serious injuries, according to the National Marine Fisheries Service. This happened despite a Take Reduction Plan (TRP) that required gear changes intended to leave hooked whales with only minor injuries.

The false killer whale take reduction team established by the National Oceanic and Atmospheric Administration (NMFS' parent agency) meets at the end of this month to discuss the plan it created two years ago. Whether the team will take steps to amend the plan remains to be seen,



False killer whale

PHOTO: ROBIN BAIRD

but at the Western Pacific Fishery Management Council's meeting last month in Honolulu, team coordinator Nancy Young said it's too soon to say whether or not the plan is ineffective. **to page 6**

## IN THIS ISSUE

2

*New & Noteworthy:*  
*GEMS, Albizia*

3

*Wespac: Bottomfish, Uhu, And Green Turtles*

5

*DLNR Rules Linger In Governor's Office*

7

*Fishing Gear More Likely to Harm Female FKWs, Photo Study Finds*

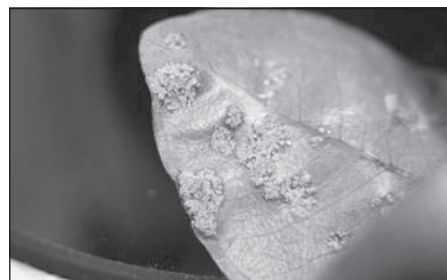
10

*Board Talk: Waikiki Zipline, Ala Wai Harbor and Legacy Lands*

12

*Amended Ko'olau Loa Bill May Die Before Council Acts*

## Board of Agriculture Approves Draft Rule To Block Import of 'Ohi'a Rust Carriers



Puccinia rust on an 'ohi'a leaf.

PHOTO: 2005 DESMOND OGATA

At long last, the Hawai'i Board of Agriculture has moved toward a quarantine rule that is intended to reduce the likelihood that new strains of the 'ohi'a rust, *Puccinia psidii*, are introduced to Hawai'i.

"The board has determined that there

exists serious danger to all 'ohi'a (*Metrosideros spp.*), the 'ohi'a forests of Hawai'i, and horticultural and agricultural industries from the introduction of new strains of the 'ohi'a rust," states the preface of the draft rule, approved by the BOA February 24.

The next step is to hold public hearings. None had been scheduled by the time *Environment Hawai'i* went to press.

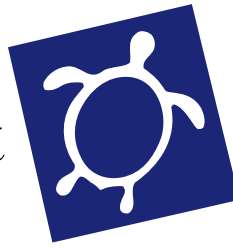
For such a short rule, it was certainly a long time in the making. A strain of the rust was first noted in Hawai'i in April 2005. Even before the species had been identified by scientists at the University of Hawai'i as *Puccinia psidii* Winter, a fungus affecting plants in the Myrtaceae family, the rust had

**to page 8**

# Environment Hawai'i

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## NEW AND NOTEWORTHY

**GEMS Update:** The Green Energy Market Securitization program, which was the subject of several articles in the March issue of *Environment Hawai'i*, has signed up with Pacific Rim Bank as the provider of GEMS-backed loans. At its February 26 meeting, the Hawai'i Green Infrastructure Authority (HGIA) approved several agreements needed before the first of the green-energy loans can be made, including one with Pacific Rim Bank to process all the loan applications. Pacific Rim receives an origination fee of 1 percent of the loan amount, plus a servicing fee of half a percent of the outstanding principal balance, paid by the customer.

According to information provided to the HGIA by its staff, Pacific Rim was the only bank that expressed any interest in helping the HGIA "develop a loan product to suit the needs of the nonprofit sector."

The HGIA also approved a "market access agreement" with Clean Power Finance, the purpose of which is "for CPF to make available tax-advantaged PPAs [power purchase agreements] for \$65 million in GEMS Non-profit/Commercial loans, which results in \$100 million of clean energy systems funded." CPF also will "facilitate prepaid PPA financing by providing the origination platform and selecting participating tax equity funds."

The HGIA approved two additional agreements – one with Concord Servicing, as the "servicing agent for GEMS purchased loans," and another with House of Finance, "to originate, process, underwrite to [sic] GEMS guidelines, close, and fund GEMS consumer loans."

House of Finance is to receive a "flat origination fee of \$300 per loan" to consumers. Concord Servicing will be receiving "monthly payments ... based on the size of the servicing portfolio. Fees are approximately \$3.67 per loan for on-bill repayment loans and \$5.09 per loan for non-on-bill repayment loans," with allowance for "reasonable adjustments ... in line with servicing requirements or reasonable inflation adjustments." On March 24, the HGIA announced it would begin accepting GEMS applications from nonprofits.

**Attack on Albizia:** In Hilo, one of the most prominent stands of albizia is dying. Vistas — of the mountains, of the sea — once blocked by towering albizias are opening up. What



Dead albizia trees along Komohana Street in Hilo

were once virtual forests of healthy albizia now look like hardwood forests in winter. The ground below still-standing trunks is littered with limbs shed by the dying and dead trees.

The area where the trees have apparently been poisoned consists of 171 acres, lying between Komohana and Mohouli streets, and encompassing the landmark Pu'u Honu. It has been proposed for development for the last 15 or so years, but the bankruptcy of a former owner set that project back. In 2011, the current owner, Wailani Development, submitted plans to the county Planning Department calling for a mixed-use development, with commercial areas, residential zones, and parks. Construction was to begin within five years of the passage of the approving ordinance — in other words, by June 18 of this year.

Since then, there has been little progress on the site — other than the apparent poisoning of the albizia trees. In February, Sidney Fuke, the planning consultant hired by Wailani, asked for more time to comply with the condition regarding timely construction. "A joint development agreement is in the works and should be consummated shortly," Fuke wrote. "Once that is firmed up, plans can be finalized and construction can be underway."

According to Planning Department staff, no response had been given to Fuke by press time.

As for the albizia, no one at either the Big Island Invasive Species Committee nor the U.S. Forest Service was involved with poisoning the trees.

### Environment Hawai'i

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### Quote of the Month

*"Only one level of fishing can  
guarantee a zero level of mortality  
and that is zero, which is  
intolerable and formidably stupid..."*

**– Kitty Simonds, Wespac**

# Stock Assessment Confirms Overfishing Of Parrotfish in the Main Hawaiian Islands

There's an 89 percent chance that commercial fishermen in the Main Hawaiian Islands are catching uhu, commonly known as parrotfish, at an unsustainable rate. That's according to Cassandra Pardee, a Hawai'i Pacific University graduate student who has recently completed a stock assessment of the fish.

Her work, funded in part by the Western Pacific Fishery Management Council (Wespac), is aimed at helping the National Marine Fisheries Service produce a more accurate annual catch limit (ACL), which the agency requires for all managed fisheries.

Last year, when setting the ACLs for the coming year, Wespac was presented with information that commercial catches in 2012 and 2013 vastly exceeded the Hawaii parrotfish ACL of 33,326 pounds. In 2012, the catch was 77,678 pounds and grew to 84,813 pounds the following year.

The council's staff and its Scientific and Statistical Committee (SSC) last June stated that the ACL exceedance was not a sign of overfishing, but was probably just the result of improved reporting following the state's implementation of a violation system that penalizes licensed commercial fishermen who fail to file catch reports.

"I guess we're victims of our own good advances in catch reporting in a more real-time basis," SSC chair Charles Daxboeck said at the time.

Council staff also pointed out that the ACL

was a first crack at setting an appropriate fishing limit and was set before the state had improved its reporting system.

Pardee's assessment suggests that the ACL is, indeed, a little low. Using a model that included the catch records of just commercial spearfishers, she determined the maximum sustainable yield (MSY) for parrotfish to be about 41,324 pounds, which is about 10,000 pounds more than the 2012 ACL. Usually, ACLs are set slightly lower than MSY, so the current ACL is off, but perhaps not by much.

In any case, Pardee told the SSC last month, the overall population has decreased, but there is a 76 percent chance that parrotfish are not in an overfished state. However, between 2010 and 2012, there was a high probability that overfishing was occurring, she said. Overfishing happens when the catch rate exceeds the rate that produces MSY. The fact that catches have continued to increase suggests that overfishing continues.

Pardee pointed out that her MSY calculation reflects only the exploitable biomass available to commercial fishers and does not reflect the entire population of parrotfish in the Hawaiian islands. Her model did not include recreational catch even though it likely exceeds commercial catch, she said.

SSC member John Sibert, a fisheries scientist, said he's often wondered what would happen to stock assessments if modelers just doubled the catch to capture what the recreational fishermen might be doing.

Pardee said that would raise the total biomass, but the population trend curve would still be about the same. Maximum sustainable yield would also increase, but since government agencies are only managing the commercial catch, the MSY would be so high it would seem unachievable, she said.

"So are we better off not knowing [the recreational catch]? I'm serious," Sibert said.

Pardee replied that it would be beneficial to know what is happening in total if agencies are going to manage both commercial and recreational catch. The state, for example, has already adopted regulations over the past couple of years attempting to manage parrotfish catches — both commercial and



Parrotfish

non-commercial — in West Hawai'i, Maui, and Lana'i.

Pardee noted that a spike in commercial parrotfish catches in recent years can be attributed to three spear-fishermen who, according to interviews, are night-fishing with SCUBA. SSC member Craig Severance added that there have been complaints in the Kona community that these top fishermen have been shipping out coolers of parrotfish.

In response, the state Department of Land and Natural Resources' Division of Aquatic Resources proposed a ban on spearfishing with SCUBA in waters off West Hawai'i. Over the objections of a number of commercial fishermen, the Board of Land and Natural Resources approved the ban in 2013.

Last year, after years of failed attempts by state legislators to pass bills severely restricting or banning outright fishing for parrotfish around Maui, the Land Board narrowly adopted regulations banning the take of certain species/sizes of parrotfish, limiting the number of parrotfish that can be taken around Maui or Lana'i per day, and increasing the minimum size limit of those species that can be taken from 12 inches to 14 inches.

Commercial fishermen opposed those regulations as well, and suggested instead a ban on night fishing.

At the SSC meeting last month, chair Daxboeck noted that nighttime spear-fishing is restricted in French Polynesia, where he lives.

## Alphabet Soup

While we make every effort to avoid using acronyms, after a while, we find they are often useful. For readers' convenience, we offer the following list of acronyms frequently found in our articles on fisheries management:

ACL: Annual Catch Limit

AOHCC: Association of  
Hawaiian Civic Clubs

CIE: Center for Independent Experts

DPS: Distinct Population Segment

EEZ: Exclusive Economic Zone

FKW: False killer whales

FWS: U.S. Fish and Wildlife Service

MHI: Main Hawaiian Islands

MSY: Maximum Sustainable Yield

(the amount of fish that can be  
caught without jeopardizing  
sustainability of the stock)

NMFS: The National Marine  
Fisheries Service

PIFSC: Pacific Islands Fisheries Science  
Center (an agency of NMFS)

SSC: Scientific and Statistical Committee  
(a formal advisory body to the  
Western Pacific Fishery Management  
Council)

SEZ: Southern Exclusion Zone

TRP: Take Reduction Plan





## For Further Reading

Past articles in *Environment Hawai'i* have discussed parrotfish catches. They include:

- “DLNR Proposes Strict Size, Bag Limits On Fish Catches Around Maui, Lana'i,” and “Land Board Approves West Hawai'i Fishing Rules,” Board Talk, August 2013;
- “Rules to Protect Maui Parrotfish, Goatfish Win Land Board Approval by One Vote,” Board Talk, November 2014.

“You can pull out the parrotfish, check the size and put it on your spear [at night], where in the day, you may have to chase it down,” he said.

He asked DAR's Alton Miyasaka, who often represents the state of Hawai'i on the council, whether the DLNR considered adopting a night-fishing ban.

Miyasaka noted that the department had considered it. It had not, however, proposed such a ban to the Land Board.

“My recollection was that the fishermen generally supported a night-spearing ban on uhu, but they felt it would shift the effort to the day fishery. Their argument is that you wouldn't see a decline in total catch. ... I disagree,” Miyasaka said. “You would probably have a big change.”

“We should probably have more discussion,” he said.

Pardee did not have a chance to present her findings to the full council last month, but she was one of the speakers during the council's Fishers' Forum — held outside of the meeting — on stock assessments. How her work will inform a new ACL for parrotfish remains to be seen.



### Panel Finds Bottomfish Assessment Is Not the Best Available Science

It appears the Western Pacific Fishery Management Council wasn't entirely off base last year when it defied the National Marine Fisheries Service and the Pacific Island Fisheries Science Center and took the position that the center's new Main Hawaiian Island bottomfish stock assessment was not the best available science.

The council voted last October to keep the annual catch limit (ACL) for MHI bottomfish at 346,000 pounds, a level that was based on NMFS's 2011 stock assessment. NMFS and the science center had by then come out with a new stock assessment that suggested the ACL was about 80,000 pounds too high. Local commercial bottomfishermen lobbied hard to keep Wespac from concurring, arguing that the stock is actually doing just fine. Members of the council's SSC also found fault with the science center's change in the way it approached the stock assessment — specifically, the center's method for standardizing data on fishing effort. As a result of the council's action, the 2014-2015 bottomfishing year began in September without an ACL.

In December, the stock assessment underwent review by the Center for Independent Experts (CIE). In short, the CIE panel of four fisheries experts found that the assessment was not the best available science.

“To coin a phrase from a perfect movie, there's some good, some bad, and some ugly,” said Gerard DiNardo at the SSC's meeting last month where he reported on the CIE panel's findings. DiNardo was, until recently, the PIFSC's lead stock assessment scientist.

The good: Contrary to the SSC's initial criticisms, the CIE panel thought the science center's standardization of the catch-per-unit-effort (CPUE) data was an improvement over the 2011 stock assessment. The panel also said the assessment modeled its results correctly.

Other than that, the panel found that the quality of catch-and-effort data from the Division of Aquatic Resources was suspect. Because that information was used to derive CPUE, any conclusions made from it is also suspect, PIFSC scientist Annie Yau told the council at its full meeting. (Yau is the main author of the 2014 assessment.)

What concerned the CIE panel most was that the science center had not used all available data. DiNardo said three days before the CIE review, it was brought to his attention that data that could have further improved the CPUE standardization were not included in the assessment.

“That data was provided to us about 10 years ago,” he told the SSC. “I was not aware of it nor was any stock assessment scientist. ... I can't say it would have helped the assessment, but it was there. That was a major concern by the CIE review, that there was data not brought into the assessment.”

During the council meeting, Yau suggested that the CIE's interpretation of “best available science” was different from the way Wespac and the National Oceanic and Atmospheric Administration (parent agency to



Bottomfish

PHOTO: NOAA/COURTESY OF DAVID ITANO

NMFS) use the term. Even so, DiNardo told the SSC, his agency had to concur with the CIE's conclusion that the assessment was not the best available science. “We use the CIE as the gold standard,” he said.

DiNardo said the PIFSC plans to explore the CIE's recommendations, as well as alternative models to fully utilize the available data, and that a complete benchmark MHI bottomfish stock assessment will be completed in 2017.

In the meantime, NMFS will be taking steps to adopt the council's October recommendation and set the ACL for the rest of this fishing year at 346,000 pounds, according to Jarad Makaiau of NMFS's sustainable fisheries division.

After that, the PIFSC will simply update the 2011 stock assessment until a new, full stock assessment is produced, he said.

A proposed rule for the current ACL is expected to be published early this month and, after public comments, adopted in early May.

“We don't expect the ACL to be reached in this fishing year,” he said. As of press time, the fishery had caught about 243,000 pounds.



### NMFS Nixes Proposal To Delist Green Turtles

Citing the threats posed by climate change and sea level rise, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service have denied the Association of Hawaiian Civic Clubs' 2012 petition to delist the Hawaiian population of green sea turtles, the vast majority of which nest on the low-lying islets of French Frigate Shoals in the Northwestern Hawaiian Islands.

Last month, the agencies published a 12-month finding and a proposed rule in the *Federal Register* responding to the petition and detailing their reasons for breaking the

## DLNR Rules Linger in Governor's Office

It's not uncommon for the governor to sit on controversial rules approved by the state Board of Land and Natural Resources until all or most of the kinks are worked out. Former Gov. Neil Abercrombie took months to sign rules adopted to boost dam safety, giving staff of the Department of Land and Natural Resources time to explain the new process to landowners. Abercrombie even convened his own public hearing on rules the board had already approved to ban the use of SCUBA gear with spearfishing in West Hawai'i.

At last month's Western Pacific Fishery Management Council meeting, Alton Miyasaka, representing the state Department of Land and Natural Resources, reported that Gov. David Ige had not yet signed two sets of fishing rules passed late last year.

On October 24, the Land Board approved the Ha'ena Community Subsistence Fishing Area rules, which established strict limits on what kinds of marine life could be taken and which banned commercial fishing from a portion of the North Shore of Kaua'i.

The rules, the result of seven years of grassroots effort, had garnered broad community support, but a contested case hearing request by commercial fishermen prevented

the rules from being signed. When the Land Board denied that request in December, it cleared the way for the governor's signature. According to Miyasaka, however, the governor has not signed them.

Miyasaka said the DLNR is considering asking the Ha'ena community to work out the details of an arrangement that would somehow allow commercial fishermen to harvest invasive fish species, such as *taape*, but is "hoping in the meantime the governor signs the rule and we can immediately do an amendment process."

The other set of rules not yet signed by the governor would establish bag limits on various species of aquarium fish. Aquarium fish collectors had drafted the rules not to address any overfishing, but merely to prevent waste, Miyasaka said.

"It was a fairly unique effort that the industry approached the department for more regulations," he said. Although the then-DLNR Division of Aquatic Resources administrator Frazier McGilvray opposed the rules, his boss, then-DLNR director William Aila, supported them. The rules ultimately won Land Board approval, but didn't make it to former Gov. Abercrombie's desk before he left office.

Miyasaka said Gov. Ige is being lobbied by the "anti-aquarium collecting side," which opposes the rules for not being restrictive enough.

"We're trying to tell them it's not about an overfished fishery. It's about controlling waste," Miyasaka said. "The anti-aquarium interest ... is very persistent. This is an issue that has been going on since the '70s. It's a long battle and we're trying to bring some science into it as well as some reasonable regulations."

### A Side Note

The DLNR's Division of Aquatic Resources continues to suffer from a lack of leadership. McGilvray resigned his post over the aquarium fish collecting rules after being on the job less than a year. Prior to McGilvray joining the DAR, the agency had been without an administrator since 2010. Carty Chang, the DLNR's acting director and former head of the department's Engineering Branch, is currently serving as head of DAR until the state Senate confirms a new director. Miyasaka told the council that all four of DAR's management positions are currently vacant and that he hoped the governor's nominee to head the DLNR is confirmed soon so that they can be filled.

The next day, Gov. Ige withdrew his nomination of Carleton Ching. —**T.D.**

green sea turtle population up into about a dozen distinct population segments (DPS).

As requested in the AOHCC petition, the agencies determined that the Hawai'i population is, indeed, a DPS. They also determined the population around American Samoa to be distinct, as well as the population residing around Guam and the Commonwealth of the Northern Mariana Islands. Both populations are proposed to be up-listed from threatened to endangered.

In all, the agencies are proposing a total of 11 green turtle DPS.

With regard to the Hawai'i population, identified as the Central North Pacific DPS, the agencies acknowledge that it has grown over the years. In fact, it was that growth that prompted the AOHCC to ask for delisting.

However, they state, "in spite of the positive [population] trends in the last few decades, the unprecedented concentration of nesting at one site and moderately lower population size raise serious concerns about the resilience of this DPS, particularly its ability to adapt to future climate scenarios. Ninety-eight percent of the population nests are low lying atolls (96 percent nesting in a

single low-lying atoll), making them extremely vulnerable to sea level rise — some effects of which have already been witnessed."

Other effects of climate change include increasing temperatures at nesting beaches that may affect hatchling sex ratios and embryonic development, they state.

A public hearing on the proposed rule will be held on April 8, from 6 to 8 p.m. at the Japanese Cultural Center in Honolulu, and public comments will be accepted until June 22.

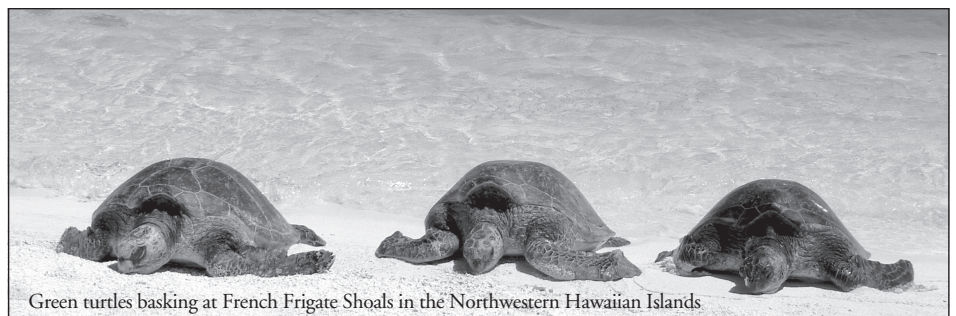
The proposed rule is a blow to the Western Pacific Fishery Management Council, which for years has sought ways to provide for the harvesting of green sea turtles. Some council

staff, in fact, had a hand in preparing the AOHCC petition.

At its meeting last month, council staffer Asuka Ishizaki hesitated to delve into her efforts to meet the council's June 2014 directive to start looking at ways to include green sea turtles as a management species under the council's fishery ecosystem plans (FEP). At the time, the NMFS had not yet issued its 12-month finding and proposed rule, but was expected to announce it soon.

Ishizaki said it would be best to "wait until the delisting or petition response is out. We're not ready to discuss the details with you."

NMFS and FWS announced their proposed rule two days later. —**Teresa Dawson**



Green turtles basking at French Frigate Shoals in the Northwestern Hawaiian Islands



*Whales continued from page 1*

"We don't have bycatch estimates yet. Effort data is still being processed," she said. (Bycatch refers to the hooking of animals, such as the false killer whales, that are not intended to be caught; effort refers to the overall number of hooks set by the longline fishing fleet.) She added that because the number of interactions (also called takes) in a given year is so small relative to the total fishing effort, it may be many years before her office determines with certainty if there has been any change in the rate of mortality and serious injury to false killer whales caused by the longline fishing effort.

But while Young and her colleagues at NMFS may have thought it is premature to draw conclusions from limited data, members of the Western Pacific Fisheries Management Council and its Scientific and Statistical Committee had no such compunctions. At the council's meeting last month, council members followed the lead of the SSC, voting to recommend that NMFS immediately evalu-

international waters might be "just a continuation of a long-term trend of fishing in the high seas," she said. She also suggested that the presence of observers may be affecting where vessels fish. Observers, which document interactions with federally listed threatened or endangered species, are required on only a small fraction—around 20 percent—of deep-set longline vessels. Young said her office is looking into whether vessels that have observers on them are fishing mainly outside the EEZ.

Perhaps because of these possibilities, the fact that so many of last year's takes occurred outside the EEZ, and that eight of them were serious injuries, Young said that when evaluating the TRP's effectiveness, the fleet's impacts both inside and outside the EEZ need to be considered.

Although she said it will take time to determine the overall effectiveness of the TRP, Young acknowledged that the circle hooks the fleet is required to employ are not performing as hoped.

Before the TRP went into effect in 2013, 89

A council press release following the meeting suggested that NMFS should "explore alternative approaches to mitigate interactions between the Hawai'i deep-set longline fishery for tuna and the pelagic stock of false killer whales as the effectiveness of the current measures may never be analyzed conclusively due to the rare nature of these interactions."

The release continues that the TRP's five-year goal is to reduce mortalities and serious injuries to less than 10 percent of the potential biological removal (PBR) level set by NMFS at 9.1 whales per year. (According to the Marine Mammal Protection Act, PBR is the number of whales that can be killed or seriously injured in a given year without jeopardizing the stock.)

"Ten percent of the 9.1 PBR for the pelagic false killer whale is less than one," council executive director Kitty Simonds said in the release. "The goal of the [Marine Mammal Protection Act] is to reduce mortalities to zero. Only one level of fishing can guarantee a zero level of mortality and that is zero, which is intolerable and formidably stupid considering the rare occurrence of interactions with the pelagic false killer whales in the Hawai'i longline fishery for tuna."

The take reduction team is scheduled to meet in Honolulu April 29 through May 1.

**Observers, which document interactions with federally listed threatened or endangered species, are required on only a small fraction of deep-set longline vessels.**

ate the effectiveness of the Take Reduction Plan by comparing data pre- and post-TRP.

*A Jump in Takes*

For the past decade or so, except for 2009 and 2014, the number of documented takes of false killer whales by the deep-set longline fishery in a given year has generally been five or less. Under the TRP, if the fleet kills or seriously injures just a couple of false killer whales within the U.S. exclusive economic zone (EEZ) in a year, a large swath of fishing grounds south of the main Hawaiian islands, known as the southern exclusion zone (SEZ), is closed until the take reduction team can meet and decide on a new course of action, if necessary. Last year, two of the 11 false killer whale takes by the deep-set longline fleet occurred within the EEZ, but only one of them was determined to be a serious injury.

Young raised the possibility that last year, after one false killer whale had been seriously injured inside the EEZ, longliners directed their efforts to international waters, so as to avoid another serious injury determination that could have led to the closure of the SEZ. However, eight of the nine takes that occurred in international waters still resulted in serious injury.

On the other hand, the effort focused on

percent of the false killer whales taken suffered serious injuries. Research at the time the plan was being created had suggested that circle hooks could reduce that rate to 50 percent. Since the plan has been in place, however, the serious injury rate has only dipped slightly, to 81 percent.

The NMFS has been able to identify about half of the gear involved in the two dozen or so takes that occurred over the past two years, but it has been unable to determine what hook or line characteristics might lead to a particular injury determination, Young said.

Even though the preferred hooks and lines are being used, they are still resulting in a lot of serious injuries. Young suggested that handling of the whales by vessel captains or crew may be a factor. To address this, the Hawai'i Longline Association, a trade association, recently created a training video for boat captains on how to treat a hooked animal so that it is released without serious injury.

The video, which was played at the council meeting, stressed repeatedly that the animals be released with no gear attached.

"If it is attached, it will be considered a mortality or serious injury. Make sure to do your part to straighten the hook. Retain constant tension to the line. Do NOT cut the line," the video's narrator stated.

*For Further Reading*

*Environment Hawai'i* has published many articles on the interactions of the longline fleet with false killer whales. See, for example:

- "Island False Killer Whale Population is Found to be at High Risk of Extinction," November 2010;
- "Lawsuits Yield Settlements to Boost Protection for False Killer Whales," January 2013;
- "Federal Fishery Council, Whale Expert Clash Over Fishing Impact on False Killer Whales," August 2014.

Articles are available on the *Environment Hawai'i* website, [www.environment-hawaii.org](http://www.environment-hawaii.org). Click on the "Index by Year" link to be taken to the year and month of publication.

## Study of Photos Suggests Fishing Gear Is More Likely to Harm Female FKW's

When estimating the number of false killer whales that interact with the longline fishery, scientists and resource managers do not try to guess the sex of any individual caught.

But a recently published study of dorsal fin disfigurements concludes that fisheries interactions with false killer whales around Hawai'i probably involve females more often than males – which in turn suggests gear interactions have a disproportionate impact on population dynamics, over and above that which would be expected if both sexes were represented equally.

The article, “False killer whales and fisheries interactions in Hawaiian waters: Evidence for sex bias and variation among populations and social groups,” was published late last year in the journal *Marine Mammal Science*. Lead author was Robin Baird of the Cascadia Research Collective, who has done much of the research on false killer whales in and around Hawai'i. Other authors included three from the National Marine Fisheries Service's science centers in Honolulu and La Jolla; three more from Cascadia; and two from non-governmental organizations.

Prompting their work were two events, they write. First, in October 2013, the National Marine Fisheries Service announced its intention to prepare a recovery plan for the Main Hawaiian Islands (MHI) false killer whale population. “An assessment of dorsal fin injuries as an indicator of fisheries interactions may have relevance for recovery planning,” they write. The second event was the discovery that a false killer whale from the MHI population found stranded at South Point, on the Big Island, had five fish hooks in his stomach, at least three of which were not of a type used in the longline fishery.

The researchers first reviewed a catalog of false killer whales photographed between 2000 and 2013 around Hawai'i. Almost 300 individual animals could be identified from good-quality photographs. Of those, 19 had disfigured dorsal fins, with scarring suggesting a possible interaction with fishing gear. Four individuals were from the pelagic population, two from the Northwestern Hawaiian Islands insular population, and 13 from the Main Hawaiian Islands insular population.

Photos of those 19 individuals were then scored by seven experts, who ranked them on a scale of 1 to 3, with a score on the low end

meaning the injury was not likely to have resulted from an interaction. A score of 3 meant it was consistent with such an interaction.

Thirteen of the 19 received an average score higher than 2.5 – one from the pelagic population, and 12 from the MHI population. Eight individuals were scored higher than 2.7, and all were from the MHI population. None from the NWHI group scored this high. The MHI individuals accounted for 7.5 percent of the total number of MHI false killer whales identifiable through good-quality photographs.

The researchers were further able to identify those 12 MHI individuals down to the

impede feeding or locomotion.”

In any event, “if females are interacting with fisheries at a higher rate, then fisheries-related mortality may have a disproportionate influence on population dynamics, influencing the rate of growth, and thus potential recovery, of the population to a greater extent than if fisheries-related mortality rates were equal for both sexes or were biased towards males,” the authors go on to say.

“In addition, if a female involved in a fatal fisheries interaction has a dependent calf, it is probable the calf will not survive, thus effectively resulting in two deaths.”

The article concludes with a recommendation for management. Recovery planning for the MHI population, designated as endangered under the Endangered Species Act, “should account for the social structure of the population and the potential for impacts from human activities acting disproportionately on certain social groups,” they write.



A false killer whale with dorsal fin injuries consistent with fishing gear interactions.

clusters they associated with. Half of them came from Cluster 3 – a rate that was more than three times that for Cluster 1.

Sex was known for six of the 12 MHI false killer whales, while it was inferred for a seventh – and all of them were female. One of the females had injuries from two different events, based on photographs over time.

The authors suggest several possible explanations for the apparent sex bias: “Females may be involved in depredation [preying on hooked fish] at higher rates than males, reflecting either the higher energy needs of females during lactation and/or the importance of prey sharing among females... Conversely, it is possible that male false killer whale interactions with fisheries are more likely to be lethal. Males are, on average, larger and heavier than females... and thus might have a greater likelihood of breaking lines when hooked, and trailing gear may

“Furthermore, our results, combined with the evidence from the stranded individual with a variety of hooks in the stomach, suggest there is a need to broaden the scope of the Take Reduction Plan [for false killer whales], which currently focuses only on the longline fisheries, to include nearshore fisheries.” (The Take Reduction Plan, developed under the Marine Mammal Protection Act, limits the number of MHI false killer whales that can be harmed in a given year by interactions with the Hawai'i-based longline fishery.)

On March 31, the Western Pacific Fishery Management Council's Scientific and Statistical Committee subcommittee on false killer whales was to meet in Honolulu to “review and discuss the revisions of false killer whale stock boundaries and bycatch proration method for incidental take in the Hawai'i longline fishery.” —P.T.



# O'hi'a continued from page 1

spread across the island chain, causing widespread devastation to stands of rose apple trees. The fungus also sickened and killed 'ohi'a seedlings grown in nurseries.

The quick spread of the fungus caused natural resource managers to worry that it could also devastate the more than a million acres of Hawai'i's 'ohi'a forests. In 2007, the Board of Agriculture approved a one-year emergency rule banning imports of Myrtaceae, including plants such as myrtle, waxflower, and eucalyptus, whose foliage is common in cut-flower arrangements.

The emergency rule expired after one year. Since then, there has been no restriction on the import of plants that could carry the rust, although scientists at the University of Hawai'i and in state and federal agencies continued to assess the magnitude of the risk posed by the rust. By working with their counterparts in Brazil, they tested the virulence of the fungus on

proval, and filing with the Lieutenant Governor's office."

"The Plant Quarantine Branch is preparing the proposed amendment analysis and documentation that, per the Governor's administrative directive, must be submitted to the Small Business Regulatory Review Board, Department of Business, Economic Development, and Tourism, and the Department of Budget and Finance, for comment in conjunction with submitting the proposed amendment for the Governor's preliminary approval to go to public hearing."

It is possible that a federal order will preempt the state rule, Enright went on to say. "HDOA has been working closely over the



All photos: Puccinia rust on an 'ohi'a leaf.

PHOTOS: 2005 DESMOND OGATA

"Amy doesn't care for those folks, so I wouldn't tell them that it was 'passed' by the board. Her question was loaded..."

— Jonathan Ho, Department of Agriculture

'ohi'a, with the results far worse than they had expected. Multiple strains of the fungus were found, including many that had a severe impact on 'ohi'a.

Three years after the emergency rule expired, in 2011, Carol Okada, then-manager of the Plant Quarantine Branch of the state Department of Agriculture, announced that the department was preparing a rule that would permanently ban such imports. At the Hawai'i Conservation Conference held that summer, Okada noted that most DOA rules are to protect agricultural industries, such as sugar, pineapple, and coffee. This rule, however, she said, "will be the first to protect native forests." She expressed optimism that the rule would be in place by December of that year.

But it took until February 2015 for the board to give even preliminary approval to the draft rule. It will be months, at the earliest, before the rule takes effect, giving Hawai'i's 'ohi'a the protection it needs.

Scott Enright, BOA chairperson, described the process in a letter to *Environment Hawai'i*. The Hawai'i Department of Agriculture, he wrote, "is at the first steps in that process, which entail public hearing, board final approval/adoption, and then the chairperson's signature, Governor's ap-

past year with the U.S. Department of Agriculture," Enright said, "which intends to release a federal order to regulate the movement of hosts of 'ohi'a rust. We have been told by the USDA that they will have a draft within the next couple of months for us to review. In the meantime, we have shared our proposed rule changes with them. We anticipate that through this process we will have compatible regulations at the state and federal levels. We would not want to see a federal regulation which would pre-empt state laws by being less restrictive than state regulations."

The Department of Agriculture's quarantine rules apply only to domestic imports. Shipments of commodities from foreign sources are subject to federal regulations of the USDA's Animal and Plant Health Inspection Service (APHIS).

## Legislative Concern

The delay between the expiration of the emergency rule in 2008 and the initial approval of a draft permanent rule is inexplicable. In 2014, the Legislature, which also seems to have been perplexed by the stall, adopted a resolution intended to spur the board to adopt such a rule.

House Concurrent Resolution No. 47

found that "the introduction of new strains of *Puccinia psidii* pose a significant threat to native forests and to the horticultural and agricultural industries of Hawai'i." The resolution also requested the Department of Agriculture "to expeditiously adopt a permanent rule restricting importation of plants in the Myrtaceae family.

Enright could offer no explanation either. "I became chair last January," he told *Environment Hawai'i* in a phone interview, "and asked why it wasn't moving." He found it "sitting in Plant Quarantine," undergoing



## For Further Reading

*Environment Hawai'i* reported on Carol Okada's presentation at the 2011 Hawai'i Conservation Conference in our September 2011 cover story: "DOA's Draft Rule on 'Ohia Rust the First to Protect a Native Species," available online at <http://www.environment-hawaii.org>.

The USGS report mentioned in the article is by Lloyd Loope, "A Summary of Information on the Rust *Puccinia psidii* Winter (Guava Rust) with Emphasis on Means to Prevent Introduction of Additional Strains to Hawai'i." It is available online at <http://pubs.usgs.gov/of/2010/1082/>.

The draft rule may be read on the Department of Agriculture's website: <http://hdoa.hawaii.gov>. Click on the "Meetings & Reports" link, then select "Proposed Administrative Rules." That will bring up a link to the draft rule.



further review. "We reached in and moved it on, took it to the Plant and Animal Review Board," and then on to the full Board of Agriculture.

### 'Those Folks...'

An exchange of emails following a simple request for information from *Environment Hawai'i* sheds no light on the reasons for the apparent foot-dragging in the Department of Agriculture on the 'ohi'a rust rule. But it does reveal a kind of paranoia and ill will that many who deal with the department have come to expect.

Here are highlights of the exchange:

On February 27, three days after the Board of Agriculture meeting where the 'ohi'a rust rule was to be heard, Patricia Tummons, editor of *Environment Hawai'i*, emailed the Department of Agriculture: "Could someone let me know whether the proposed rule amendment to prohibit the introduction of puccinia rust (ohia rust) was approved on February 24? Thank you very much."

On March 2, Janelle Saneishi, the department's public information officer, replied: "Yes. Thank you for your interest."

Tummons looked for the draft rule on the DOA website but could not locate it. So, a week later, Tummons emailed Saneishi again, asking: "Could you send me the new rule, please?"

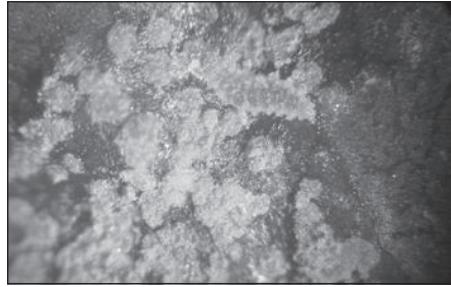
Saneishi forwarded the email to several staffers with the Plant Quarantine branch, asking their advice on how she should respond. To Lance Sakaino, the acting plant quarantine specialist, she added: "Sorry, forgot to add that this is a UIPA request since she is asking for documents. She may be charged for the copying time and per page fee. Thanks!" UIPA refers to the Uniform Information Practices Act.

Theresa Manzano, acting plant specialist, forwarded the email to Jonathan Ho: "JH—I don't know how much information to give her [Tummons], according to Janelle, this is a UIPA request. What 'papers' is she allowed copied or given out on this subject. Please advise on this matter. Thanks."

Ho, acting inspection and compliance section chief of the Plant Quarantine branch, consulted with Amy Takahashi, the current branch manager. He reported back to Manzano: "Spoke to Amy. I wouldn't worry about UIPA yet. The link that I attached in this email is on the HDOA website and should answer her question. Stuff on the web is public and doesn't require UIPA. Amy doesn't [sic] care for those folks, so I wouldn't tell them that it was 'passed' by the board. Her [Tummons'] question was loaded as she just asked if it was approved. She never asked by

who. She may be thinking that it is already in effect when it is not. Also she said that the rule is to prohibit ohia rust. In reality, the proposed rule is to restrict plants in the family Myrtaceae. It may be semantics, but you can never tell.

"Feel free to check it out online. If you'd like you can send her an actual copy, but I'd just let her read what the site has to say. Less work for you. See my sample below. It's a little



matter-of-fact, but she can't read into anything [sic]. Safer for you. If she needs more, she'll let you know."

Ho's "sample" text: "Attached is a link to our website that should answer your question. If you have further questions, please feel free to contact me." Along with the link to the DOA website, that was the sum and substance of the email that on March 10 was sent to Tummons by Manzano.

The draft rule, by the way, may be found under the "Meetings and Reports" heading of the DOA website (<http://hdoa.hawaii.gov>).



Enright acknowledged that the DOA website was outdated and difficult to navigate. "We brought a new webmaster on," he said, adding that he hopes soon to have board agendas, meeting minutes, and the like available on the site "inside of a month."

As to the email thread generated by the Plant Quarantine personnel in response to the request for information by *Environment Hawai'i*, Enright gave his assurance "that the views expressed in that email do not express the views of the department."



## USGS Recommendations

In 2010, the U.S. Geological Survey issued a report summarizing what was

known about the rust and making recommendations on ways to prevent the introduction of new strains to Hawai'i.

The author, Lloyd Loope, put the process for addressing plant diseases in context, noting how that put biodiversity conservation at a disadvantage.

"Agriculture has a standard, usually viable option, even for perennial crops, when quarantines for plant pathogens fail—development of resistant strains of the crop in question," Loope wrote.

"The same is not the case for biodiversity conservation. Hawai'i's *Metrosideros polymorpha* ['ohi'a] forest provides a classic example of the contrast between the needs of biodiversity conservation and those of agriculture/forestry. Substantial effort has been expended in developing a research basis for breeding *P. psidii* resistant strains of *Eucalyptus*. In contrast, almost nothing is known about the genetics of *M. polymorpha* other than that great variation exists across broad environmental gradients. Nothing is known about the genetics of 'ohi'a in relation to resistance to *P. psidii*. It might be possible to breed a resistant strain of 'ohi'a, but the complexity of trying to develop resistant strains across broad environmental gradients is numbing, especially in the absence of commercial incentives."

In the absence of hard information about how 'ohi'a might be affected by different strains of *Puccinia psidii*, Loope invoked the precautionary principle: "Logic suggests, and the international standards clearly permit, that the resource should be protected while this determination of risk is made."

In any case, Loope concluded, "HDOA has a clear mandate for protecting Hawai'i's environment, including its 'ohi'a forest. Based on the information cited and summarized in this report, it would seem that HDOA has the viable option of rigorous regulation of pathways to prevent arrival of additional strains of the rust fungus *P. psidii*. They also have the supplemental justification of protecting Hawai'i from at least five other potentially serious pests of native and non-native Myrtaceae already present in the United States but not in Hawai'i. Regulation of Myrtaceae through state quarantine is a necessary prerequisite to pursuit of change in federal quarantine ... and given current procedural constraints, provides the only long-term option for reasonably comprehensive protection from new strains of *P. psidii*."

—Patricia Tummons

## BOARD TALK

## Board Grants Temporary Permit For Zipline Over Hilton Lagoon

They're calling the zipline that Waikiki Beach Activities, Ltd. (WBA), plans to string over the Hilton lagoon the "Coconut Glide." And over the next several months, the company will be testing it out, paying the state \$1.50 a head plus \$1,425 a month for use of a parking area managed by the Department of Land and Natural Resources' Division of Boating and Ocean Recreation.

A one-day test run in December using a 50-pound dummy was largely successful, but the company found that raising the end point by five feet would provide better clearance above beach goers. Raising the line puts the landing zone within DOBOR's parking lot. WBA plans to take up two parking stalls for its 'Landing Zone' vehicle and relocate two trees to create two replacement stalls.

On March 13, the Land Board approved a six-month right-of-entry permit to Waikiki Beach Activities to allow the company to assess the new configuration—with real, live customers—for future zipline operations.

DOBOR determined that the permit did not require an environmental assessment under the state's environmental review law, Chapter 343, because the permit falls under an exemption for "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource."

Although the board approved the permit, board members expressed several concerns about the project.

Hawai'i island Land Board member Stanley Roehrig said he worried about the precedent the operation would set. (Roehrig was the only board member to vote against the permit.)

"This isn't Coney Island and we don't want it to be Coney Island. ... I have strong reservations of ziplines all over Waikiki Beach," he told WBA owner Bob Hampton.

Hampton replied that he couldn't foresee that happening since he thought there weren't any other suitable areas in Waikiki.

"Koe aku ia—that remains to be seen," Roehrig said.

He added that people can parasail if they want an aerial view of Waikiki and went on to describe how a number of people on his island have died from zipline accidents.

"It isn't a precise science. ... People fly

into the trees and they die," he said.

At-large board member Ulalia Woodside added that if the operation does proceed, she wanted more information on how it might interact with other recreational uses in the area.

If the six-month trial period is successful, WBA will seek an annual revocable permit from DOBOR to continue using the landing zone, Hampton said.

Kaua'i Land Board member and former DLNR land agent Tommy Oi questioned whether WBA should also seek an easement for the line above the lagoon, which, although managed by the Hilton, is owned by the state.

"The state has got to weigh whether or not it wants to assume the risk of bad publicity on our pristine shoreline from someone getting hurt," Roehrig said, adding that when WBA comes to the Land Board for future approvals, he wants Hampton to explain why the state should take that risk.

"Don't tell me, 'Generally it's safe.' Generally, cars don't run into each other," Roehrig said.

Hampton told Roehrig that his company was very conscious of every possible risk the line posed.

Finally, board member Vernon Char said he wanted to make sure the private use of the lagoon and public parking lot benefitted locals as well as visitors.

"The other thing that offends me a little bit, charging \$1.50 per passenger. It's almost as if the state is hosting this event for tourists," Char said.

Hampton replied that his company goes out of its way to serve kama'aina and explained that the pricing was simply borrowed from the rent structure it uses for its catamaran operation, which also uses DLNR land.

"What we've done is using exactly the same rent protocol [we've] been using for the last 20 years," he said. He added that there will be kama'aina rates to use the zipline.

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### Board Defers Termination Of Ala Wai Development Lease

Would-be developers of the Ala Wai Small Boat Harbor blame the now-

defunct Public Land Development Corporation for their lack of progress, but not for their failure to pay rent to the DLNR's Division of Boating and Ocean Recreation.

On March 13, DOBOR recommended ending the 65-year lease and easement Honey Bee USA, Inc., was granted by the Land Board in November 2012. Following a 2008 request for proposals, DOBOR selected the company in 2009 to redevelop the division's lands at the Ala Wai, including the fuel dock and boat repair facility. In addition, Honey Bee proposed building two wedding chapels, commercial space, and a practice facility for the U.S. kayaking team.

Although the company had fulfilled its commitments under the development agreement that preceded the lease, it eventually lost its source of funding and started falling behind on its rent last October, according to a DOBOR report to the Land Board.

Under the lease, Honey Bee must pay \$68,571 a month.

"As of February 26, 2015, Honey Bee paid to DOBOR \$690,000 in development agreement fees and \$470,515 in lease rent," the report states.

At the Land Board's meeting, Honey Bee representative Keith Kiuchi announced that his company had \$420,000 in escrow to cure the rent default, as well as a new, mainland equity partner that would allow the development to proceed. He said the partner did not want its identity disclosed until it completes its due diligence. He said he also had funding commitments from at least one lender.

To date, Honey Bee has obtained permits, a Finding of No Significant Impact on its environmental assessment, and a sewer connection from the city. The sewer connection, Kiuchi said, is probably the most important element for any harbor developer to get since the Fort DeRussy wastewater pumping station is over capacity.

Kiuchi said that his company is on track to obtain building permits by May 14. He added that its contractor, Hawaiian Dredging, is ready to start construction some time in June and that the commercial space to be built is already 85 percent leased.

Honey Bee's Deron Akiona added that \$3.2 million has been spent preparing the project for development. Among other things, the company had to work around covenants in the lease limiting commercial development, as well as restrictions posed by the city's Waikiki Special Design District.

Another problem was the creation of the state Public Land Development Corporation by the 2011 Legislature, Akiona said.

"When that came in front of the Legislature, this parcel came thrown into the pot of

who would have jurisdiction," he said. The PLDC was to have been administratively attached to the DLNR and would have overseen development of state lands. But public backlash over the way the PLDC was created and the extent of its exemptions from land use laws led the 2013 Legislature to dissolve the agency.

Between 2011 and 2013, nobody was sure who had clear jurisdiction and development rights over the area to be leased to Honey Bee, Akiona told the Land Board.

"It caused us a three-year delay," he said. With regard to the rent, however, Akiona said he had no excuse and that he was prepared to cure it.

Kiuchi added that the performance bond required by the lease will be paid once financing is secured.

Keith Chun, a DLNR project specialist, told the board that the Ala Wai development is a difficult project and that Honey Bee had done a lot of due diligence, site work, and foundation testing and remediation. "A lot of it would be things the state would have to do," he said.

Maui Land Board member Jimmy Gomes asked whether anyone else had expressed interest in developing the property.

Chun said he'd bet there would be.

"It's not a matter of putting out the same RFP with a new date. There have been a lot of changes since 2008. Obviously, the economy improved. In 2011, the Legislature passed legislation to exempt Ala Wai properties from zoning, which not only increased the permitted uses, the legislation even allows us to do timeshare hotels," Chun said.

Chun estimated that the value of the properties leased to Honey Bee has gone from \$6 million to \$20 million, assuming the state can take full advantage of the new economic and regulatory landscape. He noted that when DOBOR issued the original RFP, rail was still uncertain and now it's going to run to the end of Ala Moana Boulevard, close to the Ala Wai harbor.

"I would think that we would really need to reevaluate what that property can do, knowing the type of uses that could be permitted," Chun said. He speculated that the adjacent property owners would likely be interested.

"That said, for us to go to another RFP would take time. ... We would need to get public and community input," he said.

In the end, given the time and money spent by Honey Bee so far, the Land Board chose to defer termination for 90 days to allow the default rent to be cured, the performance bond to be paid, and Honey Bee's mortgage to be approved by the board.

The rent has since been paid.



## Board Grants \$3.5M To Legacy Land Projects

On February 27, the Land Board authorized spending \$3.5 million to buy land or easements across the state aimed at protecting natural, agricultural, and/or cultural resources.

Following the recommendations of the Legacy Land Conservation Commission, the Land Board approved funding for the following projects:

- \$398,250 to allow the Waipa Foundation to buy 1.8 acres of wetland in Hanalei via the Trust for Public Land. Additional funding would come from Kaua'i County, which would hold an easement over the parcel. The area, known as Kaluanono, is a narrow strip of taro land that also serves as habitat for the endangered Hawaiian duck, moorhen, coot, stilt, and goose, as well as the native black-crowned night heron.

- \$1.33 million to Hawai'i County to buy 322.167 acres of coastal land in Wai'opae adjacent to the state's Marine Life Conservation District. In addition to preserving the natural and recreational resources of the area, the acquisition "protects the potential financial cost to the county to provide infrastructure and the protection of the residents in this high hazard zone and the subsequent repairs when natural disasters strike," a report to the Land Board states.

- \$855,625 to the DLNR's Division of Forestry and Wildlife to acquire 800 acres

in the Pua'ahala watershed on Moloka'i, which is "virtually an entire ahupua'a" and significantly contributes to the island's sole aquifer, according to the report. The ahupua'a provides habitat to 48 federally protected species and contains the island's largest freshwater pond.

- \$500,000 to the Moloka'i Land Trust to purchase a conservation easement over 969 acres of Kalua'aha Ranch. The easement area is associated with "at least 64 populations of 41 federally listed rare or endangered species," the report states. The upper 500 acres will be fenced to control ungulates.

- \$416,125 to DOFAW to buy 3,716 acres in Pupukea, O'ahu, which contain headwaters that feed into Waimea Falls. The area would be designated as a forest reserve and public hunting area. Additional trails would be created, as well as picnic and camping sites.

One project that was approved by the commission but held back from Land Board approval was \$1 million for DOFAW's acquisition of 181.14 acres of the Ka Iwi coast's mauka lands on O'ahu. The land would be managed as an open space forest reserve. The primary goal would be to protect the land from development.

At the Land Board's meeting, DOFAW administrator Lisa Hadway explained that her division wanted to have further discussions with the nonprofit organization working on the project — Livable Hawai'i Kai Hui — and the city regarding the city's conservation easement. The city is providing 75 percent of the project's matching funds.

— T.D.



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## Committee Tables Malaekahana Development, City Council Chair Awaits a New General Plan

The bill that would keep the urban growth boundary at Malaekahana where it is will die if the Honolulu Department of Planning and Permitting (DPP) doesn't release at least a draft O'ahu General Plan this month or the next.

On March 5, the Honolulu Zoning and Planning Committee agreed unanimously to amend the bill — Bill 47 — by removing all references to development at Malaekahana from the updated Ko'olau Loa Sustainable Communities Plan (KLSCP). Bill 47 recommends that the City Council adopt the updated KLSCP.

Committee members voted to pass the amended bill out for second reading by the full council knowing that council chair Ernie Martin planned to hold it until the DPP released the revised O'ahu General Plan.

It's unknown when the department will release the general plan, but it would have to be soon for the council to approve the bill at its July 8 meeting, its last meeting before the bill "expires" on July 13. County ordinances state that bills must be passed within two years of being introduced; otherwise they are filed. Bill 47 was introduced on July 13, 2013.

Between now and July 8, the council must have a second reading of the bill, a public hearing on it must be held, the Zoning and Planning Committee must vote to recommend a third reading, and, finally, the council must pass the bill at that third reading.

In addition to the uncertainty over when the general plan will be released, it's unclear how or whether its contents will affect Bill 47 or the development potential of Malaekahana. At the committee meeting and in news reports, DPP director George Atta stressed his

department's desire to seek ways to alleviate the overcrowding of homes in La'ie and accommodate natural population growth in the region.

He told the committee there were four options for Ko'olau Loa: 1) allow concentrated development of Malaekahana, as was proposed in the KLSCP his department had originally produced; 2) relax height and density restrictions to allow for vertical growth; 3) spread urban growth throughout Ko'olau Loa; or 4) maintain the current scheme and force residents to find housing elsewhere.

He seemed willing to explore alternatives to the Malaekahana development plan, known as Envision La'ie, that was largely developed by members and supporters of the Church of Jesus Christ of Latter-Day Saints.

"Accommodating the increase has to be done in one way or the other," Atta said.

Last year, the DPP, as a condition of the Planning Commission's approval of the KLSCP, conducted a rough assessment of the current housing potential in Ko'olau Loa. Based on current zoning, the DPP estimated that at most, 537 residential units could be developed on undeveloped lands in Ko'olau Loa, according to a February 2014 letter from Atta to former City Council member Breene Harimoto.

Harimoto also asked about the potential for additional housing in currently zoned residential areas that are "under-developed" or which could accommodate additional housing through re-development. In response, the DPP estimated that these lands could accommodate up to 4,300 more residential units. "However," Atta went on to say, "this figure is not practical because of limitations such as topography and flooding,

constraints due to existing facilities, and park use. We believe a more realistic figure is 2,200 units. This number may also be reduced by the availability of infrastructure to support new development and other constraints a landowner may have."

As far as the number of units that could be built on vacant or undeveloped residential lands in Laie owned by HRI, Atta said, at most, only 113 could be developed.

"This small number is based on deleting steep lands, lands impacted by flooding, lands designated for parks and open space preservation, and lands encumbered by existing facilities," he wrote.

At the Zoning and Planning Committee meeting, Atta admitted that the DPP's computer search of developable lands in Ko'olau Loa was crude.

"When you do computer modeling, it's not an accurate picture of true capacity. The analysis must be finer than that," he said.

Although the DPP's housing capacity estimates suggest there could be more than enough currently developable land to meet the region's housing needs, Atta told the committee, "the fact that no affordable housing has been developed tells me the market is not addressing the problem. The city and nonprofit sectors have to step up or look at growth boundary and height capacity [changes]."

Testimony submitted by Ka'a'awa resident Dee Dee Letts in support of the amended Bill 47 suggested the DPP relax height restrictions on lands in La'ie controlled by Hawai'i Reserves, Inc. (HRI), the church's land management arm.

Shortly after the committee meeting, Atta and HRI's Eric Beaver were quoted in a *Honolulu Civil Beat* article by Denby Fawcett discussing their efforts to find ways to allow for growth in rural areas, including Malaekahana, without amending urban growth boundaries. — **Teresa Dawson**