

**MINUTES OF THE April 6, 2016 NATURAL AREA RESERVES SYSTEM
COMMISSION (NARSC) MEETING, HONOLULU, O'AHU**

COMMISSIONERS PRESENT:

Draft subject to approval

Dr. John Sinton, Chair
Ms. Robin Newbold
Dr. Carl Christensen
Dr. Jonathan Price
Ms. Hi'ilei Kawelo
Dr. Sheila Conant, for President, University of Hawai'i (UH)
Mr. Kekoa W. Kaluhiwa for Chair, Board of Land and Natural Resources
Ms. Janis Matsunaga for Chair, Board of Agriculture
Mr. Leo Asuncion, Director, Office of Planning

COMMISSIONERS ABSENT:

Mr. Ronald Rapanot, Sr.
Mr. Trae Menard
Mr. Nathan Yuen

STAFF:

Ms. Cindy Young, Deputy Attorney General (AG)
Mr. David Smith, Division of Forestry & Wildlife Administrator (DOFAW)
Ms. Betsy Gagné, DOFAW Administrative Office (Admin.)
Ms. Emma Yuen, DOFAW Admin.
Mr. Rob Hauff, DOFAW Admin.
Mr. John Vetter, DOFAW Admin.
Ms. Charmian Dang, DOFAW Admin.
Ms. Tanya Rubenstein, DOFAW Admin.
Ms. Chauncey Hirose-Hulbert, DOFAW Admin.
Mr. Nicholas Agorastos, DOFAW Hawai'i
Ms. Jacqueline Gaudioso-Levita, DOFAW Hawai'i
Ms. Marigold Zoll, DOFAW O'ahu
Dr. Fern P. Duvall, DOFAW Maui Nui
Mr. Peter Landon, DOFAW Maui Nu
Ms. Katie Ersbak, DOFAW Admin.
Ms. Leah Laramee, DOFAW Admin.

VISITORS:

Mr. Bryce Masuda, San Diego Zoo (SDZ)
Ms. Alison Cohan, The Nature Conservancy (TNC), Maui
Mr. Matthew Ramsey, National Oceanic and Atmospheric Agency (NOAA)
Dr. Thomas Ranker, UH

ITEM 1. Call to order: Chair Sinton called the meeting to order at 9:05 a.m., Commissioners introduced themselves, with a special welcome to Hi'ilei Kawelo, recently appointed by the Governor and approved by the Senate to serve as Cultural Practitioner representative, followed by staff and others present.

Item 2.

ITEM 1.a. Selection of a new Vice Chair (from appointed members) to replace Marie Bruegmann. Chair Sinton said that it was just to have back up to run a meeting should he be unable to; he asked for volunteers. Member Price volunteered to do be Vice Chair, subject to confirmation for a second term. Chair Sinton thanked him as did the rest of the members.

ITEM 2. Approval of the December 14, 2015 NARSC Meeting Minutes.

MOTION: CHRISTENSEN/CONANT moved that the Natural Area Reserves System Commission approve the minutes. Motion carried unanimously.

ITEM 3. Recommendation to the Board of Land and Natural Resources for approval for authorization of funding for The Nature Conservancy for \$120,000 during FY 12-22 for continued enrollment in the Natural Area Partnership Program (NAPP) and acceptance and approval of the Kānepu‘u Preserve Long Range Management Plan, TMK4-9-02:01, island of Lāna‘i. Ms. Alison Cohan, TNC Maui, gave a power point overview of the Preserve and planned activities for the next six year funding cycle. The 592 acre Kānepu‘u Preserve is located on West Lāna‘i, ranging in elevation from 1,200 to 5,450 ft. It was established in 1991 and enrolled in the NAPP in 1992 with a conservation easement held in perpetuity by TNC. While the Preserve has changed ownership over the years, TNC has continued to hold the conservation easement and do the management as managing partner; although not having a full-time office on the island; but also trying to build management capacity by residents of Lāna‘i. This Preserve contains the last remnants of lowland olopua-lama (*Nestegis - Diospyros* forest as well as the largest remaining wild population of nānū (*Gardenia brighamii*), listed as Endangered on both the State and Federal lists. The best pockets of native ecosystems are fenced in smaller units; some separated by distance from one another. Primary threats are ungulates (axis deer *Axis axis* and mouflon *Ovis musimon*) and invasive plants such as christmasberry (*Schinus terebinthifolius*), lantana (*Lantana camara*), and huehue haole (*Passiflora suberosa*), whose vines can cover the native trees and climb over fences. There is also the ever-present danger of fire and invasive plants such as fountain grass (*Cenchrus setaceus*) that help keep the fire cycle going; and how to deal with a game management area that surrounds the entire Preserve. Fenced management units are designed to keep ungulates out; or to remove any that might still be in enclosures or remove any that might jump in. While heavily affected by non-native species, the Preserve is still worth fighting for it is the last of its kind, and fencing is one of the most important management tools currently available.

Fences were originally installed in the 1990's; most of them are in need of replacement or upgrades due to the harsh nature of the soil and wind and animals jumping into units without high enough fences (minimum of 8 feet). Plastic mesh has become the fence material of choice: while not cheap, it is easier to deploy and appears to withstand the rigors of the wind blowing the erosive red dirt into metal fences; and while they may not be pretty, these fences are pretty much the best help against further ungulate incursion. A top strand of smooth wire is replacing barbed wire to protect seabirds and bats. A further

challenge is the main road across the island that connects with game management and other areas passes right through the Preserve.

Lama has turned out to respond better than olopua in recruitment (number of seedlings present in managed or ungulate-free units), an interesting discovery. Since weed control is a large part of management; herbicide training was held for the fence contractor. Rat traps are maintained by Hank Oppenheimer of the Maui Nui office of the Plant Extinction Prevention Program (PEPP); which helps to protect the rarest of the rare plants in the wild.

A self-guided trail has been developed in the main Kānepu‘u unit for the public to experience the Dryland forest. Plants have signs and there is a self-closing gate. Many of the Kupuna on the island were consulted about this project, which was dedicated to them in March 2014, with special thanks to Bob Hera.

Another valuable resource has been developed by Kepā Maly: an app that you can download that gives an overview of the island and its unique history.

The next funding cycle needs to focus on fire break maintenance, fence upgrades, ungulate and invasive plant control, protection of native plants whether common or rare; also to remove soil that blows up against fences (the buildup allows animals to jump over). TNC is also responsible for maintaining the repeater that helps support others as well.

TNC is working with Pūlama Lāna‘i (the entity created to manage private lands on the island).

Member Conant asked how many mouflon were on the island; Ms. Cohan was unsure. Chair Sinton felt that planting to stabilize soil inside the fences would be a good idea. Ms. Cohan agreed, saying they are working on which species would be the most effective, bearing in mind the extreme dryness of the area and difficulty in establishing anything out in the open. Member Kawelo asked about fence vandalism; Ms. Cohan said that they have a work to hunt program with the contractors to reduce deer within the units and this has helped against vandalism, at least along the main road (more of an issue in remote sections).

Member Newbold was concerned about runoff affecting the coastline and marine resources. Ms. Cohan replied that is something that has to work its way up the line of Pūlama Lāna‘i as a larger, island-wide issue. Member Kaluhiwa asked to see a breakdown of the financial allocations for project. Chair Sinton thanked Ms. Cohan for her presentation and said that they appeared to be doing a lot without much support; a bargain. He then asked for a motion.

MOTION: CONANT/NEWBOLD moved that the Natural Reserves System Commission recommend approval to the Board and Land Natural Resources for authorization of funding for The Nature Conservancy of Hawaii for \$120,000 during

FY 17-22 for continued enrollment in the Natural Area Partnership Program and acceptance and approval of the Kānepu‘u Preserve Long Range Management Plan, TMK 4-9-02:01, island of Lāna‘i.

ITEM 4.a. Proposed Pu‘u Maka‘ala Natural Area Reserve ‘Alalā (*Corvus hawaiiensis*) release by the San Diego Zoo Global, island of Hawai‘i. Staff Vetter gave an overview of how the Recovery Team and partners came up with a lengthy set of 35 criteria to evaluate 17 areas to find the best possible release site; which after years of effort resulted in the remote section of Pu‘u Maka‘ala NAR as the best place for the proposed release.

The last wild ‘alalā was seen in the wild in 2002; a very intensive captive propagation program has been conducted over the years at Olinda Endangered Species Facility on Maui and Keauhou Bird Conservation Center (KBCC) on Hawai‘i. Once the population reached 80 birds, it was agreed that they would move towards release of birds; there are now 114 in captivity, so planning is now underway to make release a reality.

All during this time of focus on captive propagation, there also was ongoing management and protection in the surrounding forest by a partnership originally called the Ola‘a-Kīlauea Group, which ultimately became known as the Three Mountain Alliance (Kīlauea, Mauna Loa and Hualālai) as part of the Watershed Partnership Program. Large portions of forest were fenced and ungulates removed. There was an amazing recovery of the mid-canopy layer, which is believed to contain some of the most important forage plants for ‘alalā.

Jim Jacobi and Jonathan Price did vegetation surveys, mapping food and forage plants, forest structure, and the most intact understory, which ‘alalā need. Pu‘u Maka‘ala ranked the highest as identified by the Recovery Team and was incorporated into the Pu‘u Maka‘ala NAR Management Plan approved by the Board of Land and Natural Resources several years ago, and Jackie Gaudioso-Levita was hired as an outreach coordinator by DOFAW.

Mr. Bryce Masuda, Project Manager for San Diego Zoo Global, at KBCC, has been responsible for the captive propagation of ‘alalā and other species. The long-term goal is to establish a self-sustaining wild population of ‘alalā that are fulfilling their ecological roles and that are supported by minimal management. The partners in this project are: the Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW), US Fish and Wildlife Service (USFWS), San Diego Zoo Global (SDZG), National Park Service (NPS), Three Mountain Alliance (TMA), and Kamehameha Schools (KS).

SDZG is here today to ask permission to conduct activities in the NAR, which is surrounded by KS and NPS lands. The activities will be carried out with as minimum an impact as possible. Any structures or activities will be situated to cause the least disturbance possible to the integrity of the forest.

The first such structure being requested is construction of a glass house style aviary 60 by 30 by 14 feet tall (made of wood, vinyl covered wire and plastic hooding) to acclimate the birds prior to release. Birds will be cared for out of sight. This would be built in a previously disturbed area to minimize any impact on the surrounding forest and release site of people. Once the birds move in, perches will be installed in the area.

Post-release monitoring will be conducted with GPS and VHF radio transmission units that weigh 18 grams. There will be automated telemetry towers 15 feet tall, only placed where the NAR Manager approves such sites (primarily along roads where there is less impact, such as Kulani Cone which is the highest point in the area and already has antennae on its top).

Also, SDZG is seeking permission to remove wild birds should they become injured or sick, to care for them at KBCC; then re-release them back into the wild, or to perform necropsies on any dead birds, which will then be deposited in Bishop Museum.

One request not in the permit application is the construction of hawk towers 16 feet long by 8 feet tall by 8 feet wide, along with feeding stations and capture sites.

There is also a request for infrastructure, to build a small office and living facilities in order to provide high quality care with a minimum of disturbance to the birds. With the aviary situated well inside the interior of the NAR; SDZG wants to have staff living there to minimize travel back and forth to further keep disturbance to a minimum.

The office trailer would be 10 by 32 feet and sited within a previously disturbed site. It would contain rain catchment, a contained sanitation system and solar panels or the existing grid.

All equipment used will be dedicated to the site as much as possible and carefully washed and monitored; including pressure washing of vehicles, frequent cleaning inspections and any other precautions deemed necessary, following all NARS and NPS procedures.

Member Newbold asked where the birds are now. Mr. Masuda said they are at KBCC on Hawai'i and Olinda on Maui. Member Newbold asked whether it was similar habitat; Mr. Masuda said that KBCC is surrounded by similar habitat, but Olinda, though at the same elevation, is surrounded by more disturbed forest; but they have permission to collect forage food and branches of native plants from surrounding forest. Member Newbold asked if they were previously in the area. Mr. Masuda replied that they were originally known primarily from the Kona side of the island, but Pu'u Maka'ala is on the border of the range; the Recovery Team took all that into consideration, but still felt it was the best possible release site with the hope that they would expand into their former range. Member Newbold felt that it was an exciting project.

Member Price asked about the timeline for infrastructure being there both when installed and when removed. Mr. Masuda said that they plan to release 12 birds in early September, so infrastructure needs to be installed over the next few months to be ready.

Exact length of time needed has not been established; however the goal is not to be there for a long time.

Member Kaluhiwa asked about community engagement, especially Kulani agreeing with access. Mr. Masuda said they have a new Warden who is very supportive of the project and allowing staff to access the road he when had gone over this proposal; through the prison facilities. Further, he introduced Jackie Gaudioso-Levita, who has been hired by DOFAW as Project Coordinator for the 'Alalā Project that includes an important outreach component. She has participated in the Merrie Monarch parade, numerous school groups, workshops, After Dark in the Park, and community meetings; particularly in Mountain View and especially along Wright Road, inhabited areas closest to the release site. Other events are planned, with the hope of expanding to a wider audience. Staff Gaudioso-Levita said that they are trying to work with USFWS to come up with some questions and answers to reassure people should an 'alalā nest on their property, or other concerns they might have, to better help both birds and people. She is also planning to give a presentation to the Cattleman's Association Meeting in Waimea on May 21, 2016.

Member Conant suggested that she contact the Volcano Community Association to put something in their newsletter, as well as Farmer's Markets. Staff Gaudioso-Levita said that Volcano Art Center will host an exhibit featuring only 'alalā related art work as an awareness and fundraiser just prior to the release. Mr. Masuda said that social media is also being engaged (alalaproject.org); SDZG has tons of followers all over, so they can help.

Member Kaluhiwa asked if he had gone over this proposal with the Hawai'i Hunter Advisory Commission, especially to describe or play their calls and what they sound like in the wild. Member Asuncion felt that though this was a multi-year project that they should have the permit run for one year at a time for now; may go longer, but be prepared for an extension at least in the beginning. Staff Agorastos agreed that one year to start with would help to evaluate the scope of the project (such as project staff residing there). Chair Sinton remarked that there are many unique aspects to this proposed permit, and agreed with a one year permit to start. Staff Agorastos said that he will work with the applicant; since this entails a substantial investment over a long period of time, this is the best way forward. Chair Sinton asked how many people would be residing in the project area. Mr. Masuda said the maximum would be 5, particularly in the beginning pre-release, with 2 to 3 after release, over the longer haul.

Member Newbold asked about their life span and reproductive rates. Mr. Masuda explained that the released juveniles will be 3 to 4 months old; they mature at 2 to 3 years and it is believed that the younger birds will adapt the area as their own more readily than older birds. However, if they are too young, they will consider releasing older birds after consultation with the Recovery Team. Chair Sinton asked why the juvenile rationale; Mr. Masuda replied that they are territorial and monogamous and tend to stay in one place. It is hoped that younger birds, who have not yet established a territory, will stay there and establish territories, as older birds are more likely to fly back to KBCC.

Chair Sinton asked if there were any 'io (*Buteo solitarius*) in the area. Mr. Masuda replied that there are fewer than before. Staff Gaudioso-Levita said they surveyed for 'io at 19 stations along fence lines and found only 5; which is much lower than the dozens of them in South Kona, where in 2006 to 2007 they took out a number of the released 'alalā. They were released in open pasture sites there where they were attracted to shiny beetles on cattle droppings. It is hoped that the denser sub-canopy in NAR will give the 'alalā more hiding places, as well as more likely to forage in the trees and not on the open ground. Mr. Masuda said they hoped to train the 'alalā to predator avoidance. The structure of the forest in Pu'u Maka'ala appears to be very important.

Staff Gaudioso-Levita said that it has been an enormous hurdle to coordinate all the agencies and the public and to deal with varying levels of knowledge and expectations. Member Christensen asked about public acceptance; she replied that people in Mountain View Community are particularly concerned about possible nests on their property or their private property rights being affected; that is why they are working with USFWS to deal with these concerns in the best way possible.

Mr. Masuda said that there has been a lot of outreach at KBCC, with over 2,000 school children and the public coming to visit since 1996. Kamehameha Schools (on which KBCC is located) assists by providing help by their onsite manager who helps with visitors, management, and access to KBCC.

Member Kawelo recommended that at time of release to ask for cultural practitioners to give a blessing for success. Staff Gaudioso-Levita replied that they have asked halau to develop cultural protocols. A special lei comprised of plants the 'alalā depend upon will be created for the release celebrations, and they are developing a number of events and protocols specific to the release. Because of the remoteness and limited access to the NAR; celebrations will be held for larger groups at the same time as the release on other sites, so that all can celebrate; there will only be a limited number of people on the actual release site.

Member Newbold asked if 'alalā were a threat to other birds and plants. Mr. Masuda said they feed primarily on 'ōlapa (*Cheirodendron*; now incorporated into the genus *Polyscias*), hō'awa (*Pittosporum*), and 'ie 'ie (*Freycinetia*). They were considered to be important seed dispersers; they also feed on insects.

Staff Duvall was concerned that this is precedent-setting setting for the NARS; and asked why the NAR versus other adjacent areas was chosen; given the large home range of the birds, and since they do not reach sexual maturity until 2 to 3 years, the young birds may take a long time a long time to get established and they may not know if they are related or not; so why not the Forest Reserve; why the NAR? The Natural Area Reserves are supposed to be kept as pristine as possible, so why not on adjacent land rather than altering the NAR.

Staff Vetter said that after lengthy discussion and site visits on the part of the Recovery Team over several years, especially looking at the understory with food and away from large numbers of 'io; and the release sites (infrastructure) will be located on previously

disturbed sites; the decision was made to select the NAR. While this is an outside entity applying to lead this project; there has already been an impact to the area first by the prison and now staff.

Member Conant said that a lot of time and effort has gone into considering the best possible site and she agrees with Staff Agorastos that the permit initially be granted for one year to start. She believes in the permit process and although it is hard to balance endangered species and other concerns; this provides the best possible solution.

Staff Rubenstein said that private landowners did not want the release in the Forest Reserve because those areas were immediately adjacent to them and that is where pigs are still available for hunting. The Team felt that the NAR was more central to adjacent lands within the TMA, that are fenced and ungulate-free (with limited public access), and that they would disperse from the NAR.

Staff Duvall again raised the point of their large home range and concerns of not compromising the NAR and still questioned why this could not be done in the FR rather than the NAR; how is this justified?

Staff Agorastos explained that all the sites were examined in great detail and all others were not the preferred site. He found a spot where he felt they could site infrastructure without compromising the forested area, which is why he selected the old water tank site (from when it was part of Kulani Prison). The area is in the middle to the Three Mountain Alliance Watershed Partnership management area, in the most remote portion of the NAR, and requires access either through the prison or NAR, with staff and prison approval in advance. The permit to run annually in the beginning is not for lack of trust of the applicant, but to be able to adjust conditions should there be a need, without lengthy delays. Staff Duvall said that he was still concerned about the precedent setting nature of this application.

Staff Gaudioso-Levita said that the surrounding Forest Reserve may be affected by Rapid 'Ōhi'a Death (ROD), so do not want to go there. Member Conant said that there have been years of talking and not doing; we are at a point where we need to take risks and not be paralyzed with further inactivity while trying to protect the rarest of the rare.

Member Price said that UH Hilo said they are monitoring for ROD in the FR, are expanding monitoring and coming up with a plan.

Chair Sinton thanked everyone for their comments, expressing excitement about the potential of the project, but also agreed with staff Agorastos that it should be for one year at a time to begin with. He then called for a motion.

MOTION: NEWBOLD/CONANT moved that the Natural Area Reserves System Commission approve the proposed Pu'u Maka'ala Natural Area Reserve 'Alalā (*Corvus hawaiiensis*) release by San Diego Zoo Global, island of Hawai'i, and that the Special Use Permit of this multi-year project be for one year, to start; subject to

all terms and conditions and to address any concerns that arise in the first year of the project; with renewal for successive years annually or for a longer term dependent on progress through the first year of the permit period, and inclusion of any modifications deemed necessary. (note of explanation: with SDZG returning to the NARSC prior to project year two.).

Motion carried unanimously.

ITEM 4. b. Recommendation for continued closure of ‘Āhihi-Kina‘u Natural Area Reserve (NAR), Maui Island, due to safety and other concerns: discussion and recommendation to the Board of Land and Natural Resources that the Reserve remain closed for another two years (August 1, 2016 – July 31, 2018). Staff Landon gave an update on the need for the continuing closure, primarily as a safety concern due to Unexploded Ordnance (UXO), and the State is obligated to go through the full process for liability and other issues. The Final Decision Document was submitted to the Department in October 2015, describing the Selected Remedy for the project site, situated in the NAR. The remedy was selected in accordance with the Comprehensive Environmental Response, Compensation, and liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and the National Oil and Hazardous Substances Pollution Contingency Plan, as amended.

Reminder: At the April 27, 2014 meeting, AG Chow explained that there is no way to increase the closure time without a rule change, so current closure time is 2 years; but can allow for limited, controlled public access under specific conditions. Tour operators know that the area is closed; the rules allow for permits; however the area does not lend itself well to structure safe tours, but on a case by case basis they can be considered, based on existing factors.

Staff Landon explained that the same areas that were open will remain open and the same areas were closed in 2008 will remain closed thorough this process. The timeline may be as long as 4 years for the Army Corps to complete the remainder of the process, with an 18-month window for the actual on the ground work for clearance. The third alternative (limited clearance of select areas) was chosen as the most cost-effective and afforded the best possible solution to enable access to the now-closed areas; although how much access will still need to be determined. Other alternatives were to do nothing, or full cleanup which is cost- and time-prohibitive and not realistic.

Staff will continue to work with the Advisory Group and NARSC to determine just which portions of the NAR to focus efforts on (such as anchialine pools and buffers around each of them; trails, cultural sites, areas needing access for management, and access for cultural activities, then come back to the NARSC and ultimately BLNR for the actual plan post-cleanup. We are asking for now that the area remain closed until such time as the process is completed; for once it is complete the USACE will hand over responsibility to us.

MOTION: PRICE/NEWBOLD moved that the Natural Area Reserves System Commission recommend approval, to the Board of Land and Natural Resources, of the continued closure of portions of 'Āhihi-Kīna'u Natural Area Reserve (NAR), Maui Island, due to safety and other concerns and that these areas of the Reserve remain closed for another two years (August 1, 2016 – July 31, 2018).

Motion carried unanimously.

ITEM 5. Natural Area Reserves (NAR) Rules Revision: amendments to Title 13, Chapter 209, Hawaii Administrative Rules: Rules regulating Activities within the Natural Area Reserves. The purpose of the rule amendments would be to make the NAR Rules consistent with the Wildlife Sanctuary Rules regarding prohibitions on introducing, feeding, removing, injuring, taking and killing any plant or animal. Receive recommendations from the Division of Forestry and Wildlife and approve, defer, make other recommendations, or deny to the Board of Land and Natural Resources and the Governor the proposed amendments to the rules. Staff Yuen explained that this is a further amendment to last year's approved rule changes; when staff realized there were no rules prohibiting feeding animals; it is a standard management tool to prohibit feeding, and this will make it consistent with Wildlife Rules.

Member Price asked about whether supplemental feeding of 'alalā would be permitted, since that is feeding birds. Staff Yuen replied that Special Use Permit terms will allow that. Member Kaluhiwa asked if that permit would go to the Land Board. Staff Yuen said that the NARSC can recommend approval. Staff Agorastos said that they trap non-native wildlife by feeding them to remove them, so that would also need to be permitted.

Chair Sinton agreed that it would be best to be consistent with other rules. Member Kaluhiwa said to Staff Agorastos that you as an employee are covered. Staff Gagne explained further that NARS staff operates under a Special Use Permit authorized by the Board of Land and Natural Resources to cover all management actions and activities in the course of their duties. Staff Smith said that this rule amendment was specifically to deal with feral cat colonies and having standard rules will help the Division of Conservation and Resource Enforcement (DOCARE) to uniformly enforce the rules.

Member Christensen asked if they are approving particular language for the rule amendment. Staff Yuen said they are following the rulemaking process and putting in changes. If there is a big change, as determined by the AG's Office, then we need to go through the process again; however if the language is consistent with Wildlife Rules and the NARSC recommends this language to the Board and they can change the language. Member Conant asked if the NARSC was being asked to approve this in concept. Member Christensen asked to review what was being asked. Chair Sinton read the agenda item (as written above) to all for review prior to further action. Member Kaluhiwa asked who the representative is for rule changes; Staff Yuen was not sure but said that the Board will designate authority to delegate to staff; that blanket or not, need to look at old versus new language and changes.

MOTION: CONANT/NEWBOLD moved that the Natural Area Reserves System Commission approve Natural Area (NAR) Rules revision: amendments to Title 13, Chapter 209, Hawaii Administrative Rules: Rules regulating Activities within the Natural Area Reserves. The purpose of the rule amendments would be to make the NAR Rules consistent with the Wildlife Sanctuary Rules regarding prohibitions on introducing, feeding, removing, injuring, taking and killing any plant or animal. Receive recommendations from the Division of Forestry and Wildlife and approve, defer, make other recommendations, or deny to the Board of land and Natural resources and the Governor the proposed amendments to the rules.

Motion carried unanimously.

ITEM 4.c. Update on Rapid 'Ōhi'a Death (ROD) and the Department's desire to potentially close areas to prevent the spread of ROD on Hawai'i island and the need to come up with standardized language to be incorporated into rules, as well as in all permits issued by the department. Staff Hauff, DOFAW Admin Forest Health Program Manager, gave an overview of the current knowledge of this rapidly spreading affliction. Member Kawelo noted that the power point presentation had misspelled 'ōhi'a, which is the correct spelling, not ō'hi'a. The fungus responsible for killing thousands of acres of 'ōhi'a (*Metrosideros polymorpha*) has been identified as *Ceratocystis fimbriata*. Actual agents of spread are not completely known, but researchers are racing to find the answers to this disease which can kill a tree in 2 weeks. Over 37 thousand acres are now infected on the island of Hawai'i, largely on the east side of the island in Puna; but recently seen to be spreading over to the Kona side; so far none observed in Kohala.

Symptoms: crowns of trees that look healthy can turn yellow to brown within days to weeks; dead leaves can remain on branches for some time. Sometimes, single branches or limbs turn brown first and over two to three weeks the rest of the tree turns brown. All ages of 'ōhi'a trees can be affected and can have symptoms of browning or branches and/or leaves. If a tree with ROD is cut down, or a section of the tree is removed, the fungus shows up as dark staining in the sapwood along the outer edge, and there may be an over-ripe fruit-like odor. Trees within a given stand die in a haphazard pattern; the disease does not appear to radiate out directly from infected or dead trees.

The Hawai'i Department of Agriculture (HDOA) passed a new quarantine rule that **prohibits** interisland movement except by permit of **all** 'ōhi'a plants or plant parts, including logs, wood, twigs, flowers, leaves, seeds, stems, and cuttings; also untreated wood, green waste, mulch, sawdust, wood chips and frass (droppings from boring beetles that attack dead and dying trees, creating a fine dust which can be transported by the wind and other vectors). Beginning January 2016 soil was also restricted.

There is now a social media site for further updates: **rapidohiadeath.org**; Dr. Lloyd Loope has been contracted to write a ROD Plan; an outreach specialist has been hired; Entomologists are studying the beetles to determine species and how the fungus is transmitted through their frass; development of PSA's; have secured some funding, but

need more to address further studies and actions. House Bill 267 asks for a 1 million dollar appropriation through DLNR. The ROD Team is: U. S. Forest Service, U. S. Department of Agriculture Research Services, Hawai'i Department of Agriculture, University of Hawai'i Mānoa and Hilo, U. S. Geological Survey, The Nature Conservancy, Coordinating Group on Alien Pest Species, Division of Forestry and Wildlife, National Park Service, and Invasive Species Committees.

Still do not know how it gets around so still need to exercise caution in moving all plant parts and soil.

Member Christensen said that this sets a precedent elsewhere for controlling it and it is a death threat for our forests and all the species. Staff Hauff said that they are planning on felling dead trees where feasible to keep insects from invading further (although this may not be feasible).

Everyone can help to slow the spread of this disease by not moving 'ōhi'a wood, firewood or posts, especially from an area known to have ROD (especially Puna); if you do not know where the wood is from, do not move it. Do not transport 'ōhi'a inter-island: comply with the new quarantine rule to help prevent ROD from spreading. Do not move 'ōhi'a plants, wood or other parts interisland without a permit. Use only proven cleaning methods to clean tools (other methods have been tested and they do not kill the fungus). Tools used for cutting 'ōhi'a trees (especially infected ones) should be cleaned with 70 per cent rubbing alcohol or ten per cent bleach (if using bleach be sure to oil them afterwards to prevent corrosion). Clean your shoes, gear, and clothing. Decontaminate shoes by dipping the soles in 10 per cent bleach or 70 per cent rubbing alcohol. Other gear can be sprayed with the same proven cleaning solutions. Wash clothing in hot water with detergent. Wash tires and undercarriage of vehicles with detergent, especially after traveling from an area with ROD and/or if you have traveled off-road.

Member Newbold asked if the spread could be correlated with wind patterns. Staff Hauff said more study is needed, but that it is highly likely that this could be a problem, particularly in Puna, by blowing all the frass around. However there is still no clear pattern of spread.

Member Christensen said that everyone needs to get the Legislature to understand and support this effort. Staff Hauff replied that the Big Island Invasive Species Committee (BISC) knows about this and they have already gone and talked with Legislators. Staff Zoll explained that we are adding language to permits to clean gear, and take other precautions as listed above, to help halt the spread. Chair Sinton thanked Staff Hauff for the update and handouts.

ITEM 6. a. Designation of two Commission Members to serve on the Joint Consultation Committee Meeting between the Forest Stewardship Advisory Committee and the Natural Area Reserves System Commission. Member Conant wanted to be sure that others were able to attend in case she was unable to; Members

Christensen and Matsunaga volunteered to attend the May 24, 2016 meeting to be held in DOFAW Conference Room 323, Honolulu. Staff Gagne will be sending out information and filing the agenda in May.

ITEM 7. Updates: Staff Gagne introduced David Smith as the new DOFAW Administrator, since he was not present at the beginning during introductions.

Staff Rubenstein said that there are two management plans currently in the Draft Environmental Assessment (DEA) stage: Laupāhoehoe Experimental Tropical Forest online Friday April 8, 2016 (send any comments to her); and Pahole NAR Management Plan will be completed in one to two weeks, then circulated with DOFAW staff for internal review. A draft of the plan was discussed and approved in concept at the December 14, 2015 NARSC Meeting.

Staff Agorastos gave an update on the revisited National Ecological Observation Network (NEON) proposal to install an observation tower, which was previously disallowed in Laupāhoehoe NAR and FR. This time there is a whole new group that has not come in with guns blazing and a pre-decided location and attitude. They managed to alienate Branch staff and NARSC members. This is a whole new group with a more collaborative manner, which has resulted in more cooperation from Branch staff. They are, in concept, seeking to install a station in Pu‘u Maka‘ala, most likely on Kulani Cone, which already has antennae on the top. They will need to go through an EA process and analyze proposed locations to ensure as little disturbance as possible, as well as to analyze other lands, as a CDUA through OCCL. Hawai‘i is the last of 22 stations to be installed in the network.

Member Conant said that the previous group was a very bad experience, so she would like to know more about the present group. Chair Sinton asked why it had to be in the NAR and not elsewhere. Staff Agorastos agreed that they need to better explain why in the NAR and not elsewhere. Staff Yuen said this was just conceptual at this stage. Member Conant said that she needs more details before they come in with an application; she is especially interested in how they have changed. Chair Sinton said that they can apply but we need to advise them that we need to be convinced this has to be in the NAR.

Staff Agorastos said the changes were also internal; DOFAW staff did not want it in the FR either (at Laupāhoehoe), but then staff went out and saw examples of other potential sites and why these were chosen (largely for wind patterns, which can vary from site to site). Staff now sees it as applicable to climate change concerns. This new group is comprised of listeners not tellers; and that has made a difference with many staff. They have not yet submitted an application, but we need to be ready to ask questions about proposed locations. Kulani is considered to be “magical” for high quality but remote location and wind patterns. Staff does not want any cutting of forest; they can go into open pasture land adjacent to forest.

Chair Sinton asked about the height of the proposed tower. Staff Agorastos said that it will be 30 feet minimum above the 80 foot canopy, so about a 110 foot tall tower.

Concerns were also raised about the potential for birds, such as the soon to be released 'alalā to be affected by the tower and support wires. Staff Yuen said they will also be applying for Upper Waiakea Forest Reserve, though the site is more disturbed. Staff Agorastos was not sure of their timeline or when the actual application will come in.

Staff Yuen said that the Legislative Session has about a month left; bills have been whittled down, including one for ROD, funding for IUCN, and increased funding to boost already depleted firefighting. The budget bills come out later this week.

There is a non-fiscal bill, dealing with aerial hunting that seeks to clarify aerial shooting, who is authorized to and where. Staff Smith said it is to make sure that State employees are exempt; to protect them as they do their jobs of animal control. There has been some push back, but staff is doing it. We also need to deal with the Big Island County Council resolution banning aerial shooting, with us questioning whether the County has jurisdiction over State lands. Member Christensen asked whether the County can prohibit State actions.

Staff Yuen said that there are 4 nominees to the NARSC who are scheduled for confirmation hearings later this month (Michelle Clark to replace Trae Menard, whose second term ends June 30, 2016; reappointment of Robin Newbold and Jonathan Price for a second term; and Tom Ranker (present at the meeting) to replace Marie Bruegmann who moved to the mainland.

Staff Laramée gave an update on the International Union of Nature (IUCN) World Conservation Congress (WCC), meeting September 1-10, 2016 in the United States for the first time, with Hawai'i as the host state. She reported that an appropriation bill is chugging along in the Legislature for 4 million in state matching funds (another 4 million was raised for IUCN last year through the Department's Special Land and Development Fund; but more is needed). Chair Sinton asked where it would come from. Staff Laramée replied it would come from the General Fund, they hope.

Member Kaluhiwa said that as Legislative Coordinator for the Department, he explained that we do not have 4 million and that our Special Funds are gone, so the Governor is allowing to switch to General Funds from Special Funds. The Natural Area Reserve Fund (NARF) cannot be used and the Aloha + Funding formerly under the NARF is a trade-off. The budget comes out April 12, 2016. This Friday April 8, 2016 is the deadline for all bills to cross over.

Member Newbold said that she and others hope that President Obama will announce the expansion of Papahānaumokuākea Marine National Monument, adding a fifty mile corridor to each side of the current boundary (from 50 to 100 miles) for the outside boundary which would make it the largest protected marine area in the world. It is hoped that this will be announced at IUCN and will create a lot of interest.

Staff Laramée said that Hawai'i has a number of initiatives, with 7 motions accepted for IUCN forums and Members Assembly votes. There will be a new feature for this

meeting: an open floor (first floor of the Convention Center) that will feature a number of Pavilions. Hawai'i will be part of the Hawai'i-Pacific Pavilion, where we will be able to hold presentations, and be able to interact with the general public as well as Congress Delegates. There will be pre- and post-congress tours, ROD discussions, as well as endangered species. There are over 900 presentations; registration is now open and it is anticipated to be the largest Congress on record.

ITEM 8. Announcements. Next meeting may not be until fall or later; depending on funding and whether there are any topics that need action between now and then.

Member Kaluhiwa wanted to welcome member Hi'ilei Kawelo to the NARSC, remarking on her excellent restoration work at He'eia. Staff Gagne also recognized her and Matt Ramsey as members of the first reconstituted YCC Program in the early 1990's, funded through the NARF and designed to attract and encourage students to consider a career in the out of doors; and the rest is history!

ITEM 9. Adjournment. Chair Sinton adjourned the NARSC Meeting at 11:50 a.m.

Respectfully submitted,



Betsy Harrison Gagné, Executive Secretary
Natural Area Reserves System Commission