MINUTES OF THE JULY 31, 2017 NATURAL AREA RESERVES SYSTEM COMMISSION (NARSC) MEETING, HONOLULU, O‘AHU

COMMISSIONERS PRESENT: **Draft subject to approval**

Dr. Jonathan Price, Vice Chair
Dr. Nori Yeung
Dr. Scott Rowland
Ms. Michelle Clark
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:

Ms. Robin Newbold
Dr. Tom Ranker

STAFF:

Ms. Linda Chow, Deputy AG
Ms. Betsy Gagné, DOFAW Administrative Office (Admin.)
Ms. Emma Yuen, DOFAW Admin.
Ms. Charmian Dang, DOFAW Admin.
Mr. Nicholas Agorastos, DOFAW Hawai‘i
Mr. Chris Miller, DOFAW O‘ahu
Mr. Talbert Takahama, DOFAW O‘ahu
Ms. Dohna Bicoy, DOFAW O‘ahu
Dr. David Sischo, DOFAW Admin.
Mr. David Penn, DOFAW Admin.
Mr. Barry Cheung, Land Division

VISITORS:

Ms. Lyll Asuncion, Naval Facilities Hawaii (NAVFAC HI)
Ms. Montona Futrell-Griggs, National Science Foundation (NSF), Virginia
Mr. Steve Ellis, NSF
Ms. Amy Little, Batelle Memorial Institute/National Ecological Observatory Network (Batelle/NEON), Colorado
Mr. Ty Lindberg, Batelle/NEON, Virginia
Mr. Paul Luersen, CH2M, Hawai‘i
Mr. Rck Farnsworth, Betelle/NEON, Virginia
Mr. Kirk Tomita, Hawaiian Electric Company (HECO)
Mr. Rouen Lin, HECO
Ms. Teri Nakakura, HECO
Mr. Yutaro Tsuji, HECO
Mr. Albert Garcia, Fleet Area Control and Surveillance Facility San Diego Detachment Pearl Harbor (FACSF)

Mr. Mark Damron, FACSPAC, U. S. Navy
Dr. John Sinton, former NARSC Member and Chair
Mr. Sean Moura, HECO
Ms. Teresa Dawson, Environment Hawai‘i

ITEM 1. Call to order: Vice Chair Price called the meeting to order at 9:00 a.m., Commissioners introduced themselves, followed by staff and others present. There being no requests for move-ups; he then recognized Dr. John Sinton and his eight years of service on the NARSC; half of them as Chair. Staff Gagne presented him with a print and a card that was circulated among members present, and also acknowledged that he was also the NARSC representative on the Legacy Land Commission (see Item 5.). Staff and members expressed their appreciation.

ITEM 2. Approval of the Minutes of the April 6, 2016 Natural Area Reserves System Commission Meeting. Vice Chair Price asked for any corrections; there were a few minor ones; no one else had any further corrections.

MOTION: Members CONANT/ROWLAND moved that the Natural Area Reserves System Commission approved the minutes of March 31, 2017 as corrected. Motion carried unanimously.

ITEM 3.a. Grant of Term, Non-exclusive Easement to the United States of America, Department of Navy for Communication Facility Purposes; Kamananui, Waialua, O‘ahu, Tax Map Key: (1) 6-7-003: portion of 025, located within Mount Ka‘ala Natural Area Reserve; action by the Natural Area Reserves System Commission to recommend to approve, defer, make other recommendations, or deny recommendation to the Board of Land and Natural Resources. Mr. Barry Cheung from the Land Division presented this re-submittal (deferred from March 31, 2017), where staff and members had concerns that it did not appear to be a routine houskeeping measure per the submittal, and no one was present from the Land Division or Navy to offer an explanation to address the two steps of enforcement action need to be taken: 1) remove the encroachment (Navy facility); 2) or amend the lease to authorize use of the site within the Natural Area Reserve.

Barry Chung, Land Division was present at the meeting along with Navy personnel to explain the submittal further. The intent of the request for a Special Use Permit from the NARS is to document the encroachment (1,493 square feet) by the Navy’s communication equipment within the Ka‘ala Natural Area Reserve. The Department of Land and Natural Resources (DLNR) has issued two leases in the vicinity to the Federal Aviation Administration (FAA) and the Army. Around 1990, the Navy was planning to install their communication equipment within the Army’s leased area, and construction was completed.

Around 2008, the Navy became aware that their improvements might not be falling inside the Army’s area, as they originally thought. A land survey conducted subsequently confirmed that a portion of the Navy’s equipment is actually within the NAR (the 1,493

square feet, or Area A, as shown on the map as part of the submittal). Photos taken during a recent site inspection and attached to the submittal were also part of the submittal at the NARSC meeting from the Land Division.

Navy personnel, including a real estate specialist (civilian), operational staff (one Navy and one civilian), in attendance at the meeting, indicated that the original construction was based on wrongful interpretation of mapping data which caused the encroachment. In addition, the Navy also reiterated the significance of the facility, in particular, in view of the latest development in world affairs. The Navy also said there is no further planned improvement at the site.

The Land Division has indicated that the proposed land document is a non-exclusive easement to the Navy, without removing it from the Natural Area Reserves System (NARS).

Vice Chair Price asked members if they had any questions at this time. Members were concerned about whether staff would be restricted from accessing the area for management purposes. Staff Cheung responded that it would not be taken away from the NAR. Member Rowland asked about weed control. Member Bauer wondered how the Navy improvement fits in with Exhibit 1. Staff Cheung explained that Exhibit B, the map, shows the Army on one side, the Navy on the other side (as opposed to Exhibit A). Member Rowland asked about weed control in that parcel, to be done by the Navy or NARS staff. Member Conant felt that NARS staff should have access. Staff Miller said that they have worked out access and weed control issues, and have no further concerns. Staff Cheung asked if Oʻahu NARS staff had any further questions, concerns or objections.

None being heard, Vice Chair Price then called for a motion.

MOTION: CONANT/KAWELO moved that the Natural Area Reserves System Comission approve this Grant of Term, Non-exclusive Easement to the United States of America, Department of Navy for Communication Facility Purposes; Kamananui, Waialua, Oʻahu, Tax Map Key: (1) 6-7-003: portion of 025, located within Mount Kaʻala Natural Area Reserve, and to recommend approval to the Board of Land and Natural Resources.

No further discussion.

Motion carried unanimously.

ITEM 3.b. Special Use Permit for the National Ecological Observatory Network (NEON): requesting to work in Puʻu Makaʻala Natural Area Reserve, Island of Hawaiʻi, including establishing a long-term monitoring tower; placing the tower in Puʻu Makaʻala for a 30 year monitoring project as part of a major U. S. -wide set of 20 Domains to address changing ecological patterns over the next 30 years. Mr. Steve Ellis, of the National Science Foundation, gave a powerpoint presentation outlining

the overall purpose of NEON across 20 Domains in the Continental US, and Puerto Rico; with Hawai‘i the last to be added as Domain 20. The NSF is the overall applicant and sponsor, responsible for funding, as well as overseeing the operational work carried out by Batelle Memorial Laboratories (Batelle) who are in charge of the day to day operations; answering directly to NSF. While the Federal Government runs on a biennial budget; this thirty-year project is the highest priority for NSF, has had a long lead time to set up the Domains, and has congressional support to assure that this long-term monitoring continues uninterrupted. This is a $55 million a year project across all the Domains; and again, has the highest priority in NSF.

The process to determine a suitable site in Hawai‘i was a year’s long process that passed through several iterations; resulting finally focusing on Pu‘u Maka‘ala NAR as the most suitable site for security, excellence of habitat, fenced in perimeter, overall management of the area as native, and access to an existing power source without undue disturbance, as well as additional characteristics. While Upper Waiakea Forest Reserve was the other most recently nominated area for consideration, the Hawai‘i Branch Manager explained that area was one of the most heavily used by the public for hunting, hiking, off-road trails and there were no plans to fence the area. He recommended the NAR, rather than the Forest Reserve, as being more secure for such a project; with the agreement of NARS staff.

Actual site selection within the NAR was conducted by NSF, NEON, DOFAW and NARSC members, over several visits and exhaustive evaluations of 11 sites. The final selection (the current site) was agreed to by all. Another visit to the specific site was conducted wih the addition of staff from the Office of Conservation and Coastal Lands (OCCL), which determined that this being zoned Conservation, that Use of the Conservation District would be occurring, and NSF would need to go through the full Conservation District Use Application (CDUP) process; including perparaton of an Environmental Assessment in compliance with Chapter 343, Hawaii Revised Statutes. It was helpful to all to meet on site to discuss next steps in the process for the process including public meetings and feedback. The Environmental Assessment was produced by CH2M, Honolulu; contracted by Batelle.

In addition to the CDUA; because Federal funding is involved, NEON has had to follow the National Environmental Policy (NEPA) process as well as the National Historic Preservation Act (NHPA), Section 106; consult with the US Fish and Wildlife Service as part of the Endangered Species Act (ESA) Section 7; in addition to other requirements from the State (including consultation with the State Historic Preservation Office, Coastal Zone Management (CZM) compliance through the Office of Planning (OP), and County constuction permitting process.

The entire process is accessible on the NSF NEON Program website, and all permitted acvitities will be posted for future reference; as well as all data generated from the project (as is the case for other Domains already up and running). The data will be made available to the scientific community and the general public, for use in analyzing

ecological conditions in the Hawaiian Islands and would be comparable ot data collected across the Continental United States, Puerto Rico, and Alaska.

For further information, see:
http://www.nsf.gov/funding/pgm_summ.jsp?displayFullSite=true&from=fund&orgAbbr=NSF&pims_id=13440

Infrastructure at the site will include a 105 ft (32 m) tall scaffold lattice tower with concrete foundation pad, secured by 4 guy wires. The tower site is at the edge of the forest to minimize disturbance. An instrument hut will be located across the road from the tower; also located along the road in a previously disturbed site. Power to the site will come up the 4 x 4 road, at grade from an existing power pole located below the site.

The tower, will be on site for at least 30 years and have the ablility to add different instruments to the tower; in collaboration with other researchers. In addition, there will be a series of transects, plots, soil pits, a double fence precipitation gauge (located in open lands adjacent to the forest), soil array, and staging/parking area near the tower. Proposed sampling plots and grids include the tower plot, distributed plot, bird grid, phenology transect, and mosquito point. It is possible that individual plot or grid locations may be adjusted within the limits of the proposed project area; and any adjustment in plot or grid location will be coordinated with DOFAW Hawai‘i NARS Staff, who have final say.

While these are the nation-wide standard items selected; it is also possible to have other sampling activities in the area; to be coordinated between NARSC staff and Batelle/NEON.

Member Yeung asked about other insects and also pointed out that the native landsnail fauna contains many terrestrial species, and it is quite important to conduct surveys as soon as possible. She is very much interested in conducting further surveys in the area; and to collaborate or run this simultaneously. NSF staff reiterated that the protocols developed were to national standards; but that studies such as what Member Yueng was proposing could be incorporated into the process. Also, in answer to her and other members concerns about beetle traps: they may need to be re-designed due to concerns about disturbance by ‘alalā (*Corvus hawaiiensis*). Also, member Yeung pointed out that there are species of ground-dwelling carabid beetles that are listed as Endangered. Dr. James Liebherr (Cornell University) is the expert on this group. Dr. Karl Magnacca, also needs to be contacted, as both can identify what if any of these insects are in the area (not to mention other species).

Note: All native species, whether listed as endangered or not, are protected by the state (Hawaii Administrative Rules, Chapter 124).

All this has to be in compliance with the Biological Opinion (BO) issued by the US Fish and Wildlife Service. NEON staff are open to work with member Yeung and staff to

address the snail habitat surveys. Member Yeung again expressed her concerns about by-catch in pit-fall traps, including snails and other rare invertebrates.

Member Conant said that the main point is that we know virtually nothing about many landsnail species and some may need to be listed for further protection, even though not now listed; we need to understand that they are there. Member Bauer asked about the purpose of the beetle traps. NSF staff responded that beetles are considered to be sentinel species (as one of the most abundant arthropod groups across most of the land) and that is why they were selected in the development of NEON sampling protocols, along with mosquitoes.

If any listed species are discovered, their exact location will NOT be publicly disclosed; as part of their automatic protection. Member Yeung asked about collection of voucher specimens. NSF staff said that NSF has to abide by rules and regulations of each state. Member Yeung said that the Bishop Museum is the official repository for snail, entomological and plant specimens.

Member Rowland said that within the next 30 years these protocols might indeed harm something; if so, are you willing to stop. NSF replied that yes, finds such as that would be disclosed and appropriate actions to mitigate or shift sampling sites are possible; coordination between ourselves and NARS staff is critical. Member Clark pointed out the ʻalalā project is located mauka of the tower area; she expressed concern that the guy wire location and other mitigation concerns be addressed; particularly for night-flying sea birds and bats; and would it be possible to lower the guy wires. NSF staff agreed that this could be done as well as whatever else is needed; again, collaboration is key.

Member Matsunaga asked if they would be contracting technicians to do the actual identification of specimens. NSF responded that yes, they would make a first pass by staff, then they would be sent out for further identification; possibly contracting with the University or other entities.

Member Matusnaga also asked about invasive species such as insects or plants and how they would be handled. NEON staff said that they would make field observations and report back; soil horizon plots could tease out specific species such as mites. Member Matsunaga was also concerned about invasive species in soil samples as well.

NSF/NEON then reiterated the compliance status; stating they had gone through consultation with State Historic Preservation Office (April 24, 2017); on May 23, 2017 published the Draft Environmental Assessment; on June 19, Section 7 with the USFWS per the Endangered Species Act, June 22, 2017 end of comment period for EA, June 29, 2017 public hearing for CDUA held in Hilo. Next step publication of a Finding of No Significant Impact (FONSI) for the Final EA, to be published in the August 8, 2017 issue of The Environmental Notice, and final approval of the CDUA anticipated at the September 8, 2017 Board of Land and Natural Resources Meeting. The project would then be looking at late September/October 2017 to begin the process of assembling

necessary equipment, and ensuring all County and other permits are complete before any construction begins.

Staff Yuen said that the NARSC approves the SUP application and Board the approves the CDUA.

Staff Takahama expressed concern that staff has had previous experience with federally-funded long-term research (particularly at Laupāhoehoe), and wondered if it was part of the US Forest Service deal to justifiy developing sites for their Experimental Tropical Forest overlays. Hawai‘i is an outlier compared ot the continental scale; but if local researchers cannot help, what is the benefit. NSF staff did not know for sure, but said that since the continental scale analysis is over the long term, it is valuable to have this data; Puerto Rico is also included.

Staff Takahama asked why the present site versus the original site (Laupāhoehoe); feeling that the US Forest Serviec was ill-advised to site it there due to costs to develop it, and other sites were not feasible. NSF replied that no one knows how to integrate, but need a lot of data over time to keep informed in the long run. Staff Takahama said we are the Endangered Species Capital of the US, so to the outlier effect: how does that compare. NSF staff responded that studies of the norm can be the most interesting; but also, this is over a very long time period, which has never been measured before; trends may change with changing ecological patterns not even contemplated in the conceptual stages of this project.

Member Yeung said that ecology of native and invasive snails can offer valuable comparison and insight. Staff Takahama asked Member Yeung about sampling protocols and the use of beetles. Member Yeung explained that beetles are easier to find and more common in leaf litter. But snails are now coming to the forefront, not just in Hawai‘i, but in the South East US. Pitfall traps have their uses, but need a clear plan for mitigation to protect the high biodiversity of native snails as well as invasive species, and their effects. She offerd to collaborate on this issue further.

NSF staff explained that beetle distribution was chosen in the early stages of development of NEON; beetles are generally believed to be an important senitnel species, many are widely distributed; that is why beetles were chosen.

Member Kawelo asked if funding was secure for the long term. NSF staff explained that Congress funds NSF, pending availability of funds; limited by specific appropriations. This is a $40 to $60 Million investment over the long haul; it is 10% of the budget of NSF. It is a major priority for NSF and NSF will endeavor to ensure that funding is as stable as possible for the long-term.

Member Bauer asked about the tower plots; it was explained that the plots would be around the tower. Member Bauer asked how the plots would be accessed and would the public be able to access them as well. The response was that acess to the area is within a secure area, with locked gates and that there is no vehicular acess off road; there will be a

series of trails to the plots. Batelle/NEON explained that all plots would be developed in consultation with DOFAW NARS staff; primarily Nick Agorastos, Big Is NARS Manager. They will be determining what current trails are in use by staff for management, other research in the area and possibly combining all into a set series of trails to lessen overall disturbance of the area.

Vice Chair Price asked about the scope from a permitting perspective and how they envision changes over 30 years; how will continuity be maintained. In answer, that is why NSF is the applicant, as the agency with the over-all responsiblty for delivery of the project; including funding; while Batelle/NEON is responsible for the day to day operations of the tower and ecological sampling. Any additional projects may be proposed, to go through a public process to add; as part of the overall process to address changes. NSF staff reiterated that everything is documented and available on the NSF website.

Member Rowland asked who is the host: it is NARS or State of Hawai‘i and how does one become a host? NSF staff explained that when NEON was being designed, Hawaiian scientists sent in proposals to be hosts; a self-identitifed group worked with staff. The first choice, recommended by the US Forest Service in the mid-2000s, was for Laupāhoehoe on unencumbered land (under DLNR Land Division) adjacent to the Hawai‘i Tropical Experimental Forest, which is an overlay of Laupāhoehoe NAR and Forest Reserve Sections, now under management by the US Forest Service (with oversight by the State as well).

After a site visit by NARSC members and others, it was determined that the site was unacceptable for a variety of reasons including complete lack of infrasctucture, local community opposition and concerns about such a large tower in the middle of the forest. The project was not approved by the NARSC, and they went through further steps along the way to examine other sites; returning to DOFAW with the recommendation of Upper Waiakea Forest Reserve after several years of re-grouping and reconsidering the project in Hawai‘i.

Member Rowland said that it is a big tower, and how would the tower be identified (if someone came in and asked); as well as what will happen to it in the long run at completion of the project.

NSF staff responded that at the end of the project all installed infrastructure will be removed and the site returned to its original state. AG Chow asked if there was secure funding to return it properly. She is asking because the State has had past problems, and raised the idea of bond issues. NSF staff responded to AG Chow that bond issues had been discussed but it is different for the Federal Government. The importance of locating a secure site is the most important step in the process. Using the original site in Puerto Rico as an example of a public relations nightmare: the site was not secure, a murder took place at the site, and much of the instrument hut and contents were vandalized and/or stolen outright. The site was then decommissioned and removed, and restored to its original state, and a more secure location was selected. Another possibility: the State

may still want to keep the tower infrastructure for continued monitoring; we are open to this idea too as an option through the life of the project.

Member Clark asked about security at the site. NSF staff explained that there is a series of locked gates; Kūlani Correctional Facilities also have control over access across their facility, and monitors acess along the road that goes around the boundary of the facility (an old 4 x 4 road, recently upgraded to facilitate access for management by NARS staff), and others, without having to cross thorugh prison facilities; but still requiring advance notification and prior approval by the prison; all still need to check in, in person at the guard station so they can keep track of who passes thorugh the facilities and who uses the alternate access road. The area is remote and has limited public access (as opposed to the Forest Reserve).

Member Rowland asked where the data will live. NSF explained that it takes about 8 hours for the data to show up on the NSF website. Member Rowland understood the need for consistent data collection actross the US, but also felt thare are all kinds of other things to be considered, so is there a way one can propose additions. NSF staff responded said that was a possibility; in the design phase, the State was included but it was unclear who gave that input, and many felt left out. How the design was selected and refined was part of the overall process for all Domains. Any new proposals will need to be considered separately; but NSF does receive proposals and can then fund support for them.

Staff Yuen said that there needs to be access by all researchers within reason. NSF staff replied that while Batelle/NEON will be coorindating with NSF; NARS staff has input as well. NEON staff said that as site host, you (the State) can ask for or limit access.

Member Kawelo asked if the current application was for a NARS SUP for the site. NSF staff replied that it was, and they would be seeking a permit for the full thirty year period as a Federal Government entity. Member Conant asked if this was going to be a burden on NARS staff and budget, directly asking staff Agorastos for comments and whether this would be a help for staff ot not.

Staff Agorastos said that while it is an increased burden on himself in particular, he needs to get more staff involved at Pu‘u Maka‘ala and other areas, since there is an increase in research requests in recent years, which is a bigger issue even; along with getting data and reports from researchers in a timely manner and that are useful to management of our reserves. Staff has limited time and numbers to pursue research themselves, or track down reports; but we recognize that through NSF/NEON we will get data. It is an opportunity, yet he is nervous about the increase in responsibility on the part of him and his staff.

Member Conant asked if approved, would someone be monitoring on a day to day basis. Staff Agorastos responded that he and his staff have been involved from day one and will continue to be involved; incorporating conditions into the final permit that will carefully spell out all such controls and responsibilities. NEON staff explained that this will be the

last site built; we have learned from the entire process, and NEON will have a person on site at all times with a project management background. Member Conant asked how long it would take to set up the tower infrastructure; response was about six months.

Former NARSC Member Dr. John Sinton remarked that he was involved in the Laupāhoehoe site, and he was not still not convinced that they could demonstrate why in had to be located in a NAR. The purpose of of the NARS is to maintain areas in as undisturbed a state as possible; by the NARS allowing even minimum invasive actities without considering other areas; why this site.

NSF responded that understanding the resources in this particular area would act as a reference for a greater understanding over the long-term, something that has not been attempted. Uses have been identified, and numerous sites were proposed, with Pu‘u Maka‘ala rising to the top of the list for security and access; a fenced perimeter with gated access, excellence of suitable habitat and critical wind patterns. The previous process (Laupāhoehoe) was very much a top down process; so by the time it came to the NARSC and the Community for their input and action, the proposal was turned down in the NAR as the tower location, and so began the long process of them reconsidering another site selection. NSF recognizes that it is incredibly important to work with stakeholders from the bottom up not top down. But it has still come down to Pu‘u Maka‘ala NAR as the best and only option at this point; from input at all levels including DOFAW Hawai‘i staff.

Staff Agorastos said he has a laundry list of things he wants done in conjunction with this project. Member Yeung said she has a wish list of snail work to be done in conjunction with this project. Member Conant said that she was involved with the Laupāhoehoe fiasco and this present process has been far more collaborative. She participated in actual site visits for site selection (along with Member Price) prior to this going any further in the process. Involving the community in data management for the community is a good thing.

Staff Takahama asked if it was recommended at the early stage for the permit. Member Conant said that the original proposal was defeated and they were coming back with a new process and set of oversights (Batelle/NEON for NSF; rather than the now-defunct NEON, Inc.).

NSF staff reiterated what they had mentioned earlier in the meeting, that when they returned for another try, they had identified Upper Waiakea Forest Reserve, and that was moving along until Steve Bergfeld (DOFAW Hawai‘i Branch Manager) explained to Staff, NSF and NEON that the Forest Reserve was a far less secure site, that it would meet extreme resistance from many community members that used the area for various recreational purposes including hunting; and the area was unfenced, as opposed to the NAR that was fenced, and the priority was to manage it for its native ecosystems; while allowing research to be conducted that would help with NARS management of the area.

Staff Takahama asked about chronology: at what time was this current proposal brought to the NARSC. NSF staff replied that was on the agenda for the April 6, 2016 NARSC Meeting, Item 7 under update by staff Agorastos said that there had been a shift from the Forest Reserve to the Natural Area Reserve; this was just a heads up that the process would be starting again (Note: see NARSC Meeting archives on the Native Ecosystems Protection and Management web page of the DOFAW website). NEON staff met with DOFAW and NARS staff and 11 sites were suggested looking at maps; before going out in the field with Big Island NARS staff, NARSC Members (Conant and Price who were on the Big Island), and the NARSC Executive Secretary. Most of the sites were eliminated right away by all participants; until the present proposed site was indentified by all as being the most suitable; actually on the edge of the forest along the previously roadside, not in the forest (although two of the guy wires will extend into the forest).

Staff Yuen reminded all present that the Land Board approves all permits ultimately. Staff Agorastos said that what was being asked today, was approval of the permit application to approve the tower site and infrastructure for thirty years; but the monitoring and science portion, while also a part of the permit, would be subject to annual reporting and renewal to address any issues that arose over the previous permit year or not and whether any changes need to be made in any of the monitoring or science portion. By having a single permit, divided into sections, it will allow everyone the, proper institutional memory since this project has a very long life. Permit amendments can simply be attached to the Master Permit; staff and NARSC members will continue to be part of this process, to help with institutional knowledge ofer the long term.

Vice Chair Price asked permit conditions. Staff Agorastos was unclear of all requirements for the studies; which was why he and others favor an annual review process for those. Once the tower infrastructure is in place the only additions or deletions would be to replace equipment or add new equipment. NSF staff agreed and that they will help to coordinate this. Staff Agorastos felt this had to be solid for the 30-year term, so that it can pass along seamlessly at all levels to take into account wholesale staff turnover at all levels, including the NARSC.

Member Yeung asked about the permit application and annual review in the future. Staff Yuen said that NARSC acts on an advisory basis. Vice Chair Price mentioned other long-term projects in the NAR such as ʻalalā recovery; it is important for the NARSC and staff to continue to be informed. NSF staff agreed that it was good to know what is going on. Member Conant said that she definitely wants to hear from staff for input as well as NSF. Member Clark asked about reports. Staff Dang replied that timely report submittals will be part of the SUP conditions and the annual report/review.

Member Matsunaga asked if there was an official staff recommendation to the NARSC. Staff Agorastos said that his recommendation is for the State more than the NARSC. The State does not have capacity to do this level of science so he is in favor of this and recommends approval of this permit application.

MOTION: Yeung/Conant moved that the Natural Area Reserves System Commission recommend approval of the request to work in Pu‘u Maka‘ala Natural Area Reserve, including establishing a long term monitoring tower and on the ground ecological studies through out the 30 year life of this project; with the proviso that an annual report be submitted before the end of each permit year to assess whether there need to be any changes (additions or deletions) to the on the ground research so that conditions may be amended and attached to the original 30-year Master SUP.

Vice Chair Price asked if there was any further discussion; not hearing any, called for the question.

Motion carried unanimously.

ITEM 3.c. Special Use Permit Application from Hawaiian Electric Company (HECO) to conduct a feasibility study to consider relocating a portion of the existing Mikilua 4 Circuit at Mount Ka‘ala, Waianae, O‘ahu, TMK 6-7-003: 018 and 025 portions; action by the Natural Area Reserves System Commission to recommend approval, defer, make other recommendatons, or deny recommendation, to the Board of Land and Natural Resources. Ms. Teri Nakakura, HECO staff, gave a powerpoint presentation as an overview of what HECO is proposing. They have met with DOFAW and USFWS staff prior to this as well (due to landsnails and other protected species in the area).

While HECO did not construct the original line, HECO took over the line in the 1960’s from the military. These overhead lines and their pole supporters, particularly in the NAR and Forest Reserve are aging and need to be replaced. They would like to relocate the poles along the roadside; allowing for better access for maintenance in the long term. The immediate concern is to do a feasibility survey to determine best way to proceed, which would likely include a one-time removal of poles and wires from current location to be re-placed along the roadside. While this too would cause some damage; it would be less damaging over time to the area. There area would be carefully surveyed in advance to ensure no protected species would be affected; or to develop ways to mitigate any damage. The Snail Extinction Prevention Program (SEPP) of DOFAW is playing a key role (see minutes of the March 31, 2017 meeting at which time David Sischo gave a brief overview of how his program is working with HECO).

The scope of work focuses on relocating overhead line near the top of Ka‘ala to improve reliability of electrical supply and avoid disturbing biological sensitive areas over the long term when routine maintenance is done. They will need to install 8-9 new poles and string 5-6 new spans, while removing 16 poles ands spans. The infrastructure map indicated the main known snail habitat (focusing on the federally listed *Achatinella*) in the trees, but there are also other species currently not listed of native snails on vegetation and on the ground.

Member Conant remarked that this is a big undertaking with a lot going on in a very sensitive area, and need a very detailed description of what you want to do; that is not spelled out in the permit application on hand. HECO staff explained that they are required to do an Environmental Assessment (EA), which will include a biological survey, an archaeological survey, and wetland delineation. They have hired a consultant to work on this process.

Member Yeung said that snails are all over the place in that area, and even poles along the road could destroy snail habitat. Current snail protocols focus on endangered species; but there are many other native species currently not listed as endangered. Just because they are not listed, they are still worthy of study and protection, and she offered to assist in any way possible.

Member Kawelo asked about protection of sea birds such as Newell's shearwater. Member Rowland asked if it was too expensive to put lines underground. HECO staff said that along the roadside was considered to be the most feasible; but could look into costs of undergrounding them. Member Rowland said though that it does not solve the problem of removing existing poles and wires. Member Conant asked about height of the poles; reply: 60 feet; however Member Conant pointed out that sea birds do fly low, so that is a concern.

Staff Takahama asked if they were preparing a Habitat Conservation Plan (HCP), an overall conservation plan and an Environmental Assessment and when would they be ready for review. HECO staff replied that they hired a consultant to prepare an Environmental Assessment. Staff Takahama said that the permit application under review at this meeting has many more moving parts than indicated. HECO staff said this presentaion today was for information only, it is not complete yet. Staff Takahama wanted to be sure that they inform staff and the NARSC as they go through this process too; there are a lot of unknowns at this point.

Staff Yuen said that HECO is asking for a permit to do a feasibility study first. HECO staff said they want to get the different sides together; they started the process last year with the USFWS and DLNR, and HECO is still trying to decide on methods; and coming to the NARSC today as part of the process. According to Eric vanderWerf, the current known location of Newell's Shearwaters is primarily focused on the Wai‘anae side of Ka‘ala. Member Conant replied that we still need to know what is on the windward side of the summit as well. HECO staff responded that they will incorporate all that data into the plan.

Staff Sischo, DOFAW SEPP Coordinator, said that he has been involved in this process because of the presence of *Achatinella*. Member Conant asked if there were any endangered plants in the area. Staff Sischo replied that O‘ahu Botanist Susan Ching is also involed in the process to determine if there are any listed species. Member Yeung asked if this permit application is for a feasibility study only; however, there is still a lot of detail that needs to be added.

Mr. Rouen Lin, HECO staff person in charge of the overall permitting process, said that this is the initial phase with preparation of the HCP, and other documents followed by application for access for actual construction; at which time they will come back to the NARSC for further permitting. They will also be working with the Office of Coastal and Conservation Lands (OCCL) and Forest Reserve System, through O‘ahu DOFAW. This is just an initial disclosure in the documentation process; they also need to involve other stakeholders in the design of this including possible undergrounding or other options.

Member Rowland said it was unclear what exactly the feasibility study is, and what does as little disturbance as possible mean, and what are we being asked to approve today. Vice Chair Price said that it appears there are different components of the study, but HECO needs to delineate them more clearly. Mr. Lin replied that it was part of the process: the biological and archaeological surveys specifically. Vice Chair Price asked how invasive the methods are in boring holes, especially size and depth. Member Conant wanted to know where they would be going and she needed more specific information. At this time, Ms. Nakakura had to leave, so Mr. Sean Moura took over remainder of the presentation, as HECO Environment Scientist in their Environmental Department.

Member Yeung said that they need more information on snails and wanted to know specifics of when and where they were going, study sites, and who would be involved, before she could recommend approval.

Staff Yuen said that since the NARSC does not meet very frequently, this could be deferred or delegated to staff. Mr. Lin replied that this is only preliminary; they are looking at the year 2020 for completion of the HCP and other parts of this, so there is time before coming back to the NARSC.

Member Clark asked about the helicopter landing zone study or pole structure; where and why site it to avoid creating more distuirbance. Staff Miller replied that NARS staff have been involved with landing zone site selection where it would do the least disturbance.

Staff Yuen asked which species woud be included in the HCP; reply was *Achatinella* were the primary focus, but there are other consideratons that need to be included. It will also include helicopter operations to remove old lines and poles too. Member Bauer wondered if it would be better to cut poles and leave them, or other options. HECO staff said that lines run ridge to ridge (poles and lines). Member Conant said that the current application does not provide enough details; need more, especialy with the maps; she would feel more comfortable having more information. Mr. Lin replied that they are working with DOFAW staff member Charmian Dang about the permitting process and further details.

Staff Sischo said that SEPP will be involved every step of the way, and they will need to follow snail protocols, and staff will be involved in every step off-road where they go and where and be accompanied by staff. Any new trails to poles will be carefuly scouted to be sure there is as little disturbance as possible to the vegetation and ground cover.

Member Conant asked about plants; staff Sischo replied that the DOFAW O‘ahu Botanist is also involved.

Member Rowland asked if protocols are part of the permit; is that what we are asking for. Staff Sischo replied that yes, snail protocols cover all of Ka‘ala, both the NAR and Forest Reserve Portions. Staff Yuen wanted clarity on what part the NARSC plays in this. Member Conant said that more details like specific locations on maps are needed. Member Clark asked about studies for species distribution and population trends. Member Yeung was concerned about the overall land snail surveys; not just focusing on listed species, as there are other species on the vegetation and many small ground-dwelling species that she is equally concerned about; all could be affected by survey crews as well. Mr. Lin said that acess to the poles would be with machetes, to carefully clear a trail. Member Bauer asked about wire removal; it could fall on the forest and cause further damage.

Staff Miller said they are considering various senarios with HECO staff; who explained further that the worse-case scenario is that wires fall down on existing poles and lines, but the wires may not coil up; it depends on the spans; some are more susceptible than others.

Member Conant asked what would happen if the NARSC said ‘no’ at this point; what would other options be. HECO staff replied that they still need to upgrade, but they also do not want to keep walking down through snail habitat. Staff Sischo said that continuing impacts from pole maintenance such as it is now causes more impacts; which is why he and others are in favor of not having poles in snail habitat; and why he and others favor realignment along the road for the long term. Staff will still accompany any crews that return for routine maintenance to be sure that there are no snails or other sensitive species in the vicinity.

Vice Chair Price felt that we need to look at the whole picture, not just what is before us today. Staff Sischo said they need to look at other options. Staff Takahama asked if they could replace only the poles. HECO staff replied that they need to replace both poles and lines. Staff Takahama asked how long transmission lines could last; reply was approximately 70 years.

Member Clark asked if other species would be included in the HCP. HECO staff responded that they are working with Dr. Karl Magnacca, an Entomologist who is familiar with listed arthropods; also working with botanists. AG Chow said that Endangered species are the key part of HCP’s.

Member Asuncion pointed out that theyalso need to follow Coastal Zone Management Law since the entire island, even if it is not along the coast, can affect the overall coastal area; they need to implement CZM access permission; referring to the Office of Planning website for further details). Some items may or may not apply, but they need to go through this process as well. They need to delineate preliminary work versus actual construction. Member Bauer pointed out that the Ka‘ala NAR Management Plan was available on the DLNR/DOFAW website.

AG Chow said that they need all of the above to be incorporated into the CDUA process through OCCL as well. Vice Chair Price said that it needs pulling it all together, and at least there is time for the whole process; that this is just preliminary. HECO said that mpost of the line is not in the NAR; they could consider undergrounding the portion in the NAR.

Staff Sischo said that coring along the road would not be in snail habitat. Mr. Lin said that the four-inch wide cores would go to 10 feet deep where poles would go; with soils put back and any left over material would be removed from the site. Member Bauer asked what would happen to the cores, would they be taken off site for study and how and where would they be stored. Mr. Lin was not sure exactly; need to add this to the description of the plan.

Staff Takahama asked about following protocols to get to pole 25, the most remote in the NAR. HECO responded that would be part of the EA process. Staff Yuen suggested that the NARSC could delegate to staff at this prelimnary stage and rather than an SUP, continue to work with staff rather than have another NARSC meeting. This needs to be resolved.

Vice Chair Price said that while most of this is standard permitting; it is the other details that need to be worked out with staff. Member Conant asked what should be done. Vice Chair Price felt that the application at this time is not complete, but they can delegate to staff to work with HECO on protocols and an understanding of biological and cultural concerns before returning to the NARSC. Staff Yuen suggested that the SUP could be split in two: surveys and construction options and installation. Member Conant asked how staff felt about this. Staff Miller replied that they have been involved and are alright with the process. Member Ascuncion reminded them again that they need to state in the permit application any effects along trails and the landing zones, under CZM law.

Staff Yuen said that this is the study part only; not ready to implement yet; need to further figure how to do this without disturbing snails. Member Clark wanted to be sure that staff is informed. Mr. Lin said that they were working with DOFAW staff on access routes and proposed pole sites; three poles in particular have large *Achatinella* concentrations; however there are also other species of native plants and animals to be included as part of the initial survey.

Member Rowland said that the NARSC is concerned about the plans; they should go back and address some of these concerns again before coming back for the preliminary study; especialy what exactly is the potential for damage. Member Conant said that potentially destructive activities need to be clearly stated; she is not comfortable with approving at this time.

Member Ascuncion asked about preliminary versus ultimate project: need to delineate more clearly the site preparation and impacts to the NAR or Forest Reserve, besides the CZ requirements as well; the NARSC needs to know what we are approving.

Member Rowland felt it was more like two projects: initial survey and then the implementation. Member Yeung reiterated the need for more snail surveys and studies, not just native species, but also non-native. Member Clark felt that they needed to indicate exactly where they were going on the map. Member Asuncion reiterated that there needs to be more details on access.

MOTION: Members BAUER / ASUNCION moved that the Natural Area Reserves System Commission defer this application, which was incomplete; to come back to a future meeting with a more detailed time line and further details; along with the CDUP process, which will be overseen by the Office of Coastal and Conservation Lands, before they can recommend approval to the Board of Land and Natural Resources.

Motion carried unanimously.

Vice Chair Price called for a break for lunch at 11: 50 a.m. Member Leo Asuncion was excused for the afternoon; quorum would still be maintained.

Vice Chair Price called the meeting back to order at 12:55 p.m. .

ITEM 4. Re-establish the NARSC Commercial Use Subcommittee to address the possibility of limited commercial activities in certain Natural Area Reserves; to appoint new members that could them meet with staff and others interested in this issue. Staff Gagne explained that while there was a subcommittee still on the books; all former NARSC member's terms had expired and there was a large change in staff and in commercial issues. She said that Member Newbold, who was out of state has volunteered to be on the Subcommittee; also that former NARSC Member and Chair, Annette Ka'ohelauli'i, volunteered to participate as a resource person and an institutional memory; since there were major commercial concerns that arose during her time on the NARSC, and she can provide very hands on perspective and recommendations. Vice Chair Price called for volunteers among other members present. The following Members at the meeting volunteered: Rowland, Matsunaga, and Conant. Staff Gagne said that they only needed to have a motion to approve members and they they could then meet with staff (following Sunshine law in posting the agenda, and so on) in the interim between NARSC Meetings, since the Subcommitee was already established. They will be joined by NARS staff.

MOTION: Members CONANT/ BAUER moved to approve the following NARSC Members to serve on the Commercial Use Subcommittee with staff and resource people: Ms. Robin Newbold, Ms. Janis Matsunaga, Dr. Scott Rowland, and Dr. Sheila Conant, to replace others whose terms have expired.

Vice Chair called for any further discussion; there being none, called for the question.

Motion carried unanimously by those present.

ITEM 5. Identify NARSC Member to serve on the Legacy Land Conservation Commission. David Penn, Program Specialist, introduced himself as the new coordinator of this grant program, which receives $5.1 million from the conveyance tax to be used for acquisition of lands from, and for State, County and others, for fee simple purchase or conservation easement; from agriculture lands to natural areas. For example, assisting with the acquisition of part of the Ka‘iwi Coastline and Kanewai Springs on O‘ahu; both with quite significant natural and cultural resources. Current statute requires representation by one member from the NARSC. Meetings are primarily on O‘ahu, but there are also site visits off island. There are approximately two meetings a year: next meeting is scheduled for October 5, 2017; then December 7-8 will be a two-day meeting to review proposals with decision-making to follow. Site visits are scheduled separately as needed. They also meet in spring (late May-June) too for the annual cycle. Last year there were 6 applications; however current funding is limited and not all may be supported.

Member Bauer asked if money could be used to purchase areas for the Natural Area Reserves System. Staff Penn said that was acceptable, subject to available funds.

Vice Chair Prices asked if there were any volunteers; Member Kawelo volunteered.

Motion: CLARK/CONANT moved that the Natural Area Reserves System Commission approve the selection of Member Hi‘ilei Kawelo, to serve on the Legacy Land Commission.

No further discussion; **motion carried unanimously**.

ITEM 6. Request for delegation of authority to the Administrator of the Division of Foerstry and Wildlife to issue permts listed in Exhibit 1 for Hawaii Administrative Rules Chapter 13-209, rules regulating natural area reserves and request to amend list in Exhibit 1 to replace the word “insects” with invertebrates”.

Vice Chair Price noted that this item was withdrawn from the agenda, to be taken up at a later date; no further action at today’s meeting.

ITEM 7. Introducing the new DLNR Game Advisory Commission; for information purposes, no action. Staff Gagne said that both the new Wildlife Biologist and Hunting Coordinator for the Wildlife Program, Dr. Shaya Honavar and Wildlife Program Manager, Mr. James Cogswell, were unable to attend. Staff Gagne then gave a brief summary that she had met with them to help them set up agenda and other templates and how to organize a meeting following Sunshine Law and other matters. Their first meeting was June 19, 2017.

ITEM 8. Joint Consultation between the Natural Area Reserves System Commission and Forest Stewardship Advisory Committee. Staff Gagne explained that the meeting of May 25, 2017 was quite brief with all the changes to the Natural Area

Reserve Fund (NARF), among other things. The suggestion was made, however, that while it was important to keep holding an annual meeting such as this, that perhaps the meeting needs to be scheduled just prior to or part of the preparation for the following budget year and/or legislative session rather than in May; that might be more helpful. Staff will work with both the NARSC and FSAC to come up with a date for the next meeting.

ITEM 10. Budget update: Staff Yuen requested taking this item first to segue from the previous item; followed by the the legislative update. Trump's proposed budget significantly decreases funding; with a 14 % overall cut to USFWS, which DOFAW relies on for a great deal of our funding. The Legacy Land Program (Recovery Land Acquisition, Habitat Conservation Plan, etc.) have also been cut; there is a 13% reduction in the National Park Service (NPS) budget, 15% to US Gelogical Survey (USGS); not sure how deep the cuts are for US Department of Agriculture (USDA) other conservation agencies. There is still no final word on what Trump will do.

ITEM 9. Legislative Update: Staff Yuen laid out the legislative table for 2018: January (Session/bill introduction); January – April for testimony and hearings; May testimony ends; 2018 is an election year so there will be all that to consider as well.

Watershed CIP (Capitol Improvements) went to zero funding last session. We are $1.7 milion down; it is going to be very challenging managing the bottom line; including lost positions (Big Is. and Kaua‘i).

Member Rowland asked about 2 programs in DOFAW that sound similar; how diferent are they. Staff Yuen explained that NEPM (Native Ecosystem Protection and Management) which includes the NARS, NAPP, and Watershed Partnership is one program; the other that also has the term Watershed Protection in its title, is under the Forestry Program, focusing on fire and emergency operations. Member Rowland asked if only the top one is NARS-specific. Staff Yuen said that no, CIP also affects us across all the programs. Member Clark asked about Kaua‘i positions. Staff Yuen said that the Governor's Sustainable Hawai‘i Initiative needs to be supported; the lack of funding will impact the ability to protect and manage the watershed and all that goes with it.

Staff Yuen said that a bill may be introduced in the 2018 session to appoint a member of the Game Management Advisory Commission to serve on the NARSC; this would allow for more direct communicaiotn between the two commissions; much as a member of NARSC sits on Legacy Land for input. This requires legislation because no one is allowed to serve on more than one board or commission at a time.

ITEM 11. Announcements. Staff Gagne announced the passing of Dr. Lloyd Loope on July 4, 2017 on Maui. A former NARSC Member, he was a champion of native species and then became one of the pioneers to work with invasive species that were beginning to invade both at Haleakalā National Park, where he worked, and other areas. He was a strong supporter of the creation of the Maui Invasive Species Committee (MISC), which he continued to collaborate with after his retirement in 2012; producing his last paper in

January 2017. There will be a memorial gathering at the MISC office on the afternoon of September 2, 2017. Contributions can be made in his memory to MISC.

Staff Gagne also noted the passing of another Maui icon: Richard Nakagawa a month before Lloyd. Richard was the long time nurseryman for Maui DOFAW; one of the pioneers of finding and growing native species. He was one of the founders of the Native Hawaiian Plant Society on Maui and was mentor and inspiration to many over the years. A celebration of his life was held at Pu‘u Mahoe, which holds the D.T. Flemming Arboretum, a treasure trove of rare dryland plants; where they planted two *Kokia cookei* in his honor and remembrance. A painting of one of his “offspring” has been offered to our DOFAW Administrative Office as a reminder of all that Richard accomplished. Contributions in his memory may be made to the Native Hawaiian Plant Society, Maui.

Vice Chair Price thanked members and staff for their insights and participation and asked if there were any other announcements or concerns.

ITEM 12. Adjournment. Vice Chair price adjourned the NARSC Meeting at 1:15 p.m.

Respectfully submitted,

Betsy Harrison Gagné, Executive Secretary
Natural Area Reserves System Commission