

**MINUTES OF THE SEPTEMBER 20, 2010 NATURAL AREA RESERVES
SYSTEM COMMISSION (NARSC) MEETING, HONOLULU**

COMMISSIONERS PRESENT:

DRAFT Subject to approval

Dr. Dale Bonar, Chair
Dr. John Sinton, Vice Chair
Mr. Ronald Rapanot
Ms. Rebecca Alaka`i
Dr. Arlene Buchholz
Mr. Trae Menard
Ms. Marie Bruegmann
Dr. R. Flint Hughes
Ms. Marnie Meyer, for Director Office of Planning
Dr. Sheila Conant for President, University of Hawai`i
Ms. Sydney Iaukea, for Superintendent, Department of Education
Ms. Laura Thielen, Chair Board of Land and Natural Resources

COMMISSIONERS ABSENT:

Mr. Patrick Conant, for Chair, Board of Agriculture

STAFF:

Mr. Randy Kennedy, Division of Forestry and Wildlife (DOFAW)
Ms. Betsy Gagné, DOFAW
Ms. Emma Yuen, DOFAW
Ms. Tanya Rubenstein, DOFAW
Ms. Vickie Caraway, DOFAW
Ms. Charmian Dang, DOFAW
Mr. Mike Wysong, DOFAW, Kaua`i
Mr. Talbert Takahama, DOFAW, O`ahu
Mr. Bill Evanson, DOFAW, Maui
Ms. Lisa Hadway, DOFAW, Hawai`i
Mr. Michael Constantinides, DOFAW

VISITORS:

Ms. Teresa Dawson, Environment Hawai`i
Mr. Ken Kakesaku, Senator Kokubun's Office
Mr. Kevin Nishimura, US Army Corps of Engineers
Ms. Christine Ogura, USFWS/National Wildlife Refuges

ITEM 1. Call to order. Vice Chair Sinton called the meeting to order at 9:10 a.m., followed by Commissioners introducing themselves followed by others; all welcomed new member Ms. Marie Bruegmann (replacing Dr. James Jacobi whose term expired June 30, 2010). Chair Bonar arrived and resumed chairing the meeting.

ITEM 2. Approval of Minutes of Jan 19, 2010 NARSC/NEON Subcommittee Site Visit, Minutes of January 20, 2010 NARSC Meeting, and Minutes of May 5, 2010 NARSC Meeting.

MOTION: SINTON/S. CONANT moved that the NARSC approved the minutes as corrected. Motion carried unanimously.

ITEM 3. Staff Updates.

ITEM 3.a. Natural Area Reserve Fund (NARF) Status Update for FY 11; Projections for FY12: Staff Kennedy distributed handouts and said that it appeared that the conveyance tax was going back up; am recommending an increase of the spending cap, which has been lowered due to uncertainty, now can raise it. Refer to sheets handed out to members for details; looks better than last year. Chair Bonar asked if Invasive Species Committees (ISCs) can make up for what they need; Staff Kennedy said yes, this is an administrative priority. He also announced that as of October 1, 2010, DOFAW Administrator Paul Conry will serve as DLNR Land Deputy on temporary assignment until the new administration appoints new replacements. Chair Bonar asked who would be representing DLNR on the NARSC. Staff Gagné said that Director Thielen had not as yet informed her whether it would be herself or Deputy Conry. Member Alaka`i asked who would be acting as DOFAW Administrator; Staff Kennedy said it would be on a rotating basis between himself, Michael Constantinides, and Scott Fretz.

ITEM 3.b. Kaua`i: NARS Manager Mike Wysong gave a brief update on **Ku`ia** ongoing fence projects: 20 acre enclosure nearly done; 80 acre enclosure contract just expired, and contractor walked away from the job, working with Staff Kennedy to see how to pay for this; at least materials are out on line already so will not need to add in cost of materials. Crew almost done with another 20 acre enclosure, then all fencing will be done for the original Environmental Assessment from 2003. Next phase will be to update the original management plan and outline goals for additional fences, maintenance, and so on. **Hono O Na Pali NAR:** This past weekend, flew hunters between the 3 to 9 mile markers for ungulate control to take advantage of the State Park being closed for 2 months to address rock fall issues along Kalalau Trail and in the Valley. This is the time to get hunters with their dogs and firearms in to reduce animal numbers; four groups, one per valley, were dropped off, resulting in 15 goats. This was lower action than expected; goats were higher up cliffs and many were not willing to shoot due to inability to recover meat. These are volunteer hunts vs. public hunts, done in cooperation with Kaua`i Wildlife Program. Accompanied one of the groups and found it was a great opportunity to meet and work with them. Member Menard asked if an aerial shoot would be effective; Staff Wysong replied that as soon as goats hear gunshot, they go high and are hard to track. Member Buchholz asked if the population was increasing. Staff Wysong explained that Wildlife staff conducted aerial surveys 2 times a year; but are not sure how reliable an estimate this is. Hunters say there used to be "a lot more", but no numbers were mentioned, nor delineating between pigs and goats. Local hunters go in at night illegally, everyone "knows", but enforcement is not there; on one hand they help keep the numbers low but conflict with hunters and hikers is an issue. Member Buchholz asked about deer; Staff Wysong said they are higher up in the Alaka`i and Nualolo Kai, west of Kalalau. Member Bruegmann asked if numbers were declining or moving higher; Staff Wysong said they were shooting goats; Member Bruegmann said she had seen goats at the summit. Member Menard agreed and reported seeing more than a dozen. Staff Wysong felt they were coming up from Waimea.

ITEM 3.c. O`ahu: Staff Takahama (Acting O`ahu NARS Manager) gave a brief update on the three current NARs on O`ahu: Ka`ala, Pahole, and Ka`ena; beginning with **Ka`ala** where staff is in the process of replacing the 20 year old boardwalk; originally built before the wide use of spiked tabis for hiking (their increased use has caused more rapid deterioration in recent years), there has also been a general increase in hikers across the boardwalk, causing increased wear and tear. Staff is working on a prototype for surface treatment to protect the board walk which would have plastic lumber for support beams and redwood (with surface treatment) for the actual boardwalk, whose surface needs to be treated to protect against spikes; trials will be held within the next 2 months. Sphagnum moss control appeared to have a reliable organic agent largely consisting of clove oil; however it looks as though the moss is rebounding; and unfortunately there has been scant communication from Army Resource Management staff for the past 2 months as they have expanded rapidly with new personnel. It would be ideal to eradicate sphagnum first, then to proceed with building the boardwalk. **Pahole:** 98% of Pahole is enclosed in fences; first unit still has a few pigs; has taken 2 ½ years to remove them. For FY 10, 28 hunters from the public removed 30 pigs; but there are more in the units. By the end of June the program threshold increased with 3 hunts with no catch; then followed by staff snaring; but adjacent areas were open to hunters in August; then pulse snaring alternating with hunting, with hunters going with staff and Wildlife Service staff to control and set/check snares; have to be on top of this control; do not back off: take foot off the gas could end up with 3 more years of control. **Ka`ena:** on schedule with construction of predator fence; Chair Thielen signed the grading permit; there is an agreement between The Wildlife Society (TWS), US Fish and Wildlife Service and DOWAW are partners, with transfer of funds to TWS for construction, which is scheduled to begin in mid-November. There has been ample public outreach and it will continue, in addition to round the clock staff oversight before, during, and after construction. The NAR will **not** be closed; there will be a DOCARE (Division of Conservation and Resource Enforcement) presence on site, along with the Honolulu Police Department, especially for the 2 – 3 hours the boulder barricade will need to be partially opened to allow entry for construction materials and equipment.

Member Buchholz asked how sphagnum was eradicated. Staff Takahama said it was an organic pesticide largely consisting of clove oil; it had an immediate response; it was specifically labeled for moss treatment, however it bounced back; that is why we are conservatively dealing with walking off the boardwalk on NARS side, so do not keep spreading the sphagnum further and why there are no service trips pulling up bags of sphagnum, because even small bits can fall out of bags as they are carried across the boardwalk. Member Menard asked how the last few pigs were removed. Staff Takahama said that Staff Chris Miller used a GPS collar on hunting dogs and came up with remarkably accurate mapping of both dogs and pig tracks; he also did a collaborative poster with Army staff for the Hawai`i Conservation Conference. Such tracking allows one to see where to go without any scouting; it is based on maps and data and places hunters in the best position; it also tracks main highways, food sources, etc. Member Menard has even seen dogs run right past pigs. Staff Takahama shot and wounded a pig; lost it even with dogs as it apparently jumped into molasses grass which

disguises the cent of pigs, another challenge. Member Sinton asked when staff hopes to have the area pig-free; Staff Takahama: in this unit by end of calendar year.

Member Rapanot asked if hunters used snares and did dogs ever get caught in snares. Staff Takahama replied that they remove **all** hardware before hunts; there is no overlap between hunters and staff control with snares. Member Rapanot asked if they use a GPS tracking collar; Staff Takahama said yes. Member Hughes wondered about metal caps on boardwalk. Staff Takahama said they wanted to protect the wood surface from spikes, using a high metal winding strip so footprints not on wood all the time.

Staff-wise we are 3 ½, not the 7 on paper, with staff on leave or lost to other positions, so running a smaller crew than whole time have been on staff. Chair Bonar asked about lack of response from military; Staff Takahama that they had a solid reporting process established, but past 3-4 months were pretty busy with training new personnel; not really an issue unless it becomes chronic, then will be addressed. Chair Bonar asked him and Staff Kennedy if there were any other remedies for the staff shortfall. Staff Takahama said that he was only recently made aware that they would not be eligible for a year-round intern due to last year's unsatisfactory evaluation. Staff Miller worked to create a position for a year round weed specialist; it is out for recruitment now as a PCSU position; Staff Takahama felt a weed specialist would be a most helpful addition; he also felt that supervisory training would be good for staff. Staff Kennedy agreed. Chair Bonar remarked that the personality dynamics of the various branches seems to be a problem. Member Buchholz asked about priority projects for staff. Staff Takahama: at our last staff meeting, we identified a list for staff as they become available to work on them. Chair Bonar asked who says yes to staff training; Staff Kennedy said it is the DOFAW Administrator, as well as Branch Managers. Chair Bonar felt there was a dearth of training and said this needs to be pushed.

Staff Wysong said that some of the Maui NARS crew helped him with large projects, and suggested that O`ahu could do something similar; interisland exchange is a great way to get jobs both large and small done while learning a lot from one another. Staff Takahama said that there is more infrastructure now than when he started 20 years ago when there were no fences. Now there is ongoing fence maintenance and also a need to identify work project lists to take advantage of any additional staff or funding, and to be as efficient as possible for fence installation and maintenance including both in-house and working in partnership with the Army. Chair Bonar asked if the Memorandum of Agreement (MOA) had been signed yet. Staff Kennedy replied that it is with the lawyers now.

ITEM 3.d. Maui: NARS Manager Bill Evanson gave a summary that will be expanded on in the 2010 Legislative Report, starting with **Hanawi**, where they are maintaining 10 miles of fence line built in the 1990's; improvements and replacements have been made of about 2 miles. Fish and Wildlife Service has put a lot of money into this area for fences, research shelters, and fence camps, as well as new mid-elevation protection. Field crew has used hunters and dogs after work; use GPS collars and follow them back at camp (a lot of Maui hunters are not doing this now). **Kanaio:** 876 acres;

Archaeological Survey has just been accepted by State Historic Preservation; Phase II (3.8 mile fence line) with help from Staff Tanya Rubenstein for fence contract. There is ongoing weed control, and some outplanting in protected areas. **West Maui: Kahakuloa Section** has a problem with vandalism on the boundary fence, since it is more accessible above the Boy Scout Camp (broken 6 times in the past year). The hunters cut fence so dogs can go through, then find their own way home; they also pull up fence, so need to maintain some sections monthly; particularly where can drive right up to the boundary. Member Sinton asked if fences were closed; Staff Evanson said yes, but hunters throw dogs over the fence; there are more animals down lower on private property. Chair Bonar asked about one-way gates. Staff Hadway said they have them on Big Island. Staff Evanson said they have not as yet installed one-way gates. Member Menard said they use dog ramps on Kaua`i because a one-way gate could be left open.

Pu`u Ali`i, Moloka`i: three fourths of a mile of fence has been installed along the rim of Pelekunu Valley (deer fence); there were 5 volunteer community hunts coordinated with Moloka`i Pig Hunters Association in the upper fenced area. **Oloku`i:** aerial shooting along the north shore for three two-day missions last year; flying personnel over from Maui, for a total of 196 goats, 55 pigs, and 29 deer; low numbers compared to the 3,068 goats removed from the south slope of Moloka`i, where the East Moloka`i Watershed Partnership is working to lower the amount of ungulate damage and restore watershed and connect practitioners; which has allowed large-scale animal control to go forth with a minimum of grumbling. Member Buchholz asked if any of the goats were utilized; Staff Evanson replied that most were in steep areas and not able to be safely retrieved. Member Menard asked about goat numbers; Staff Evanson said 2600 last year, 2800 animals this year. Member Bruegmann asked if that was above the fenced areas; Staff Evanson replied it was below fenced areas; and the community could see that eroded areas due to high animal activity were a direct threat to the reef. TNC is working with the community both here and on Maui.

`Ahihi-Kina`u, Maui: TNC is overseeing revision and update of the `Ahihi-Kina`u Management Plan. On October 20, 2010, the draft will be presented to the Advisory Group, and there will be an additional public information meeting to answer further questions about the draft plan, and will be presented at the November NARS Commission meeting, before the plan goes through further refinement and ultimately to the BLNR for final approval, for full transparency. Managed access is the focus with 98% of the Reserve currently closed for a second cycle of two years to allow for further monitoring and evaluation of the closed portions and completion of the management plan.

There is also a new project in the Reserve: unexploded ordnance has been discovered and the Army Corps of Engineers is working with us to deal with this issue. From highly explosive ordnance discovered in 2007, the area jumped to the top of the Corps cleanup list; recently attended a technical meeting on Maui with the contractor (he also introduced Kevin Nishimura, Corps Biologist, who came to the meeting as support). They are proposing to conduct a study that includes 150 transects 50 meters apart, vegetation is to be cut down to within 6 inches of ground (there are endangered species concerns); 73% of area is barren lava where that should not be a problem, while the anchialine pools will

be of great concern to minimize impact to them (trying to avoid walking in them, and so on); they are looking to do this November/December 2010. There is a well-established process for dealing with unexploded ordnance and people to do the job. Fencing and increased signage may be justified, as well as the need for increased managed access. Chair Bonar asked if this issue was included in the draft management plan. Staff Evanson replied it was, but not as detailed as it is turning out to be; more details will be added to the plan, since re-opening some of these areas may be a problem. He also talked about fees, such as what State Parks is planning for Makena and other parks; it seems to be a good thing, such as at Nu`uanu Pali where there is a parking attendant who serves sort of as security; they took in \$29 K the first month parking fees were begun (Hawai`i residents are not charged).

Staffing of five Rangers is very expensive; with the departure of Ranger Matt Ramsey, his supervisory duties are rotated between two Maui NARS staff to keep the Ranger program going. The volunteer program is still delayed due to technical problems; lacking good radio and cell phone communication. The radio repeater planned for uphill, two years in the making, opened up in July; Maui DOFAW staff sized up needs at site; communication issues should be solved by the end of this year. Final need for functioning on-site trailer-office is hook up of power; then can operate a volunteer program from the trailer; Rangers also need to be there to hand out radios to volunteers. Once again, Chair Bonar expressed his frustration that it has been years of no movement and no adequate response to these concerns. Discussion went back and forth on whether satellite phones were at least an interim solution, with Chair Bonar saying he thought staff was ordered to get them and stating that this was unacceptably frustrating.

Member Menard asked why there were no cell phones; his staff use them, and they could be used while waiting for the repeater. Chair Bonar agreed and asked if there could be an emergency appropriation; especially since this is a priority health and safety issue. Further discussion ensued back and forth with once again Chair Bonar expressing that continued administrative excuses are not what the Commission wants to hear. Staff Kennedy stated that he would bring a satellite phone to the next meeting. Chair Bonar thanked him and returned to questioning development of the volunteer program and whether it was a part of the management plan. Staff Evanson said that, yes, it was part of the management plan and he did hope to have the volunteer program up and operational by the end of the year; including completion of office and communications. Chair Bonar said that staff needs to look at alternatives in the interim.

Member Buchholz asked about dates for ordnance; Staff Evanson said that the Navy was actively shelling in 1945-1946; Staff Kennedy added it was ship to shore.

Staff Kennedy announced that the road, after years of debate regarding State or County ownership, has gone from the lawyers to an Memorandum of Understanding (MOU) with Maui County that they maintain the Road and DLNR/DOFAW will look after the brush along the roadside and remove vehicles. Chair Bonar asked about a kiosk/toll booth. Staff Kennedy said the MOU was silent on that.

ITEM 3.e. Hawai'i: Staff Lisa Hadway gave an update. **Pu'u O`Umi:** 31 kilometers of monitoring transects are read on a 10-year cycle; notice that ginger is a growing concern. Fence construction is being done with Kohaha Watershed Partnership (KWSP) through the Environmental Assessment (EA) process. NARS staff also helps with managing areas within the Forest Bird Sanctuary at Pu'u Wa'awa'a: 1300 pigs have been removed. Also help manage Koai'e Unit with TNC, which is full of endemic species. There has been substantial drought across the island and NARS staff participated in the recent large Mauna Kea fire, largely through incident command/planning; burn included State Park and military training lands. **Laupahoehoe:** continues to operate as part of the Hawai'i Experimental Tropical Forest (HETF); the US Forest Service just hired Melissa Dean to be new HETF Coordinator. Big Island NARS staff participates in a work-exchange program in Hanawi, Maui, along 1.9 miles of fence twice a year. Staff participated in the Hawai'i County Fair along with Three Mountain Alliance (TMA) staff over the weekend; over 1,000 people visited their exhibit. Other Reserves will be covered in other items on the agenda.

Member Buchholz asked about the fire size; Staff Hadway: 1300 acres total, 600 in PTA, rest in Forest Reserve. They arrested the presumed fire starter, who was surrounded by fire, proclaiming that this was a clear blast from heaven. There was some pretty extreme fire behavior but it was ultimately controlled. Chair Bonar said that The Maui Conservation Alliance recognized fire as a big issue; for example a few weeks at Ma'alaea, T&E plant areas got torched, so it is important to ramp up protection of rare plants; firefighters do not understand areas with rare plants, they need extra help for these high priority areas. Staff Hadway: on Big Island there is palila critical habitat that gets special protection. Ka'upulehu educates fire fighters; the County gets it; but it depends on who is on call that is familiar with special resources. Staff Kennedy said that Maui has fire maps as well that show priority areas, as does O'ahu.

Chair Bonar called for a short break; re-convened at 11:25 a.m.

ITEM 4. Enhancement.

ITEM 4.a. Update on proposed expansion of Pu'u Maka'ala NAR, to include the forested lands at Kulani: Staff Yuen gave a power point slide that showed a map of the overall area with the proposed extension in relation to the existing NAR as well as other parts of the former prison to be used for a proposed Youth Challenge Academy (YCA) run by the State Department of Defense (DOD) through the Hawai'i National Guard. The proposed extension of the NAR has gone through extensive public review, the NARS Commission and the Land Board. Seventy people attended the formal public hearing in Volcano (the nearest community to the Reserve and proposed extension) and many testified in support of the expansion. More concerns were raised about possible military training in the area; others wanted to see the prison re-opened, while others raised concerns about endangered species such as nene that were found in the former pasture lands and felt they should also be part of the NAR. A total of 55 letters were received in support of the NAR; 5 opposed. At its September 9, 2010 meeting, the Land Board considered the NAR and DOD portions. There was overwhelming support for the NAR,

while concerns were raised about proposed military training in the area and whether that would be compatible with both the YCA and the rare species in the vicinity of the abandoned Mauna Loa Boys Home facility (used for urban assault practice in the past). The Land Board expressly forbid any military training, but did recommend setting aside to DOD the parcel containing the Kulani prison facility for the YCA. They recommended that NAR expansion include the former Mauna Loa Boys Home site, to be managed for the rare birds and plants in the area; now need to do border surveys to add in the forested areas.

Chair Bonar asked about the nature of testimony against the NAR; Staff Hadway replied that it was largely hunters and other recreationists that felt they would be excluded; however access was never open; as a NAR there **will** be managed public access; and in the meantime the forested area has been managed under partnership first with Ola`a-Kilauea Group and now under the Three Mountain Alliance (TMA), which includes the Department of Land and Natural Resources, Kamehameha Schools, National Park Service, and others.

Staff Yuen said DOD is still vague about what exactly could be done in the pasture areas; they have talked about cattle, solar panels, piggery, rural curriculum; because there are endangered species such as nene they will have to at the very least address these through the Conservation District Use Permit (CDUP) process, T&E species permits, and Habitat Conservation Plans (HCP).

Member Alaka`i asked if NEON (National Ecological Observatory Network) was interested. Staff Hadway said that a NEON team was on-island one week ago, met with TMA staff; they found Kulani to be more difficult than previously realized so it was dropped as a potential alternate site; instead a site further down Stainback Highway within Forest Reserve lands was identified. Member S. Conant asked if she had been invited or informed about the visit or possible site; Staff Hadway said she had not.

Member Menard wanted to have YCA staff come to the NARSC to explain what they want to do in more detail. Staff Yuen said they are still deciding what to do; they are in communication with TMA. Member Hughes wanted to be clear about compatibility and accessibility issues (who, when, where). Staff Hadway: access will be through MOA developed within TMA to go to the Board; DOD portion: access easement is needed for State (DOFAW) to cross it; no new roads should be built, use existing ones.

ITEM 4.b. Waiea Tract, South Kona: Staff Yuen used a power point map to discuss two possible suggestions for this parcel from the last Enhancement Subcommittee Meeting: Forest Bird Sanctuary or NAR. Ian Cole suggested it be a NAR (representativeness, wetter than neighboring Kipahoehoe NAR, native species management; Roger Imoto favors Forest Bird Sanctuary because the focus of the adjacent Wildlife Refuge is for species not ecosystems, as is Waiea Tract; the area also contains an aviary to be used in the near future to hack `alala (endangered Hawaiian crow) back into the wild. Staff Yuen said that this needs to be discussed, and introduced Christine Ogura, as new USFWS Refuge Conservation Planner.

Member S. Conant asked about additional parcels for the Wildlife Refuge; Staff Yuen said there were no willing land owners at this time. Staff Hadway said that there was a big field trip in April with Keith Unger (McCandless Ranch Manager), USFWS, NPS, DOFAW staff member Sheri Mann and John Henshaw from TNC; the Ranch indicated that it was not just ready to walk away; plus they own access to Waiea; so we need to work together. Trip participants were taken aback at the loss of habitat due to cattle in Waiea now; but heard that Roger Imoto and the Hawaii DOFAW leadership team and Branch choice is as Forest Bird Sanctuary (FBS). Member S. Conant asked about road access; Staff Hadway: they own the property below Waiea too; so it is better to work with the Ranch. The top skinny portion of Waiea Tract has the only significant population of `akepa on the Kona side; there may also be creeper; both species are listed as endangered. Member S. Conant asked if there was a difference in managing as a FBS versus a NAR. Staff Hadway: Bird Sanctuary Rules are more restrictive: they can close them more easily than we can; having just revised their rules. Staff Yuen said that FBS allows more flexibility.

Staff Hadway: Hans Sin is the West Hawai`i Wildlife Manager. Member Buchholz asked about the area as an `alala site. Staff Hadway said that while it is identified as one, Ka`u is the priority site due to habitat quality; however the drought has been severe and impacts from cattle continue the degradation. Member Buchholz asked about elevation change; Staff Hadway said it was very steep. Member Bruegmann said that the top is below the mosquito line, but there are portions that do go above current mosquito line of 4,000 feet. Staff Hadway added that it is primarily high stature `ohi`a forest. Chair Bonar asked if understory could be replaced; discussion continued back and forth on potential management of the area under the different land designations, along with long time cattle presence. Staff Yuen said that the top is at 6,000 feet, the majority is pretty steep; the bottom starts at 1200 feet, then goes to 3,000, 4,000, 5,000, and then 6,000 feet at the very top point. Member Buchholz: top parts are most important plant and bird habitat.

Member Sinton said he had a gut feeling that it sounds not like a NAR, because it is pretty damaged and it would be difficult to manage as a NAR between other parcels. Staff Hadway said that the FBS designation is supported by Big island DOFAW; Member Sinton: sounds like it makes more sense. Member S. Conant supports FBS designation. Staff Hadway: the Ranch does want help with removing the cattle; they do see the threat of losing it all; want to keep it in the family.

Discussion went on with focus on road access to manage the tract as well as access the Refuge section. Member Sinton asked if another road would be bulldozed. Member Bruegmann said that if dozed straight up hill, it would be difficult to maintain. Christine Ogura said that the preferred alternative in the comprehensive management plan is a perimeter fence of 17 miles around the Kona Unit within 2 years; that is the goal, with internal management units: 1) bottom portion: survey/monitor/buffer with little or not active management; 2) more active management such as ungulate and predator control; 3)

control; active reforestation, outplanting and collection of PEPP species; 4) lava tube system: rare critter surveys (Howarth and Stone); still need a cultural survey; our desire, but funding is not certain, but put in a request to reinstate Kona Unit staff. After further similar discussion, Chair Bonar said that from the general tone that it was more appropriate to designate it as a FBS. Staff Yuen said just to support; do not need any formal action; members still felt action was appropriate.

MOTION: S. Conant/Menard moved that the NARS Commission support designation of Waiea Tract as a Forest Bird Sanctuary. Motion carried unanimously.

Chair Bonar called for a lunch break at 12:05 p.m.; meeting reconvened at 1:05 p.m.

ITEM 5. Management Plans.

ITEM5.a. Overview of major proposed management actions for Pu`u Maka`ala and Manuka NAR; Pre-consultation with the NARSC: Staff Hadway started the tour with Pu`u Maka`ala, giving a power point presentation to bring new members up to date with both the existing Reserve and adjacent Kulani lands, that will be added to the Pu`u Maka`ala Management Plan; with preparation of an EA within the next month, and on through the full assessment process. As for Big Island NARs, there used to be eight, with 94,000 plus acres, now there are 11,000 additional acres (Tract 22 and former Kulani lands). TMA formerly headed by Tanya Rubenstein, now by Colleen Cole, includes active management across Pu`u Maka`ala, Kulani, NPS (Hawai`i Volcanoes NP), KS (Keauhou Ranch), Army, and State Forest Reserves. Pu`u Maka`ala has fenced units: Aku (fenced, montane, relatively weed-free); older substrate kipukas; Na Lua Mahoe (largely intact bog); Kulani addition will now include more montane mesic and montane dry ecosystems for different habitats/species, and includes more T&E birds with critical habitat for `akiapola`au, creeper and `akepa. Plants: Aku is the Hawaiian name for the rare lobeliad *Cyanea tritomantha*, which is the namesake for Aku Unit. Other rare plants include *Clermontia peleana*, with only 5 wild plants left. Threats: pigs, non-native insects, weeds. Original acreage for Pu`u Maka`ala was 12,106; with the addition of 6,600 acres of ungulate-free Kulani lands, it will be 18,706 acres. TMA will help to keep the four Kulani units managed. The 600 additional acres including Mauna Loa Boy's Home contain rare bird species, especially `akepa. A comparative picture of the Kipuka Unit in 1998, contrasted with a pig-free picture of the same site in 2005 showed great native plant growth; monitoring continues for fence integrity, pig sign, and vegetation recovery. Strawberry guava has increased from 2000 – 2008; Wright Road weed blocks; takes 10 years to complete: focus on main weed concentrations; monitoring is in cooperation with ISCs; with a concern for coqui spreading further up the mountain; this is a particularly scary issue: with the amount of people driving up and down Stainback Highway, it's only a matter of time. Frog folks go out at night in an attempt to keep the density lower than at Manuka (State Wayside Park) and into the NAR. Staff Jennifer Randall is working on bog restoration in the Wright Road Unit. Rare plant restoration includes Dr. Robert Robichaux's Mauna Loa silversword outplanting at Kulani, as well as *Clermontia peleana*.

New management activities will focus on road and trail selection as well as developing new interpretive trails at Kulani, but also to route them to minimize impacts from weeds and ungulates on rare plants. New Units: Upper and Lower Ola`a; Army Road back to Aku Unit and Pu`u Maka`ala Unit. These areas are under Unit K: open to hunting (lower portions); have had trapping success at Kulani. Other areas: buffer area, where proposed NEON Tower is being proposed off Stainback where there is an existing power supply Ama`uma`u Road will be maintained as a bike trail, need to refine it and keep on the NAR not KS portions; Army Road (used for training back in the day) now walk-able, plan to add signage and interpretive area because it is the best place for hiking and nature study for the public, to follow the intent of the NARS, without harming either ecosystems or the public.

Kulani Management Needs: MOU with DOD; invasive species control, access protocols developed with YCA; continue to rely on TMA for outreach in particular plus the ability to work across property lines; predator control including trapping; access for public/pedestrian use of select existing trails; signage; work with volunteers; predator control to protect the recovering nene population nene locales are being mapped, particularly near water catchments. There have been no cattle in the pastures since 2005 and so they are recovering and attracting nene among other species. Using old road ways along the fence for loop hikes; staying away from the facilities whether they become the YCA, or should the decision be made to re-open the facilities as a prison, we would partner with them as well. Member Bruegmann asked about Unit K, was it fenced and if not, why. Staff Hadway replied that these areas were already degraded and were a lower priority; not to say that there will not be tools developed to manage more highly degraded areas that still have many rainforest characteristics, but are swamped with weeds such as strawberry guava. Member Menard asked about nursery potential. Staff Hadway said there is one already in the facility; also a green house for vegetables and common native plants. We would like to hire an outreach person for NARS to keep this going.

Next "tour" is a power point of **Manuka**, which at 25,550 acres is our largest Reserve, running from Ka`u District into South Kona District; from sea level to over 5,500 feet in elevation, consisting of primarily dry and mesic forests with a high degree of diversity (including 9 endangered plants, 13 species of concern; three candidate anchialine pool shrimp species, endemic cave critters, and other rare arthropods). There is halapepe under the high stature `ohi`a forest; highly unusual; along with the rare endemic nettle *Neraudia obovata*. Kepa Maly did a review of historic trails and an archival history. There is an unnamed trail at 2200 feet and heiau at the coast, both with smooth paving stones, along with konane game boards carved out of lava, significant littoral cones, anchialine pools (74 were mapped with DOFAW/DAR staff/Scott Santos and crew from Auburn University); the bulk of them are actually below the coastal road that marks the boundary of the NAR; these are high saline anchialine pools which are comprised of a mix of fresh and salt water. Beaches are used for haul out by Monk seals and hawksbill turtles, both highly endangered species. Only 1.4% of the Reserve is fenced; these two small units are where the most active management is concentrated in these pockets of lama, koa, and olopuu. Significant geological features include pit craters and lave

tube/cave with cave critters. Threats include fire and invasive species such as fountain grass and coqui frogs; along with ungulates (goats, pigs and mouflon sheep); also illegal logging of koa and `ohi`a; encroaching atv's (all terrain vehicles), illegal shooting range, branch blow-downs on fence lines, dumping of garbage, and 13 encroachments into the Reserve from neighboring Hawaiian Ocean View Estates (HOVE).

Member S. Conant asked if it was houses; Staff Hadway said that most are HOVE Association roads, dumped vehicles, water tanks. Also caught a guy cutting `ohi`a, and now DOCARE has a new truck (which was forfeited in this case). Dumping is also an issue because there is no transfer station for trash pick up; so see old vehicles, appliances, and other stuff everywhere. In 2003 there was a mid elevation fire that burned 4 acres. Manuka was also the place where parasitic mites (*Knemidokoptes jamaicensis*) were first discovered by Jackie Gaudioso, doing research on `amakihi, she noticed their feet, and such a heavy infestation is called "tempura feet" (gross but accurate), which pretty much cripples the birds; it has now spread to Puna. Another threat is pakalolo culture, from high elevation to the coast; with concerns for safety of staff as well as concerns about weed introductions and illegal pesticides. There is also ordnance in lower Manuka. There are significant human impacts along the coast.

The latest issue of Hawaiian Airlines Magazine (Hana Hou) featured the fishing spot called "smoking rock" that has been heavily altered, smoothed out by bags of cement for ease of access for coastal `ulua fishing. The littoral cones are impacted by atv's and turtle and seal habitat is also disturbed. The upper koa unit does not have many native birds left but it does serve as an important secure outplanting site for many rare plants. There are about a dozen mouflon left in the upper part of the unit. There are 106 separate one-acre parcels in HOVE; the most affordable so there is lots of building by people who like to be off the grid. There was a fire in April of 2010 in top 3 acres; got a picture of the illegal fire ring, and it burned 6-8 feet underground, making it hard to walk safely.

Staff is working in partnership with Mac Farms Hawai`i, Rolles, Keahole One Partners, TNC, and NPS for pig removal from Manuka and surrounding areas; pigs really go for macadamia nuts. The drought is causing a heavy loss of native tree ferns.

Mid elevation management focuses on trail maintenance, frog monitoring, dump cleanup, logging survey. Staff is also looking to increase water capacity with a 100,000 gallon redwood tank. Even with an 89% drop in coqui frogs, there are still **56 thousand per hectare** (according to studies by Dr. Karen Beard). GIS maps have been prepared for treatment of area with citric acid. Big Island Invasive Species Committee (BIISC) conducts monitoring transects for *Bocconia frutescens* and fountain grass.

The makai 10-acre Lama Unit is being monitored for effects of goats/fountain grass and any changes with goat control. Aerial fountain grass control is done with the "pot ball" suspended from a helicopter for use in remote areas. Staff does weed sweeps with TMA staff, walking through 900 acres looking for adult and especially seedling fountain grass; inmates used to help with this as well. For animal control: remove bag limits; fencing and staff control; install new signage, potential control of mouflon. A boundary fence

with HOVE is also a high priority, along with a fence down by the coastal road to protect anchialine pools within the Reserve.

Member Hughes wondered how the neighbors feel about management. Staff Hadway said that is very happy; they do not want poachers, they want to see defined boundaries, protected by fences, which would benefit both NAR and Mac Farm; pigs can take up to 50% of a mac nut crop! Member Hughes asked about the cultural survey; Staff Hadway said it was on the NARS website. State Historic Preservation Division is helping deal with inadvertent discovery of cultural sites. She said that this is a ten-year plan, that it cannot address everything; there is already a lot of ongoing management. Member Menard felt Manuka was a priority, Staff Hadway said that the boundary fence with HOVE needs to be done to clearly define the boundary; however it will be cut constantly and is therefore primarily to establish the legal boundary against illegal encroachments. We are contemplating creating a “buffer zone” that would place the fence on better land; that it would be better than a constant battle forever.

Chair Bonar asked how long to amortize the fence; Staff Hadway replied that 20-30 years is the estimate for Bezenol-coated material but it may be more like 10 years with the salt and vog; even less in some areas; some sections have only lasted 15 years at Kulani. Member Menard wondered about higher quality material. Staff Hadway: vog can carry 5 parts per million of sulfur dioxide, and it is the sulfur that does the damage. The rare Plant Facility on Wright Road got some burn on the *Clermontia* species, but on the positive side there were few mites (sulfur is one of the most effective controls for mites). Member Sinton wondered if the large amount put out by the summit vent made a big difference. Staff Hadway said that the vog, coupled with the extreme drought has caused even more damage and goats are also ring-barking trees.

ITEM 5.b. Overview of major proposed management actions for Hono O Na Pali NAR. Kaua`i NARS Manager Mike Wysong conducted his own power point tour of this Reserve. The south boundary is now the Alaka`i Boardwalk Trail, Kalalau to the west; bounded also by Wainiha Valley (Robinson land), and the upper basin (Alexander and Baldwin) and a tip of the eastern side (National Tropical Botanical Garden). The 3,150 acre Reserve was designated in 1983 to protect significant mesic forest, wet forest and perennial streams; in 2009 it was expanded another 450 acres to include more significant habitat up to 4,284 feet in elevation. The first Management Plan was prepared in 1989. The reserve has 58 federally listed plant taxa, as well as 3 endangered forest birds, 3 sea birds, as well as listed invertebrates. *Brighamia insignis* (the lobeliad often referred to as a “cabbage on a baseball bat”) was once found along its steep cliffs; now presumed to be extinct in the wild. The area is an important nexus for rare species.

The upper plateau has intact mesic forest, the terrain is very remote and hard to get around in, even for Steve Perlman and Ken Wood; there is a great deal that is still unknown about this area. There is also bog habitat: north bog is a mix of wet montane forest interspersed with open bogs. The edge of the boundary is to a cliff that falls a thousand feet into Wainiha Valley. The steep cliffs are hard to fence. There is a lot of

hala (*Pandanus*) forest and remnant lama (*Diospyros*), alahē (Psydrax) forest and some ohi`a, but also heavily disturbed at lower elevations.

Threats: feral ungulates (pigs, goats, deer), mammalian predators such as cats, mongoose and rats, which all go after burrowing sea birds. Two of the worst invasive plants are Australian tree fern (ATF) and kahili ginger; with ATF easier to find through aerial imagery as well as emerging from the forest canopy and liking open ridges, than the ginger which forms dense carpets below the forest canopy, making them difficult to detect from the air; there is not as much strawberry guava there, as yet.

Existing management includes a 2.4 acre montane bog, 1 ½ acre north bog, and lowland mesic enclosures for 2 ¼ acres each; all are extremely steep sites; 800 feet of fence line installed up Pohakea ridge to prevent pig ingress from Kalalau Trail, plus to prevent pigs from going up and back over into Kalalau. Rare plant surveys still need to be done in the deep interior. Goats have an easier time moving through this habitat than pigs (up and over from Hanakapiai). A weather port was constructed next to north bog to help access and work in the remote area. Member Sinton asked what that meant; he explained that it is a little yurt in the mountains that can house up to 10 for remote area management. There will soon be a larger fence that will incorporate the smaller bog fences within a larger area, to secure and restore some of the most extraordinary forest on the island.

Staff is currently working with State Parks to increase public hunting opportunities in conjunction with closure of Kalalau for trail work. Hunters think animals are coming up and over, not along Kalalau Trail. It is hard to get pigs by daylight; they come down at night, therefore the illegal hunting activity at night when they are easier to approach and are less fearful. The lower forest is degraded heavily, but at least need to keep animal numbers low to lessen damage.

Upper plateau management: we are wondering if the boardwalks are serving as pathways for feral cats to move into the interior, further threatening the already rare forest birds. There also needs to be cat control to protect nesting sea birds. Aerial control of ATF is done by sweeps through areas and applying herbicide directly into the growing crown; which delivers a more effective kill.

Need to identify where animals are making it to the upper plateau, and build strategic fences; additional strategic fencing of the entire upper plateau will eventually protect this entire area; however, the fence will have to be routed to be compatible with sea birds that also use the area. The challenge is to identify and protect good habitat before it is invaded by feral ungulates and introduced weeds. Member S. Conant asked about precautions to prevent seabirds from colliding with fences; suggesting webbing, placed on a fence to help birds avoid collision. Member Menard said that they use reflective flagging which can be seen in low light cloudy conditions.

Director Thielen stopped by the meeting at 2:30 p.m., and was introduced by Chair Bonar, and asked if there were any questions about how the land Board voted on September 9, 2010. Chair Bonar said he was very pleased. Director Thielen said she was

proud of the Land Board Members; it was a good discussion. She appreciated all the information provided by staff and commission members for the unique opportunity. Now comes the time to prepare the documents for the Governor to sign as an Executive Order to expand the existing NAR. This is a critical time because other parties could also still try and make a move. The land is subject to legislative approval of 2/3 of the House or Senate, or a majority of both houses can disapprove an Executive Order (EO) transfer. The above is done by Resolution not Bill; it can be introduced early in the session; not necessarily towards the end.

Staff Constantinides felt it was unusual for the Legislative to not to approve an EO; Chair Thielen said this one is not typical; a surge of opposition or Legislators saying they need "more time" could be an issue; so keep eyes open, since Resolutions can go through faster. She said that military training is excluded in the language of the EO; it is DOD/YCA only. Some people feel the prison should not have been shut down; that it should still be on the table.

Staff Yuen said that the NAR EO is separate from the DOD EO, so even if the middle portion is controversial, the NARS is not affected; but there is still some movement to combine them.

Director Thielen said that everything needs to be put on the table and re-looked at; but it is a lot of land not in back yards; perhaps a Task Force could look at potential sites; recognize valid concerns, but there are other solutions. YCP is a good program and it could interact with our YCC's.

Chair Bonar thanked her for her support of partnerships in this process; she replied that staff was all over her. Chair Bonar said that it was a pleasure working with Director Thielen and the Land Board. She said that while she had not been to NARSC meetings a lot it meant that she felt it was in good hands.

ITEM 6. Enhancement Update and Discussion. Staff Yuen said that the Enhancement Project began 2 ½ years ago, taking the work of past commissioners and having an Enhancement Subcommittee to help focus efforts, which with new support and public testimony, has resulted in four new areas. The NARS Strategic Plan, developed in 2008 help to provide broad visions: areas to focus, how to prioritize areas, how to overcome obstacles, in addition to looking at not just new NARs but looking more broadly across the State to look at other designations. The Enhancement Report prepared by TNC looked at evaluating areas based on standard data sources to prioritize past NARs; and the focus was primarily on terrestrial ecosystems; not marine ecosystems and geological features.

DOFAW Program Managers and TNC staff met in 2008 and came up with a list of Biologically Important Areas (BIA); not all necessarily NARS nominations: that was not the purpose, although some did follow that path. In Spring 2009, island representatives on the NARSC met with DOFAW Administrative and Branch staff to go over each area

including management and access issues; and what was feasible. These discussions have been ongoing in Enhancement Subcommittee Meetings.

Some of the areas that were the most Biologically Important: Kaua`i (Blue Hole, North of Ku`ia), O`ahu (Honouliuli), Maui (Upper Kanaio), and Hawai`i (Waiea). The process that has evolved for the NARS nomination process begins with DOFAW recommendations, NARSC, Public Hearings, BLNR, Survey, Governor EO, then finally NARS designation.

The following seven are pending Legislative Resolution:

Kanaio Mauka, Maui: 700 acre extension to Kanaio NAR.

Hono O Na Pali, Kaua`i: 400 acres upper Alaka`i Plateau.

Poamoho, O`ahu: Wet forest dominated by `ohi`a.

Ilio Point, Moloka`i: Lithified sand dunes, coastal vegetation, fossil bird bones, and sea birds.

Kahauale`a Tract 22, Hawai`i: This was recommended for designation as an addition to Kahauale`a NAR.

Na Kula, Maui: Leeward Maui, steep area with subalpine vegetation, koa and `ohi`a forest that while damaged, has been identified as a potential reintroduction (once restored) for forest birds

Pu`u Maka`ala Extension of forested lands at Kulani, Hawai`i. High quality mesic to wet high elevation forest, open bogs and shrublands.

There was opposition from some that do not want to see more expanded NARs; however there was also support. There were also challenges when dealing with the media, who appeared to take aim at preserving an area (Maui News: Na Kula). Supportive testimony touched on protection of rare ecosystems and the species that depend upon them.

Opposition was generally expressed with the perceived restriction of access, removal of feral ungulates, stopping hunters, fewer hunting opportunities, or close off areas completely.

A lot of areas have no current legal access, such as Na Kula, which is essentially landlocked, yet there was a opposition to its nomination as a NAR because there was the perception by some that they would be excluded; when in fact they stood a better chance at working things out with NARS staff, for a NAR **could** actually increase public access. Member S. Conant: access is primarily where people can or cannot go. Staff Yuen said there were no fences blocking pigs more than people. The other commonly lodged opposing remark is that there is not enough money so why add new areas. But as a whole, there is far greater support, exponentially, in increasing the NARS. She noted that testimony is on line: see Land Board Submittals.

Further discussion went back and forth on Na Kula and its treatment by the media. Yes, when the NARS was first created, back in 1971, there was no staff to manage the reserves, as they were nominated by the NARSC and an administrative staff; it was not

until the 1990's that NARS managers were hired on each Branch. Member Menard felt that the public and others have somehow gotten the wrong idea, because the NARS are being managed. Staff Yuen said that following the additional portion of Hono O Na Pali, 35 people turned out for an educational hike and celebration of this added area.

Member Buchholz asked about the cable that may pass through `Ilio Point. Staff Yuen said that the Governor wants to know about the hazard materials that are present in unknown quantities and types; not just military ordnance is part of the problem and potential liability. Member S. Conant thanked the Enhancement Subcommittee members, saying that the Commission had come a long way form when she was on it in the 1970's.

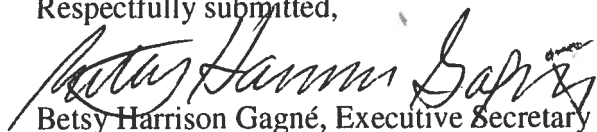
ITEM 7. Update from Experimental Tropical Forest (ETF) and National Ecological Observatory Network (NEON). Staff Gagné referred members to the report submitted by newly hired ETF Coordinator Melissa Dean, who was unable to attend in person; while NEON will likely not be pursuing the tower site in Laupahoehoe NAR, situated in the ETF but now actively looking at other sites, where obtaining a large power source for a large tower would be less disruptive.

ITEM 8. Announcements and next meeting date. Staff Gagné represented the Department and NARSC on September 12, 2010, in Waikamoi Preserve on Maui for a very special naming ceremony: to bestow a Hawaiian name on the Maui Parrotbill; which is not a parrot. Exhaustive literature search came up empty; many felt that giving it a proper name would help to build natural as well as cultural bridges. And so, on a most extraordinary day, these shy, retiring, birds became known as Kiwikiu: to celebrate their amazing curved bills, and their subtle yet deliberate movements while foraging through the forest, all the while regarding your presence in the forest; there is nothing quite like being looked over by a Kiwikiu. A copy of the ceremony will be shown at a future meeting.

Next NARSC meeting will be held on November 5, 2010; this will be Chair Dale Bonar's last meeting; he announced he was stepping down form the joint responsibilities of Chairing both the NARSC and Legacy Land Commission. Vice Chair John Sinton will keep the NARSC moving forward during this time of transition.

Chair Bonar adjourned the NARSC Meeting at 3:32 p.m.

Respectfully submitted,


Betsy Harrison Gagné, Executive Secretary
Natural Area Reserves System Commission