

## **Forest Stewardship Advisory Committee (FSAC) Meeting**

Division of Forestry and Wildlife

Waimanalo School and Community Library, Meeting Room 41-1320 Kalaniana'ole Highway,  
Waimanalo, Hawaii 96795

11:30 am, May 10, 2013

**Committee:** Alvin Kyono (Chair), Michael Constantinides, Kip Dunbar, JB Friday, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Benton Pang, Rich von Wellsheim, and Mark White.

**Staff:** Irene Sprecher, Elizabeth Boxler, and Hannah Bergemann.

**Guests:** Adiyana Hara (Kauai Hindu Monastery), Rev. Katit (Kauai Hindu Monastery), Sebastian Marquez (Wayne Lau Proposal), Jim Mehrwein (KHR), and Matt Schirman (Wayne Lau Proposal).

### **Meeting Site Visit:**

Committee members and interested guests met at the Waimanalo Forest Reserve at 9:30am and conducted a site visit via the Maunawili Ditch Trail.

### **Call to Order:**

Meeting was called to order at 11:20am. Elizabeth Boxler provided an overview of the agenda for the Forest Stewardship Advisory Committee (FSAC) meeting.

### **February 15, 2013 Meeting Minutes:**

The FSAC reviewed the meeting minutes from February 15, 2013 meeting.

#### *Corrections*

Minor grammatical corrections were provided by Michael Constantinides and Betsy Gagne.

**Motion to approve the February 15, 2012 FSAC meeting minutes as corrected. Moved by Rich von Wellsheim, seconded by Benton Pang. Approve: Michael Constantinides, Kip Dunbar, JB Friday, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: None. Unanimously approved.**

### **Forest Stewardship Management Plans:**

#### **Kaupakuea Orchards Forest Stewardship Management Plan:**

Staff provided an overview of the project and a summary of the history of the project. The FSAC reviewed the project proposal at the February FSAC meeting.

#### *Discussion*

- Member J. Friday recalled that the FSAC had strongly discouraged the use of Australian toon at the previous meeting and that it had been removed from the management plan. He also

- recommended that although the best management practices (BMPs) are useful for inclusion in the plan for the landowners it is not necessary for the committee to see this included.
- Member J. Friday also appreciated the inclusion of the financial analysis in the management plan and the inclusion of fencing costs prevent the project from being profitable. He shared that he has seen this in a number of cases and asked whether or not fencing should be included in financial analyses for timber production in Hawaii.
  - Member von Wellsheim felt that this was a problem because the FSAC wants to promote forestry in Hawaii but the fencing costs cause projects to not be profitable. Member White asked whether fencing is necessary in lower elevation areas that are not focused on restoration or conservation. Member J. Friday stated that in certain sites, such as this one, it is because the project will face feral pig pressure which could damage the planting effort. Member Gagne reiterated that for restoration projects fencing is necessary. Member Hendrickson felt that if FSAC recognizes the need for the fence in this project there should be recognition of the multiple benefits for fencing that are not always accounted for by the FSAC such as boundary delineation and property protection. His understanding is that NRCS does not provide boundary fencing for projects. Member Constantinides clarified that the project had to prove that they are impacted by feral ungulates to be eligible for cost-share funding for fencing. Member K. Friday mentioned that the Forest Stewardship program currently has a cap per foot and previously there had been discussion about adding a per acre cap for fencing. Her feeling was that they are still working on how to subsidize fencing costs for forestry projects. Member Dunbar shared that on his land projects need to be fenced to be viable. Member J. Friday suggested allocating a portion of the fence cost in the economic analysis. Member Koch shared that this is common with forestry roads. Member Hendrickson felt that a lot of the expenses associated with fence installation will outlive the project.
  - Member Constantinides questioned whether the selected species would be impacted by pigs. He also wondered whether the Forest Stewardship Program (FSP) should pay for the fence next to the pasture area. Member J. Friday responded that he believed that the pigs would pull out newly planted trees especially if they have been fertilized.
  - Staff shared that the landowner is seeking approval for their management plan and cost-share support approval.
  - Member K. Friday shared that the applicant included the Hawaii Pacific Weed Risk Assessment (WRA) for timber species. The applicant provided a justification for species that scored between 1 to 6 but she indicated that they also need to provide further evaluation of these species. She ran the WRA for these species and after further evaluation six (6) are alright, and four (4) are inconclusive. These four species are *Cedrella odorata*, *Elaeocarpus angustifolius*, *Dalbergia latifolia* and *Tabebuia rosea*. She requested a further evaluation of these inconclusive species and delegated to staff. Member J. Friday also stated that the WRA site used in the management plan is no longer up to date. Member Constantinides

recommended using the WRA for all species but he does not have concern for these species based on personnel experience.

- Member J. Friday suggested that naio is removed from the plan because of thrips on the Big Island.
- Member Pang recommended that the landowners consider that an environmental assessment (EA) will be required prior to the State providing cost-share support for this project.
- Member Constantines recommended that on page 10 section 5.4 the landowner rethink removing all grass cover due to its role as a conservation cover. He also recommended on page 13 5.5.3 that planting is a too high density for tree species he would generally recommend an 8x8 ft or 10x10 ft spacing with shrubs included inside this planting. He also mentioned that on page 16 “access control” should be called “fencing”.

**Motion to approve the plan and pass on suggested amendments. Moved by Rich von Wellsheim, seconded by Michael Constantinides. Approve: Michael Constantinides, Kip Dunbar, Katie Friday, Betsy Gagne, Greg Hendrickson, Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: JB Friday and Nick Koch. Motion passed.**

#### Saiva Siddhanta Forest Stewardship Management Plan:

Staff provided an introduction to this project; this proposal was reviewed at the February 2013 FSAC meeting where they were ineligible to receive cost share support for developing a management plan due to their lease length but were invited to prepare a management plan for consideration by the FSAC. They have now secured a 35 year lease on the property and had prepared a Forest Stewardship management plan. Adiyana Hara, and Rev. Katit were present to represent the project

#### *Discussion*

- Adiyana Hara clarified that the ironwood on the project pre-dates the creation of management plan. However, they have not seen it travel or reproduce very successively on the site. Rather, they have had more issues with Norfolk pine spreading. Member Kyono shared that he has not seen ironwood becoming invasive on Kauai.
- Member Constantinides suggested that for controlling guinea grass the College of Tropical Agriculture and Human Resources (CTAHR ) has a number of videos for controlling between planting rows. He also suggested that they reconsider the species selection for the three rows of windbreaks. He felt that brushbox can grow quite tall and would introduce a long term maintenance cost. Instead he would suggest a multi-storied windbreak that could incorporate crotons or banana in first row, kamani or milo in the middle row, and Norfolk pine, jackfruit, or brushbox in the third row.
- Member Constantinides questioned planting only 300 koa and sandalwood plants for 2 acres; he felt that this was very wide spacing. Adiyana clarified that there are approximately 2 acres set aside for the koa/sandalwood planting at 10x12 ft spacing. Member Constantinides asked if that spacing included the host plants and Adiyana said that it did not.

- Member Dunbar asked why the landowner had chosen the sandalwood species they had. Adiyen said that prior to creating this plan they had planted a number of *Santalum album* but after they attended the sandalwood conference they discovered that *S. panticulum* has a good oil profile and they would prefer to use native species if possible. Member J. Friday asked about using Kauai sandalwood. Adiyen shared that only *S. panticulum* have been tested for their oil content. They have already begun planting *S. panticulum* along the ironwood windbreak.
- Member White asked if the landowners were working with Nick Dudley from Hawaii Agriculture Research Center (HARC) to help with seed selection. Adiyen answered affirmatively; Nick Dudley is helping to collect seeds from Kauai but will also include some of his best koa families for planting.
- Member J. Friday asked about *D. arbriusa* which is an invasive species. Adiyen clarified that there are a few plants that were planted prior to knowing about the problem.
- Member J. Friday suggested that the landowner reevaluate the cost analysis in the management plan due to errors.
- Member Koch asked about the site preparation. Adiyen clarified that they have done six (6) passes with a disk. The goal is to ultimately keep the guinea grass as a conservation cover, but the soil is pretty compacted in this area, therefore they need to knock back the grass prior to planting tree species. Member White suggested that Fusilade may impact the sandalwood that could be utilized the grass as a host species.
- Member Dunbar suggested that the fencing should be every 8 -10 feet apart with spines in between the posts.
- Member J. Friday stated that the FSAC would be interested in how the tree tubes work to protect seedlings.

**Motion to approve the plan and pass on suggested amendments. Moved by Kip Dunbar, seconded by Rich von Wellsheim. Approve: Michael Constantinides, Kip Dunbar, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: JB Friday. Motion passed.**

#### Lau Forest Stewardship Management Plan:

Staff introduced the Lau Forest Stewardship Management Plan. Matt Schirman and Sebastian Marquez were present to represent the landowner.

#### *Discussion*

- Member J. Friday asked whether this project could provide appropriate water bird habitat. He indicated that he had spoken with people in the wildlife sector and was told that there would need to be a number of these habitats across the landscape for it successful. There is also a need for predator control. Matt Schirmann explained that there are currently no moorhens on the island. Member Constantinides also had questions about the suitability of the site for the moorhen; according to other authorities the moorhen is known to have habitat up to 400 ft elevation, the coot has habitat up to 600 ft elevation. He also recommended that the

landowner seek a safe harbor agreement. Member Pang indicated that the U.S. Fish and Wildlife Service has a recover plan for water birds that could be shared with the landowner to improve the plan. Member Gagne suggested that Norma Creps from DOFAW could also have information to share with the landowner. The koloa range, Hawaiian duck, is in elevation range of this property but care needs to be taken in regards to possible hybridization concerns. Matt Schirman indicated that the landowner initially wanted to do koloa but he was encouraged to focus on other water bird species.

- Member Koch asked about forest products the project would produce. Matt Schirmann explained that one of the forest products is hydro-seeding with planting of natives in rows. Member J. Friday suggested that the details for this portion of the plan be included in more detail.
- Member Pang suggested that the species list on page 13 remove the endangered species until a native forest is established.
- Member J. Friday questioned some of the species on this list. He felt that a lot of the species were dry forest species. Matt Schirmann explained that the landowner wants them planted as an education component similar to an arboretum. He also indicated that they have planted these species in similar sites for education purposes. Member J. Friday felt that this could be a problem because species should be planted where they are most adapted.
- Member Dunbar asked about the stream fauna. Matt Schirmann indicated that there are native species in the stream but stream restoration is not a part of the plan.
- Member J. Friday asked for maps with soil types as well as fencing locations. Matt Schirmann indicated that fencing around the project area will be pig proof with a cattle proof fence around the property.
- Member J. Friday also questioned using gallon size plants. Matt Schirmann suggested that certain plants do better in larger pots.
- Member J. Friday reiterated that he does not suggest planting naio on the Big Island and care be taken to not use mulch from outside areas due to the threat of spreading invasive ants.
- Member J. Friday asked for clarification regarding how Hawaii Community College was involved in the project. Matt Schirmann said that they were working with a past teacher at the college.
- Member Koch asked whether \$40,000 an acre was a typical cost. Matt Schirmann clarified that most of those costs were due to fencing and the wetland restoration but the Forest Stewardship Program is not being asked to provide much funding for the wetland restoration.
- Member K. Friday suggested that the WHIP program might be appropriate and that the landowners may need to speak with more experts on wetland restoration. Member Gagne stated that predator proof fences are extremely expensive to maintain and that cost should be anticipated.
- Member J. Friday asked whether \$8.70 per plant was an average and suggested that he would like to see a better separation of the restoration and education components of the projects.

Member K. Friday also requested that for the education component they include who the partners are, how it will be implemented so that the additional cost can be justified.

Member von Wellsheim also felt that there needed to be more clarification in the plan to better reflect the project goals.

- Member Constantinides asked that Mr. Lau clarify which areas of the project currently have an NRCS contract and the practices that the contract is covering. He also recommended that the windbreak follow NRCS PIA planting spacing, closer to 20ft, and the species selection should be clarified.
- Member Dunbar stated that he was supportive of the project but the plan does not give enough information about the spatial arrangement of activities in the form of a map.

**Motion to defer the management plan until additional items are clarified in the plan.**

**Moved by Rich von Wellsheim, seconded by Benton Pang. Approve: Michael**

**Constantinides, Kip Dunbar, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch,**

**Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain:**

**JB Friday. Motion passed.**

#### Kealakekua Heritage Ranch Multi-Use Plan:

Staff provided an introduction of the Kealakekua Heritage Ranch Multi-Use Plan which is associated with a Forest Legacy Project. The landowner is seeking approval of the management plan in conjunction with their conservation easement.

- Greg Hendrickson, functioning as a representative as the Kealakekua Heritage Ranch (KHR), clarified that they are looking at a long term vision for the ranch.
- Member Koch asked how the growth and yield model for koa were calculated since the metrics for koa are not well known. Jim Mehrwein, representing KHR, explained that the model is widely used by industrial forests in the western United States. The model relies on species libraries for the region it will be used in. The Hawaii library was built off of fell tree data and other published data in the State. The model is distance dependent and can be calibrated with new data.
- Member Koch asked how often the area will be surveyed to validate the model. Jim Mehrwein stated that they are currently looking at a ten year horizon. He mentioned that they are also looking at how patch cutting will impact regeneration as well as how restoration with scarification and planting contribute to growth.
- Member J. Friday asked what the model used for inputs. Jim Mehrwein clarified that most of the data was fell tree data. Member Constantinides stated that most of the fell tree data was provided in association with the Waiakea Timber Management Area (WTMA) inventory. In the FSP Model, a number of coefficients are provided for different growth effects. This model has been previously used for non-native trees grown in Hawaii but Member Constantinides had concerns about whether there was enough growth data for native species in Hawaii.

- Jim Mehrwein stated that the model has been updated and that the Hawaii library has been updated since the WTMA inventory, but no additional data from permanent plots has been added. However, in his opinion this is the best model available for harvesting even though the growth data may not be the best.
- Member Constantinides felt that the growth rate generated by the model was optimistic even if harvesting was excluded.
- Member J. Friday felt that although koa has some long-term data ohia has very limited data on growth rate. Jim Mehrwein stated that he would be happy to refine the data with new information. He also wanted to clarify that the ranch will be reforesting at the same time that harvesting is occurring which will increase forest growth and stocking.
- Member Koch shared that the proposed level of harvest is 1/6 of what is being proposed for the west side of Hawaii for koa. However, he said that one problem with harvesting in Hawaii is that no one really knows that koa will do in 50 years. One method to account for this to be conservative in the harvesting plan which he felt that this plan did. He suggested that they could consider using a volume versus an area treatment.
- Jim Mehrwein clarified that this project is looking at both koa and ohia and the ranch is looking at harvesting areas that are going to be most productive and looking at re-stocking potential. Greg Hendrickson stated that in order to double in volume, using a compounding formula, it would have to grow at 7% in a 10 year period. Since the inventory is based on 8 inches dbh are higher than 7%, the ranch is being conservative in its harvesting rate. Member Constantinides and Member J. Friday stated that the property is approximately half koa and half ohia and shared concerns that since ohia would grow on the order of mm per year instead of inches per year.
- Member K. Friday felt that the ranch is definitely understocked and that as it is restocked growth will increase. Presented in the plan is that 34% of the existing volume of wood will be harvested in the next 10 years. Member K. Friday clarified that in the ranch's conservation easement thresholds for harvesting are set: no green harvest, 250,000 board feet, or greater than 250,000 board feet but no more than 25% of stock. She, therefore, felt that harvesting 34% was a lot.
- Greg Hendrickson stated that the harvest is only 3.5% per year and the forest is not at culmination therefore the growth rate is greater than decadence. Member K. Friday asked if they were planning to harvest 250,000 board feet a year. She also emphasized that the primary cause for the understocked forest is because of grazing and harvest; she asked if the grazing is under control. She also had concerns about whether they are currently on a positive growth curve. One suggestion she had was that the harvest be limited to 25% of current volume or that more specific information is provided related to the units being harvested and whether they have the herd under control in those areas.
- Greg Hendrickson felt that Member K Friday was attempting to renegotiate the conservation easement. Member K. Friday felt that the easement had the provision to ensure that a management plan was required to harvest at the threshold requested. Jim Mehrwein

clarified that the model for growth is constrained by a 25% survival assumption and growth rates are reduced to be more conservative.

- Greg Hendrickson clarified that between 2006 to 2008, the ranch removed cattle from uncontrolled areas. During this time period 1,026 animals were removed, of which 750 bulls. At this point the ranch believed that all of the cattle had been removed from uncontrolled sections; however, occasionally the ranch will discover some areas where cattle were not removed or people left gates open unintentionally. Greg Hendrickson estimates that there are approximately 50 to 100 cattle in uncontrolled areas of the ranch and they are looking to remove those animals as part of the plan. The total herd on the ranch is 60 bulls, 800 breeding cows, 150 replacement heifers with most of the grazing areas located outside of the easement area.
- Member Dunbar asked what harvesting the 250,000 green timber would do for the ranch. Greg Hendrickson clarified that it would be profitable for the ranch and would allow for additional fencing to occur. Member Dunbar questioned whether enough money would be made to cover the cost of harvest. Jim Mehrwein explained that the pictures included in the management plan show what is currently on the ranch. He clarified that the goal is to not harvest lone trees but units that are more heavily stocked such as Unit 10. These types of areas will be selectively cut to encourage regeneration. Greg Hendrickson shared that the ranch has considered a number of different options to make the harvest economically and the proposed level is sustainable.
- Member White clarified that The Nature Conservancy previously had a conflict of interest with the ranch which originated with an adjacent parcel but that issue has been resolved. He felt that the project has a lot of potential. He questioned the statement that 75% of the ranch is forested; he asked what standard was used to determine the forest cover. Greg Hendrickson stated that the standard is set in the Forest Legacy easement guideline as 10% canopy cover.
- Member White felt that including the information about what species should be harvested is important. Greg Hendrickson said that the species would be determined by the area that is harvested. Member White was particularly concerned about harvesting green sandalwood. He felt that this topic needs some additional clarification. Greg Hendrickson clarified that for sandalwood a professional forester will have to determine that the tree is dead or dying or that the tree has been significantly damaged such as when a chainsaw cut in the center of the tree was used to determine the value of the tree in past. Any tree that has more than 20% living will not be harvested and while there are a few trees that would fit this restriction, Greg claimed that most of the sandalwood on the ranch will be maintained. Member J. Friday asked whether they could restrict sandalwood harvest to only 10% of live trees to be harvested. Jim Mehrwein clarified that they are not targeting sandalwood but acknowledging that the ranch is going to lose sandalwood and the ranch would like to capture the value of those trees.

- Member von Wellsheim asked for a silvicultural and harvest plan to be included in the multi-use plan. Greg Hendrickson felt that this requirement would be cost prohibitive for a 10 year period.
- Member Dunbar asked whether the plan was to fence and plant or scarify. Jim clarified that the majority of the restoration work is reforestation with scarification. The ranch is also considering doing patch cutting in areas with merchantable timber that is in decline, and then encourage regeneration with scarification and planting.
- Member K Friday asked about the special management areas for biodiversity on page 42. Greg Hendrickson stated that these special management areas are to protect more biodiverse areas but they are looking to establish them while they are working on the property. Member K Friday felt that it is important to designate these areas.
- Greg Hendrickson felt that the management plan included sufficient information on wildlife. Member Pang asked how endangered species in the harvested area will be determined. He suggested that it would need to be done with a professional.

**Motion to approve the management plan as drafted. Moved by Nick Koch, No Second. Motion dies.**

- Member Constantinides felt that more information is need in certain areas and a need for improvements, more data, on aspects of the model.

**Motion to approve the management plan subject to inventory data being included in the model with permanent growth plots and that the ranch will collect data to supply information (permanent plots to calibrate) into the data over the next 10 year period at the 0, 5 and 10 year mark. Moved by Michael Constantinides, seconded by Nick Koch.**

*Discussion:*

- Member White felt that more information is also needed about feral animals, special management areas, and grazing designs.
- Member Dunbar felt that the plan would need to be updated with the model and information sooner than 10 years.

**Approve: Michael Constantinides, Nick Koch, Alvin Kyono, Betsy Gagne; Oppose: Kip Dunbar, Katie Friday, Rich von Wellsheim, Mark White; Abstain: JB Friday, Greg Hendrickson. Motion failed.**

- Greg Hendrickson asked what timeframe would be appropriate for permanent plots. Member J. Friday suggested that putting permanent plots now would be helpful to establishing the validity of the model and if the model proves to be inaccurate there will be adequate time to reverse any negative consequences.

**Motion to defer with improved detail on cattle and relationship on model, plans for the herd and feral animals, plans for survey and prescription for biodiversity, and limits on**

**harvest between species or percentage limits. Moved by Katie Friday, seconded by Benton Pang**

*Further Discussion:*

**Motion to add an amendment requiring the establishment of permanent growth plots. Moved by Michael Constantinides. Not Accepted: Katie Friday. Amendment failed.**

- Greg Hendrickson stated that deferring the management plan will delay the ranch's ability to produce income but that the ranch is happy to accept the inclusion of adding growth pots.
- Member K Friday felt that these are items that need to be addressed in the management plan.

**Approve: Benton Pang, Katie Friday, Mark White; Oppose: Michael Constantinides, Kip Dunbar, Betsy Gagne, Nick Koch, Alvin Kyono, and Rich von Wellsheim; Abstain: JB Friday, Greg Hendrickson. Motion failed.**

**Motion to approve the management plan provided staff work with KHR on improved detail on cattle and relationship on model, plans for the herd and feral animals, plans for survey and prescription for biodiversity, and limits on harvest between species or percentage limits, and including permanent plots in the ranch. Moved by Rich von Wellsheim, seconded by Kip Dunbar.**

**Approve: Michael Constantinides, Kip Dunbar, Katie Friday, Betsy Gagne, Nick Koch, Alvin Kyono, Benton Pang, and Rich von Wellsheim; Oppose: Mark White; Abstain: JB Friday, Greg Hendrickson. Motion passed.**

**FSAC and NARSC Consultation:**

- Member von Wellsheim provided an overview of the joint consultation that had occurred between the FSAC and the NARSC.

**Motion that FSAC request that the informal consultation between the FSAC and NARSC happen in advance of budgetary decisions so that the joint consultation committee could look to ways of funding being strategically applied. Moved by Rich von Wellsheim, seconded by Kip Dunbar. Approve: Michael Constantinides, Kip Dunbar, JB Friday, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: None. Unanimously approved.**

- Member Gagne mentioned that she will be making a similar motion at the next NARSC meeting.

**Motion to nominate Koa Kaulukukui and Michael Constantinides to represent the Forest Stewardship Advisory Committee with Benton Pang as an alternative. Moved by Kip Dunbar, seconded by Rich von Wellsheim. Approve: Michael Constantinides, Kip Dunbar, JB Friday, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Alvin Kyono,**

**Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: None.  
Unanimously approved.**

- The FSAC proposed that the next FSAC meeting would be Monday September 16, 2013 on Oahu.

**Motion to adjourn the FSAC meeting. Moved by Greg Hendrickson, seconded by Benton Pang. Approve: Michael Constantinides, Kip Dunbar, JB Friday, Katie Friday, Betsy Gagne, Greg Hendrickson, Nick Koch, Alvin Kyono, Benton Pang, Rich von Wellsheim, and Mark White; Oppose: None; Abstain: None. Unanimously approved.**