



University of Hawai'i at Hilo

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**Minutes  
Regular Meeting**

Mauna Kea Management Board  
Tuesday, September 16, 2014

Kukahau'ula, Room 131  
640 N. A'ohoku Place  
Hilo, Hawaii 96720

**Attending**

- MKMB:** Chair Gregory Mooers, 1st Vice Chair Herring Kalua, Roger Imoto, Douglas Simons, Hannah Kihalani Springer and Lehua Veincent
- BOR:** Barry Mizuno
- OMKM:** Wally Ishibashi, Fritz Klasner, Stephanie Nagata, Dawn Pamarang and Joy Yoshina
- Others:** Chas Cavedoni, Robert Christensen, Tom Chun, Sandra Dawson, Cory Harden, Stewart Hunter, Bruce Mathews, Joseph McDonough, Dwight Vicente and Mike Yellen

**I. CALL TO ORDER**

Chair Mooers called the meeting of the Mauna Kea Management Board (MKMB) to order at 10:00 a.m. University of Hawaii Regent Barry Mizuno along with new Board members Roger Imoto, Douglas Simons and Lehua Veincent were introduced.

**II. APPROVAL OF MINUTES**

Upon motion by Hannah Springer and seconded by Herring Kalua the minutes of the June 4, 2014, meeting of the MKMB were unanimously approved.

**III. DIRECTOR'S REPORT**

**A. Thirty-Meter Telescope (TMT) Conservation District Use Permit (CDUP) Appeal**

The appellants filed an appeal against Circuit Court Judge Greg Nakamura's ruling in favor of the Board of Land and Natural Resources (BLNR) and the University. The due date for filing opening briefs by the appellants is September 29, 2014.

**B. Thirty-Meter Telescope (TMT) Sublease**

On June 27, 2014, the BLNR granted the University a preliminary consent to sublease with the TMT International Observatory (TIO), LLC, but stayed the decision until administrative proceedings on contested case requests were concluded. On July 25, 2014, the BLNR denied applicants' request for a contested case and lifted the stay on the consent to sublease. The sublease was signed and became effective on July 28, 2014. TIO submitted their pro-rata share of their first year's rent of \$129,041. The next installment is due in January 2015.

Following the decision by the BLNR, at least one appeal to the Circuit Court was made. It is the University's understanding that additional appeals were made, but are pending a decision by the Court whether or not to waive the filing fee.

**C. Department of Hawaiian Home Lands (DHHL)**

The use of the Humu'ula sheep station for commercial tour operators prior to ascending to Halepōhaku will be reviewed by the Department of Hawaiian Home Lands Commission at their next meeting on September 22 and 23. If approved, DHHL can begin the process of finalizing their plans and begin preparing the site. When this plan comes to fruition, it will help reduce overflow congestion at the Visitor Information Station (VIS) during the late afternoon.

**D. Administrative Rules**

Office personnel have been actively involved in small community engagements and spoke to over 100 individuals and groups regarding suggested content for administrative rules. Representations include members of Native Hawaiian organizations and communities, including Keaukaha, Panaewa, Royal Order, Hawaiian Civic Clubs, DHHL, cultural practitioners, businesses, chambers of commerce, County Council, and the community in general. The groups are given an explanation of the issues and challenges we face on the mountain and suggested rules on how those challenges would be met. The responses have been positive.

The next step is public open houses for people to review the proposed rules and provide comments. Next the rules will be drafted for submittal to the Board of Regents who will then seek approval from the governor for the University to hold public hearings. The public meetings will give the community an opportunity to give oral or submit written testimony. Upon conclusion of the public meetings the rules will be finalized and submitted to the Board of Regents for approval. Following BOR approval, the rules will be forwarded to the governor, who then distributes them to his departments for review before he gives his final approval. It is a long process and it will at least another year before rules are in place.

**E. Association of Hawaiian Civic Clubs**

The annual convention of the Association of Hawaiian Civic Clubs will be held during the last week of October in Kona. The Office will have a booth and display.

**F. 50 Years of Astronomy on Maunakea**

This year marks the 50<sup>th</sup> anniversary of astronomy on Hawaii Island. The Hawaii Island Chamber of Commerce celebrated this milestone by recognizing three individuals who pioneered the establishment of astronomy on Maunakea – Mitsuo Akiyama, Howard Ellis and Gerard Kuiper. The commemorative video presenting 50 years of astronomy on Maunakea was shown.

**IV. KAHU KŪ MAUNA COUNCIL (KKMC)**

Shane Palacat-Nelsen was unable to make the meeting. Director Nagata reported that the Council met earlier and discussed the proposed projects being presented to the Board today. The Council's recommendation for each project will be presented respectively.

**V. Committee Reports**

**Environment Committee – Fritz Klasner**

Fritz Klasner reported to date the Office of Mauna Kea Management (OMKM) hosted seven weed pull events involving 214 volunteers for a total of 1,500 volunteer hours. The last volunteer event was held on August 23, 2014. The next event may be scheduled in October.

Kamehameha School senior, Israel Stillman, approached OMKM for assistance with his Natural Science Academy senior project. The project will be a science fair entry as well as a legacy project. The science fair side of this project will be repeating some of the vegetation inventory that was previously completed during the botanical survey. The legacy aspect will be selecting vegetation planting for restoration purposes, and getting a head start on a restoration plan for the Halepōhaku area.

Since the last meeting the annual invasive species survey was completed. No new threats were identified. A clown beetle/Histerid, *Saprinus lugens*, but is not a threat. There has been honey bee issues at the VIS. OMKM is working with the Department of Land and Natural Resources (DLNR) and Department of Agriculture to determine from a public safety and environmental perspective, the best course of action. Over the summer the Halepōhaku area also had issues with wasps. A few wasp traps were set, but only a couple of wasps were caught. The traps were later removed because they were trapping some very rare species, including leaf minors, that had only been documented in the state once before.

Wēkiu bug numbers this year were surprisingly low. A meeting with the Fish & Wildlife Service, DLNR and University experts was convened to discuss the low numbers. Theories proposed included climate (cold, wet winter), and an

abundance of lady bugs which may have been feeding in the traps. Some of the surveys were repeated and found all life-stages of the wēkiu bugs are present indicating reproduction is occurring..

The erosion project with Dr. Ryan Perroy has commenced. Dr. Perroy conducted some imaging testing this summer. He also completed a Lidar data collection of the cinder cone terrains on the summit and along the road corridor. It was a very large data set that was collected and will take several months to process.

For all of these projects OMKM had the help of two summer interns - Margaux Mellot and Darcy Yogi. Both are attending UH Hilo.

## VI. NEW BUSINESS

### A. Kahu Kū Mauna Council Nominee

The Kahu Kū Mauna Council requested the approval of the appointment of Benjamin Keahiokealohanui Tajon for membership on the Council. Mr. Tajon's application was distributed earlier to Board members.

#### Action

It was moved by Hannah Springer and seconded by Herring Kalua to approve the nomination of Mr. Tajon. The motion was carried unanimously.

### B. Gemini North Observatory (GNO) - Request to Install a Photovoltaic Array System

Gemini North Observatory requests approval to install a photovoltaic (PV) system to reduce its energy costs and carbon footprint. The project shall result in an estimated savings of \$200 per day in energy costs, or \$72,000 per year, with an estimated 10 percent reduction in fossil fuel use.

#### Background Information

- The proposed system is rated for 100 kW, Hawaii Electric Light Company's (HELCO) maximum net-metering capacity.
- The project will include approximately 300 PV array panels mounted to the roof of the GNO support facility building, to less than a foot above the existing roofline, along with connective wiring and mounting hardware.
- One power disconnect switch, required by HELCO, shall be mounted on the exterior wall of the support building.
- The system shall be engineered to withstand 150 mph winds and severe winter weather, including snow loads.
- All other elements of installation shall be inside the GNO support facility building.
- The installation shall be permitted in accordance with County of Hawaii and State of Hawaii Department of Land and Natural Resources requirements.
- The selected installation contractor shall be licensed in the State of Hawaii and shall perform all work in accordance with County Code, HELCO net-metering agreements, and OMKM requirements.
- Pending receipt of necessary approvals, anticipated start of work is December 2014 or early 2015. Weather permitting, the selected contractor, working with a 4-8 person team, is expected to complete the installation over a few days to a couple of weeks.
- System installation shall require no digging, trenching, grading, or encroachment onto undisturbed areas.
- Installation equipment and hardware shall be transported to the summit using standard size flat bed or panel trucks.
- An equipment lift will be used to place the material on the roof of the support building working from the Gemini parking lot and/or the side of the roadway, no outdoor storage of equipment or supplies will occur.

#### Kahu Kū Mauna Council

Kahu Kū Mauna reviewed this project on August 19, 2014, and had no objections. The Council supported the project as it did not alter the facility footprint and will reduce fossil fuel use. The Council also discussed potential visibility issues, including reflections and the color contrast of the dark panel surface. These were concluded as largely unavoidable given current technology and that passing (commercial) aircraft will not be able to see these panels.

#### Comprehensive Management Plan (CMP) Compliance

This project addresses the numerous CMP actions. Of particular relevance and significance are the following actions regarding the Management of the Built Environment: Infrastructure and Maintenance, Sustainable Technologies:

- IM-11: “*Encourage existing facilities and new development to incorporate sustainable technologies, energy efficient technologies, and LEED standards, whenever possible, into facility design and operations.*”

- IM-12: “Conduct energy audits to identify energy use and system inefficiency, and develop solutions to reduce energy usage.”
- IM-13: “Conduct feasibility assessment, in consultation with Hawaii Electric Light Company, on developing locally-based alternative energy sources.”

Department of Land and Natural Resources (DLNR)

DLNR will be consulted regarding a permit or site plan for this project.

Recommendation

1. Based on the following, OMKM recommends this project be classified Minimal Impact:
  - This project does not impact any archaeological sites or historic properties.
  - This project does not require excavation.
  - This project does not change the footprint of the building.
  - Impact to immediate surroundings is minimal.
2. OMKM recommends approval of the project and to allow GNO to proceed.

Conditions

OMKM recommends the following conditions:

1. Inquire with DLNR’s Office of Conservation and Coastal Lands (OCCL) whether a permit or site plan is needed for this installation.
2. If a DLNR permit or site plan is required, submit a copy of correspondence with DLNR to OMKM.
3. Comply with all applicable DLNR conditions.
4. Verify and comply with any required County of Hawaii permits.
5. Notify OMKM in writing at least five days prior to beginning any on-site work.
6. Arrange with OMKM for an orientation of the cultural and natural resources for all members of the construction crew.
7. Comply with all actions and measures described in the proposal, including CMP compliance list and mitigation measures.
8. Ensure that loose tools or equipment are not left unattended and are properly stored at the end of each day.
9. In preparation for high wind conditions, protocols must include measures to ensure debris and equipment are not blown from the job site.
10. Invasive species prevention best practices will be employed, including inspections of materials by OMKM staff prior to entering UH-managed lands.
11. Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed of.
12. Notify OMKM in writing when field activity associated with the project is completed.
13. The project must be completed within 24 months of the date approved by the Mauna Kea Management Board. Projects not completed within this timeframe are not allowed to proceed (or commence) without explicit prior written approval from OMKM.
14. Allow OMKM rangers to visit and monitor activities.
15. The approval may not be transferred or assigned.

Discussions

Roger Imoto inquired if Gemini received approval from HELCO. Director Nagata replied Gemini has been in discussions with HELCO.

Douglas Simons stated the sub-circuit on the HELCO grid has a certain capacity for solar PV. He asked if Gemini knew how much was being consumed by this project and the potential affect it would have on Halepōhaku's (HP) plan for solar PV? Stewart Hunter replied both HP's and Gemini's net-metering agreement was approved by the same HELCO representative who said this would not affect HP's plans for solar PV. HP has been approved and they are awaiting release of the request for proposals from the University. The net-metering agreement for HP has been extended. Mr. Hunter did not know the total capacity, but HELCO is aware of Gemini's project and said it would fit within the capacity. Chas Cavedoni added Gemini will only produce 10% of their current consumption.

Dr. Simons also addressed the issue of people walking around, including the tops of observatory buildings, and wanted to make sure there was no way someone could get up on Gemini's roof. Mr. Cavedoni stated it is approximately 15-feet above the ground and they have a commercial ladder that has a lock on it preventing people from going up to the roof.

Corey Harden asked if this project is approved would it affect residents trying to get solar panels on their homes. Mr. Hunter replied HELCO divides everything by grids with no more than 10 percent per grid. The grid at HP and the summit is completely separate from all others on the island.

#### Action

It was moved by Hannah Springer and seconded by Herring Kalua to classify this project Minimal Impact and approve with conditions as stated and to allow Gemini to proceed. The motion was carried unanimously.

### **C. Mauna Kea Observatories Support Services - Request to Install LED Sign and Pathway Lighting**

Mauna Kea Observatories Support Services (MKSS) is requesting approval to install a Light Emitting Diode (LED) road sign and pathway lighting near the Visitor Information Station (VIS).

#### Purpose

The purpose of the LED sign is to enable MKSS staff and rangers to display real time road and hazard conditions to Maunakea visitors. Many visitors do not stop at the VIS prior to continuing on the summit access road and miss important information that is currently only transmitted verbally at the VIS or by personnel manning gate closures. The LED sign message can be updated by authorized personnel.

The purpose of the pathway lighting is to provide reliable pathway lighting to help visitors safely navigate walkways. The existing pathway lighting is insufficient and unreliable and needs to be replaced. Lighting will consist of individual, low-voltage (12 volt, DC) LED stakes similar to what currently illuminates the route between the VIS parking to construction cabins parking lot.

#### Proposed Installation

The LED sign will replace the existing metal sign with fading hazard placards. The new sign will emit a lighted color font, black exterior casing, and measures 2.2' high x 6.4' wide x 7" deep.

The pathway lighting will be placed between the VIS and construction camp parking lot, and at the walkway entrance to the construction camp cabins.

#### Kahu Kū Mauna Council

Kahu Kū Mauna reviewed the proposal on September 9, 2014. The Council had no objections and expressed appreciation at the effort to address previously expressed Council concerns regarding deteriorating signs.

#### Comprehensive Management Plan (CMP) Compliance

This project was reviewed for compliance with the Comprehensive Management Plan.

#### Department of Land and Natural Resources (DLNR)

DLNR will be contacted and applicable site plan or permits obtained pursuant to administrative rules in the conservation district. The project will not proceed until appropriate DLNR approval has been obtained and any conditions incorporated into the project.

#### Recommendation

OMKM recommends this project be classified Minimal Impact based on the following:

- The proposed request does not increase the size of facility.
- There are no archaeological sites in the immediate area.
- Excavation will occur only in previously disturbed areas.
- The impact to the immediate surroundings and summit region are negligible.

If this project is classified Minimal Impact, OMKM recommends MKSS be allowed to proceed, pending DLNR approval and compliance with any requirements.

#### Conditions

OMKM recommends the following conditions:

1. Notify OMKM in writing at least 5 days prior to beginning field work on UH-managed lands.
2. Allow OMKM Rangers to visit and monitor activities.
3. Invasive species prevention best practices will be employed, including inspections of materials by OMKM staff prior to entering UH-managed lands.
4. Comply with all actions and measures described in the proposal, including (community) benefits, CMP compliance list, and mitigation measures.

5. Ensure that loose tools or equipment are not left unattended.
6. In preparation for high wind conditions, protocols must include measures to ensure debris and equipment are not blown from the job site.
7. Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed of.
8. The approval may not be transferred or assigned. All persons associated with this project must carry a copy of the approval while they are working on University-managed lands.
9. The project must be completed within 24 months. Projects not completed within this timeframe are not allowed to continue (or commence) without explicit prior written approval from OMKM.
10. Notify OMKM in writing when field activity associated with the project is completed.

#### Discussions

Lehua Veincent asked what the timeline was for DLNR response. Director Nagata stated with small projects such as these, we usually hear back from DLNR within a month.

Chair Mooers asked if the lighting would cause any problem with the night skies. Mr. Hunter explained the LEDs are adjustable and automatically dim at night.

#### Action

It was moved by Hannah Springer and seconded by Herring Kalua to classify this project Minimal Impact and approve with conditions as stated and to allow MKSS to proceed pending DLNR approval and compliance with any requirements. The motion was carried unanimously.

#### **D. Thirty-Meter Telescope - Request to Install Construction Monitoring Camera**

TMT is requesting approval to install monitoring cameras on the Subaru Telescope catwalk guardrail. Two fixed cameras, with different field of views, will record images at preset intervals of the TMT construction site. A single pan-tilt camera will provide real-time viewing of the access way.

The purpose of the monitoring cameras is to provide a record of construction activity, providing independent documentation of construction activities and facilitate uninterrupted documentation of site activities. The request is for a permanent installation, which may be used as publicly accessible weather cameras upon completion of construction.

#### Kahu Kū Mauna Council

Kahu Kū Mauna reviewed the proposal on September 9, 2014, and had no objections or comments on the project.

#### Comprehensive Management Plan (CMP) Compliance

This project was reviewed for compliance with the Comprehensive Management Plan.

#### Department of Land and Natural Resources (DLNR)

DLNR will be contacted and applicable site plan or permits obtained pursuant to administrative rules in the conservation district. The project will not proceed until appropriate DLNR approval has been obtained and any conditions incorporated into the project.

#### Recommendation

OMKM recommends this project be classified Minimal Impact based on the following:

- The proposed request does not increase the size of facility.
- There are no archaeological sites in the immediate area.
- No excavation is involved and the activity will take place on the catwalk of the Subaru observatory.
- The impact to the immediate surroundings and summit region are negligible.

If this project is classified Minimal Impact, OMKM recommends TMT be allowed to proceed pending DLNR approval and compliance with any requirements.

#### Conditions

OMKM recommends the following conditions:

1. Notify OMKM in writing at least 5 days prior to beginning field work on UH-managed lands.
2. Allow OMKM Rangers to visit and monitor activities.
3. Invasive species prevention best practices will be employed, including inspections of materials by OMKM staff prior to entering UH-managed lands.

4. Comply with all actions and measures described in the proposal, including (community) benefits, CMP compliance list, and mitigation measures.
5. Ensure that loose tools or equipment are not left unattended.
6. In preparation for high wind conditions, protocols must include measures to ensure debris and equipment are not blown from the job site.
7. Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed of.
8. The approval may not be transferred or assigned. All persons associated with this project must carry a copy of the permit while they are working on University-managed lands.
9. The project must be completed within 24 months. Projects not completed within this timeframe are not allowed to continue (or commence) without explicit prior written approval from OMKM.
10. Notify OMKM in writing when field activity associated with the project is completed.

#### Discussions

Chair Mooers asked for the size of the housing for the pan-tilt camera. Director Nagata replied the camera includes a pan-tilt mechanism approximately 7" wide x 10.5" high x 6.4" deep. It will be mounted on an arm which measures 12" high x 11" wide x 7" deep.

Ms. Harden asked who will have access to the images from the cameras. Director Nagata replied TMT will have access to the images.

Mr. Vicente asked if the true intent is not to monitor the construction, but for the opponent's who threaten to try to stop the construction. That would bring about a whole new round of questioning jurisdiction and land title, etc. if there is a criminal prosecution. Chair Mooers replied anything is possible. Given the controversy surrounding this project, having a photographic record of what takes place and who may be where at what time is probably a good thing. He congratulated TMT for being proactive in this regard.

#### Action

It was moved by Herring Kalua and seconded by Hannah Springer to classify this project Minimal Impact and approve with conditions as stated and to allow TMT to proceed pending DLNR approval and compliance with any requirements. The motion was carried unanimously.

#### **E. Submillimeter Array (SMA) - Request to Install Daytime Monitoring Camera**

SMA requests approval to install a single monitoring camera on the Subaru Telescope catwalk guardrail using the same mounting bracket as existing SMA monitoring cameras. This request is for a visible-light camera, while existing SMA cameras are infrared for nighttime use.

The purpose of this monitoring camera is to provide a record of SMA activity during daylight hours. SMA staff monitor visitor and array activity whenever observing to ensure public safety. The request is for a permanent installation, which may be added to the Mauna Kea Weather Center collection of publicly accessible weather cameras.

#### Kahu Kū Mauna Council

Kahu Kū Mauna reviewed the proposal on September 9, 2014, and had no objections or comments on this project.

#### Comprehensive Management Plan (CMP) Compliance

This project was reviewed for compliance with the Comprehensive Management Plan.

#### Department of Land and Natural Resources (DLNR)

DLNR will be contacted and applicable site plan or permits obtained pursuant to administrative rules in the conservation district. The project will not proceed until appropriate DLNR approval has been obtained and any conditions incorporated into the project.

#### Recommendation

OMKM recommends this project be classified Minimal Impact based on the following:

- The proposed request does not increase the size of facility.
- There are no archaeological sites in the immediate area.
- No excavation is involved and the activity will take place on the catwalk of the Subaru Observatory.
- The impact to the immediate surroundings and summit region are negligible.

If this project is classified Minimal Impact, OMKM recommends SMA be allowed to proceed pending DLNR approval and compliance with any requirements.

Conditions

OMKM recommends the following conditions:

1. Notify OMKM in writing at least 5 days prior to beginning field work on UH-managed lands.
2. Allow OMKM Rangers to visit and monitor activities.
3. Invasive species prevention best practices will be employed, including inspections of materials by OMKM staff prior to entering UH-managed lands.
4. Comply with all actions and measures described in the proposal, including (community) benefits, CMP compliance list, and mitigation measures.
5. Ensure that loose tools or equipment are not left unattended.
6. In preparation for high wind conditions, protocols must include measures to ensure debris and equipment are not blown from the job site.
7. Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed of.
8. The approval may not be transferred or assigned. All persons associated with this project must carry a copy of the permit while they are working on University-managed lands.
9. The project must be completed within 24 months. Projects not completed within this timeframe are not allowed to continue (or commence) without explicit prior written approval from OMKM.
10. Notify OMKM in writing when field activity associated with the project is completed.

Action

It was moved by Herring Kalua and seconded by Douglas Simons to classify this project Minimal Impact and approve with conditions as stated and to allow SMA to proceed pending DLNR approval and compliance with any requirements. The motion was carried unanimously.

**VII. ELECTION OF BOARD 2ND VICE-CHAIR/SECRETARY**

Director Nagata explained the seat for 2nd Vice Chair/Secretary is now vacant. It was filled by former member Lisa Hadway, who has moved to Oahu. Chair Mooers opened the floor for the nomination of the 2nd Vice-Chair/Secretary.

Herring Kalua nominated Dr. Gregory Chun and Hannah Springer seconded the motion. The motion was carried unanimously. Although Dr. Chun is not here today, he has agreed to serve as 2nd Vice Chair/Secretary of the Board.

**VIII. ANNOUNCEMENTS**

Dwight Vicente, speaking on behalf of the Hawaiian Kingdom, questioned the legality of the sublease and the general lease inquiring if a title search on the two leases was ever done. If there are any copies, he would like to have them. Chair Mooers replied he would have to contact the attorney general's office for any legal documents of that nature. Mr. Vicente stated you recently signed the sublease - were there any title search done? Chair Mooers stated this Board did not sign the sublease. This Board made a comment on the sublease. We are not signatories to that document.

**IX. NEXT MEETING**

The Board will be polled to determine the next meeting date.

**X. ADJOURNMENT**

There being no further business Chair Mooers adjourned the meeting at 10:52 a.m.

Respectfully submitted:

Signed by Herring Kalua  
Herring Kalua, 1st Vice Chair

11-25-14  
Date