

Can A Sea Robot Help Heal Maunalua Bay?

Working with Malama Maunalua, Liquid Robotics is using its Wave Glider to collect ocean data in Hawaii waters.

DECEMBER 4, 2015 • By [Nathan Eagle](#)

A solar- and wave-powered sea robot made its way to Oahu this week after a monthlong cruise from the Big Island, collecting data on water quality, weather, salinity and other factors that affect ocean health.

[Liquid Robotics'](#) Wave Glider, dubbed Malama, is now in Maunalua Bay, [tweeting](#) surface and underwater images, location and more information. There's also a [live video feed](#).

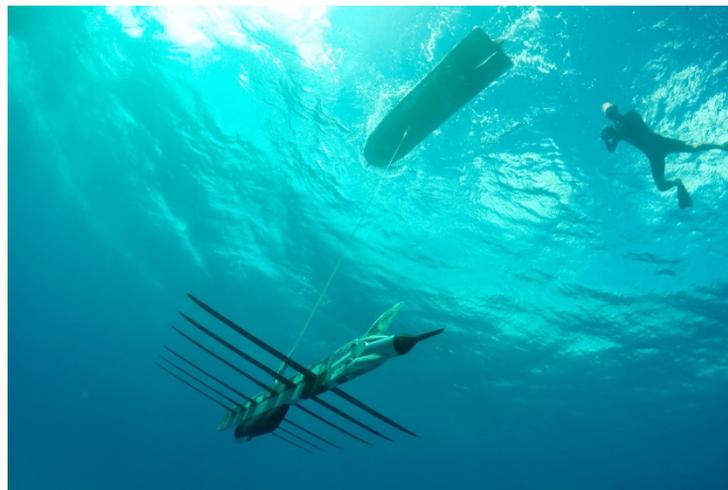
[Malama Maunalua](#), a nonprofit organization headed by marine conservation expert Frazer McGilvray, has partnered with the company to use the robot to gather data that it hopes might be useful in the ongoing planning process to help heal the degraded bay.

“Any science we can get is good science and it helps us focus our work,” McGilvray said during an interview in the water next to the robot Thursday as circled several hundreds yards off the coast of Hawaii Kai.

“With data gathering, you need a boat, you need human beings and it can all be really costly,” he said.

“With these things, you just set it on a path and off it goes. So you don't need to be out here. It sends it all back to a computer, and you can control it from anywhere in the world.”

Maunalua Bay has been the subject of [intense public debate](#) as the National Oceanic and Atmospheric Administration works to add a new layer of protection by making it a special



sanctuary management area. Hearings in July attracted big turnouts as state and federal officials heard testimony on the plan, which will be reviewed over the next several months.

Some fear a federal overreach that could restrict what activities are allowed in the bay, but others say the bay needs a break. Currently, there's everything from fishing and diving to Jet Skis and boating.

Some 60,000 residents live in the area that borders the bay. Malama Maunalua has been working to get their input, along with numerous other stakeholders.

The nonprofit [launched an effort](#) in September to pull together more than two dozen stakeholders to create a community-driven, science-based plan to restore the bay. The planning process, called Imua Maunalua, is expected to take two years.

McGilvray, the former administrator of the Department of Land and Natural Resources's Division of Aquatic Resources, said the Wave Glider can provide data that can be used to help improve the quality and future of the bay.

The bay, which covers 6.5 miles of coastal waters from Black Point to Portlock Point, has ranked among the least healthy in the state for the past several years. Scientists, environmentalists and a range of ocean users say it's overfished and is being damaged by sediment runoff and other human-caused factors.

The robot can detect everything from salinity levels to oil and petroleum in the water.

Derek Cuny, Liquid Robotics' senior field support engineer who's based at the company's Big Island offices, was in the water Thursday doing some minor maintenance work on Malama.

"Liquid Robotics is honored to collaborate with Malama Maunalua, NOAA and our community partners to create awareness about the importance of ocean health, and the human impacts on the ocean," Roger Hine, Liquid Robotics co-founder and chief technology officer, said in a release Friday.

“To navigate change and make the right stewardship decisions, we need scientific data,” he said. “The scientific data collected by our Wave Glider will contribute towards advancing the health of our ocean and marine resources, with the intention of creating greater sustainability for the State of Hawaii and globally.”

The Wave Glider’s journey to Oahu is part of an outreach program called Aloha Aina, which was developed by Liquid Robotics and is being done in collaboration with Malama Maunalua, NOAA and others. The goal is to promote and educate the public on economic, environmental and social benefits of a healthy, sustainable ocean, the release says.

As part of the same program, there is a Citizen Science Day set for 9 a.m. Saturday at Kuliouou Beach Park to encourage members of the general public to partake in scientific research by gathering data, asking questions, and analyzing information, the release says.

Activities include pulling invasive alien algae, testing water quality and informational presentations on the Wave Glider. For more information, email Nicole Williams at nwilliams@malamamaunalua.org.



Experts Strategize Future for Maui's Coral Reefs

By Maui Now

Posted January 22, 2016, 07:32 AM HST



Marine scientists, coastal planners, and local community leaders met recently on Maui to evaluate Maui's coral reef recovery progress and strategize future efforts.

The 13th meeting of the Maui Coral Reef Recovery Team was held at UHMC and assessed recovery efforts at the Team's three

priority sites of Olowalu, Polanui in Lahaina, and Kahekili.

During the meeting, members suggested strategies to direct and accelerate recovery efforts on Maui during 2016 and 2017.

In 2010, the Maui Nui Marine Resource Council established the Maui Coral Reef Recovery Team composed of community members, scientists and cultural representatives, to develop a results-driven plan for the recovery of Maui's coral reefs: *Ola nā Papa i Mālama 'ia: A Practical Plan for the Technical and Cultural Restoration of Maui's Coral Reefs*.

In 2015 the Team authored the comprehensive report *Maui's Coral Reefs: Declining Trends 1993-2015*, which combines existing diverse data sets into one format. Both documents address the major impacts to reef health (i.e., land-based sources of pollution, overfishing, deteriorating water quality, invasive algae, and climate change) and provide hope for the future by offering solutions to reverse the decline.

Lanaians unhappy with community plan changes

Precedence of community plan or zoning one area of contention

February 4, 2016

By BRIAN PERRY - City Editor (bperry@mauinews.com) , The Maui News

Maui County Council members will take up the Lanai Community Plan update at their regular meeting Friday and, again, at a public hearing March 12 on Lanai.

On both occasions, councilors can expect to get an earful from Lanai residents unhappy with revisions made by the council's Planning Committee and insistent that the council defer to the recommendations of the Lanai Community Plan Advisory Committee and the Lanai Planning Commission.

The changes from what was recommended for approval earlier by the Lanai advisory panels are in the revised plan's land use chapter, according to a Jan. 25 letter to council Chairman Mike White from members of both Lanai advisory panels.

One statement in the revised land use chapter says: "Unless specifically prohibited, the uses permitted by zoning and the standards applicable to the zoning district apply to the corresponding community plan amendments."

The language was added to address a simmering dispute over whether zoning or community plans dictate land use. (The county's practice for decades has been for zoning to determine land use if it is in place prior to community plan amendments. However, if a change in zoning is needed, it would need to be consistent with the area's community plan designation.)

Ron McOmber, a member of the Community Plan Advisory Committee, said it's "just not acceptable" for the council committee to make changes to the Lanai plan, especially without returning to the advisory panels first and giving them the "courtesy" of explaining the revisions.

Advisory committee members spent nine months working on their version of the plan, which was kept mostly intact - except for some minor changes - by the Lanai Planning Commission, McOmber said.

"Everybody agreed that was a good document going forward," he said.

McOmber said that the council should give deference to the plan drafted by the Lanai groups because outsiders "have no idea what's going on over here."

Lanai residents will not sit by while the council makes changes to the plan, he said.

"We're not going to put up with it," he said.

Deborah dela Cruz, a member of the Community Plan Advisory Committee, said it wasn't made clear to panel members that they could recommend language that would specifically prohibit activities in zoned areas.

"I don't think we were given the correct guidance in the beginning," she said. "We are laypeople. We're not zoning experts . . . Whoever put it in there, we don't like the language."

If Lanai panel members had known that language would be put in the plan, then they would have looked at the plan differently, she said. The Lanai community is invested in the plan recommended by the community advisory panels, dela Cruz said.

"It's our plan. It's our name on it," she said. "Why bother coming back to the community if you're not going to pay attention to what we're saying?"

The Jan. 25 letter blamed the county Planning Department for making changes in the plan.

"This is a wholesale and blatant takeover of Lanai's community planning process by the Planning Department," said the letter signed by a dozen members of the two Lanai panels.

In another part of the letter, the panel members say: "While we understand that the Community Plan Advisory Committee is 'advisory,' we also note that the Planning Department's role is to make 'recommendations,' not rewrite the plan by unilateral fiat."

On Tuesday, Planning Committee Chairman Don Couch and Department of Planning Deputy Director Michele Chouteau McLean both said that the council's Planning Committee, and not the Planning Department, revised the Lanai plan.

"Ultimately, the council is responsible for the Lanai Community Plan and all community plans," Couch said. "These are the council's plans for those communities based on input from a number of different bodies."

In Lanai's case, input came from the Lanai Community Plan Advisory Committee, the Lanai Planning Commission and the county Planning Department, he said.

"The Lanai community is very passionate," he said, adding that the community panels are advisory. "We appreciate their passion. We do take it into consideration."

Couch said that at the last Planning Committee meeting on Lanai, the committee held a "roundtable" discussion about the community plan and gave the community the opportunity to "talk story" about the plan.

"We got buy-in from everybody who was there," he said.

McLean said she wanted to make clear that the "Planning Department does not make any changes to the document on its own initiative."

The department put together an initial draft at the beginning of the process, she said, but "from that point on" changes have been made, in succession, by the Community Plan Advisory Committee, the Lanai Planning Commission and the council's Planning Committee.

The Planning Department makes recommendations on community plans, but it's up to the various panels whether to adopt them, she said.

"The letter suggests the Planning Department made changes to the document on our own," she said. "We do not do that."

McLean said she believes a misunderstanding about the department's role has grown over time because of long committee meetings and long periods of time between meetings.

White said he understands the Lanai residents' concerns, but "the plan for Lanai was thoroughly vetted by the council's Planning Committee."

"The role of the council is to take input from the community, county departments and other stakeholders to craft a final decision on the plan," he said. "It never is easy as we find common ground, but we all want the best for the community."

White encouraged Lanai residents to testify during Friday's council meeting, which begins at 9 a.m., and later when the Lanai plan comes before the council for first reading on Lanai.

"This is an open process, and I appreciate the dialogue we continue to have on this important matter that will help guide us for the next 10 years," he said.

Meanwhile, Couch has submitted a proposed resolution to give the council more time - until April 29 - to complete its work on the Lanai plan. The current deadline is March 15.

Couch said the extra time is needed because there were problems scheduling travel for all council members to Lanai in time to make the current deadline.

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Legislators target rapid ohia death

Published January 24, 2016 - 1:30am

By **COLIN M. STEWART** Hawaii Tribune-Herald

The entire Big Island delegation to the state House of Representatives is endorsing a bill seeking to address the growing problem known as rapid ohia death.

Scientists have observed mortality rates in heavily infested areas of between 50 and 90 percent due to the disease, which is caused by a fungus.

Rapid ohia death was initially observed in Puna, but in the past several years it has rapidly spread to areas including Kona, Ocean View, Honaunau and Gleenwood, said Lisa Keith, a researcher with the U.S. Department of Agriculture.

Scientists say the disease, which is also known as ohia wilt, has the capability of killing ohia trees statewide, but so far it has only been observed on Hawaii Island. It has not yet been found in North Hilo, Hamakua or Kohala.

House Bill 1597 directs the state Department of Agriculture to research and report on the causes and possible control measures for the recently identified disease. The bill was introduced and passed in its first reading on the House floor Wednesday, the first day of the Legislative Session,

The bill, introduced by state Rep. Nicole Lowen, D-Kailua-Kona, seeks to appropriate \$200,000 to fund the preparation of the report, which is to be presented to legislators during the 2017 legislative session.

“The Legislature finds that rapid ohia death disease is devastating thousands of acres of native forest on the island of Hawaii,” the bill reads. “The ohia makes up about 50 percent of the state’s native forest and is a keystone species in native watershed areas.

Lowen said Thursday that her bill had so far received widespread support, despite legislators often having their own pet projects to hold their attention.

“All those things are important,” she said of their various projects. “It’s hard to say that one thing is more important than another. But this particular one has the potential to be quite devastating. The prospect of this spreading is really frightening. ... It would be devastating to our native forests. ... There’s impacts it would have to endangered species, and to our watersheds.”

State Rep. Cliff Tsuji, D-Hilo, agreed. As chairman of the House Committee on Agriculture, Tsuji said he has long championed efforts to combat destructive invasive species and diseases that can impact Hawaii Island’s flora and fauna.

“Not only is it a big threat, it’s a continuation of a neverending journey of invasive species threatening our island,” he said.

Tsuji said the state currently lacks the resources to respond appropriately to such threats, pointing out that federal inspectors at Hawaii ports, who inspect shipments leaving the state, outnumber state Department of Agriculture inspectors, who look at shipments entering Hawaii, by a margin of 4-1.

He added that the public can help fund such measures by providing their support and testimony as bills such as HB 1597 make their way through the legislative process.

“Hearing from the citizenry is so very important,” Tsuji said. “I’ve been imploring the media to keep the public abreast and informed of what’s happening as we go through committee hearings.”

Keith said she was excited to see the bill making its way through the Legislature, because it will provide funding to look deeper into a mystery that she and her fellow researchers are just beginning to learn about.

“We’re continuing to do new things, like fungicide testing. We’ve got six new potential chemicals we’re looking at (that could kill the ohia wilt fungus),” she said. “And we understand more about the genetics and biology now. But we’re just scratching the surface. (The appropriation) will allow us to do real detailed studies. I think we’ll make more progress in a lot of areas, producing more knowledge and information to lead to better management and control.”

In August, the state Board of Agriculture placed Big Island ohia under quarantine, limiting the transport and shipping of the trees and products made from ohia. However, the fungus has continued its rapid spread across the island after its initial discovery in Puna in 2010.

In a response to questions emailed Thursday afternoon, University of Hawaii Extension Forester J.B. Friday called the quarantine a “bright spot” amid rather bleak news regarding the spread of the fungus.

“We have tested several shipments of logs that were to be shipped to other islands and found the fungus on several of these, which were then not shipped,” he wrote. “We appreciate the good work of the Hawaii Dept. of Agriculture.”

Friday added that support from government and private foundations has been strong early on.

“Our task now is to keep the momentum going ...” he stated. “We have funds and are in the process of hiring scientists to look at the disease itself, the molecular biology of the disease, insects that may carry the disease, and technicians and outreach staff. Much of the funding we have is only for the year 2016, though, so we really appreciate the legislators introducing a bill to fund ongoing efforts to understand and manage this disease that affects our forests and all of us.”

In a related step, a separate bill also introduced by Lowen seeks to allow the state government to respond more quickly when future threats arise. House Bill 1596 creates an invasive species rapid response fund for the purpose of eradicating newly detected invasive species.

The fund would be an important step in preventing species from becoming entrenched before government agencies can react, as was the case with fire ants, coqui frogs and other species which have run roughshod over Hawaii's ecosystems in recent years, she said.

"Acting early means we can eradicate (invasive species), instead of ending up spending much more just dealing with controlling them," Lowen said. "Once they get rooted in the state, all we can hope to do is manage them."

The bill passed its first reading on Wednesday.

Email Colin M. Stewart at cstewart@hawaii.tribune-herald.com.

Environment



Hawai'i

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NEW AND NOTEWORTHY

Tuna Treaty Tanks: The United States has informed the other parties to the South Pacific Tuna Treaty that it will be withdrawing from the treaty, first signed in 1987. Recent discussions over terms of its renewal were fraught; last August, when an agreement was finally reached for fishing in the South Pacific for 2016, the United States had agreed to pay \$21 million to the 15 small island states whose tuna-rich waters are a major fishing ground for the 37 vessels in the U.S. purse-seine fleet. In addition, the vessel owners themselves were to make payments totaling \$68 million in four quarterly installments of \$17 million. The treaty has been the major source of U.S. foreign aid to the region.

But with depressed prices for skipjack tuna, many vessel owners in late 2015 announced they wanted to revise the price they would have to pay for a day of fishing in the member states'



PHOTO: WPFMC

Purse seine vessels have been hauling more and more bigeye tuna, which often intermingle with the targeted skipjack schools gathered around fish aggregating devices.

territorial waters. From \$9,380 per vessel day in 2015, the charge rose to \$12,600 in 2016. As a result, the United States proposed that the number of fishing days, set in August at around 5,700, be reduced to around 3,700, which translates into a \$23 million reduction in total payments under the treaty.

The Pacific Islands Forum Fisheries Agency, which administers the treaty for the South Pacific island states, rejected the proposal.

On January 17, the State Department informed the FFA that it would be withdrawing from the treaty in 12 months. (The treaty requires parties to give a year's notice of their intention to withdraw.)

In a letter sent out on Christmas Eve, Michael Tosatto, administrator of the National Marine Fisheries Service's Pacific Islands

Regional Office, informed purse seine owners that in the absence of a license from the FFA, they would not be able to fish in the treaty area beginning January 1 except within the U.S. exclusive economic zones around American Samoa and the Pacific Remote Island Areas that are not included in the PRI Marine National Monument. Also, he wrote, no fishing by U.S. purse seiners would be allowed in the area of overlap between the areas of competence of the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission, unless the purse seiner is on the IATTC registry of active vessels.

According to a report carried by Radio New Zealand, the FFA is now attempting to determine if it can sell the unused fishing days to other nations. "However," its report said, "the FFA has conveyed that it thinks it may be difficult to get all vessel days purchased at the level—over \$11,000 per day—that the U.S. fleet agreed to pay."

Nahalehele Dry Forest Symposium will be held on February 26 at the King Kamehameha's Kona Beach Hotel in Kailua-Kona, with the theme: "Dryland forest conservation — where we've been and where we are going." This year marks the 10th anniversary of the symposium, which brings together landowners, managers, researchers, and other interested parties to discuss ways to protect Hawai'i's imperiled dry forests.

Two field trips will be held in conjunction with the symposium: one on February 25 to the Ka'ohē Restoration Area on Mauna Kea, part of Palila Critical Habitat; the other, on February 27, will be to the private Palamanui Dry Forest Preserve, dominated by lapa, alaha'e, and sandalwood. Participation is limited and on a first-come, first-served basis.

Early registration (through February 16) is \$65 and includes lunch and parking. Student registration is \$35. After that, it is \$80 (\$50 for students). Registration is limited to 200.

To register: <http://nahelehele16.eventbrite.com>.

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Quote of the Month

"Approximately 200,000 to 1.3 million oceanic whitetips ... may enter the global fin trade each year."

— National Marine Fisheries Service

NOAA Withdraws Proposal to Expand Whale Sanctuary

The Hawaii Department of Land and Natural Resources objected to the plan, considering it a federal overreach.

JANUARY 26, 2016 • By [Nathan Eagle](#)

Facing opposition from the state, federal officials on Tuesday withdrew their plan to expand the Hawaiian Islands Humpback Whale National Marine Sanctuary.

The proposal, [introduced last March](#) after years of work, called for adding 235 square miles of state and federal waters around Oahu, Kauai and Niihau to the sanctuary and changing to an ecosystem-based management approach instead of one that is species specific. The sanctuary would have been 1,601 square miles if approved.

John Armor, acting director of NOAA's Office of National Marine Sanctuaries, said in statement Tuesday that in light of state and community input, "NOAA is withdrawing the proposal to expand sanctuary conservation around Hawaii."



DLNR Chair Suzanne Case, seen here at a public hearing in July, opposed the sanctuary's expansion.

“HIHWNMS will continue in its present form, conserving and protecting humpback whales and providing needed research support and public education,” Armor said. “We look forward to continuing our partnership and working together with the State of Hawaii and local communities.”

Suzanne Case, head of the Hawaii Department of Land and Natural Resources, sent Armor a letter Friday detailing the state’s concerns.

“As the trustee of Hawaii’s natural resources, cultural resources, and submerged lands, the State of Hawaii supports an ecosystem-based management approach, but cannot endorse federal jurisdiction or enforcement of Hawaiian waters at this scale,” Case said in the letter, according to a [story in The Garden Island](#).

She said the state “continues to believe that the Sanctuary should focus on complementing existing state functions and supporting existing management efforts of communities, non-government organizations, partner agencies, and other institutions rather than duplicating existing regulatory authority and programmatic efforts,” the article says.

DLNR issued a news release Tuesday in response to NOAA’s decision, saying it will continue working “to implement an integrated, ecosystem-based approach to management.”

“We believe strongly that this can only be achieved through partnerships in which each entity builds upon and leverages its unique strengths,” Case said in the release.

Congress established the sanctuary in 1992. It runs from the shoreline to 600 feet in depth off of Maui Nui, including Penguin Bank, and off the north shore of Kauai, the north and south shores of Oahu, and the north Kona Coast of Big Island, according to DLNR. NOAA’s Office of National Marine Sanctuaries co-manages the sanctuary with the state.

In June, the DLNR submitted comments on the proposal that said what is most needed from the federal government at this time is “more management capacity ... not more regulation.”



Replant

Recovery and restoration

20,000 koa seedlings planted to rejuvenate burned forest in Kokee area



Posted: Thursday, February 4, 2016 2:00 am

Jenna Carpenter - The Garden Island

Almost 30 volunteers took to Hikimoe Ridge Wednesday, breathing new life to the once tree-filled forest.

"It's great to have the chance to come back and heal the land," said Michelle Clark, a biologist with US Fish and Wildlife Service. "Who can say no to a chance to come out to Kokee to plant trees."

Clark estimated she planted about 40 seedlings.

"It's cool they collected seeds from other koa trees that lived here," she said. "They have a better chance of surviving." Hikimoe Ridge, in the Kokee Area Forest Reserves, was one of three ridges charred in 2012 fire that burned several thousand acres in the Na Pali-Kona, Pu'u'ka Pele Forest Reserves and southern Poki.

"We thought it was out, but then it skipped to three different ridges," said Patrick Porter, program manager for the Kauai Division of Forestry and Wildlife.

The fires ended with almost 3,000 acres of eucalyptus trees being burned to the ground, leaving officials with the Department of Land and Natural Resources and the Division of Forestry to find a way to rebuild the forest.

Four years later, 800 koa seedlings, found scattered in the burn sites, were planted along two acres of the Hikimoe Ridge.

Volunteers from conservation groups like DLNR, the Kauai Division of Forestry and Wildlife, the USFWS, the Kokee

Conservation Program and Kupu Hawaii spread across two acres of the Hikimoe Ridge, planting the foot-tall seedlings.

"It's a good way to get involved in different conservation efforts," said Marissa Gordon, an intern with AmeriCorps who was placed with the Nature Conservancy program of Kupu Hawaii.

Replanting is phase 3 of the Kokee Area Restoration and Reforestation Project, Porter said.

Phase 1 involved getting the area back open to the public by removing hazardous trees, controlling erosion and fixing the road. Phase 2 was getting logging trucks into the area, Porter said.

The Hikimoe Ridge is the first ridge to be planted, but officials plan to plant 20,000 seedlings along the entire burn area, said Sheri Mann, state forestry program manager for the DLNR Division of Forestry & Wildlife.

Officials are unsure about the timeline for when all 20,000 seedlings will be planted, but hope to finish Hikimoe Ridge within the year, she said.

The 20,000 acres of seedlings will cover a total of 50 acres with 400-500 trees per acre.

"Hawaii has never experienced fires quite like these, followed by this type of recovery and restoration," said Suzanne Case, DLNR chair. "We hope in not too many years the scars left by this series of wildfires will no longer be evident, thanks to the replanting efforts and everything that led up to it."

This is the first time the state has undertaken a project that replaces non-native trees with native ones, Mann added. Since eucalyptus trees are from Australia, it was important to officials to replace them with trees native to Hawaii. "We want to support the community, beauty and recreation, but we also want to stabilize the soil and create a habitat for native plants and animals," Mann said.

Additionally, officials plan to use the burned remnants of trees as a source for renewable energy on the island, which is another first for the state, said Philipp LaHaela Walter, state resource survey forester with the DNLR Department of Forestry and Wildlife.

"This project is special in many ways," LaHaela Walter said. "With higher temperatures, fires will become a problem in the future, and this is a pilot program for the state to try out some things."

But while koa is a native species, planting them in the Kokee Forest has some challenges.

Adverse conditions like drought and animals have officials concerned the seedlings won't grow as easily as they would in some other areas of the state.

So, to combat that, officials are pulling out all the stops, like growing the seedlings in a specialized nursery on Maui and putting the bulbs in a gel that acts as a fertilizer and moisture retainer, to make sure the trees have their best chance of survival.

The total ticket price for the project is about \$2 million, which is funded mostly by the state, Mann said.

"This method is more expensive, but we are going to do everything we can to give the koa their best chance to flourish," she said.

Thursday, January 28th, 2016

By [Catherine Cluett](#)

Study on Electric Utility Suggests ‘Paradigm Shift’

A recent study on Maui County’s electric utility could play a large role in shaping the future of Molokai’s electric service. The independent study, contracted by the county to consulting company Guernsey, examined alternate forms of electric utility ownership and operation models. Released two weeks ago, it recommended that Maui County seek an Independent Systems Operator (ISO) or Regional Transmission Operator (RTO) to oversee the electric grid and energy market.

“The County desires to move to 100 percent renewable and sustainable energy as quickly as practicable, and has concerns about the prospects of this progress under the status quo,” states the study.

With the state’s lofty renewable energy goals and the Public Utilities Commission calling for modernization and upgrades to the utility’s system, the study points out this can only be achieved through “a paradigm shift in the power generation scheme for Maui County.”

Key to reaching those goals is determining and implementing the best structure and organization to lead the charge, according to Guernsey. The current Maui Electric model is operated under an Investor-Owned-Utility (IOU) structure whose responsibility is to its shareholders, not ratepayers.

“There’s always a bottom line for a private utility,” said Mayor Alan Arakawa. “Their decisions are influenced by making a profit, whereas an ISO’s only duty is being fair to the consumers and making sure our electrical grid is reliable and efficient, as well as renewable friendly. This community is more than ready for an electrical utility model where they — the ratepayer — is the bottom line.”

Under the proposed model, the majority of physical infrastructure would remain in the hands of Maui Electric. The ISO/RTO would acquire existing dispatch, monitoring and control equipment to manage the transmission system. This approach could be implemented regardless of the outcome of the proposed merger of Hawaiian Electric and NextEra Energy, as the utility would be subject to the jurisdiction of the ISO/RTO.

While the study notes progress has been made toward renewable energy goals, “current system renewable generation, as configured and managed by MECO, is limited and reaching a plateau.” This can be seen on Molokai, where the threshold for integrating additional rooftop solar power without compromising reliability of service has already been reached.

The timeline remains uncertain, but the study states that implementation for this model would be faster than negotiating a sale of Maui Electric, which could take five to seven years. It also suggests condemnation or eminent domain action as a means to acquire the assets if needed.

The County has announced a proposal to modify state law in regards to county powers of condemnation, specific to utilities. Current language allows the county to exercise condemnation “when it is in the public interest to do so.” The proposed amendment would add a clause specific to acquiring property necessary to operating an electric utility.

The county's Managing Director Keith Regan said the amendment does not imply the county plans to use eminent domain in this case, but it offers "another tool in our toolbox."

Arakawa said he will be adding \$2 million to the fiscal year 2017 Maui County budget proposal to hire a utility consultant that could take the county through the next steps of the utilities process.