

MINUTES OF THE JANUARY 19, 2010 NATURAL AREA RESERVES SYSTEM COMMISSION (NARSC) NATIONAL ECOLOGICAL OBSERVATION NETWORK (NEON) SITE VISIT TO HAWAII EXPERIMENTAL TROPICAL FOREST(HETF) LAUPAHOEHOE SECTION

COMMISSIONERS PRESENT:

DRAFT Subject to approval

Ms. Rebecca Alakai

Dr. James Jacobi

Dr. Sheila Conant, for President, University of Hawai`i (UH)

STAFF:

Mr. Roger Imoto, Division of Forestry and Wildlife (DOFAW)

Mr. Steve Bergfeld, DOFAW

Mr. Ian Cole, DOFAW

Ms. Betsy Gagné, DOFAW

VISITORS:

Dr. Jody Bolyard, NEON

Dr. Rebecca Ostertag, UH Hilo

Dr. Susan Cordell, U.S. Forest Service Institute for Pacific Islands Forestry (IPIF)

ITEM 1. Call to order. Meet at Hilo DOFAW office at 8:00 a.m.; travel via vehicles along the Hamakua coast to Laupahoehoe Natural Area Reserve, now part of the HETF; up Blair Road to first visit the small weather tower in the Forest Reserve side of the HETF, with Dr. Ostertag explaining that is part of the Hawai`i Permanent Plot Network (HIPNET); similar plots are being set up on other islands as well. A small weather tower was installed with a very minimal footprint; built on site; all concrete and other materials slung into the site, not highly visible from the road.

The group then went across the road into the NAR portion to view the potential site chosen for a NEON large observational tower. The site is located 260 meters off of Blair Road in the middle of high quality native forest. Dr. Bolyard explained that this is the preferred site, need correct wind conditions.

Discussion went back and forth on securing site against pig activity, what effects weeds would have on the site, how much such a large structure would alter the site, why it had to be located there due to wind direction, and could/would other sites be considered. Dr. Ostertag: they used the remote sensing for site selection, developed by Dr. Greg Asner, Carnegie Airborne Laboratory, since they need flat topography. Dr. Bolyard said this particular site had the highest score, and had previously brought construction staff and others on site visits (today was first site visit with NARSC members).

Members S. Conant and Jacobi asked about other areas, such as Kulani, which already has a power source and is more readily accessible without major site disturbance. Member S. Conant explained that the NARSC had to ask if there was any other place this could be done; you have to be able to say this cannot be done at any other place; the purpose of the NARS is the key and the first question that commissioners and staff ask in reviewing permit applications, is can this be done elsewhere, and why this must be

done in the NAR and nowhere else. When the Forest Service first considered Laupahoehoe NAR to be included within the HETF, NARSC members made it clear that the NAR would be the control portion, with little or no site destructive activities or equipment. She also expressed wondered if this would increase management needs to protect the area form increased ungulate use and weed invasions. Member Alakai said that alternatives need to be looked at since power is a concern and this could have a very large impact on the area.

Dr. Ostertag felt that NEON would be a tremendous benefit to all, with its 30 years of continuous data; NEON staff would hire local technicians; provide a huge education potential, and would be the only tropical rainforest site in the US.

Dr. Bolyard: the intent of NEON is to inspire other scientists, who could come and add components to the tower; to stimulate other science, not only NEON. Member S. Conant said that she understands the importance of scientific aspects. Dr. Ostertag said that the public needs more educational opportunities, that NEON is special, that the data is publicly accessible to all. Dr. Bolyard they (NERON) do not do their own research, they provide the towers to make this possible. Member Jacobi observed that the site is a long way up to bring power. Dr. Bolyard: this is **the** most expensive site; even more than Alaska; however NEON is committed to Hawai`i. The NARS Commission can do an analysis and say yes or no to the site being within the NAR, but that will not mean that we will just leave.

Member S. Conant asked it there was an alternate power source. Dr. Bolyard said that the community also asked this question; NEON has considered other sources such as solar panels, but they are not as reliable for the large amount of power needed for NEON towers. Member S. Conant: "surprise factor" is still part of the issue. Member Jacobi asked about site disturbance by pigs; would they be excluded. Dr. Bolyard: will not matter unless they affect the site. Member Jacobi asked about a time table. Dr. Bolyard: late February will consider alternate sites; discuss with Forest Service. Member Jacobi: then decision comes back to the NARSC. Dr. Bolyard: yes, clearly defined process, there is a light at the end of the tunnel and this is the last domain. Member Jacobi wanted to see a list of other prospective sites to compare, such as Kulani or Kamehameha Schools.

After site visit, a break for travel to IPIF for informal discussion with Commission Members and others unable to participate in the site visit.

MINUTES OF THE JANUARY 19, 2010 NARSC INFORMAL MEETING,
INSTITUTE FOR PACIFIC ISLANDS FORESTRY, HILO.

COMMISSIONERS PRESENT:

Dr. James Jacobi

Dr. R. Flint Hughes

Ms. Rebecca Alakai

Dr. Sheila Conant, for, President, University of Hawai`i

Mr. Patrick Conant, for Chair Board of Agriculture

STAFF:

Mr. Roger Imoto, DOFAW

Ms. Betsy Gagné, DOFAW

VISITORS:

Dr. Jody Bolyard, NEON

Dr. Rebecca Ostertag, UH Hilo

Dr. Christian Giardina, IPIF

Staff Gagné facilitated informal discussion beginning at 5:00 p.m. that largely reviewed observations made and questions asked during the site visit, but repeated here for the benefit of those unable to attend the morning site visit.

Dr. Giardina said that the Forest Service was in the process of acquiring a three-bedroom house on Spencer Road, which could be used immediately as a research support facility with access to the area via county road above Laupahoehoe community. They are still interested in the 20-acer parcel for an education center and staging area for the EF.

Member P. Conant asked about alternate sites. Dr. Bolyard: this is still the preferred site, 260 m off the road near one of the permanent plots. Commission Members said that NEON needs to at least evaluate alternate sites and make recommendations to the Subcommittee, even if Laupahoehoe is the preferred site; but need to demonstrate **why** it must go there and nowhere else; need a more documented, formalized process; has every site been considered; what makes this site the best and why is needs to be 260 m off road and why in the NAR.

Discussion then focused on power supply, power loads and other concerns. Member Alakai reminded everyone of the Chapter 343 process regarding the environmental assessment process. Concerns were expressed again about there apparently being only one site. Member S. Conant would like more information on alternate power sources. Member P. Conant wanted more information on the technical aspect of the wind requirements.

Dr. Giardina said during the Request For Information (RFI) that a large number of people including NARS staff evaluated potential sites, but narrowed it down to the Laupahoehoe site three years ago due to 1) biophysical attributes, particularly how air masses move across mountains, 2) it is a secured site behind locked gates, 3) critical piece behind this site is the long term protection under NARS designation, and the ability to measure changes with elsewhere; 4) it will be within an Experimental Forest.

Staff Imoto: at that time was one thing, **but** NEON parameters have changed since the RFI. Dr. Giardina: if cannot meet criteria of three years ago then what. Member P. Conant: asked about the site on Escape Road near Thurston Lava Tube; feel it has potential. Dr. Giardina: near Dr. Tom Giambelluca's site. Member Jacobi asked about a site outside the National Park, such as on Shipman lands. Dr. Giardina: there is a commitment from NEON to bring investment in conservation; Member S. Conant asked

him to elaborate. Dr. Giardina: thirty years of Federal investment could add address issues such as fencing to keep the site viable and stable.

Dr. Bolyard: the way we choose sites is not a NARS decision; criteria are established for these sites by Forest Service scientists, as in prior sites, and weighted; by February or March will present findings to the Subcommittee of why or why not the NAR.

Member S. Conant would like that to be clear cut so the Subcommittee can understand priorities and ranking; this is a multi-step process; still need to explain **why this cannot be done elsewhere**.

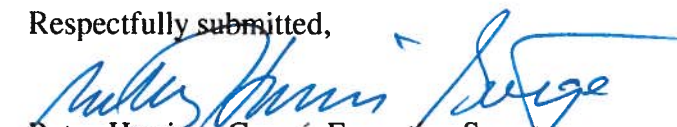
Dr. Giardina: ask the RFI participants if the current footprint is okay, it is a science question. Need to engage NEON: power requirements, line or off grid; power line run all the way up through the community; getting power up Blair Road; parameters to consider (overhead or not, at grade or not, buried, or other alternatives); if footprint and 30-year commitment is not going to pass muster with NARS, then what. Member Jacobi asked, if NARSC said the NAR is not applicable, then what. Dr. Bolyard said they would then consider going across the road where it is less restrictive. Member Jacobi still felt there was benefit in looking at other sites to not merely justify Laupahoehoe but look at other sites that might be better and have other elements; still feels Kulani especially needs to be evaluated.

Member S. Conant referred to the process with respect to the NARS; before NARSC can recommend approval to the BLNR (which would also be the final approving body for the NEON tower should it be on conservation-zoned land), citing the proposed Ka`ena Predator Fence; it went through a lengthy review and permitting process including demonstrating absolute compelling reasons **why** this had to be done in the NAR and not elsewhere (though portions of the fence will also be on State Park and unencumbered lands; with State Park and Land Divisions granting a right of entry for construction).

Dr. Giardina would like to see tower on windward, wetter side of the island because it is linked to climate change work being done through the EPSCoR (Experimental Program to Stimulate Competitive Research) which also includes HIPNET, pollination web studies, and ecohydrology (linking volume and quality of water flow through soil, streams, vegetation, and atmosphere from mauka to makai); Forest Service hosts a number of EF sites with NEON.

No future Subcommittee Meetings were scheduled at this time; informal discussion ended at 6:45 p.m.

Respectfully submitted,



Betsy Harrison Gagné, Executive Secretary
Natural Area Reserves System Commission