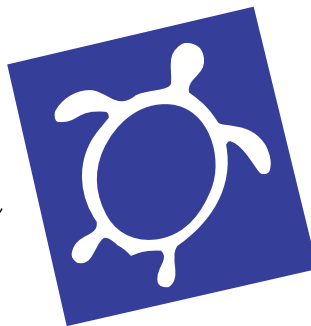


Environment



Hawai'i

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A Resort Up in the Air

Both the owners of the Turtle Bay Resort and the critics of its expansion plans are on tenterhooks at the moment, awaiting word from the state Land Use Commission on whether or how it can move forward on a redistricting approval given two decades ago.

As Teresa Dawson explains in our cover article, the approvals given by the City and County of Honolulu for the expansion in the mid-1980s are just one piece, albeit a critical one, in the plan to develop a major resort at Kuilima Bay, on O'ahu's North Shore.

Also in this issue: final results are in for the 2008 Legislature, and we recap its environmental actions; we provide an initial look at some of the highlights of the 2008 Hawai'i Conservation Conference; and we discuss the efforts of the Agribusiness Development Corporation to accommodate cattlemen, even at the cost of harming a struggling private slaughterhouse.

Attorneys Debate How Deadlines Apply To Kuilima Resort Expansion Project

The Kuilima Resort Company seems to believe it has all the time in the world to fulfill its expansion plans; the state believes it can, and perhaps should, impose a deadline; and the nonprofit Defend O'ahu Coalition says that the deadline already exists and passed years ago.

Next month, the state Land Use Commission will discuss a status report on the progress KRC has made toward meeting nine conditions placed by the LUC in 1986 on the redistricting of 236 acres from agricultural to urban. Depending on the progress KRC has made, the LUC may choose to set a deadline for meeting those conditions.

It's been a while

The last time the LUC sought a progress report on the Kuilima expansion was twenty years ago.

On May 6, 1988, Esther Ueda, then-

executive director of the LUC, wrote to Kuilima Development Company manager Norman Quon requesting a status report on the company's efforts to meet the nine conditions. The LUC had approved the redistricting more than two years earlier to allow the KDC to proceed with its master expansion plan, which would increase the number of resort units from fewer than 1,000 to more than 3,500. The conditions required KDC to 1) build hotels on adjacent property already in the Urban District, 2) construct employee housing, 3) improve Kamehameha Highway, 4) develop water sources and infrastructure, 5) help improve the adjacent Punaho'olapa marsh wildlife preserve, 6) protect archeological sites, 7) provide public access and parking, as well a city park, 8) build a sewage treatment plant, and 9) implement a monitoring program for coastal resources.

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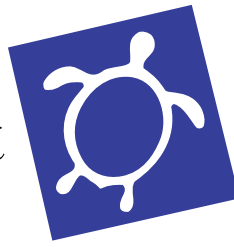
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Slaughterhouse Faces Closure, ADC Approves Back-up Unit



At its October meeting, the state Land Use Commission will discuss Kuilima Resort Company's recent progress report on the proposed expansion at Turtle Bay (pictured here).

Environment



Hawai'i

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NEW AND NOTEWORTHY

By Hook or Crook: George Bush may be a lame duck president, but his administration is still capable of mischief. Case in point: proposed changes in regulations to implement the Endangered Species Act.

The regulations would achieve through the rule-making process what the administration has been unable to do through legislation. Instead of agency actions affecting protected species having to be approved by NOAA or FWS, each agency could instead make its own determination of impact and required mitigation measures, if any.

And the standards for determining impact are narrowed. Effects that are “reasonably certain to occur” if an agency undertakes a given action must now be supported by “clear and substantial information” that the effect will happen. “Our intention is to make it clear that the effect cannot just be speculative and that it

must be more than just likely to occur,” the Department of Interior states in describing the proposed changes.

The implications for administering the ESA are huge. To take one example, plaintiffs suing the Navy over its use of mid-range frequency sonar would be prevented from claiming harm to beaked whales, since it is impossible to say with certainty that a beaked whale will be harmed by such sonar. And the Navy would not even have to win the concurrence of NMFS to conduct sonar operations—although, to be sure, NMFS’ concurrence comes pretty cheaply these days.

The regulations also would rule out consideration of effects that agency actions might have on climate change and the secondary impacts climate change may have on listed species (think polar bears).

The deadline for commenting on the rule change is September 15. More information on where to address comments is available on our webpage: www.environment-hawaii.org. The rules are available in the *Federal Register* online at: <http://edocket.access.gpo.gov/2008/pdf/E8-18938.pdf>.

testimony on the measure, which was introduced by Councilmember Brenda Ford. (The actual author of the measure appears to have been Sydney Ross Singer, the executive director of the non-profit Good Shepherd Foundation who has used the foundation to oppose control of coqui as well as strawberry guava).

After five hours of testimony that was pretty evenly split among those supporting release of the insect as perhaps the last and best hope of saving native forests from the invader and those fearing that the insect would destroy their source of strawberry jam and handy walking sticks, the committee decided to hold off further action until sometime in October, following a public meeting in Hilo.

The resolution would not have any force of law. Instead, it would put the council on record as discouraging the introduction of the insect, *Tectococcus ovatus*, anywhere on the Island of Hawai'i, would ask that the minutes of the County Council and its committee’s deliberating on the resolution be included in the environmental assessment on the release, now being prepared.

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Strawberry Guava

Waiawi Control Update:

A resolution that would have put the Hawai'i County Council on record as opposing the release of a scale insect intended to slow the growth of strawberry guava has been tabled for the time being. On August 12, the council's Public Works and Intergovernmental Relations Committee took



give aloha
Foodland's Annual Community Matching Gifts Program

Give Aloha: The annual charitable campaign of Foodland will be in full swing throughout the month of September. It provides you with a terrific opportunity to leverage your support of *Environment Hawai'i*. For each dollar donated, Foodland will provide a match based on the percent of total donations we receive.

It's easy to donate: just remember to give the check-out cashier the number of our organization, 77036, along with your payment. Foodland will give you the receipt you need for tax purposes.

If you would like to have your donation acknowledged in a future issue, please send us a copy of your receipt. That's the only way we have to link you to your gift.

Quote of the Month

“Will it be really hot, or kinda hot?”

— Stephen Miller, FWS,
on climate change

Hawai'i Natural Resource Managers Confront Challenge of Global Warming

In his plenary address to the Hawai'i Conservation Alliance's annual conservation conference in July, Stephen Miller asked the questions that usually arise when people talk about global warming:

"How profound is it? ... Will it be really hot, or kinda hot? ... What are the potential ecological consequences we may need to deal with?"

No longer do the questions contain an "if." Miller, a biologist with the U.S. Fish and Wildlife Service, noted that even if greenhouse gas emissions over the next 100 years are brought to low, stable levels, the planet will still see significant changes given the amount of carbon dioxide already in the atmosphere. While concentrations of carbon dioxide in the air and surface seawater might top out in 100 to 300 years, and temperatures will eventually stabilize, "sea level will continue to rise for hundreds to thousands of years," as a result of the thermal expansion of oceans and actual melting of sea ice.

"So," he said, "we really need to begin to deal with these things right now, and in a significant way."

For Hawai'i, that means looking at what Miller called the "basic life zones" or "bioclimate envelopes" – sets of physical factors within which basic biological and ecological interactions occur. "As climate changes in the Hawaiian islands, these life zone conditions are going to change as well. The places where today you find wet, mesic, and dry conditions are going to be different in the future. Current communities of species may disassemble and novel communities may appear. Species and populations may go extinct, and ranges may shrink. And invasive species may begin to come into play and occupy many of these new regimes.

"Landscape areas that once used to be major Hawaiian habitats are no longer going to occur in the Hawaiian islands. The life zone conditions that created those will simply no longer be present here as climate changes unfold over a long series of time."

In their place a new regime will arise, he said: "New life zone conditions will arise that have never before occurred in these islands."

Natural resource managers will need to develop new approaches to the changing conditions. Right now, the system of adaptive management, Miller said – "learn – plan – do – learn – plan – do ..." – has as its goal the conservation of landscapes capable of

sustaining species, habitats and ecosystems at desired levels. It is based, he said, on the notion that climate conditions are relatively stable.

"As climate change hits the scene," Miller continued, "your management plan will probably become not so useful anymore. You'll need to evaluate climate changes, start management cycles all over again – until climate change moves your plan toward obsolescence. So the adaptive management cycle which went around and around now becomes a spiral, moving through time."

But how does one go about developing a strategy to address natural resource management challenges in the face of substantial change?

The first element should be education, Miller said – at all levels, from individuals to presidents and world leaders. "We need them to understand what global warming really means, and to get these urgent actions that need to be done started right away. We've got a decade, maybe two, to decide where that level of greenhouse gases is going to be set, [the level] that will set the stage for the next thousand years of human climate. We need to act quickly on these issues."

The second element, he said, is climate modeling. "One of the great problems right now is, we need regional climate modeling that will tell us what's going on in the Hawaiian islands. We need hydrology models ... localized models that tell us about specific areas and events, and agreed-upon standards that tell us how to interpret these models." Along with that, Miller said, is a need for ecosystem modeling to inform managers and conservationists how ecosystems will shift over time. "That needs to start now," he said. "Major policy decisions and management decisions need to be informed by this kind of modeling."

At present, he said, "we're in reactive adaptation. You manage critical systems ... and habitat for resident species for as long as reasonably possible. It's business as usual. But when extreme changes threaten to extirpate resident species, reactive adaptation can be used to provide source populations for translocation – get them moving into new areas where habitats and life zone conditions are adequate for longer survival. What it doesn't mean is trying to maintain current populations on current landscapes. We have to shift activities as climate change unfolds."

What is needed, Miller said, is "anticipatory adaptation."

"Starting now, and increasingly rapidly in the future, we need to identify and enhance areas that may be suitable future habitat. We need to expand our knowledge and expertise in transition ecology. ... Right now, we're not too good at doing this. There needs to be a great deal of work on how to carry out this stuff. And it needs to be developed fairly soon."

Already, Miller said, Hawai'i is experiencing rising temperatures. "The global trend is .18 degrees centigrade per decade. In the Hawaiian islands, Tom Giambelluca has looked at the data, and found we're pretty much on track.

"But when you compare low versus high elevations, the high elevation is where major temperature changes are taking place — .27 degrees centigrade per decade. This is where the best habitat is," he said.

More worrying is the fact that nighttime temperatures at high elevations are rising at a faster pace – ".441 degrees centigrade per decade at upper elevation forests," Miller said. "This will have a profound effect on plant and bird species. Most natural vegetation and agriculture crops in non-frost areas are negatively affected by higher nighttime temperatures, due to increased [plant] respiration. Increased temperature and stress on natives could favor invasives. Also, warm night temperatures will undoubtedly affect the distribution of malaria in Hawaiian forests and its impact on birds."

The Hawai'i Conservation Alliance has developed a "rough outline" for developing a strategy to deal with climate change, Miller noted, and had placed him at the helm. The subject will be the focus of next year's HCA conference. "If you have comments, input," Miller said, "feel free to send us an email: hcastaff@hawaii.edu, with the subject heading 'climate change comments.'"

Synergy

Among those in the forefront of Hawai'i climate change study is Jonathan Price, a professor of geography and environmental studies at the University of Hawai'i. Amid the gloom and doom of dire forecasts, Price still managed to proclaim, "We are NOT doomed."

"We have a number of tools necessary right now to cope with climate change," he said.

Price is part of a team of scientists trying to develop regional climate change models that will be able, among other things, to project future habitat for individual species of Hawaiian plants and animals.

'Ohi'a Rust Threat Is as Large as Ever, But Ban on Imports Is Allowed to Lapse

One of the scariest potentially invasive pests is also one of the smallest. Known as 'ohi'a rust, *Puccinia psidii* is a relative latecomer, being discovered on 'ohi'a seedlings in an O'ahu nursery in 2005. Since then, it has spread throughout the state. While 'ohi'a have escaped its worst effects, the strain of the rust that is present in Hawai'i has devastated rose apple (*Syzygium jambos*) and has been found to kill individuals of two native species, *Eugenia reinwardtiana* and the endangered *Eugenia koolauensis*, both known as nioi in Hawaiian. All affected plants are in the Myrtaceae family.

Last year, in response to the alarm raised by natural resource managers, the state Department of Agriculture adopted an emergency rule, banning the import of Myrtaceae plants and plant parts from the states of California and Florida, and from Central and South America. When the rule expired in late August, the DOA was still working on a permanent rule.

Anne Marie LaRosa of the U.S. Forest Service's Institute for Pacific Island Studies, in Hilo, gave an overview at July's Hawai'i Conservation Conference of what, she said,

is not only "possibly the greatest threat to 'ohi'a," but also "a serious threat to global biodiversity ... equivalent to other introduced epidemic tree diseases, such as Dutch elm blight." Unlike the wiliwili gall wasp, the puccinia rust has been known to science for more than a century, having been described on guava in Brazil in the 1880s. No one was alarmed over its presence there until the 1930s and 1940s, LaRosa said, when Brazil's fledgling eucalyptus industry was affected by the rust. Since then, it has spread to Florida and the Caribbean, where it ravaged allspice trees, to California. "The concern now is that Hawai'i is the gateway for Australia, New Zealand, and Samoa."

"'Ohi'a is at stake here, the very fabric of our forest," LaRosa said. "If we have an epidemic like Dutch elm disease or chestnut blight, we're looking at changes in our ecosystem... Over 400,000 acres are potentially impacted."

The good news is that the strain of rust identified in Hawai'i, while it can be found on 'ohi'a, has limited impact. "We see it everywhere, but it's not that bad on 'ohi'a," she said. Other species affected elsewhere,

such as eucalyptus and allspice, have also avoided being hard hit in Hawai'i.

But that could change quickly if a new strain arrives in the islands. At the moment, LaRosa said, "we're working with a single strain, called the rose apple strain. There's little genetic variability now, indicating the rust is something that recently arrived and has not yet undergone change."

Hawai'i Department of Agriculture adopted an interim rule prohibiting the importation of all Myrtaceae plants and plant parts. Even asymptomatic plants could still harbor the rust, LaRosa said: "You can't inspect for rust."

But is the ban on imports of Myrtaceae plants and plant parts enough?

LaRosa herself identified a large gap in the process. "The flower trade is very active," she said. "We believe that's how the rust came in." In 2007 and 2008, cut flower material, in pre-arranged bouquets, was intercepted coming into Maui. "People grow flowers, send them to a central location to be bundled into bouquets, where it's mixed with Myrtaceae" and other flowers from other plants known to be hosts to the rust.

In another presentation, David Simmons, a student in the University of Hawai'i Department of Plant and Environmental Sciences, reported that the rust had been found on two popular landscape plants, the brush cherry (*Eugenia paniculatum*) and the downy rosemyrtle

Climate Change from page 3

Already the effects of climate change are beginning to be observed in Hawai'i, he said. "There's been an increase over the last 100 years at high elevations, sharpening over the last 30 years," with similar trends at low-elevation stations, he said.

Price described an approach he and other team members are using to look at how climate change might affect local ecosystems. "Historically, Hawai'i ecosystems have been greatly altered," he said. "A major consequence of climate change is the exacerbation of stressors." And when the impacts of global warming are seen essentially as the continuation or exacerbation of stressors that are already present, he said, it is possible to see that "management techniques employed today will be vital to coping with climate change."

As an example, Price cited the anticipated rise in elevation of the areas where mosquitoes will be present – and, with them, the avian diseases they transmit. By removing ungulates "at the landscape scale," Price said, mosquito habitat can be reduced. "And we can

reduce other stressors, such as nest predators" – rats – as another means of helping to protect diminishing forest bird habitat. "Fencing, removal of ungulates and predators, could help keep their habitat useful for the next hundred years," Price said.

Plants also will be affected by rising temperatures. "We don't know what will occur in warmer, lower levels," he said. "Different species respond to climate change at different rates," as illustrated by the migration of different species of trees after the last ice age in North America.

How that will play out in Hawai'i is still the subject of speculation. But, in light of aggressive invasive species, Hawai'i plants may be at a disadvantage. Price noted that the introduced strawberry guava (waiawi, or *Psidium cattleianum*) is comparable in many ways to the native kopiko (*Psychotria* spp.), a tree much valued by Hawaiians for its hard wood. Both are mid-canopy trees and occupy similar ranges, from sea level to 5,000 feet elevation, in mesic to wet areas. (The kopiko, although native, "doesn't have a website devoted to protecting it," Price wryly observed,

as he displayed a slide showing the webpage of savetheguava.com, sponsored by the Good Shepherd Foundation and Sydney Ross Singer, who opposes release of a biocontrol agent for waiawi.)

"The traits of waiawi probably mean it will establish in upland areas earlier than kopiko," Price said. But, he added, with "early detection and removal of incipient populations, preemptive control of future source populations, and reduction of alien sources of dispersal," the natives would have a better chance of surviving the coming changes.

"Certainly, in the next 100 years, elements of Hawai'i ecosystems will be lost, I hate to say, but there will be overlap between what we have in the future and what we have today," he said.

And size will matter: Price noted that different scales are needed for different organisms. "Birds require a larger scale to have viable populations," he said. "By protecting, managing larger areas, we're not putting all our eggs in one basket that's subject to natural or unnatural processes. There's a safeguard in having larger and larger conservation areas."

— Patricia Tummons

(*Rhodomomyrtus tomentosa*), which is also naturalized and considered a serious pest in forests on Kaua'i, O'ahu, and Hawai'i. (On Maui, several rosemyrtle infestations were found and eliminated, but monitoring continues.)

Simmons reported that the larvae of the diptera fly *Mycodiplosis pucciniae* had been found eating spores of the rust on all the islands. "It eats a lot of spores," he said, and "helps greatly to reduce the amount of inoculum in nature." When asked where the fly was from, Simmons said that no one knows if it's native or not.

The fly doesn't seem to be helping the native nioi ward off the ravages of the rust, however. Chris Kadooka, also with the UH Department of Plant and Environmental Sciences, reported on his work developing a genetic profile of the Hawai'i rust strain and what he had seen when collecting rust samples in the wild. "What we've seen in the field is moderately affected 'ohi'a... Where I've seen it bad is where we have a roseapple source that's nearby." As for the nioi: "We found one fungicide that might be protecting it in the nursery, but we're pretty sure there's no fungicide approved for the forest. We went to Kahuku, and it's pretty sad. Lots of trees are susceptible."

According to a source at the U.S. Fish and Wildlife Service, both species of native *Eugenia* are "equally affected, fairly severely. There's not much we can do." "Extinction in the wild is a real possibility," said another botanist who wished not to be identified in print.

LaRosa summed up the prospects for control: "There's no practical management for this disease in the wild. Prevention is the key."

A Delayed Rule

With the expiration of the emergency rule, the state has no ban on plants that might host the 'ohi'a rust. Leslie Iseke, with the Plant Pest Quarantine branch of the state Department of Agriculture, said the department was intending to go forward with a permanent rule, but, "unfortunately, it's taking longer than I thought to gather information."

In the meantime, she said in a phone interview, "we're setting up a plant quarantine policy on how we handle Myrtaceae coming into the state."

"We're still targeting areas where the rust is known to occur – Florida, Central and South America," she said, but added that instead of the entire state of California subject to the Myrtaceae ban, based on information provided by California agri-

culture officials, the ban will probably be narrowed to just San Diego County,

"So as we go along," Iseke continued, "as we do the permanent ruling, the infested areas will be better defined, down to counties instead of states. And the same with South and Central America. If people know what areas are infested, we can define it that way – or it could be the entire continent, if the rust is more widespread."

In addition to learning more about areas of infestation, Iseke said that the DOA is also "waiting to see if we can get information regarding the types of strains that are out there" so that the rule does not exclude the strain of rust already here. "That's how quarantine works," Iseke said. "You're trying to keep something out of Hawai'i, so it has to be something not already here."

When asked whether identifying the rust down to the strain is a reasonable standard for a quarantine rule, Iseke agreed that tests to identify the strain of *Puccinia* might take weeks or longer. Still, she said, "to ban all Myrtaceae is probably not the way we want to go." With quarantine rules, she added, "you don't ban everything."

The emergency rule was broader than the final rule is likely to be, she said. "When we did the emergency rule, not everyone was in agreement. It was like shutting the gate after the horse has escaped."



Ant Control

As anyone who has ever tried to fight ants knows, the little critters can be amazingly persistent. And, as anyone trying to protect endangered species from ants can attest, they can be as damaging as they are intractable. And so the control of ants – or at least, experiments to control them – was the subject of several presentations at the conference.

Robert Peck, a researcher with the U.S. Geological Survey's Hawai'i Cooperative Studies Unit, reported on the use of pheromones to disturb trails used by Argentine ants (*Linepithema humile*), which Peck said are highly aggressive. "They form supercolonies, have multiple queens, and are quick to dominate food resources," he said, and, in addition, they thrive above 4,000 feet elevation in mesic and dry habitats.

"Contributing to the success of Argentine ants is their ability to create pheromone trails that result in rapid recruitment to ephemeral, high value food sources," Peck said. Pheromones – chemicals insects use to

communicate among themselves – are used by the ants to mark their trails. If artificial pheromones could destroy or at least disrupt the trails, they could prove to be another arrow in the quiver of conservationists wanting to halt the ants' spread.

And so Peck and members of his team conducted a simple experiment on the walls of their office at Hawai'i Volcanoes National Park. They focused a video camera on the walls where a steady stream of ants moved back and forth to an unidentified food source. Then they released a pheromone to mask the trail. Sure enough, the pheromone trail the ants had been following disappeared, and ants were seen scrambling all over the wall.

The ants quickly regrouped, however, prompting Peck and his colleagues to develop a more effective delivery system. They encapsulated the pheromone in tiny beads of food-grade bait, which ended up disrupting trails for nearly three weeks. "It doesn't kill the ants, but it may limit their ability to recruit to food," Peck said.

The method is suggestive, but further tests are needed, he said. "We need to show that disrupting trails can result in lower reproductive output, and we need to test the efficacy of the pheromone in concert with a standard toxicant, which could lead to the death of the brood and queens when worker numbers are low."

A poster by Colorado State University's Caleb Slemmons reported that applying the pesticide hydramethylnon to test plots dramatically decreased the number of invasive ants in protected areas of the Army's Pohakuloa Training Area on the island of Hawai'i.

In another poster, Kirsten Snook of the USGS Hawai'i Cooperative Studies Unit reported that Amdro (hydramethylnon), Extinguish Plus (a mix of hydramethylnon and S-methoprene), and Distance Plus were similarly effective in controlling big-headed ants at Hawai'i Volcanoes National Park, although worker ants were not eradicated at any of the test plots, "and it is not known whether nests harboring egg-producing queens survived the treatment." Xtinguish (fipronil) was the least effective and most labor-intensive of the pesticides tested.

Although hydramethylnon could affect native insects, she wrote, "these concerns should be weighed against the substantial impacts of big-headed ants on native arthropods. In sensitive ecosystems, or where rare arthropods exist, studies aimed to identify non-target effects of hydramethylnon are warranted." —*P.T.*

Lingle Vetoes Inspection Fee Bill, Lets Ag Bill Become Law over her Concerns

Governor Linda Lingle vetoed one of the most significant bills relating to invasive species to come out of the 2008 Legislature. House Bill 2843, which expands the list of freight subject to inspection for invasive species to include air shipments, would unduly increase the costs of goods in Hawai'i, Lingle said in her veto message.

The Legislature overrode the veto in its first special session and the bill is now law.

But whether the Department of Agriculture enforces it is an open question. According to some sources within state government, Lingle has instructed the DOA not to promulgate rules to implement the law, reasoning that without rules, the law will not be enforceable.

The law took effect August 1. According to a DOA employee at the Honolulu International Airport, as of late August, "we haven't started collecting" the fee. "I don't know when we'll start," he added.

The collection of an inspection fee was authorized in a bill passed by the 2007 Legislature. Lingle vetoed that bill, too, but again her veto was overridden in a special session. The 2007 law set the fee at \$1 per 20-foot container or equivalent. The 2008 measure changes the fee to one based on weight – 50 cents per 1000 pounds. That translates into a quarter of a penny on a five-pound bag of flour that retails for \$3.79.

Still, Lingle objected to the measure.

"The goal to enhance inspections for invasive species is laudable," she said in her veto message. "However, this bill is objectionable because of its significant impact on the cost of living in Hawai'i. . . [T]his fee will have a serious impact on families and individuals already stretched with the burdens of rising prices for food, fuel, rent, and other necessities."

Lingle also objected to another significant measure passed by the Legislature that deals with natural resources – Senate Bill 2646, "relating to important agricultural lands." That bill, by and large opposed by the environmental community because of last-minute rewrites by agricultural interests, provides incentives to get landowners to designate qualified areas as important agricultural lands.

In her gloss on the bill, contained in Governor's message No. 921, Lingle identified several concerns. The bill provides for redistricting of land by the Land Use Commission, in connection with designation of important agricultural lands, but fails to "specifically include the evaluation criteria currently re-

quired for land reclassification. . . Further, it is unclear whether the Office of Planning may provide input into the reclassification deliberations." (Under the state Land Use Law, the OP is a required participant in all redistricting actions.)

Lingle also noted that the bill requires the Department of Agriculture "to review housing plans, a function outside of its scope of responsibility and for which it is not equipped." Counties, she added, also objected to provisions calling for "priority processing of permits."

Jeff Mikulina, executive director of the Sierra Club, Hawai'i chapter, has called the legislation a "blatantly pro-development scheme." As he noted in an op-ed piece, the

[T]his fee will have a serious impact on families and individuals already stretched with the burdens of rising prices for food, fuel, rent, and other necessities." — Governor Lingle

Legislature "cast aside the democratic process and its own rules." At the "eleventh hour," he noted, the Legislature inserted language allowing owners of "important agriculture lands" to reclassify up to 15 percent of their holdings into the urban or rural district. "The Senate had already twice rejected the scheme as a stand-alone measure," he wrote. "Legislative rules require an open hearing on all proposed legislation, but the new language had never previously appeared in any prior drafts of SB2646. When some senators balked at passing the cannibalized SB2646, House leadership forced it to a floor vote by arbitrarily threatening to hold hostage the popular solar roofs measure, SB 644. Ultimately, a sharply divided (14-10) Senate passed SB2646."

So what exactly does the new law, which took effect July 1, achieve?

Farm Dwellings: First, it amends Chapter 205, *Hawai'i Revised Statutes*, which is the state's fundamental law concerning land use. New language is added to Chapter 205 that specifically allows owners of agricultural lands to "develop, construct, and maintain farm dwellings and employee housing for farmers, employees, and their immediate family members." The area taken up by such housing is limited to five percent of the total "important agricultural land" controlled by the land-

owner, or 50 acres, whichever is less. It also requires that the "plans for farm dwellings and employee housing units" be supported by "agricultural plans that are approved by the department of agriculture," apparently adding a whole new category of work to the state DOA, but giving the agency no guidance at all as to what such plans are to contain.

Tax Credits: Second, stating that "it is in the public's interest to assist agricultural businesses in establishing and sustaining viable agricultural operations on important agricultural lands," the new law establishes income tax credits for qualified landowners, which is to take effect only after the law giving a \$75 million tax credit to the Ko Olina resort is "repealed, exhausted, or expired." (The Ko Olina tax credit provision expires on June 1, 2009.) In the first year in which credits are allowed, SB2646 allows owners of designated "important agricultural land" to receive credits against income tax of up to 25 percent of

qualified agricultural costs incurred by the taxpayer since July 1, 2008, or \$625,000, whichever is less. In the second year, the taxpayer can claim 15 percent (or \$250,000) of costs incurred – not just over the most recent reporting year, but for all costs incurred since July 1, 2008. In the third (and apparently final) year of tax credits, the credit slips to the lesser of 10 percent or \$125,000, but again, the costs can be calculated since July 1, 2008. Altogether, then, over three years, landowners can receive tax credits totaling up to 50 percent of all costs incurred. Furthermore, if, because of other deductions, "the credit . . . exceeds the taxpayer's net income tax liability. . . the excess of the credit over liability shall be refunded."

Once again, the law imposes a heavy regulatory burden on the state Department of Agriculture, which now is required to "maintain records of the total amount of qualified agricultural costs for each taxpayer claiming a credit; verify the amount of the qualified agricultural costs claimed; total all qualified agricultural costs claimed; and certify the total amount of the tax credit for each taxable year." In addition, the DOA "shall issue a certificate to the taxpayer verifying the qualifying agricultural costs and the credit amount certified for each taxable year." To help with the added administrative burden, the DOA will get no more than \$50,000 in the current fiscal year.

Perhaps concerned that the tax credits could bankrupt the state, the Legislature capped them at \$7.5 million per year, with the credits given out on a first-come, first served basis.

The law does state specifically that any information provided to the DOA in connection with the tax credits “shall be available for public inspection and dissemination.”

In addition to the tax credits, SB2646 provides for guarantees of up to 85 percent of commercial loans for the development of projects on designated important agricultural lands.

Designation: As mentioned, the tax credits and other benefits are available only for owners of or developers of lands that have been designated as “important agricultural lands.” The language setting forth just how such lands are to be designated is what occasioned the great amount of controversy.

Landowners who want to qualify for the benefits spelled out in SB2646 can petition the state Land Use Commission for such designation, so long as the lands qualify for the designation under Section 205-44, *Hawai'i Revised Statutes*. There are two kinds of petitions. First, there are the straightforward ones, where the land in question is simply designated as important agricultural land. The second kind, the one that generated the heat in discussions over the merits of SB2646, is where the petition for designation is linked to reclassification of other agricultural lands.

Under the second type of petition, the petitioner can seek both to designate lands as important agricultural lands *and* reclassify other agricultural land into the Urban, Rural, or Conservation District, so long as at least 85 percent of the total land in the petition is to be designated as important agricultural land.

This provision, wrote Mikulina, “allows the urbanization of nearly 300,000 acres (15 percent of existing ag lands) – or almost three times the total urbanized land on O‘ahu.”

There is nothing automatic in the LUC approval of such petitions. Under SB2646, the LUC must still find that when land is proposed to be put into the Urban District, it is consistent with applicable county planning documents. (Mikulina faulted the bill for not making rural reclassifications subject to a similar condition.) The bill also requires any LUC approval to be on a two-thirds vote and does allow the LUC to “include reasonable conditions.” Finally, if the commission determines that either the designation or reclassification proposed by the landowner should not be approved, the entire petition is to be denied.

But the bill also positively encourages the redistricting of agricultural land into other state land use districts. Even when a land-

owner only seeks to have his land classed as “important agricultural land,” he or she still earns credits that can allow other holdings to be reclassified. Such credits, the bill says, “shall equal the difference between . . . fifteen percent of the total acreage of land subject to the [LUC declaratory] order; less the amount of the petitioner’s land that is reclassified from the agricultural district to the rural, urban, or conservation district by the declaratory order.” Anyone having such credits can petition the LUC for reclassification of other lands he or she may have in the same county into the urban, rural, or conservation district “until the credits are exhausted or expired.” Such credits expire 10 years after the declaratory order designating important agricultural land is granted. They cannot be transferred.

If any landowner whose agricultural lands were designated as important in connection with a redistricting of other lands should in the future seek to lose that designation, the Legislature must first approve such withdrawal by adoption of a concurrent resolution, approved by a two-thirds vote in each chamber.

Earl Yamamoto, a planner with the Department of Agriculture, said his agency would probably have to go through the rule-making process before it could process requests made by landowners seeking to take advantage of some of the benefits contained in the new law. “Where we’re required to certify if the land meets designation criteria,” under Part X of the law, he said, “we presume that this requires rules.” Other parts of the law, including the loan guarantee provision, may be accomplished with existing resources, however, he said.



Environmental Bills’ Final Fate

In June, we reported on several bills that had passed the Legislature but whose fate on the governor’s desk was still uncertain. Here, for the record, is what happened to those bills:

Energy

► **HB2863**, which seems to have been tailor-made to suit Lana‘i owner Castle & Cooke, was signed by the governor and became Act 207 of the 2008 Legislature. The new law sets up a new, streamlined system for approving sites where renewable energy facilities could be built.

► **HB2502**, adding “solar energy facilities” to the list of uses permitted on land in the

state Agriculture District, was signed into law, becoming Act 31.

► **HB3179**, now Act 90, allows “renewable energy producers” to be eligible to acquire leases on state land without going through the public auction process.

► **HB2505** gives the Department of Business, Economic Development and Tourism \$112,000 to hire temporary staff to help with the permitting of renewable energy facilities. The governor let **HB2507**, which gives DBEDT \$140,000 to hire two temporary employees to help with the work of the Greenhouse Gas Emissions Reduction Task Force, pass into law without her signature. “Rather than appropriating funds to research an issue,” her message said, “I believe this money could be put to better use by directing it to existing programs.”

► Under **SB644**, new single-family houses built after December 31, 2009, are required to be equipped with solar water heaters, on-demand gas water heaters, or “comparable renewable energy systems.” The governor signed the bill, which became Act 204.

► **SB2933**, which would invalidate private covenants against outdoor clotheslines, sailed through to approval in the Legislature, but the governor sent it back without her signature. “This bill is objectionable,” she said in her message, “because the proper way to promote this practice is through advertising and public relations campaigns, not through regulation. . . . This bill unnecessarily invalidates homeowners’ contracts and inserts government regulation into a local, community matter.” When the Legislature got a second chance to vote on the measure during the special session in July, it easily overrode her veto.

► **SB988**, which opens the door to letting people who install photovoltaic systems receive a rebate, was signed by the governor and became Act 151.

Invasive Species

► **HB2977**, which requires agencies to coordinate efforts to control coqui frogs, was approved by the governor.

► **HB2850**, which establishes a biosecurity program, became law without the governor’s signature. She expressed concerns “over the funding methods provided.” The program is authorized to spend up to \$250,000 in general revenues and up to \$6 million from the state’s pest inspection, quarantine, and eradication special fund.

DLNR Bills

► **HB3177**, **HB3178**, and **SB1891** increase fines and penalties for violating rules relating to use of lands regulated by the Department of Land

Kuilima Resort Submits Status Report

In accordance with the Land Use Commission's July 11 decision, attorneys for the Kuilima Resort Company submitted on August 18 a 16-page report on its progress toward meeting the LUC's nine redistricting conditions. The LUC will discuss this report at its October meeting in Honolulu. The following is a summary:

CONDITION 1, FULL-SERVICE HOTELS:

KRC claims it has made "significant financial investments", which include the completion of a wastewater treatment plant (1990), the Opana well facility (1991), a water transmission system along Kamehameha Highway (1991), the Palmer golf course (1991, with a maintenance facility completed in 2003), and \$100 million in improvements to the existing Turtle Bay hotel and Ocean Villas (2005).

The City and County of Honolulu approved in 1990 and 1991 the consolidation and resubdivision of several parcels for hotel, park, tennis club, golf course, and roadway use.

KRC has received tentative county approval of a subdivision for three park sites, three access easements, and a 100-foot-wide shoreline easement. KRC has also been trying to get city and state approvals for traffic improvements at the proposed West Kuilima Drive and Kamehameha Highway.

Also, KRC developed an employee training program in 1991 and the company's

landscape master plan was accepted by the county in 2006. Although not included in the report, a building permit for a hotel at Kawela was approved by the county in 1990, but expired in 1991.

CONDITION 2, EMPLOYEE HOUSING: KRC simply reports, "Petitioner agrees to comply with the foregoing condition. As of this date, however, no new resort condominium units have been developed on the property."

CONDITION 3, ROAD IMPROVEMENTS:

In July 2005, KRC submitted construction plans to the state Department of Transportation for the intersection of West Kuilima Drive and Kamehameha Highway. The DOT suspended the plan's review on March 2006 pending acceptance of a Traffic Impact Analysis Report update. KRC submitted one in February 2006 and has amended it several times. As of August 18, the DOT was still reviewing the report.

KRC is also working with the DOT to improve the Kuilima Drive/Kamehameha Highway intersection, and with affected land owners regarding Marconi Road and Kamehameha Highway intersection improvements.

The county approved a Roadway Improvement and Phasing Plan in May 2006 and widening plans for Kuilima Drive last July. Bids for the project were due August 21.

CONDITION 4, WATER SOURCE AND INFRASTRUCTURE DEVELOPMENT: KRC is working with the Honolulu Board of Water Supply to put Opana Wells 1 and 2 into service. The BWS approved modification plans for the wells last March.

CONDITION 5, IMPROVING PUNAHO'OLAPA MARSH:

While improving the adjacent golf course, KRC constructed a moat to prevent feral animals from entering the marsh and killing native birds. KRC dedicates about 1,200-1,300 hours a year to maintaining the moat.

Improvements to the marsh were also made in 1990.

CONDITION 6, MEETING STATE HISTORIC PRESERVATION REQUIREMENTS:

KRC states that no construction or land disturbance has occurred in the area of identified archaeological sites.

In 1988, the U.S. Corps of Engineers, SHPD, the Advisory Council on Historic Preservation, and the Office of Hawaiian Affairs entered into a memorandum of agreement regarding human remains that might be on the property. In March 2003, KRC submitted to KRC an archaeological mitigation report, which the SHPD acknowledged and accepted as final in March 2005.

KRC's report does not acknowledge an October 2006 letter from the State Historic Preservation Division urging the resort to either do more archaeological testing or revise its plans to avoid burials.

CONDITION 7, PUBLIC ACCESS AND PARKING:

Kawela Park and two access easements were subdivided in 1989. In early 2006, the county approved shoreline walkway construction plans and the state certified the shoreline (although shoreline certifications are only good for one year).

CONDITION 8, SEWAGE TREATMENT PLANT AND INFRASTRUCTURE:

Completed in 1990. KRC also created in 2007 a public utility to operate and manage the plant.

CONDITION 9, COASTAL RESOURCES MONITORING PROGRAM:

The state Department of Land and Natural Resources' Division of Aquatic Resources has accepted KRC's coastal resources monitoring program, which is currently being implemented. — *T.D.*

and Natural Resources. Governor Lingle signed all three.

► **HB3174** and **HB3175** impose new authority on the DLNR relating to regulation of commercial and recreational fishing. They, too, were signed by the governor.

► **HB2872**, requiring the Board of Land and Natural Resources to negotiate with holders of leases at Koke'e, Kaua'i, became law without the governor's signature. "I have received many petitions arguing that it is unfair for the previous lessees to monopolize the opportunity to lease these unique properties," she wrote in her message to the Legislature. "I understand these concerns and have weighed them heavily in my deliberations on this measure." Still, she said, the bill attempts to "balance the interests of the taxpayers, the current lessees, and other interested parties."

NELHA

► **SB1793** would have increased the board of directors of the Natural Energy Laboratory of Hawai'i Authority by adding two tenants' representatives (something long sought by the tenants) and would have eliminated any role for parent agency DBEDT in NELHA's procurement process. At a June meeting, the NELHA board voted to recommend that the governor approve the measure, even though DBEDT director Ted Liu had earlier warned against it. The vote was moot: the governor vetoed the bill, saying it was objectionable because it eliminated the partnership between NELHA and DBEDT in key areas: "I strongly believe all attached agencies must have Executive Branch oversight... to ensure the proper use and expenditure of public funds." — *P.T.*

Kuilima from page 1

When Ueda did not receive a reply, she warned Quon in an August 8 letter, "Please be advised that in the event we do not hear from you by August 22, 1988, this could be a basis for the Land Use Commission to consider initiating an order to show cause proceeding on the reclassification of your property."

Quon responded on August 18. He first noted that after the LUC had signed its March 1986 findings of fact, conclusions of law, and decision and order granting the redistricting, Asahi Japan had bought all of KDC parent company Prudential Insurance Co.'s interest in the resort. He added that Asahi planned to start construction in the first quarter of 1989 and complete phase one within three-and-a-half years. Phase one was to include construction of a sewage treatment plant, road and drainage improvements, internal roads, wells, a water distribution system, improvements to the marsh and an existing golf course, a new golf course, a hotel at Kawela Bay, a commercial area, building pads for condo sites, and a stable.

With regard to the nine conditions, though, little action appeared to have been taken. According to Quon's report, except for drilling test wells to meet condition four, the company was still in the planning, negotiating, and contracting phases. What's more, with regard to condition eight, which required KDC to construct a private sewage treatment plant, Asahi wanted to file a petition for reconsideration.

On January 10, 1989, Jan Naoe Sullivan, an attorney for KDC, filed a motion to

pany to advance the project have been met with strong opposition from community groups, including the Defend O'ahu Coalition, Keep the North Shore Country, and the Sierra Club, Hawai'i Chapter.

In April, the coalition asked the commission to order KRC to show cause why the 236 acres should not revert to the Agricultural District. The group argued that administrative rules in effect in 1986 re-

"[T]his could be a basis for the [LUC] to consider initiating an order to show cause proceeding..."

— Esther Ueda, former LUC director

quired substantial progress to be made on the expansion within five years—a standard, the group claims, KRC has failed to meet.

Section 6-3 of the 1973 Hawai'i Administrative Rules for the LUC states, "Petitioners requesting amendments to District Boundaries shall make substantial progress in the development of the area redistricted to the new use approved within a period specified by the Commission not to exceed five (5) years from the date of approval of the boundary change. The Commission may act to reclassify the land to an appropriate District classification upon failure to perform within the specified period according to representations made to the Commission..."

Section 6-2 of the rules, which also seems to have been overlooked, requires petitioners to provide proof that its development can occur within five years of LUC approval. If a project cannot be substantially completed within five years, Section 6-2 requires the developer to submit a schedule in increments and obliges the LUC to redistrict to

own rules and of the fact that the development would not be completed within five years.

Deputy attorney general Bryan Yee, representing the state Office of Planning in this case, agreed with the resort's take on the five-year issue. In his filings with the LUC, Yee wrote that while the commission's order may be flawed by today's standards in that it lacked any deadline or reporting

requirements, the Office of Planning could not support the coalition's motion because the 1986 order "does not give the petitioner fair warning of an obligation to perform within a specific time period and reliance upon a bare reading of the [administrative] rules is too uncertain."

Like KRC, Yee pointed out various proceedings during which LUC commissioners seemed to know that the expansion was not going to be completed within five years. Yee also suggested that the five-year limit might not have been common knowledge at the time, since many projects that received LUC approvals back then remain undeveloped.

Imposing Deadlines

While Yee agreed with KRC that it would be improper to initiate an order to show cause proceeding, which could lead to the immediate reclassification of the land, he suggested that the LUC might want to impose compliance deadlines on the resort.

"In this case, a clarification of the decision and order to impose a reasonable time period...would not result in manifest injustice...To the contrary, a reasonable time period in which the conditions must be completed would prevent landowners from resting on their entitlements for excessive amounts of time, reduce the likelihood of entitlement trading in which landowners merely receive entitlements for the purpose of increasing the value of the property, and allow for proper planning..." he wrote.

Yee added that the LUC's administrative rules allow for the modification or deletion of any conditions for good cause and that because the order can be and has been modified, "reliance upon the belief that the existing language would never change cannot be reasonable."

KRC, which claims it has spent more than \$100 million in improvements in reliance on the LUC's open-ended order, denounced the idea, stating that good cause

"[R]eliance upon the belief that the existing language would never change cannot be reasonable."

— Bryan Yee, deputy attorney general

amend condition eight to require the construction of a public, rather than private, sewage treatment plant. The LUC compromised on February 7, voting to amend condition eight to require KDC to develop a sewage plant to county standards.

Nothing in the LUC's files suggests that the commission ever inquired again about KDC's progress toward meeting the nine conditions.

Five-year rule

Twenty years later, the promised phase one is nowhere near complete and recent efforts by current landowner Kuilima Resort Com-

urban only those portions to be developed in five years, with an indication that future redistricting approvals for the remainder would be given.

In June of this year, the KRC responded to the coalition, arguing that the commission "consciously elected" not to apply the five-year requirements. Like the KDC's September 1986 Unilateral Agreement with the Honolulu City Council that rezoned Kuilima's land subject to 14 conditions, the LUC's order imposed no deadline to meet the commission's conditions. The KRC provided transcripts of LUC discussions that suggest the commission was aware of its

‘Need For the Proposed Development’

Does O‘ahu’s visitor industry even need Kuilima to expand? Given the fact that occupancy rates reach about 90 percent during peak months, some might say yes. But in 1986, in justifying its decision to approve the redistricting of Kuilima’s 236 acres, the Land Use Commission relied on projections that have fallen so astronomically short that they inevitably lead to the question of whether the expansion should have been approved in the first place.

In 1985, O‘ahu’s 38,600 visitor units made up 58.6 percent of the statewide total and many people believed the island could handle thousands more. The 1985 Ko‘olauloa Development Plan anticipated an additional 4,000 units at the Kuilima resort, and an October 1985 report by Hallstrom Appraisal Group, Inc., predicted that the demand for resort units on O‘ahu would grow to 59,700 by the year 2000.

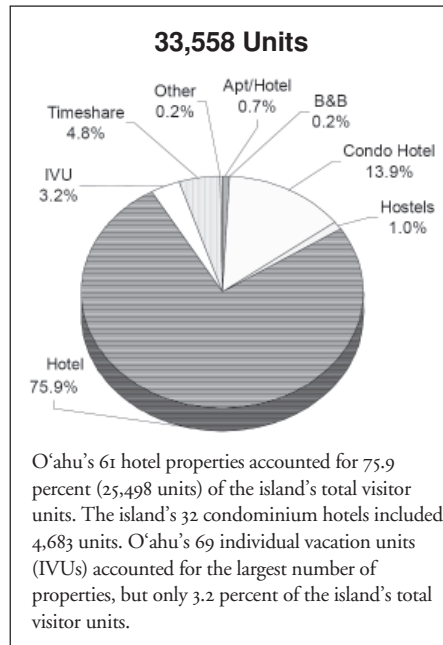
In the “need for the proposed development” section of its decision and order, the LUC wrote, “Hallstrom anticipates that [Kuilima] Resort could absorb between 5,000 and 6,000 resort units. Hallstrom also indicated the demand for resort condominiums at the Resort will exceed demand at other resort destinations because: lack of proximate competing inventory, O‘ahu’s recognition as a visitor destination area, and a low sales price.”

But between 1985 and 2007 (the most recent year for which data is available), resort units statewide have increased by

only 7,301, and all of that growth has occurred on the outer islands. On O‘ahu, the number of units has actually dropped to a little less than 34,000. According to the Hawai‘i Tourism Authority, the decrease on O‘ahu can be attributed to the renovation of several older Waikiki properties and the transition from hotel to condominium properties.

While the number of units has decreased, hotel occupancy has increased on O‘ahu, and the HTA’s O‘ahu Tourism Strategic Plan states that the island may not have sufficient units to attract many more visitors.

“By 2010, it is estimated that there will



STATE VISITOR PLANT INVENTORY FOR 2007

be a net loss of 1,396 hotel rooms, offset by gains of 1,185 new timeshare units, and 1,169 new visitor condominiums. The greatest hotel room losses will occur in Waikiki, with growth in hotel rooms occurring on the Leeward Coast. This trend will affect the mix of visitors attracted to O‘ahu because timeshare and condominium visitors tend to be repeat visitors who visit fewer attractions and undertake fewer activities. Hotel visitors are more likely to be first-time visitors who participate in a greater number of activities. Likewise, the conventions, meetings, and incentive market for business events rely on hotel room availability to support these events,” the plan states.

While this scenario seems to suggest that KRC’s plans to build 2,500 more hotel rooms and 1,000 more condo units might offset the loss of visitor units on the island, questions remain over whether the communities surrounding the resort still favor that much growth.

During the most recent public hearings for the update of the Ko‘olauloa community plan, which was supposed to have been updated a few years ago, Defend O‘ahu Coalition’s Mark Cunningham says, community members had drafted language that would have amended the plan’s previous support of the expansion. However, he said, that process has stalled since “the city seems to have run out of money for that and ceased having meetings.”

— *Teresa Dawson*

for modification does not exist and has not been shown.

After hearing these and other arguments on the Defend O‘ahu Coalition’s motion from all parties as well as taking testimony from several members of the public on July 11, the LUC decided it needed more time to discuss the complicated legal issues with its deputy attorney general. While the commission did not grant an order to show cause, it did order KRC to provide a status report on the project. (See article on opposite page.)

In the meantime

Whatever the LUC decides, the future of the property will be in limbo at least until a new

buyer is found. If recently appointed resort manager Stanford Carr cannot find a buyer for the property by the end of the year, KRC parent company Oaktree Capital Management L.P. will lose the resort to its lenders, which include Wells Fargo & Co. and Credit Suisse Group.

Last Legislative session, Governor Lingle proposed purchasing the property and created a Turtle Bay Advisory Working Group to work toward that end. The coalition’s Mark Cunningham says that several coalition members sit on the advisory group and that they are hopeful a “green knight” will purchase the property as-is and let the community decide what should be done with it.

“We really have our fingers crossed,” he says, adding that he worries that the pressure to get top dollar for the property ensures that Carr will still seek to construct at least one new hotel there. Cunningham said he and the rest of the coalition are also “on eggshells” because KRC’s subdivision permits are still pending city approval. KRC has until September 29 to satisfy the city’s concerns about the project and if it does, Cunningham says, “It’s a done deal.” With the subdivision in place, no one interested in preservation will be able to afford the property and anyone who can afford it will need to build it out to recover their costs, he said.

— *Teresa Dawson*

As O'ahu's Slaughterhouse Faces Closure, ADC Approves Experimental Back-up Unit

At a time when Hawai'i is seeking ways to feed more of its own people, O'ahu's beef and pork industries are on the verge of disaster.

Earlier this year, O'ahu's only slaughterhouse, which processes both beef and pork, announced that it would cease slaughtering beef in July. It has since elected to continue its operations for now, but the panic over the possibility that O'ahu ranchers would have nowhere to take their cows spurred the University of Hawai'i, state agencies, and local ranchers to find an alternative.

At last month's board meeting of the state Agribusiness Development Corporation, Alfredo Lee, the agency's executive director, proposed that the board approve a \$210,000 mobile slaughterhouse demonstration project. Mobile slaughterhouses, which can hold about 10 carcasses at a time and can be moved around with a heavy duty "dualy" pick-up truck, are used on the mainland and in Europe to accommodate small-scale ranchers.

Lee explained that the mobile facility would promote the local grass-fed industry and would also spare cattle the stress of being trucked to slaughterhouses. He added that the state Department of Agriculture, the ADC, and the University of Hawai'i's College of Tropical Agriculture and Human Resources would contribute to the purchase of a biodigester for the facility's waste, and that he had identified an O'ahu rancher who would be willing to operate the mobile slaughterhouse.

When asked by board members how waste from the slaughterhouse would be handled, rancher Alan Gottlieb said that depends on what each individual county allows. On the Big Island, for example, carcasses are often buried, while ranchers on O'ahu have the option of taking their waste to Island Commodities to be processed, he said.

Wastewater, however, is not so easily dealt with. According to Wayne Nishijima of CTAHR, the state Department of Health's Wastewater Branch has said it would not grant a permit for a holding tank for the wastewater, but would allow a limited amount of wastewater to be sprayed on pasture lands so long as they weren't near any streams. Also, a wastewater permit would likely be required for each property upon which the wastewater was sprayed, he said.

Despite the waste concerns, Gottlieb supported the idea of a mobile facility since "every island needs to have some slaughter capacity."

He seemed most concerned about Kaua'i, which has several intermittent slaughterhouses, and O'ahu, which may soon have none. Maui, however, is developing its own small, contained slaughterhouses, he said.

With regard to O'ahu's dilemma, DOA director Sandra Lee Kunimoto explained that the slaughterhouse was built to handle 200 head of cattle a month. But with the recent demise of the last of O'ahu's dairies, "throughput went way down," she said. With the future of the slaughterhouse in danger, "The ADC can address that immediate void," she said.

Slaughterhouse manager Calvin Wong, however, asked the board whether taxpayer money would be better spent helping to maintain the current USDA-certified facility than to fund a demonstration project. He said that while the facility is owned and operated by the Hawai'i Livestock Cooperative, a hog farmers' co-op, it was built to specifications pushed for by an O'ahu cattle rancher that later went out of business. Now, the slaughterhouse has the ability to process 50 head of cattle a week, but doesn't receive enough animals to pay off its \$2 million dollar construction loan.

"It's the biggest, newest facility... You have no idea of operating costs for the potable water, the waste treatment system... The bottom line is the whole slaughterhouse will eventually be shut down with the debt service," which will affect the island's entire livestock industry, he said.

When one board member asked what

percent capacity the slaughterhouse was currently operating at, Wong said, "How about one percent?" Wong said that while the mobile slaughterhouse project could further reduce the number of cattle going to the co-op's slaughterhouse, the project wouldn't necessarily be to blame for its demise. "We're headed in that direction anyway," he said.

Faced with the fact that the slaughterhouse closure could devastate both O'ahu's cattle and hog industries, the board, as well as members of the public, explored ways to save the facility.

To reduce refrigeration costs, Wong suggested that a smaller refrigeration unit could be built, with outside funding, of course. Taro farmer and food processor Ernest Tottori suggested that the state buy the facility for \$1.5 million and lease it back to the co-op. He added that the state should buy agricultural lands, as well, and lease them back to farmers since his biggest problem as a vegetable, taro, and bean sprout processor has been a lack of supply.

"For the past 20 years, we've been short... That's why I'm a taro farmer," he said.

Wong also supported the idea. "With no debt, we can slaughter indefinitely," he said.

North Shore Cattle Co. owner Cal Lum, however, said he still wanted to move forward with the mobile slaughterhouse, even though he too believed that the slaughterhouse's survival depended on a state buyout.

Lum explained that he instigated the mobile project after the co-op first threatened to stop processing cattle. "The mobile slaughterhouse is a plan B," he said.

Lum added that he had been approached to be a supplier for Whole Foods, which supports the use of mobile slaughterhouses because they put less stress on the cattle and meet the company's compassionate care stan-

Environment



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dards. The slaughterhouse, on the other hand, recently had a problem meeting those standards—during the inspection by Whole Foods, a cow had to be stunned multiple times, he said. While Lum added that such things happen and could be easily remedied, “My preference is a mobile unit,” he said.

Despite the board’s concerns over the ramifications of a slaughterhouse closure, the ADC’s Lee noted that a buyout could not and would not come from the ADC. “That is not an ADC function,” he said, adding that the agency also doesn’t have the money to buy the slaughterhouse. When it was clear that ADC had little to no ability to assist the slaughterhouse, the board unanimously approved the mobile slaughterhouse demonstration project.

“This seems like a small amount of money to help an emergency,” board member Christine Daleiden said. Lee added that if it’s not successful on O’ahu, “I believe Kaua’i could use one.”

Limited potential?

While mobile slaughterhouses may help ensure that local ranchers will always have a place to take their cattle, more slaughter facilities—mobile or not—won’t necessarily mean that Hawai’i will be able to produce all of its own beef.

Twenty years ago, when all of the beef raised in Hawai’i was sold in Hawai’i, it fulfilled only 25 percent of the state’s demand, according to Gottlieb. Today, more than 90 percent of calves produced in Hawai’i are shipped, often to Canada, and trucked to states like Texas to be “finished” for slaughter. And by all accounts, these types of cow/calf operations will always be a major part of Hawai’i’s cattle industry.

However, Gottlieb said, if the demand for local, grass-fed beef continues to grow, and he

believes it will, Hawai’i may see a doubling or tripling in the number of calves that are kept here.

Lum, whose north shore ranch serves the high-end niche market, said he also believes that market is here to stay. “We are not getting close to meeting our demand,” he said.

Lum said his immediate plans for his 11,000-acre ranch are to increase his production to 400 head a year. He said he hopes to eventually grow to 600 to 800 head a year, all of which will be slaughtered on O’ahu.

According to Gottlieb, however, the rest of the state is not likely to follow his lead. “It’s still a premium to ship calves. There’s not enough land to keep calves on the land,” he said, adding that he couldn’t say whether the niche market would ever grow to more than 50 percent of the state’s overall demand.

In addition to an apparent lack of suitable land, a 2003 CTAHR study indicates that it’s far cheaper for ranchers to ship calves than it is to finish them here. The study, by Sabry Shehata and Linda J. Cox, found that producing calves costs only \$226/year/calf for small ranchers (less than 500 head), while it would cost them \$475/year/cow to finish them. For large producers, the cost is \$262/animal for a cow/calf operation and more than \$500/animal for a finishing one.

Large producers, the study states, have no economic incentive to enter the finished beef market and would need a return of at least \$0.05 more per pound to “make the market cost effective.”

Despite the obstacles, the DOA’s Kunimoto said that she hoped Hawai’i’s finished beef sector will continue to grow. With the food sustainability discussions going on now, providing more local beef makes a lot of sense, she said.



Waiahole Reservoir Lining Encounters Dam Safety Issues

Earlier this year, the ADC’s Alfredo Lee was scolded by members of the state Commis-

sion on Water Resource Management when he requested more time to line two reservoirs that provide Waiahole Ditch water to farmers in Central O’ahu. The lining, required by a contested case order, was to have been completed in July, but the ADC was waiting for enough funding to do both reservoirs at once. With hundreds of thousands of gallons of water being wasted in the meantime, the Water Commission all but ordered Lee to find a way to immediately start lining at least one reservoir.

At the ADC board’s August meeting, Lee reported that the agency did have enough money to line one reservoir and that the Army Corps of Engineers would present a revised timeline to the Water Commission soon.

There was one glitch, Lee said. An attorney for Monsanto, which recently purchased the land that contains the reservoir to be lined, had sent a letter to the ADC claiming that because the ADC has an easement for the reservoir, the ADC is not only the operator, but is also the owner, of the reservoir. Lee said he believed the letter was prompted by the fact that the reservoir is actually a dam, which makes it subject to the state’s new dam safety law and raises liability questions.

While he said that the ADC will manage the reservoir as though it is the owner, “the question is, legally, can we be the owner, because we’re not the landowner?” He added that the reservoir was on the land before the ADC got the easement.

Because the state Department of Land and Natural Resources is in charge of dam safety, board member Wayne Katayama said, “It’s the DLNR’s call whether they recognize [Monsanto’s argument].” With regard to fulfilling the requirements of the state’s dam safety law, Lee said that the ADC and Monsanto may have to do it jointly.—*T. D.*

