University of Hawai'i at Hilo

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Minutes
Regular Meeting

Mauna Kea Management Board
Wednesday, October 8, 2013

Kukahau'ula, Room 131
640 N. A'ohoku Place
Hilo, Hawai'i 96720
and
Hualalai Learning Theater
W.M. Keck Observatory
65-1120 Mamalahoa Hwy
Kamuela, Hawaii 96743

Attending MKMB:	Hilo: 2nd Vice Chair/Secretary Lisa Hadway and Hannah Kihalani Springer Waimea: Taft Armandroff and Gregory Chun
BOR Ex officio Officers:	Eugene Bal
Kahu Kū Mauna:	Tom Chun
OMKM:	Wally Ishibashi, Jessica Kirkpatrick, Fritz Klasner, Stephanie Nagata, Dawn Pamarang, Amber Stillman and Joy Yoshina
Others:	Cory Harden, Stewart Hunter, Wendy Light, Dwight Vicente and Ross Wilson

I. CALL TO ORDER

Second Vice Chair Hadway called the meeting of the Mauna Kea Management Board (MKMB) to order at 10:07 a.m.

II. APPROVAL OF MINUTES

Upon motion by Hannah Springer and seconded by Gregory Chun the minutes of the August 14, 2013, meeting of the MKMB were unanimously approved.

III. DIRECTOR'S REPORT

A. Welcome Regent Bal

Director Nagata welcomed and introduced Regent Eugene Bal to the meeting. Regent Bal is from Maui and replaces Eric Martinson.

B. Thirty-Meter Telescope (TMT) Conservation District Use Permit Appeal

The appellants in the appeal of the Board of Land and Natural Resources (BLNR) decision to grant a permit for the Thirty-Meter Telescope (TMT) project filed their opening brief in Circuit Court on September 26, 2013. The University of Hawaii (UH) will be filing their response by November 5, 2013. The appellants will then have 14 days to submit a response.

C. Thirty-Meter Telescope (TMT) Geotechnical

TMT began their geotechnical borings in late August. Don Thomas, a UH geophysicist working out of UH Hilo, has agreed to store the cores after TMT completes its tests. Dr. Thomas will be analyzing the cores to study the geology

of the area and is measuring temperatures at various depths in the bore holes to see if there are any signs of permafrost. He is also working with the Visitor Information Station (VIS) to develop an educational exhibit using parts of the core showing the geology of that part of Mauna Kea.

D. Master Lease

The University submitted a request to DLNR for new leases for the Mauna Kea Science Reserve and the mid-level facilities at Hale Pohaku and an extension of the summit access road easement. There were four reasons for requesting the lease: 1) the need to address internal changes made by UH in how it manages its managed lands on Mauna Kea; 2) the need to reflect management actions and reporting requirements adopted by the BLNR; 3) to assist in implementing legislation concerning UH's managed lands on Mauna Kea lands; and 4) to provide the basis for developing sublease agreements with current and any potential telescope projects. The terms of the lease are standard terms DLNR applies to its leases with other state and county agencies. In addition, UH requested that special conditions be added that reflect UH's compliance with existing statutes, rules, regulations, constitutional rights for native Hawaiians, BLNR approved management plans, and community-based management for Mauna Kea. A draft of the DLNR lease was submitted to agencies for their review and comment.

E. United Kingdom Infrared (UKIRT) and James Clerk Maxwell (JCMT) Telescopes

The United Kingdom Science and Technology Facilities Council (STFC), the organization that operated the United Kingdom Infrared Telescope (UKIRT) and James Clerk Maxwell Telescope (JCMT) announced plans to cease funding of the operations for UKIRT and JCMT on September 30, 2013 and September 30, 2014, respectfully. STFC subsequently announced that it was extending the operations of UKIRT to December 31, 2013. STFC's decision follows a review process and reflects the evolution of the United Kingdom's suite of observational capabilities in a tightly constrained financial environment.

In the case of UKIRT it is currently experiencing a peak in scientific productivity based largely on the UKIRT Infrared Deep Sky Survey (UKIDSS) which is photography of the sky similar to taking an inventory of objects including very faint ones.

JCMT recently launched the world's fastest submillimeter mapping camera called SCUBA-2. Similar to the UKIDSS, it is also mapping the sky but at much longer wave lengths, thus complementing the UKIDSS. Because SCUBA-2 observes at longer wave lengths it can see objects that UKIDSS cannot.

Recognizing that both UKIRT and JCMT are still doing outstanding research, the University is taking over ownership of both facilities and is engaged in establishing scientific partnerships for operating the two telescopes.

F. Meetings with Community Organizations

The Office has initiated community updates beginning in Keaukaha with a joint meeting of several homestead organizations in the Hilo area. The Ka'u community has also expressed interest.

G. Guardrails on Mauna Kea Access Road

The installation of guardrails along sections of the gravel portion of the summit road was completed last week in time for the winter season. After completing some sections additional segments were added for additional safety.

IV. KAHU KŪ MAUNA COUNCIL (KKMC)

Tom Chun reported the Council last met on September 10. UH attorney Tim Lui-Kwan discussed the new master lease with Council members. John Hamilton presented his proposal for astro-geology survey of hydrologic outflow features around the base of Pu'u Poli'ahu. An amendment to the Council guidelines was approved and is being presented to this Board for review and approval. Wally Ishibashi's responsibilities and the orientation program were discussed. The Council will be working on adjusting the time structure for its meetings spending half of the time on astronomy related issues and the other half on cultural issues.

V. Committee Reports

Environment Committee – Fritz Klasner

A volunteer weed pull event was held on Saturday, October 5. Thirty people volunteered to pull weeds at Hale Pohaku. We now have 1400 volunteer hours to date. The silverswords planted in the DLNR enclosure are doing well. The next volunteer event is scheduled for November 2 with the UH Hilo Biology club.

We continue to research and monitor the ants, identified as *Cardiocondyla kagutsuchi,* found at Hale Pohaku around some of the parking lots and among roots of pulled fireweed . DLNR is looking into spraying herbicides along the

access road shoulder. DLNR has also asked us to continue with weed pulls in the Hale Pohaku area as one means of reducing habitat for ants up there.

The committee discussed what they learned from TMT's geo-technical surveys and how to adapt the invasive species methods.

The current schedule for Cultural and Natural Resources Orientation is available on the Office of Mauna Kea Management (OMKM) website. We are looking into putting this online in the future.

Grant Gerrish's botanical inventory survey of the Science Reserve is completed and will be added to the OMKM website.

Lisa Hadway added Donna Delparte's latest summary and calculation of Lake Waiau is that there is 3 cubic meters of water left in the lake and she expects it to evaporate in the next two weeks.

Wally Ishibashi inquired if DLNR was doing any invasive species monitoring on the mountain. Mr. Klasner replied as far as University lands, not to his knowledge. Regarding adjacent lands, he deferred to Lisa Hadway. Ms. Hadway replied there is work being done in the Natural Area Reserve Systems (NARS) and forest reserve relating to their focus areas such as the palila mitigation areas. Of particular concern to DLNR is addressing the court order to remove sheep from the mountain. That is what their focus has been for the last several months.

VI. NEW BUSINESS

A. Pacific International Space Center for Exploration Systems (PISCES)/National Aeronautics and Space Administration (NASA) Proposal for Astro-Geology Survey of Hydrologic Outflow Features around the base of Pu'u Poli'ahu

Prior MKMB Action

This project was originally submitted to the Board for review and approval at the August 14, 2013 meeting. The Board, however, deferred action until the Kahu Kū Mauna Council made its determination about the project. Earlier, Kahu Kū Mauna deferred action because of concerns about future activities of the project. One concern was whether the outcome of the project would generate additional studies using Poli'ahu. Also the Council wanted to know what the benefit would be to the mountain and the community.

Project Background

The purpose of this project is to perform a visual and photographic survey of hydrothermal alteration of the cinder and basalt rocks around the base of Pu`u Poli'ahu. The survey part of the project will indicate regions for sample collection. Samples will be collected and measurements of the geochemical alterations of the basalt rocks would be performed later. It is not anticipated that additional samples or traverses will be needed to accomplish the goals for this investigation.

Certain regions on Mauna Kea are analogs for Mars research. Some regions resemble the terrain while other areas mimic the rock composition found on Mars. For this particular research, Pu`u Poli'ahu is unique since it was an eruption near or on the summit caldera where reserves of water and ice were also in abundance. The presence of heated water alters the compositional makeup of the cinder. Some of these highly altered areas are caused by hydrothermal events both on Mauna Kea and on Mars. The study and comparison of one area can yield insights into the other.

Proposed Activity

Top priority objectives are documenting the characteristics and emplacement of some of the altered material (particularly hematite) on Mauna Kea. Since these altered basalts seem to form only under situations when an eruption occurs under a glacier (as it did on Mauna Kea during the last Ice Age), there are no other alternate known locations. Additionally, the composition of Hawaiian magma seems to be the best match for Martian volcanic rocks. This would be done by identifying the rocks based on their surface appearance (by expert geologist) and by collecting small samples for verification and analysis at the NASA laboratory.

Desirable samples will be cinder pieces about 5-10 cm in diameter or smaller and consist in quantity of about 5-10 pieces at each site, yielding a total weight of no more than 2 kg (4lbs). Samples will be selected from the surface as they will be identified by their appearance. Digging or trenching will not be involved. Samples will be deposited with the NASA astrogeology library archive for future comparisons and use by researchers, as well as to limit the need to repeat such field efforts for broadly similar purposes. Metadata (sample information) will be provided to OMKM.

Kahu Kū Mauna

Kahu Kū Mauna reviewed the project again at its September 10, 2013 meeting. John Hamilton of PISCES attended to answer questions. One of the benefits to the community was that the information from this study would not only help to better understand Mars, but it would also help to better understand the geological processes that took place at Poli'ahu. The information gathered would be of interest and could be used in exhibits and other learning venues. He also mentioned that a native Hawaiian student, Melissa Adams, a student at UH Hilo, is participating in this study and other PISCES activities.

The Council expressed their frustration that Mauna Kea was giving and sharing its resources, but they did not see any give back to the mountain. How is this project benefiting the mountain? The community? Most of the Council members did not object to the project, but made it a condition that Melissa Adams, or a student at UH Hilo, be the lead of the survey and gathering team and the other scientists her "guests." This concept is similar to the Queen Lili'uokalani Trust which requires adults to be the guests of a child when visiting the Trust's properties. The Council also felt that the PISCES project should engage in public outreach activities by compiling and taking the information they learned from the studies to local schools.

DLNR

Pursuant to administrative rules pertaining to the Conservation District (HAR 13-5-22, P-1, Data Collection), a permit or site plan is not required. The rules state: *Basic data collection, research, education, and resource evaluation that is temporary (less than thirty days) and results in negligible ground disturbance (small gages or monitoring devices) and does not involve a land use (e.g., botanical, archaeological, faunal surveys).*

An inquiry will be made by PISCES-UHH-NASA with DLNR to confirm that a permit or a site plan is not required.

CMP Compliance

PISCES-UHH-NASA reviewed the CMP for compliance and where applicable addressed the CMP conditions for compliance.

OMKM Recommendation

OMKM recommends the MKMB classify this proposal a minimal impact project based on the following:

1. There are no archaeological sites in the immediate surroundings where they team plans to do its survey.
2. The collection of soil will only be at the surface and not result in disturbances similar to corings or excavations.
3. The impact to the immediate surroundings and summit region are negligible.

Conditions

OMKM recommends the following conditions:

1. If a permit or site plan from DLNR is required, notify OMKM that one is required and provide a copy to OMKM.
2. Notify OMKM in writing when it plans to conduct field activities.
3. Ensure that no tools or equipment are left in the field and collection sites are left in a natural condition.
4. Document individual locations of specimen collection using a Global Positioning System (GPS) and report these to OMKM along with quantities of materials collected at each site.
5. Comply with all actions and measures described in the proposal including the CMP compliance actions.
6. At least one team member on site must have a copy from OMKM authorizing this project.
7. Allow OMKM rangers to visit and monitor activities.
8. Rock samples are to be deposited with the NASA astro-geology library archive for research and future comparisons which will help to limit the need to repeat field efforts for broadly similar purposes.
9. Notify OMKM in writing when the project is completed.

Discussion

Kihalani Springer asked at what grade level would the presentations to local schools be. Director Nagata replied it was not determined but she expects it to be grades K thru 12.

Gregory Chun inquired if it was possible having all of the samples kept here on island. Director Nagata replied that could be done. She will inquire with Dr. Don Thomas if he is willing to store it here.

Ms. Hadway suggested that the request should be at least half of the material be stored locally for scientists to work on and also that there be outreach to local researchers.

Action
It was moved by Hannah Springer and seconded by Gregory Chun to approve and classify this project as Minimal Impact with the conditions as amended and discussed.

Dwight Vicente stated he objected in the name of the Hawaiian Kingdom because those lands are Crown Lands and the lease is not valid.

Second Vice Chair Hadway asked for a favorable vote and the motion was carried unanimously.

B. Kahu Kū Mauna Council Guidelines
The Council is submitting its third revised guidelines for review and approval. The Council held a retreat in July and felt the minimum of 9 was too high and that a minimum of 7 would be more manageable and reasonable. Changes were made to: 1) the structure - having a minimum of seven to a maximum of nine members, 2) term limits (currently unlimited) - set to four years (staggered) with each member being eligible for a second term, and 3) create emeritus status.

Recommendation
Director Nagata explained the MKMB approved the original guidelines in 2000, a first and second revision in 2008 and 2010, respectfully. OMKM recommends adopting the revised guidelines.

Action
It was moved by Hannah Springer and seconded by Gregory Chun to adopt the revised Kahu Kū Mauna Guidelines. The motion was carried unanimously.

VIII. ANNOUNCEMENTS
Cory Harden inquired if discussions with TMT regarding their sublease has taken place. Director Nagata replied there has been no discussions with TMT on their sublease.

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

X. ADJOURNMENT
There being no further business Second Vice Chair Hadway adjourned the meeting at 10:55 a.m.

Respectfully submitted:

Dr. Gregory Chun, MKMB

Feb 12, 2014
Date