

# Environment



# Hawai'i

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## *At Loggerheads Over Loggerheads*

The catch of turtles by the swordfish fishery in Honolulu has been subject to more litigation than you can shake a fishing pole at. After what had to have been seen as a victory for the fisheries in 2009, when National Marine Fisheries Service rules were rewritten to ease up on the catch of loggerhead sea turtles, the service was, predictably, sued.

Now the longline swordfish fleet finds itself pushing up against an annual take limit for loggerheads that, if reached, will close the fishery for the remainder of the year.

Not surprisingly, the Western Pacific Fishery Management Council is angry at the outcome of the lawsuit. The next step is for the NMFS to redo a biological opinion, which the council – and turtle advocates – eagerly await.

## Revised Turtle Restrictions Threaten To Close Hawai'i Swordfish Fishery

After trying for more than two years to lift restrictions protecting federally listed sea turtles, the Hawai'i longline industry was dealt a setback on January 31, when the U.S. Department of Justice and three conservation groups entered into a settlement agreement requiring the National Marine Fisheries Service to rescind its 2009 decision to increase the annual allowable take of loggerheads from 17 to 46.

As a result, the Hawai'i shallow-set longline fishery is now in danger of closing this year, having hooked, or "taken," 11 threatened loggerhead sea turtles as of March 15. The ten boats that make up the current fleet, which targets swordfish, bring in about 20,000 fish a year.

The settlement, filed in U.S. District Court in Honolulu, ended litigation initiated December 16, 2009 by the Center for Biological Diversity, KAHEA: the Hawaiian-Environmental Alliance, and the Turtle Island Restoration Network in response to the NMFS's rule, published less than a week earlier, instituting a looser set of restrictions on the Hawai'i

swordfishing fleet.

In addition to nearly tripling the number of loggerheads that could be hooked in a year, the rule lifted the annual limit on the number of hooks set and allowed take levels to be calculated on a three-year basis.

To the groups, it just didn't make sense for the NMFS to allow the killing of more loggerheads at the same time the agency was considering uplisting them from threatened to endangered.

But to at least one industry representative, who also is a member and former chair of the Western Pacific Fishery Management Council, the science behind the 2009 NMFS rule was perfectly sound. And at the council's meeting last month in American Samoa, he demanded an explanation of why, in his opinion, the agency caved.

### **Background**

Disputes between conservationists and the NMFS over the fleet's impact on sea turtle populations have been going on since the late

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Loggerhead sea turtle (*Caretta caretta*).

PHOTO: NOAA

# Environment

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# Hawai'i

April 2011

## NEW AND NOTEWORTHY

**Setback at Midway:** The tsunami that hit Midway atoll last month washed more than a hundred thousand albatross chicks off the island, while at least a thousand Bonin petrels were buried alive in their burrows.

The short-tailed albatross chick, whose hatching was heralded as a major breakthrough last January, survived. The location of its nest cup was well known, so the chick could be put back where its parents could locate it. As of press time, the parents had not been spotted.

But for most of the thousands of black-footed and Laysan albatross chicks rescued, volunteers and staff at the Midway Atoll National Wildlife Refuge had no way of knowing where their nest cups might have been. And unless the chicks are able to wander back to their nest site, where their parents might find them,

odds for their survival are not good. The chicks are not at a stage when they could survive on their own, says Barry Stieglitz, manager of the U.S. Fish and Wildlife Service's Hawaiian and Pacific Islands National Wildlife Refuge Complex.

"If a chick can't find its way back on its own to its nest cup," Stieglitz told *Environment Hawai'i*, "my understanding is the adults will come back several times with food, look around, and if they can't find their chick, they give up. They won't feed just any chick that happens to be nearby. There may be a few 'adoptions,' but certainly that wouldn't be widespread."

If the short-tailed albatross adults don't return to the chick, will the refuge managers try to hand-raise it? Stieglitz was asked.

"Normally we try to manage populations, not individuals," he said. "But because this is the first short-tailed albatross chick to have hatched outside Japan, we might make an exception in this case."

Other atolls in the Northwestern Hawaiian archipelago were also hit pretty hard by the tsunami, including Kure and Laysan, Stieglitz said.

**Radioactive Dangers Here?** The earthquake and resulting tsunami in Japan last month should have driven home a couple of lessons:

The first, and most obvious, is that siting nuclear facilities near coastlines or zones of high seismic activity may not be a good idea. Hawai'i has no nuclear energy plants, but there is one proposal, still alive in the eyes of the Nuclear

Regulatory Commission, to build a cobalt-60-fueled irradiator, with more than a million curies of radioactivity, near the Honolulu airport.

Pa'ina Hawai'i, which has proposed the facility, already has a license to operate from the NRC at the airport site. Recently Michael Kohn, a principal of Pa'ina, has said he wants to add another location—in Kunia—to the license. But, as *Environment Hawai'i* reported last month, Kohn insists that he does not want to surrender the airport site just across Lagoon Drive from Ke'ehi Lagoon, which was heavily damaged in the March tsunami.

On March 1, the NRC released a final supplement to its environmental assessment for the Pa'ina facility. In the discussion of the potential impacts of tsunamis, the document looks only to "projected wave velocities associated with the largest historical tsunamis," concluding that the source assembly (housing the radioactive cobalt) would remain intact. "Even an extremely large tsunami" generated by a hurricane, it states, "would not be sufficient to remove a source assembly from the bottom of the irradiator pool." In view of the many photos revealing the force of the Japanese tsunami, it verges on silly to think the Pa'ina plant would have been unscathed were it to be hit by something similar.

That leads to the second lesson: Designers of the Japanese nuclear plants also assumed that their facilities would not have to be built to withstand more than the "largest historical" events. When historical records extend only a couple of hundred years, maybe it's time to scrap their use as a basis for design.

David Henkin, the attorney representing Concerned Citizens of Honolulu, which is an intervenor in the NRC proceedings concerning Pa'ina, has yet a third lesson, though this one he was happy to discuss well before the events in Japan. Given that the benefit of the Pa'ina facility is negligible, according to even the brightest scenarios in the NRC environmental documents, why should residents of Hawai'i be asked to accept any associated risk, however small, at all? he asks.

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### Quote of the Month

*"The state should put together a SWAT team and take them out."*

— **Marjorie Ziegler,**  
on reports of axis deer in Ka'u

## Restoring, Protecting Hawai'i's Dry Forests: West Hawai'i Examples Showcased at Conference

**H**ow do you restore Hawai'i's dryland forests?

The question is a hard one to answer. Because so little is left of the forest types that once blanketed the islands' leeward slopes, any restoration is bound to involve a level of creativity that might discomfit purists. Then, too, there's the absolute, unyielding fact that centuries of human habitation have irrevocably altered the landscape, soils, and rainfall patterns in ways that mean restoration will be, of necessity, an uphill and constant struggle.

But at the fifth annual Nahelehele dryland forest symposium, held in February, the mood was upbeat. The symposium, sponsored by Ka'ahahui 'o ka Nahelehele, a non-profit established to promote protection and restoration of dryland forests in Hawai'i, featured speaker after speaker discussing approaches to bringing native vegetation back to areas ranging in size from a few dozen acres to thousands.

### ***Pelekane Bay***

One of the most ambitious dryland forest restoration efforts in the state is the Pelekane Bay watershed project, part of the larger Kohala Watershed Partnership. Stretching from Kawaihae east to the summit of the

Kohala mountains, the project involves protecting 6,000 acres from goats by erecting some 18 miles of goat-proof fence around fields of largely invasive grasses, installing more than 10 miles of drip irrigation line, planting 30,000-plus seedlings—trees, shrubs, groundcover—representing more than 30 different native species. Small enclosures, put up during the Works Progress Administration days of the Great Depression, have protected postage-stamp remnants of koaia-dominated native vegetation in some of the gulches. These have provided seed for many of the new plantings and serve as a vision of what used to be—and could yet be.

Plans for the project had been developed nearly 20 years ago, but no funds were available until the Kohala Watershed Partnership won a grant from the National Oceanic and Atmospheric Administration, under the American Recovery and Reinvestment Act (ARRA). With the \$2.9 million award, the Pelekane Bay project was off and running, under the direction of Melora Purell, coordinator of the larger Kohala Watershed Partnership.

As Purell explained during the symposium, the entire effort was directed toward “addressing issues on the watershed that led to sediment in the bay.” Much of the bay was

destroyed when Kawaihae Harbor was built. What remains has been so burdened by sediment from upslope areas that an ancient shark heiau, once under 10 feet of water, is now completely covered in silt.

While the justification for the NOAA award was to restore coastal values, Purell said, the work that the project undertook served any number of different purposes as well. “We could have had a different objective, such as restoring native forests—which we’re doing—or increasing moisture in the soil, and we would still achieve the same result from all those actions,” she told the group. In addition to fencing, planting, and irrigation, the project also installed more than 90 sediment-check dams downstream (each capable of holding back 10 tons of sediment) and treated 13 acres of bare soil with fabric seeded with native plants and grasses.

At the time the project began, in mid-2009, the area was experiencing exceptional (category D4) drought. “Our plan was to plant in the winter,” Purell said. “We put 1,200 plants in the ground and waited for rain. It never came. We ended up using backpack sprayers and the crew spent three days a week watering. So we went to Plan B, a temporary irrigation system, which then became a much larger-scale system. So now we have around 32,000 plants in the ground, and every single one of them is on irrigation.”

As for the exotic grasses that still cover the slopes, Purell said, “we decided to address this by replacing fire-prone species over time with natives.” For now, the grasses and other weedy species provide the young seedlings with some shelter from the famous Kohala winds and also hold down soil that otherwise would be contributing to the sedimentation problems of Pelekane Bay.

In February, the NOAA-funded part of the project was completed. What will happen now? Purell was asked.

“What we were able to build with the stimulus money was a large, firm foundation. We hope funders like NOAA will build, little by little,” she replied. “The Hawai'i Community Foundation got NOAA money for watershed restoration, which provided us with a small grant to continue our work, to maintain infrastructure, water plants, and check the fence.”

Over the long term, with the trees maturing, she said, “our hope is that with the trees evaporating water into the atmosphere, the area will be more humid and the cloud line will move down the Kohala Mountain. There's an old expression, the rain follows the forest. How long that will take, how big the trees will need to be... we simply don't know.”



A view to the coast through a fence surrounding the Pelekane Bay watershed.





Dave Faucette points to a native seedling protected by wire caging at the Waikoloa dry forest.

### Waikoloa Dry Forest

Driving down Waikoloa Road, past the golf course and condos and shops of Waikoloa Village, one might never guess that the densest wild population of the endangered uhiuhi tree is only a stone's throw away. Just 50 uhiuhi (*Caesalpinia kavaensis*) are known to exist in the wild; 10 of them are found within the 275 acres of the Waikoloa Dry Forest Recovery Project, and three more are close by.

Dave Faucette, who is the volunteer manager of the project, gave an overview of its young life at the Kona symposium.

"Around 2003, several Waikoloa residents became aware of the sale of mature wiliwili trees [*Erythrina sandwicensis*] for resort landscapes... They began lobbying the [Waikoloa] Village Association to stop the practice," Faucette said. Not long afterward, Lyman Perry, a botanist with the Department of Land and Natural Resources, was invited to survey the area; to the surprise of all involved, Perry discovered the hitherto unknown population of uhiuhi as well as nearly 100 wiliwili, several of them estimated to be hundreds of years old.

The Village Association then stopped mining the area for landscape trees and allowed the Waikoloa Village Outdoor Circle "to begin to undertake stewardship of the uhiuhi trees," Faucette continued. They hired people to remove the dry grasses from around the base of each uhiuhi, as well as from 25 wiliwili, thereby reducing the risk that grass-fueled fires would harm the trees. After applying for and receiving several grants to undertake

more systematic restoration of the area with native vegetation, the Outdoor Circle recently signed a 15-year lease for the area. And with the Village Association's permission, the group also fosters protection of the three uhiuhi just beyond the boundaries of the project area. Fire is a constant threat, Faucette said, with a blaze in 2007 burning around 35 percent of the area. Goats, too, will kill young plants with their browsing and kill prospects of any natural regeneration. Many of the goats that once roamed the area have been taken out, but it will take completion of the perimeter fence to make sure that new plantings are protected.

Other challenges Faucette identified include the "sea of fountain grass" remaining in the areas of the project yet to be addressed and the wiliwili gall wasp. Although the parasitoid wasp released as a biocontrol agent for the gall wasp has tempered the gall wasp's devastation, almost every tree still shows signs of ongoing gall wasp presence.

Finally, there's the human element, Faucette noted. With uhiuhi valued for its dense, hard wood, people used to come in and cut off limbs, leaving trees scarred, disfigured, and vulnerable to disease.

The Natural Resource Conservation Service has given the project \$310,500 and the state Department of Land and Natural Resources is providing \$430,000 over 10 years through its Forest Stewardship Program.

Progress is slow but clearly visible. Faucette and others clear the fountain grass from the 'a'a clinker substrate by mowing it down and

poisoning the remaining tufts. The ubiquitous kiawe (mesquite) trees are trimmed back so as to provide dappled sunlight for the new native plantings. There is no soil to speak of, so when native seedlings are planted, each is given a bed of woodchips and soil mix as it is placed into a puka of the 'a'a lava that covers the ground. Further protection from the goats is provided by wire cages Faucette builds around each new arrival. Watering is done with a backpack sprayer.

The loving care the plants receive is rewarded with robust growth. On the field trip to the area preceding the conference, dozens of natives were flush with new vegetation and practically bursting out of their cages. Like a proud father, Faucette rattled off their names: hibiscadelphus, alahe'e, aweoweo, hau, akia, ilima, lama, 'ali'i, hoawa... Not all are known to have grown in this area, but Faucette is hopeful that the survivors in this mix will, in the long haul, yield a healthy, self-sustaining landscape.

As part of the project, the Waikoloa Village Outdoor Circle has initiated what it calls the Waikoloa Future Foresters Program. A local teacher has developed a curriculum, and "every second Saturday," Faucette said, "we head into the classroom, go through the lesson she's prepared, then put it into practice in the field. We want to instill in them an environmental ethos they can carry forward. They're all local kids, living only a mile away from the forest. They can walk there."

### Visionaries

Waikoloa and Pelekane Bay are just two of dozens of dryland restoration projects across the state. To name but a few: On Maui, Art Medeiros has been spearheading restoration at Auwahi, on the leeward slope of Haleakala, for years, with noteworthy results. Small areas of Pu'uwa'wa'a and Ka'upulehu on the Big Island have been fenced off for decades. At Palamanui, 55 acres in an area designated for urban development have been set aside for preservation of a remnant dry forest that is astonishingly intact. At the back of Makua Valley, on O'ahu, the U.S. Army is working to protect and restore native dry forest. Lana'i has Kanepu'u preserve.

The obstacles are daunting. Jonathan Price, a professor in the Department of Geography and Environmental Studies at the University of Hawai'i at Hilo, spoke on the topic of climate change. After describing the dramatic decline in Hawaiian flora and fauna, especially over the last century, Price noted that the "main thing to think about is ... change is upon us. And it didn't come from a tailpipe, cement factory, or powerplant. Instead, it came from a lot of the things we're

familiar with from having to deal with on a daily basis. Collectively, they're called stressors: habitat loss, invasive plants, feral ungulates, fire, rats, mammalian predators. They all combine to create changes – fairly dramatic changes."

"All this makes us think about climate change in a particular way," he continued, "but this" – climate change – "is 100 years from now. I'm tempted to say that I'm not worried about that now. We have more burning issues today." To illustrate his point, Price pulled up a cartoon of a burning house, with one fireman saying to another, "we need to sit down and figure out what to do about this termite problem."

Still, Price would be the last to say that the "termite problem" – climate change – is too far off to worry about. Indeed, he and colleagues in the UH system and government agencies are trying to figure out, on a fine scale, just how climate change models will play out regionally. The models can then be compared with current climate patterns, and management efforts can be integrated with those predictions.

Already the research is showing an increasing slope in average temperatures over the last 30 years as compared to the slope over the last century, Price noted. What's more, the rise in temperatures is more pronounced at high-elevation sites than low-elevation ones.

In what are now the driest areas of the state, Price said, the models predict a decrease in rainfall during the wet season (winter). The frontal systems that bring winter storms are expected to come down less often in the future, he noted, and "this means drought, especially for leeward sites."

Dry-season precipitation is expected to increase "just very slightly," Price said, but with current precipitation being "close to nothing," the overall impact will be a net decrease in annual rainfall.

Hawai'i will also lose climates at high elevations, where the cool climate that now exists will disappear. With a rise of 3 degrees Celsius predicted at the summit of Mauna

Kea, Price said, "the coldest area won't exist." Elsewhere, too, changing patterns of precipitation and temperature mean existing combinations of these elements may disappear as well, he said.

At the lowest elevations, "we will have a new climate ... a climate that hasn't existed for millions of years," he said. For some plants, the change could be a boon. Drawing a lesson from past warming trends, Price noted that in eastern North America, after the last glacial period, certain tree species expanded their habitat rapidly, arriving in northern areas thousands of years ahead of species that shifted at much slower rates. As a result, he said, "we have forest types today with a mix of species that didn't exist before."

How those species were able to respond depended on their unique characteristics. Oaks could disperse rapidly, with their acorns

moderate for lama – and, with the birds that used to disperse the large lama seeds now extinct in the wild (the 'alala, most importantly), functional dispersability is actually very low.

Furthermore, even without an overall change in annual rainfall, variability in the seasonality of rain could also be a problem, Price said. "We have some species very attuned to seasonality," he said. "Wiliwili, for example, leafs out in winter. If rains come in the summer, it could put wiliwili at a disadvantage."

Later, Price emphasized the uncertainty that inevitably accompanies any discussion of the impacts of climate change. "Many of the projections are fairly uncertain," he wrote in an email to *Environment Hawai'i*, "although in some cases, we are seeing these changes occurring even now."

Regardless of the lack of certainty, the best way to deal with future challenges, Price suggested, was with protection, pre-emption, and positivity.

Those areas most in need of protection, he said, were the "gradients," areas where different climates are very close together. Examples he cited were Waimea Canyon (in Kaua'i); Kanaio, Auwahi, and Lihau mountain (Maui); and Pu'uwa'awa'a (Big Island). In each of these cases, the dry forest is adjacent to mesic areas that may dry out: "dry forest areas have the seeds of



A giant wiliwili tree near Waikoloa.

being easily transported by squirrels and birds. "Species like oak are on the A train," Price said, "moving north at a very fast pace." Hemlock, on the other hand, responded much more slowly.

In Hawai'i, the same behavior may be expected in the response of different species to changing temperatures and weather patterns. "Look at lama and Christmasberry," Price said, referring to a native dry forest tree and an invasive shrub, respectively. Both occupy the same habitat now, but Christmasberry produces many more fruits per tree than lama. And while the dispersability is high for Christmasberry, with thousands of small seeds, it is only

the future," Price said.

Pre-emption, Price went on to say, "is the idea that we need to detect invasives and remove incipient populations, control future source populations, and reduce alien sources of dispersal and disturbance (especially feral ungulates)." Pre-emptive restoration of native species is also required. For example, Price said, "if 'alala are not here, we need to replace them."

Finally, positivity is essential. "We are NOT doomed," Price said. "Hawaiian dry forest climates will continue to exist, and even expand in some cases. Proper management can ensure these forests persist."

— **Patricia Tummons**



## Axis Deer on the Big Island? Reports Of Possible Sightings in District of Ka'u

On the Big Island, where a proposal to introduce axis deer in the 1970s ground to a halt after environmentalists raised hell, rumors abound now that axis deer have arrived anyway and that a reproducing population of them exists in the large district of Ka'u. One rancher has reported seeing a doe with at least one fawn near Na'alehu.

Steve Hess, a biologist with the U.S. Geological Survey's Biological Resources Discipline, has studied mouflon in the area. He calls the reports of axis deer "pretty reliable" and states that natural resource management agencies at the state and federal levels are "gearing up to do something about it."

Jan Schipper, head of the Big Island Invasive Species Committee, emphasized that the reports weren't confirmed. "We often get reports of axis deer, but most of them turn out to be mouflon that have lost their horns or have mange," he said. Still, he added, "there are rumors that the deer have been here a long time."

Among the actions that Hess and others have taken or planned to take are stationing cameras in remote areas that are triggered by passing animals, in the hope of obtaining hard evidence of deer, and meeting with area landowners to develop strategies for dealing with the deer, whose presence can be devastating to ranchers and farmers. Also, the source of the deer, assuming they are present, cannot be easily determined. Axis deer on Moloka'i may be infected with bovine tuberculosis (BTB), raising the prospect that cattle on the Big Island could be at risk if the deer in Ka'u were brought from Moloka'i. As a condition of maintaining its BTB-free status, and thus be able to ship livestock interstate without conditions, the U.S. Department of Agriculture requires, among other things, that the state restrict the movement of feral pigs and axis deer from the east end of the island.

But in fact, there are no restrictions, in the regulations of either the state Department of Agriculture or Department of Land and Natural Resources, on the inter-island transport of game. Nothing in state law (Chapter 197, Hawai'i Revised Statutes) seems to address specifically the deliberate introduction of game animals to an island by private parties.

Marjorie Ziegler, executive director of the Conservation Council for Hawai'i, is alarmed at the rumors. If there's any chance they're true, she said, "the state should put together a SWAT team and take them out. Put a bounty

on them, hire sharpshooters to take them out — do anything we can to eradicate them."

In Hawai'i, Steven B. Anderson studied axis deer (*Axis axis*) for several years on Maui, documenting their harmful effects on native ecosystems and agricultural enterprises. In a report he prepared in 1999 — "Axis Deer Overview and Profile" — Anderson quoted the noted territorial botanist Harold Lyon, who, commenting on a proposed release of axis deer at Pohakuloa, on the Big Island, warned: "They will range in the cane fields as well as in the forest ... The deer can graze down the forage grasses and other plants much closer to the ground than can the cattle, so in all overstocked pasture the deer can thrive while the cattle starve."

"During my study," Anderson wrote, "I have witnessed [both] warnings come true." On Maui, deer are frequently found in the cane fields of HC&S, he reported. "Unfortunately, I have also witnessed cattle in very poor condition (nutritionally) co-existing with deer that had continued to thrive under extreme drought conditions."

Anderson went on to list the "principal elements of axis deer biology that cause it to be problematic here in Hawai'i:" the lack of natural predators; the deer's "extreme elusivity

(hiding) and nocturnal activity;" and its "behavioral variability, adaptability and opportunism." He added: "This species has also evolved in the face of environmental extremes in Asia that it will never encounter here in Hawai'i. It is adapted to a much wider temperature range, a much greater breadth of precipitation extremes, a much broader range of common plant species, and much more stealthy predators (tigers) than hunters generally are."

BIISC's Schipper told *Environment Hawai'i* that if the deer are on the island, they arrived without any formal permission or notice. "We don't have a lot of control over what comes onto the island," he said. Even with species that are listed as noxious or invasive, there's a problem controlling their transport, he said. "Fire ants, for example, show up everywhere, and we can't track them. We can't open containers or monitor the transport of vectors." In the case of axis deer, they don't even appear on any state list as a noxious species whose inter-island transport might be prohibited.

If axis deer are discovered on private property, said Hess, there's nothing the state could do to eradicate them without the owner's permission. Perhaps, if they move onto adjoining land with more cooperative owners, or onto state land, they could be hunted, "but I'm not sure they're even regulated as game" on the Big Island, he added. "It's an odd situation," Hess said. "Nobody anticipated this."

— Patricia Tummons



Axis deer along Hanamu Road in Makawao, Maui.

## LUC Takes Another Step Forward In Reversion to Ag of 'Aina Le'a Land



An artist's rendering of a completed structure for Villages of 'Aina Le'a.

The state Land Use Commission has reaffirmed its vote in January to revert to the Agricultural District more than 1,000 acres of land near Waikoloa. For more than two decades, the land was in the Urban District, while a series of companies made efforts, with varying degrees of seriousness and purpose, to develop it in line with the plans first approved in 1989.

On March 11, the LUC voted 6 to 2, with one member excused, to approve a proposed Findings of Fact, Conclusions of Law, and Decision and Order that reflects the decision taken in January. The two commissioners in opposition – Duane Kanuha and Charles Jencks – also opposed the January vote to revert. Lisa Judge, who voted against the reversion in January, voted with the majority to approve the proposed findings last month.

The parties to the LUC petition – Bridge 'Aina Le'a, LLC, DW 'Aina Le'a Development, LLC, the state Office of Planning, and Hawai'i County – were given until March 24 to file objections to the statements in the document, which the LUC will consider at a meeting tentatively set for April 7-8.

On the March 11 agenda was also the motion by DWAL to have the commission amend three of the conditions included in the LUC's approval in 2005 of changes to the project, now known as the Villages of 'Aina Le'a. Those changes relate to the requirements that 385 units of affordable housing be completed by November 17, 2010; that the

sewage treatment plant serving the project be built within the Urban boundaries; and that 16 acres of land within the Urban area be provided to the state for schools.

"Given the prior action by the commission," LUC chairman Vladimir Devens asked Alan Okamoto, attorney for DWAL, "are you going to be withdrawing this motion? How is it you propose to proceed? The matter appears to be moot at this point."

Okamoto did not agree with Devens' assessment. "I'd like to be heard on it," he said. "We are attempting to have a discussion with the Office of Planning, because of the new administration." Under the previous OP director, Abbey Seth Mayer, the OP had vigorously supported reversion of the land. With the new governor and a new OP director, Jesse Souki, Okamoto was optimistic that the OP's objections could be tempered. "Director Souki has been very accommodating, but understandably, he's just starting his duties," Okamoto told the commissioners. "We don't have a resolution of this. I don't know that this motion is moot.... We really feel that if we can address these conditions to the satisfaction of the Office of Planning, it would be something that would be worth looking at by this commission.... We ask the commission's indulgence in allowing us to continue this matter."

Devens appeared puzzled. "The only problem I can foresee with this is that we have

taken action on the reversion, so it wouldn't make any sense to defer the motion, because it is a motion to amend conditions that no longer exist."

"I understand," he continued, "the argument you're presenting, in terms of wanting to try to work it out and so forth.... At this point, we face the state of the record, which is the action that has just taken place."

Okamoto pointed out that what had occurred was the adoption of *proposed* findings of fact, with the parties still able to put forward their exceptions and objections for the commission's consideration.

Devens then asked Bruce Voss, attorney for co-petitioner Bridge 'Aina Le'a, if he had any comment. As he has done in the past, Voss argued that the commission's order to show cause, which began the process of reversion, was flawed and then also began to list the ways in which he saw the commission as having violated its statutory obligations – essentially by having redistricted land (the 1,060 acres of the 'Aina Le'a project) without having made all the determinations required by law.

"You can't just say this is moot because you anticipate doing something on April 7," Voss said. "This is deeply wrong and shows the commission's predisposition to this motion, when everyone on this commission is supposed to be an impartial arbiter.... I would ask the commission to review its rules and statutes, and continue this proceeding in compliance with the applicable rules before we're in a situation three years from now, where ... after litigation, we have to come back and repair the damage."

Devens took exception to what seemed to be the suggestion by Voss that the commission members were less than impartial. "Every one of the commissioners votes their conscience," he said, "and has never been predisposed to anything. We hear the evidence, give it the appropriate weight.... Let me reassure you this has always been the process so long as I've been on this commission."

At the end of the discussion, Devens summed it up this way: "Mr. Okamoto, based on the prior action we just took, I do believe the motion would be moot, because I don't know what you'd be trying to amend, if it is already in the process of being reverted. But I do want to give you the chance regarding the continuance of your motion." Devens then put Okamoto's request to have the motion to amend three conditions be heard by the commission at a later date.

Once more, the vote was 6 to 2 in favor, with commissioners Kanuha and Normand Lezy voting in opposition.



### Proposed Findings

The proposed Findings of Fact, Conclusions of Law, and Decision and Order that the LUC approved on March 10 provides a recap of the various changes to the project made over the last 22 years, through five different developers.

The findings included a recitation of the various promises made by DWAL principal Robert Wessels and principals of the predecessor developer, Bridge, concerning financing. None of them materialized, except for a scheme to raise capital through small individual investors in Singapore and Malaysia. (According to county records, nearly 800 individuals with addresses in Southeast Asia were listed as owners of the affordable housing site as of March 4.)

The proposed findings also cite violations of a number of conditions of development. Among other things, there is the failure to have completed 385 affordable units by November 17, with the LUC noting, "as of January 20, 2011, over 22 years since the reclassification was first granted, petitioners had failed to obtain a certificate of occupancy for even one affordable dwelling unit." At the request of commissioner Ronald Heller, the proposed findings also noted that Bridge had represented that the affordable units would be "spread throughout the project," instead of being concentrated in one 60-acre parcel at a far corner of the project.

Misrepresentations concerning the extent to which development had received permits are recounted as well: "On December 16, 2009," the proposed findings state, DWAL had submitted an annual report representing "that all necessary permits ... had been prepared and recently submitted." But, it goes on to say, "On November 18, in response to questioning by the Commission, co-petitioner DW 'Aina Le'a represented that condominium documents had not been submitted, the package wastewater treatment plant had not been delivered and plans not submitted to the state Department of Health for review and approval, no application had been made to the Public Utilities Commission for approval of wastewater or water utilities, no plans for landscaping had been submitted for review and approval by the county, and co-petitioner DW 'Aina Le'a had not authorized anything to facilitate the construction of the intersection to provide access to the property."

As to Voss' claim that the reversion constitutes a reclassification, the commission's proposed findings state that the commission "has the authority to revert a petition area to its original land use classification for failure to



Bobby Jean Leithead-Todd

comply with the conditions imposed by the commission," citing the Supreme Court decision in *Lana'i Co., Inc. v. Land Use Commission* as well as Hawai'i Revised Statutes, Section 205-4(g). (That paragraph says, in part: "The commission may provide by condition that absent substantial commencement of use of the land in accordance with such representations, the commission shall issue and serve upon the party bound by the condition an order to show cause why the property should not revert to its former land use classification or be changed to a more appropriate classification.")

### 'Farm Dwellings?'

One of the questions that will arise if the LUC adopts its proposed findings of fact is what happens to the 40 or so affordable units that have already been built or are in various stages of construction.

Bobby Jean Leithead-Todd, Hawai'i County's planning director, told *Environment Hawai'i* that they would all be treated as non-conforming structures. "If we have 400 units, which they had legitimately got building permits from us based on the zoning at the time they applied, we'd have to pretty much honor it, like grandfathered or non-conforming," Leithead-Todd said. She also noted that under state law, "you can have a farm dwelling on ag land, even though at the time of the application, it was urban and they had county zoning."

Another issue, she said, was whether there would still be a requirement to have 385 of the units meet the requirement of affordable. The original condition set by the LUC was to have 20 percent of the total units built be affordable. If only some 400 units total are able to be built, then probably only 80 – 20 percent – would need to be affordable, she said.

If the land does revert to Agricultural, Leithead-Todd said, "you could still subdivide, in theory, and then build homes – farm

dwellings – with some kind of agriculture."

"There are all kinds of questions that haven't been answered because this hasn't happened before. We'll have to address them as these issues are raised," she said, adding that almost certainly, the courts will have the final say in this case.

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## Tropic Land Withdraws Time Extension Request

The request of Tropic Land, LLC, to be given more time by the Land Use Commission to work out an access agreement with the U.S. Navy was withdrawn. Notice of the withdrawal was made at the commission's meeting of March 11, where the commission was to have taken a vote on whether to grant the request.

As of mid-March, the LUC was tentatively set to hear oral arguments by the Tropic Land parties at its meeting of April 7-8, with adoption of a decision and order at a subsequent meeting.

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## Abercrombie Nominates Replacements for Kanuha, Devens

Governor Neil Abercrombie has nominated Ernest Matsumura to replace Duane Kanuha as LUC member representing the Big Island. Kanuha's term expired on June 30, 2009, and the Senate in 2010 voted to reject Governor Linda Lingle's effort to have him reappointed. Kanuha's vote last fall in favor of a controversial proposal to develop land in Central O'ahu (Koa Ridge) led to a challenge of the LUC vote in 1st Circuit Court. (The appeal is set for a hearing in June.)

Abercrombie has also named Chad McDonald, vice president of the contracting firm Mitsunaga & Associates, Inc., to the O'ahu at-large seat now held by Vladimir Devens, serving as commission chairman. Devens will complete his first (and apparently only) term on June 30.

As of mid-March, Abercrombie had not yet nominated anyone to take the Maui seat. That is still occupied, for the time being, by Charles Jencks, who was given an interim appointment to the LUC last June by Lingle when then-LUC member Ransom Piltz resigned to run for Maui mayor.

— Patricia Tummons



*Wespac from page 1*

1990s, when a lawsuit filed by the Center for Marine Conservation and the Turtle Island Restoration Network resulted in Hawai'i-based longliners being banned temporarily from their grounds in the Northern Pacific.

Before the closure, the fleet, which deploys dozens of miles of line and thousands of hooks at a time, was taking hundreds of loggerheads and endangered leatherback sea turtles every year, as well as other species of turtles, seabirds, and cetaceans.

By 2004, longline fishing in the Northern Pacific had resumed under new rules, including an annual limit of 2,120 shallow-set hooks, and annual capture caps of 17 and 16 for loggerheads and leatherbacks, respectively. It was also limited to killing 3 loggerheads and two leatherbacks a year.

In March 2006, after only three months of fishing, the fleet had reached its allowable take of loggerheads and had to shut down for the rest of the year.

The following February, the Hawai'i Longline Association sought relief from the NMFS, asking the agency to lift its effort and take limits because turtle capture rates had declined by 89 percent from pre-closure rates, with the number of "deeply hooked" turtles dropping as well. The HLA also asked for the annual caps to be changed to a three-year cap.

Despite protests from conservation groups and a petition by two of them to list the North Pacific population of loggerheads as endangered, the NMFS and the Western Pacific

Fishery Management Council agreed to conduct a supplemental environmental impact statement analyzing HLA's proposal as well as time/area closures.

The NMFS's Pacific Island Fisheries Science Center later determined that a take level of 46 loggerheads and 19 leatherbacks would result in the deaths of about three adult females of each species, which was not, as the center's Melissa Snover informed the council in 2008, significantly different from the 2004 kill levels set by the NMFS. She did, however, advise the council to use caution when interpreting her results, because her analysis incorrectly assumed that nesting trends were representative of total population trends.

In a 5-4-1 vote, the council voted to recommend that the NMFS lift limits on fishing effort, raise the caps for loggerheads from 17 to 46 and those for leatherbacks from 16 to 19, and to apply those limits on a three-year basis. In 2009, the NMFS agreed with the council's recommendations, except those regarding leatherbacks.

### **Litigation**

The two mainland groups that petitioned the NMFS to uplist the North Pacific loggerheads, joined by the local organization, KAHEA, immediately filed a complaint against the agency, arguing that in publishing its rule, it violated the Endangered Species Act, the Migratory Bird Treaty Act, the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Administrative Procedure Act.

The plaintiffs, represented by Earthjustice, noted in their June 2010 amended complaint that the 2008 biological opinion (BiOp) prepared by the NMFS for the longline fishery had stated that the North Pacific loggerheads "faced an over 83 percent likelihood of becoming quasi-extinct within the next three loggerhead generations. ... Yet the rule nearly triples the number of loggerhead sea turtles the fishery is authorized to catch."

The complaint alleged that the BiOp was not based on the best scientific and commercial data available, failed to address the impacts of the proposed take on species recovery, and also failed to consider the rule's impact given the environmental baseline and cumulative effects.

In the midst of the litigation, the NMFS published a proposed rule on March 16, 2010, to list the North Pacific loggerhead turtle as endangered. And by October, the plaintiffs and the NMFS were ready to settle. They filed a joint motion to enter a stipulated injunction, or settlement, as an order of the court.

Although the Hawai'i Longline Association, which had intervened in the case, op-

posed the motion, on January 31, U.S. District Judge David Ezra approved it.

Under the settlement, the NMFS must redo the portions of its 2008 biological opinion that relate to loggerhead and leatherback turtles and may not increase their allowable take until after a new BiOp is completed. The BiOp and a new incidental take statement for the fishery must be completed no later than 135 days after the NMFS's final determination on its proposed listing of nine population segments of loggerheads.

In exchange for the revised BiOp, the plaintiffs allowed all of their other claims regarding the rule's effects on seabirds and whales, among other things, to be dismissed with prejudice.

(On March 22, NMFS published a notice in the *Federal Register* announcing it was proposing to extend by six months — to September 16 — the deadline for making a final determination on the loggerhead listing. According to the *Federal Register* notice, the extension is needed to clear up the status of the Northwest Atlantic Ocean loggerhead "distinct population segment," or DPS. "[I]n preparing the final rule, there was substantial disagreement regarding the interpretation of the existing data on status and trends and its relevance to the assessment of extinction risk to the Northwest Atlantic Ocean DPS," the *Federal Register* notice stated. "There was also considerable disagreement regarding the magnitude and immediacy of the fisheries bycatch threat and measures to reduce this threat to the Northwest Atlantic Ocean DPS. The Services [NMFS and U.S. Fish and Wildlife Service] need to fully evaluate and assess the best scientific and commercial data available and ensure consistent interpretation of data and application of statutory standards for all of the nine proposed DPSs.")

### **Council Ire**

Last month, at the council's meeting in American Samoa, National Oceanic and Atmospheric Administration counsel Fred Tucher presented a summary of the settlement.

Clearly annoyed that the council's work appeared to have been brushed aside in the settlement process, council member and HLA president Sean Martin said he thought the council deserved an explanation from NMFS Pacific Islands Regional Office director Michael Tosatto and/or Tucher as to why "the best available science was abandoned."

Also, because the council had little involvement in settlement negotiations, Martin asked what the role of the council might be in any future actions.

"The council was left behind," he said.

Tucher replied that he had already dis-



### *For Further Reading*

More background on these issues is contained in the following articles, available at no charge to subscribers, at [www.environment-hawaii.org](http://www.environment-hawaii.org). Non-subscribers may purchase a 2-day archives pass for \$10:

- ◆ "Fishery Council Narrows Scope of Study on Expanded Longlining Effort," November 2007;
- ◆ "Fisheries Council Approves Proposal to Raise Caps on Turtle Interactions," May 2008;
- ◆ "Fishing Council Relaxes Turtle Limits, NMFS to Initiate New Biological Opinion," August 2008;
- ◆ "New Report Supports Lifting Annual Limit On Interactions between Loggerheads, Fishers," December 2008.

cussed the matter with council executive director Kitty Simonds, informing her that the authority to settle lies with the U.S. Department of Justice, in consultation with the NMFS.

"I fully appreciate that the council worked on the [rule] amendment, but once it becomes law, the ability of the council to influence decisions is reduced," he said.

The stipulated injunction does not address the issue of whether the best available science was used. It simply notes that the parties chose to settle all claims "to avoid the costs and uncertainties of litigation."

Council member David Itano, a fisheries scientist, echoed Martin's concerns.

"We get the feeling the agency sold the fishery down the creek," he said, adding that should loggerhead takes approach 17, the NMFS will move to close the fishery. (By February, the fishery had taken four loggerheads. By the council's meeting on March 7, the fishery had taken already nine, two more than was caught in all of last year.)

Tosatto said he fully recognized the impact the settlement has on the fishery.

He added that he did not have a date for when his agency would issue a final determination on the loggerhead listing proposal. (With the March 22 *Federal Register* notice, the new BiO would now be due 135 days after September 16, or the end of January next year.)

The fact that Tosatto did not know when the NMFS would make its determination also concerned Martin. He said the industry worried that the NMFS would not make developing a new BiOp and incidental take statement a high priority, allowing the current restrictions to carry on indefinitely.

Tosatto assured Martin that fact that the NMFS has passed its deadline to rule on the status of loggerheads puts "some fire on our feet" to issue a new incidental take statement.

Martin said that if the best science available is not going to factor into decision-making, "the council needs to be told that."



## Effects of Bigeye Closure On Hawai'i Businesses

Last year, to prevent overfishing of stocks in the Western Pacific, the National Marine Fisheries Service closed the U.S. bigeye tuna longline fishery in late November, in accordance with limits set by the international Western and Central Pacific Fisheries Commission.

The U.S. catch limit of 3,763 metric tons was expected to be reached just before the holidays, when the demand for fresh tuna is especially high. However, U.S. boats with

permits to fish in American Samoa, Guam, or the Commonwealth of the Northern Mariana Islands could continue to fish under an exception designed to spur commercial fishing development in those territories.

So when the fishery was closed on November 22, eleven boats stopped fishing completely, while the rest either moved their effort 400 miles to the east, outside of the closure area, or, if they had an American Samoa permit, stayed in western waters just outside the U.S. 200-mile exclusive economic zone around Hawai'i.

What kinds of effects did the closure have on the local bigeye market?

Not much in terms of tonnage caught, but quality suffered and prices spiked, according to the Pacific Islands Fisheries Science Center's Dawn Kotowicz and Laurie Richmond. Last month, the social scientists presented the council with the results of their investigation of the social impacts of the 2010 Hawai'i bigeye fishery closure.

For the most part, the fleet caught a good amount of fish, about \$5.5 million worth in December, even though boats made fewer trips. The twelve boats that had American Samoa permits brought in about 528 metric tons.

The fish brought in by the entire bigeye fleet were generally smaller and of low and high quality, they found, adding that with few fish of average quality, some buyers at the Honolulu fish auction were not able to fill their orders.

Even so, they said that it did not appear that the closure caused many buyers to seek imports. Although they are still working to get data on profits, it appears the smaller boats benefitted from the higher fish prices, they added.

Kotowicz and Richmond also found that the fleet's catch of non-target species, such as opah, increased.

After their presentation, council member Sean Martin noted that when the Western Pacific fishery closed, the quota had not actually been reached. Only 3,641 metric tons had been caught, and the difference between the quota and the catch—some 122 metric tons—represented about a million dollars worth of fish, according to Martin.

David Hamm, a NOAA fisheries scientist, explained that the NMFS projects when quotas will be hit using historical catch data. In this case, he said, fishermen changed their behavior, fishing less in the days before the fishery actually closed.

Martin said he hoped that the Western and Central Pacific Fisheries Commission would find a way to allow the industry to recapture the \$1 million lost by the early closure.



## PIFSC Budget, Without Earmarks

With congressional earmarks banned this year, the Pacific Islands Fisheries Science Center is facing a loss of more than 30 percent of its normal operating budget, while at the same time, research demands are growing.

Center director Samuel Pooley told the Western Pacific Fisheries Council last month that the center's overall budget, aside from congressional directives, will dramatically decrease the number of days the center's research vessels will spend at sea. The center's "limpy, old" *Townsend Cromwell*, which normally spends about 240 days at sea, may under the current budget be at sea only 120 days, Pooley said, adding that it could be as few as 90 days at sea.

"What that number will be remains to be seen because we don't know Congress's budget for FY 2011," Pooley told *Environment Hawai'i*. He says a shrinking NOAA budget together with a rising cost of operating ships are causing the agency to reduce the number of sea days allocated to each science center.

The PIFSC has proposed tying up smaller vessels to give the larger ones more time on the water and has canceled its biennial Northwestern Hawaiian Islands lobster cruise, Pooley told the council, adding that the cruise has provided the center with its longest ecosystem time series and was beginning to "bear fruit" regarding productivity in the NWHI.

For FY 2010, some 33 percent of the PIFSC's \$29.3 million budget comes from earmarks. Of the \$9.7 million in "congressional directives" identified in the budget, nearly \$2.6 million supported endangered Hawaiian monk seal research and \$3.3 million was directed to sea turtles.

Even without earmarks, Pooley says, this year's monk seal field camp cruise will proceed as planned. "It was our first priority," he says. "We don't do turtle cruises, so from a protected species standpoint, all of our sea days are covered."

The lack of earmarks will, however, have an impact on basic field camp operations, he says, although how much of an impact is unclear.

"We don't now how Congress will choose to do its budget. At the council, I was just trying to give people a heads-up of the impacts [and] most of it is going to be related to protected species," he says.





## Council Slams NMFS For MCBI Contracts

I think it'll be fair. ... The same as the Tobacco industry's report that cigarettes don't cause cancer," Paul Dalzell said of a report the Marine Conservation Biology Institute will be preparing for the National Marine Fisheries Service on the value of large marine protected areas.

Dalzell, senior scientist for the council, was aghast when NMFS Pacific Island Regional Office director Mike Tosatto announced at the council's meeting last month that the report was one of three projects the agency had contracted the conservation group to do. A workshop on interactions between tuna and birds and a report on ecological resources in the Pacific Remote Island Areas were the other two.

"You'd be better off hiring ecological modelers," Dalzell said. "Asking MCBI, an environmental advocacy group that has an expressed interest [in MPAs] reminds me about arguments made ten years ago about fishermen on the council — foxes in the hen coop."

Dalzell noted that MCBI is the same institution that issued a report arguing that bottomfishers in the Northwestern Hawaiian Islands were ecologically overfishing. He said it was an act of supreme naivete by the NMFS to expect anything different.

Tosatto, well aware of MCBI's past work and reputation, disagreed. He noted that, with regard to the organization's NWHI bottomfishing assessment, "It was not that hard to refute that report."

"I'm not naive," he added. "I do expect them to do their best to paint large MPAs as a benefit." However, he said, if MCBI produces a one-sided report, the NMFS will simply "move on" and get the other half of the story somewhere else.

Why go with MCBI? Because the organization is very interested in monuments and the Pacific Remote Islands Areas, Tosatto said. Despite its advocacy work, "I do expect them to produce a fair, professional report," he said.

Council member David Itano, who was also skeptical of MCBI's tuna-bird workshop, warned that even a scientifically invalid report can have an impact.

The debate over MCBI's contracts with the NMFS came toward the end of long and heated discussions over petitions to list marine species in Guam, Hawai'i, and the CNMI as endangered, and to expand the Hawaiian Islands Humpback Whale Sanc-

## Rural O'ahu Watershed Plans Win Approval of State Water Commission

In the next decade or so, the Honolulu Board of Water Supply will introduce desalinated water into its municipal supply for Wai'anae, not because the island is short of groundwater, but because it's cheaper than drilling new wells in wetter districts and pumping the water to Wai'anae.

Desalination is just one aspect of the Wai'anae Watershed Management Plan, adopted last month by the state Commission on Water Resource Management. At its meeting on March 16, the commission also approved a watershed plan for Ko'olauloa as

part of the county's Water Use and Development Plan (WUDP) for the island of O'ahu.

Under the state Water Code, each county must submit to the commission a WUDP as part of the Hawai'i Water Plan.

The Honolulu BWS began updating its WUDP, starting with the rural areas of Wai'anae and Ko'olauloa, in 2004. The BWS expected to complete the plans in 2006, but because of delays, caused, in part, by the Water Commission's failure to update its Water Resources Protection Plan until 2008, the county did not complete them until

to include a variety of marine mammals and other species.

Hearing that the NMFS had funded MCBI shocked council chair and Guam resident Manuel Duenas into a long tirade over what he saw as the agency's oppression of local fishing rights.

"All I'm seeing from the agency is worse, worse, worse interaction with the community. ... This whole exercise is a joke," he said.

With regard to the recent efforts to expand MPAs and list more species as endangered, Duenas added that the environmental community probably thinks, "Maybe we can squeeze another \$100,000 out of Pew and take half the Marianas," referring to the foundation that has contributed significant funds towards the protection of marine areas.

At the very end of the meeting, the council voted to send a letter to the NMFS

communicating the council's concerns over the decision to provide federal funds "to an environmental advocacy organization that has provided questionable scientific reports related to the NWHI bottomfish fishery."

The motion also noted that MCBI's work for the NMFS on the Pacific Remote Island Areas "could have significant implications to the management of marine resources within council jurisdiction."

The council asked the NMFS to describe the outcome of MCBI's projects at the council's June meeting.

Although the motion passed, Tosatto opposed it and Hawai'i's Julie Leialoha abstained.

MCBI president Elliott Norse said he could not comment without seeing the council's final letter to the NMFS.

— Teresa Dawson

Environment



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2009. The Honolulu City Council finally adopted the Wai'anae and Ko'olauloa plans last August.

The county expects to complete its plans for the North Shore and Ko'olau Poko in 2013, and those for the South Shore in 2018.

Even without knowing what the water demands for those higher-growth areas will be, the BWS's Barry Usagawa told the commission that desalination in Wai'anae is planned for the early 2020s. However, climate change effects on the availability of groundwater from the Pearl Harbor aquifer, the island's largest source of drinking water, will ultimately determine when desalination will be needed, he added.

Usagawa said that while constructing a desalination plant is cheaper than drilling wells, operating it is expensive and it will need to be powered, at least in part, by renewable energy.

Melva Aila, a Wai'anae resident and wife of commission chair William Aila, testified in support of the Wai'anae plan.

Jim Anthony of the Hawai'i La'ieikawai Association, however, opposed the commission's adoption of both plans because he said they lacked clear objectives, timelines, and funding sources. He said that the BWS does not commit to do anything in the plans and is vastly undercharging for supplying water.

With regard to the Ko'olauloa plan, Anthony argued that the handful of large, private water purveyors in the region, including the Mormon church and Kamehameha Schools, should be required to pay their fair share of watershed protection costs. He said community members raised that issue with the BWS "and they ignored us."

Anthony, a resident of Ko'olauloa, requested a contested case hearing on the commission's approval of the region's plan.



PHOTOS: CWRM

Spreckels ditch with a gage and transducer (left photo). CWRM staff prepares to deploy a pressure transducer

He noted that the Water Code calls for the county to produce one WUDP, not eight.

Commission member Donna Fay Kiyosaki, who formerly was chief engineer for the BWS, said that she agreed with much of Anthony's arguments, especially those regarding the cost of water, but said the plans, while not perfect, headed the BWS in the right direction. In past WUDPs, the BWS was regarded as merely a water developer. In the new plans, the agency is also tasked with conservation and resource protection.

### *Recharge*

At the same time the BWS is developing plans to guide future water use on O'ahu, both the BWS and the Water Commission are trying to refine their understanding of how much groundwater will be available. Piggybacking on the BWS's recent decision to contract the USGS to determine aquifer recharge rates in the Pearl Harbor aquifer, the commission voted last month to pay the USGS \$165,000 to do the same for the rest of the island.

Before the commission's unanimous vote, the HLA's Anthony criticized the proposal, noting that the commission had tasked its staff with determining the Pearl Harbor aquifer's sustainable yield some seven years ago.

"I don't think this is fair, honest, or administratively efficient," he said of the USGS contract, adding that the money should be put into the Pearl Harbor monitoring project that the commission had already established.

When commissioner Kiyosaki asked what happened to the initial efforts to assess the aquifer, staff informed her that the work was largely done by the agency's survey branch, which was all but eliminated during the cut-backs of 2009.

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## Maui Water Update

Over the past several months, commission staff have been busy trying to implement the interim instream flow standards for East Maui and the four streams in West Maui known as Na Wai 'Eha.

According to the most recent update on their efforts, staff with the commission and the state Department of Land and Natural Resources' Division of Aquatic Resources are expected to meet this month with the East Maui Irrigation Company, Inc., to determine the diversion modifications needed to provide for biological connectivity. The state agencies will also meet with Hawaiian Commercial & Sugar and the Wailuku Water Company to determine the same for Na Wai 'Eha.

It also appears that the Water Commission may be taking on responsibility for running ten U.S. Geological Survey stream gages — six in East Maui, four in Na Wai 'Eha — because the USGS may not have the funding to continue their operation past June 30.

— T.D.



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