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Lay representative for Temple of Lono

BOARD OF LAND AND NATURAL RESOURCES
FOR THE STATE OF HAWAII

IN THE MATTER OF) Case No. BLNR-CC-16-002
)
A Contested Case Hearing Re Conservation)
District Use Permit (CDUP) (HA-3568 for) **TEMPLE OF LONO FIRST**
The Thirty Meter Telescope at the Mauna) **SUPPLEMENTAL EXHIBIT**
Kea Science Reserve, Kaohe Mauka,) **DESIGNATION**
Hamakua District, Island of Hawai'i,)
TMK (3) 4-4-015:009)
_____)

TEMPLE OF LONO FIRST SUPPLEMENTAL EXHIBIT DESIGNATION

Now comes the TEMPLE OF LONO, by and through its above named representative, and hereby submits it First Supplemental Exhibits (Exhibits L16 through L23) Designation.

Exh No.	Description	Rec'd Into Evidence
L16	Agenda – OMKM Board Meeting – 10/4/2016	
L17	Item CR-5 on OMKM Board Meeting Agenda	
L18	Item CR-7 on OMKM Board Meeting Agenda	
L19	Item CR-8 on OMKM Board Meeting Agenda	
L20	Item CR-9 on OMKM Board Meeting Agenda	
L21	Poster on Closed Bathroom facilities	
L22	Kahu Ku Mauna Council Guidelines	
L23	Keystone Center Risk Assessment	

DATED: December 23, 2016

_____/s/_____
Lanny Alan Sinkin
Lay Representative for Temple of Lono

Event Details

Date	2016/10/04 - 2016/10/04
Time	10:00 AM - 12:00 PM
Recurring	
Event status	
Title	Mauna Kea Management Board
Location	640 N. Aohoku Place, Room 131, Hilo, Hawaii 96720

Mauna Kea Management Board
Tuesday, October 4, 2016
10:00 a.m. to 12:00 p.m.

Institute for Astronomy
Kukahau‘ula - Room 131
640 N. A‘ohoku Place
Hilo, Hawaii 96720

AGENDA

I. CALL TO ORDER

II. APPROVAL OF MINUTES OF THE JUNE 22, 2016 MEETING

III. DIRECTOR'S REPORT

IV. KAHU KU MAUNA COUNCIL

V. COMMITTEE REPORTS

A. Environment Committee

VI. NEW BUSINESS

A. Information Only: Bird and Bat Inventory Proposal

B. Action Item: CR-5 Develop and Adopt Guidelines for the Culturally Appropriate Placement and Removal of Offerings

C. Action Item: CR-8 Develop and Adopt a Management Policy for UH Management Areas on the Scattering of Cremated Human Remains

D. Action Item: CR-7 Determination of the Appropriateness of Constructing new Hawaiian Cultural Features

E. Action Item: CR-9 Management Policy for the Cultural Appropriateness of Building Ahu or "Stacking of Rocks"

F. Action Item: Submillimeter Array (SMA) Parking Lot Geotechnical Investigation

G. Action Item: University of Hawaii 2.2-m Telescope Maintenance and Repair

H. Executive Session (Closed to the Public)

To consult with the Board's attorney on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities related to the contested case hearing on the application for a Conservation District Use Application permit for the Thirty Meter Telescope project, pursuant to HRS §92-5(a) (4)

I. Action Item: Review and Approval of Draft Administrative Rules

VII. OLD BUSINESS

A. Discussion: Governor's 10 Point Plan

B. Discussion: Decommissioning of Telescopes Update

VIII. ANNOUCEMENTS

IX. NEXT MEETING

X. ADJOURNMENT

Maunakea Comprehensive Management Plan Action:

CR-5 Develop and adopt guidelines for the culturally appropriate placement and removal of offerings.

Hawaii State Constitution

The Hawaii State Constitution states in Article XII, Section 7 that:

“The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. [Add Const Con 1978 and election Nov 7, 1978]”

While traditional and cultural rights are recognized as an important aspect of our political heritage the Hawaii State Constitution also tasks the state with the regulation of these rights.

Mauna Kea Cultural Resources Management Plan

The “Mauna Kea Cultural Resources Management Plan” (CRMP), along with the “Mauna Kea Comprehensive Management Plan” (CMP) outline the types of management actions to be implemented by the Office of Maunakea Management (OMKM) on the University of Hawaii’s (UH) managed lands on Maunakea.

The CRMP makes the following observations:

“There are a number of cultural practices that could potentially affect historic properties. One practice that has become a major management problem in many places in Hawai`i, including many State Parks, are those involving offerings placed on shrines. At a number of religious sites and culturally significant places in Hawai`i, accumulations of offerings have become obtrusive and distracting to the point that they can have an adverse effect on historic properties. Organic offerings become a problem as they deteriorate or are dispersed by winds, while inorganic offerings, such as stones or objects made of modern materials, remain at the site for considerable periods of time unless removed. “(CRMP 4.1.2.3)

The CRMP also makes the following specific recommendations:

“Establish protocols

1. A culturally trained staff person or a specially designated individual shall be responsible for the culturally appropriate removal of offerings.

2. Establish culturally appropriate means of handling the removal of non-food offerings.
3. Food offerings shall be removed immediately following the ceremony.” (CRMP 4.2.1.3)

University Hawaii Administrative Rules

In addition, the rule making authority granted to the University of Hawaii regarding rules for the management of Maunakea state, in pertinent part explicitly that the UH’s administrative rules must :

“Strive for consistency with the administrative rules of the division of forestry and wildlife of the department of land and natural resources(DLNR) related to forest reserves and natural area reserves;” [§304A-1903] Mauna Kea lands[;] rules.

Therefore, any policy implemented by the OMKM needs to be consistent with the administrative rules of the division of forestry and wildlife of the department of land and natural resources related to forest reserves and natural area reserves whose land surround the UH managed lands on Maunakea.

The OMKM’s policies also need to comport with the DLNR’s administrative rules that apply to Conservation District Lands.

The OMKM’s policy on the placement and removal of offerings will be formalized by the adoption of administrative rules for UH’s managed lands.

Department of Land and Natural Resources Administrative Rules

Natural Areas Reserve

HAR 13-209-4, prohibited activities within the Natural Area Reserve

The following activities are prohibited within a natural area reserve:

- (1) To remove, injure, or kill any form of plant or animal life, except game mammals and birds hunted according to department rules;
- (2) To introduce any form of plant or animal life, except dogs when permitted by hunting rules of the department and service animals accompanying their handlers;
- (3) To remove, damage, or disturb any geological or paleontological features or substances;
- (4) To remove, damage, or disturb any historic or prehistoric remains;
- (5) To remove, damage, or disturb any notice, marker, or structure;
- (6) To engage in any construction or improvement;

Forest Reserve

HAR 13-104-4, preservation of public property and resources.

The following activities are prohibited within a forest reserve:

- (1) To remove, injure, or kill any form of plant or animal life, either in whole or in part, except as authorized by the Board or authorized representative or as provided by rules of the Board;
- (2) To remove, damage, or disturb any natural feature or resource (e.g. natural stream beds) except as authorized by the board or its authorized representative;
- (3) To remove, damage, or disturb any historic or prehistoric remains;
- (4) To remove, damage, or disturb any notice, marker, or structure;
- (5) To enter, occupy, or use any building, structure, facility, motorized vehicle, machine, equipment, or tool within or on forest reserve except as authorized by the board or its representative;
- (6) To engage in any construction or improvement except as authorized by the board.
- (7) To sell, peddle, solicit, or offer for sale any merchandise or service except with written authorization from the board.
- (8) To distribute or post handbills, circulars, or other notices. Unofficial compilation:
- (9) To introduce any plant or animal except as approved by the Board.
- (10) To enter or remain within forest reserves when under the influence of alcohol, narcotics, or drugs, to a degree that may endanger oneself or endanger or cause annoyance to other persons or property. The use or possession of narcotics, drugs or alcohol within forest reserves is prohibited. [Eff 9/28/81; am and comp 10/15/93] (Auth: HRS §183-2) (Imp: HRS §§183- 2, 183-17) §

Conservation District Rules

HAR 13-5-2 Definitions

"Land use" means:

- (1) The placement or erection of any solid material on land if that material remains on the land more than thirty days, or which causes a permanent change in the land area on which it occurs;
- (2) The grading, removing, harvesting, dredging, Unofficial Copy §13-5-2 5-6 mining, or extraction of any material or natural resource on land;
- (3) The subdivision of land; or
- (4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

For purposes of this chapter, harvesting and removing does not include the taking of aquatic life or wildlife that is regulated by state fishing and hunting laws nor the gathering of natural resources for personal, noncommercial use or pursuant to Article 12, Section 7 of the Hawaii State Constitution or section 7-1, HRS, relating to certain traditional and customary Hawaiian practices.

§13-5-6 Penalty

(d) No land use(s) shall be conducted in the conservation district unless a permit or approval is first obtained from the department or board.

Hawaii Revised Statutes

Conservation District

183C-2 Definitions

"Land use" means:

- (1) The placement or erection of any solid material on land;
- (2) The grading, removing, harvesting, dredging, mining, or extraction of any material or natural resource on land;
- (3) The subdivision of land; or
- (4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

Historic Preservation Program

6E-11 Civil and administrative violations.

- (a) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon the private lands of any owner thereof without the owner's written permission being first obtained. It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.
- (b) It shall be a civil and administrative violation for any person to knowingly take, appropriate, excavate, injure, destroy, or alter any burial site, or the contents thereof, located on private lands or lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, to knowingly fail to re-inter

human remains discovered on the lands in a reasonable period of time as determined by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.

(c) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or burial site during the course of land development or land alteration activities to which section 6E-42 applies, without obtaining the required approval.

(d) It shall be a civil and administrative violation for any person who inadvertently discovers a burial site to fail to stop work in the immediate area and report the discovery, as required by section 6E-43.6.

(e) It shall be a civil and administrative violation for any person to knowingly glue together any human skeletal remains, label any human skeletal remains with any type of marking pen, or conduct any tests that destroy human skeletal remains, as defined in section 6E-2, except as permitted by the department.

(f) Any person who violates this section shall be fined not more than \$10,000 for each separate violation. If the violator directly or indirectly has caused the loss of, or damage to, any historic property or burial site, the violator shall be fined an additional amount determined by the environmental court or an administrative adjudicative authority to be equivalent to the value of the lost or damaged historic property or burial site. Each day of continued violation of this provision shall constitute a distinct and separate violation for which the violator may be punished. Equipment used by a violator for the taking, appropriation, excavation, injury, destruction, or alteration of any historic property or burial site, or for the transportation of the violator to or from the historic property or burial site, shall be subject to seizure and disposition by the State without compensation to its owner or owners.

(g) Any person who knowingly violates this chapter with respect to burial sites shall also be prohibited from participating in the construction of any state or county funded project for ten years.

(h) Nothing in this section shall apply to land altering activities relating to family burial plots under section 441-5.5.

(i) The civil and administrative penalties imposed pursuant to this chapter shall be in addition to the criminal penalties provided by this chapter and any other penalties that may be imposed pursuant to law. [L 1976, c 104, pt of §2; gen ch 1985; am L 1990, c 306, §8; am L 1992, c 113, §3; am L 1996, c 97, §8; am L 2003, c 104, §3; am L 2005, c 128, §3; am L 2006, c 38, §1 and c 45, §2

CR-5 Develop and adopt guidelines for the culturally appropriate placement and removal of offerings.

PROPOSED OMKM POLICY for CR-5

The Placement and Removal of Offerings

1. Offerings shall not be placed on existing historic properties, roadways, pathways or existing structures or subleased properties.
2. Any offerings that present a health or safety issue shall be removed.
3. All applicable Hawaii state laws and regulations shall apply.

Maunakea Comprehensive Management Plan Action:

CR-7 Kahu Ku Mauna shall take the lead in determining the appropriateness of constructing new Hawaiian cultural features.

Hawaii State Constitution

The Hawaii State Constitution states in Article XII, Section 7 that:

“The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. [Add Const Con 1978 and election Nov 7, 1978]”

While traditional and cultural rights are recognized as an important aspect of our political heritage the Hawaii State Constitution also tasks the state with the regulation of these rights.

Mauna Kea Comprehensive Management Plan

The “Mauna Kea Comprehensive Management Plan” states:

“CR-7. Determining the appropriateness of constructing new Hawaiian cultural features .This is an extremely sensitive issue as most Native Hawaiians will be the first to say that it is not their kuleana to judge the cultural practices of another Hawaiian. However, the intent of this management measure is to develop a process to determine culturally appropriate protocols. Kahu Kū Mauna and/or the MKMB’s Hawaiian Cultural Committee in consultation with families with lineal and historic connections to Mauna Kea, kūpuna, cultural practitioners, the Office of Hawaiian Affairs and other Native Hawaiian groups will work in collaboration to develop these protocols. Guidelines should be adopted to assist in formulating culturally appropriate protocols (e.g., to determine which kinds of features and locations are appropriate or inappropriate, as well as if and when a regulatory review process is necessary). Construction of new features will be evaluated to determine whether a CDUP is required. New construction not complying with the applicable protocols, the conditions imposed by guidance provided by Kahu Kū Mauna, MKMB, and/or the MKMB Hawaiian Cultural Committee or administrative rules, if/or when adopted, will be dismantled.”

Mauna Kea Cultural Resources Management Plan

The “Mauna Kea Cultural Resources Management Plan” (CRMP), along with the “Mauna Kea Comprehensive Management Plan” (CMP) outline the types of management actions to be implemented by the Office of Maunakea Management (OMKM) on the University of Hawaii’s (UH) managed lands on Maunakea.

The CRMP makes the following observations:

Construction of new Hawaiian cultural features (CR-7)

In addition to the modern use of ancient shrines, there are persons who are also constructing new shrines (kahu) and building less formal mounds (ahu) of stacked or piled rocks. Though most of the ahu, at least those located near roads, were probably erected rather recently to commemorate or memorialize a person or family's visit to the summit region, it is also possible that some ahu were built based on a religious belief and might therefore be viewed as a new or different form of shrine, especially since one meaning of ahu is shrine or altar (Pukui and Elbert 1971:8).

Ahu built as shrines and those built for non-religious purposes are difficult, if not impossible, to distinguish based on morphological characteristics alone. This poses a major management problem that will require further discussions amongst Native Hawaiian cultural practitioners and land managers to determine what shrines are and what are not. For the purpose of this CRMP, new shrines are defined as those that replicate the older shrines in the sense that they have one or more upright stones. The management actions for what are inferred to be modern, non-religious rock piles or ahu are presented in Section 4.2.1.8.(CRMP 4.2.1.6)

Management Actions for Constructing New Shrines.

1. Guidance shall be sought with regards to the construction of new Hawaiian cultural features and the long-term management of these features.
2. The Kahu Ku Mauna Council, in consultation with other Native Hawaiian organizations, will develop protocols that will consider which kinds of features and locations are appropriate or inappropriate, and whether a review process should be instituted.
3. New constructions not complying with the established protocols and Chapter 6E and HAR 13-5-2 will be dismantled.
4. Newly built permitted shrines will be described and their locations recorded so that they can be protected by OMKM Rangers on patrol and checked as part of the ongoing monitoring program.

University Hawaii Administrative Rules

In addition, the rule making authority granted to the University of Hawaii regarding rules for the management of Maunakea state, in pertinent part explicitly that the UH's administrative rules must :

Stephanie 9/13/2016 10:08 PM

Comment [1]: What is this word?

“Strive for consistency with the administrative rules of the division of forestry and wildlife of the department of land and natural resources(DLNR) related to forest reserves and natural area reserves;” [§304A-1903] Mauna Kea lands[;] rules.

Therefore, any policy implemented by the OMKM needs to be consistent with the administrative rules of the Division of Forestry and Wildlife of the Department of Land and Natural Resources whose land (Forest Reserve and Natural Area Reserve) surround the UH managed lands on Maunakea.

The OMKM’s policies also need to comport with the DLNR’s administrative rules that apply to Conservation District Lands.

The OMKM’s policy on the placement and removal of offerings will be formalized by the adoption of administrative rules for UH’s managed lands.

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The following activities are prohibited within a natural area reserve:

- (1) To remove, injure, or kill any form of plant or animal life, except game mammals and birds hunted according to department rules;
- (2) To introduce any form of plant or animal life, except dogs when permitted by hunting rules of the department and service animals accompanying their handlers;
- (3) To remove, damage, or disturb any geological or paleontological features or substances;
- (4) To remove, damage, or disturb any historic or prehistoric remains;
- (5) To remove, damage, or disturb any notice, marker, or structure;
- (6) To engage in any construction or improvement;

Forest Reserve

HAR 13-104-4, preservation of public property and resources.

The following activities are prohibited within a forest reserve:

- (1) To remove, injure, or kill any form of plant or animal life, either in whole or in part, except as authorized by the Board or authorized representative or as provided by rules of the Board;
- (2) To remove, damage, or disturb any natural feature or resource (e.g. natural stream beds) except as authorized by the board or its authorized representative;
- (3) To remove, damage, or disturb any historic or prehistoric remains;
- (4) To remove, damage, or disturb any notice, marker, or structure;

- (5) To enter, occupy, or use any building, structure, facility, motorized vehicle, machine, equipment, or tool within or on forest reserve except as authorized by the board or its representative;
- (6) To engage in any construction or improvement except as authorized by the board.
- (7) To sell, peddle, solicit, or offer for sale any merchandise or service except with written authorization from the board.
- (8) To distribute or post handbills, circulars, or other notices. Unofficial compilation:
- (9) To introduce any plant or animal except as approved by the Board.
- (10) To enter or remain within forest reserves when under the influence of alcohol, narcotics, or drugs, to a degree that may endanger oneself or endanger or cause annoyance to other persons or property. The use or possession of narcotics, drugs or alcohol within forest reserves is prohibited. [Eff 9/28/81; am and comp 10/15/93] (Auth: HRS §183-2) (Imp: HRS §§183- 2, 183-17) §

Conservation District Rules

HAR 13-5-2 Definitions

"Land use" means:

- (1) The placement or erection of any solid material on land if that material remains on the land more than thirty days, or which causes a permanent change in the land area on which it occurs;
- (2) The grading, removing, harvesting, dredging, Unofficial Copy §13-5-2 5-6 mining, or extraction of any material or natural resource on land;
- (3) The subdivision of land; or
- (4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

For purposes of this chapter, harvesting and removing does not include the taking of aquatic life or wildlife that is regulated by state fishing and hunting laws nor the gathering of natural resources for personal, noncommercial use or pursuant to Article 12, Section 7 of the Hawaii State Constitution or section 7-1, HRS, relating to certain traditional and customary Hawaiian practices.

§13-5-6 Penalty

- (d) No land use(s) shall be conducted in the conservation district unless a permit or approval is first obtained from the department or board.

Hawaii Revised Statutes

Conservation District

183C-2 Definitions

"Land use" means:

- (1) The placement or erection of any solid material on land;
- (2) The grading, removing, harvesting, dredging, mining, or extraction of any material or natural resource on land;
- (3) The subdivision of land; or
- (4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

Historic Preservation Program

§6E-11 Civil and administrative violations.

- (a) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon the private lands of any owner thereof without the owner's written permission being first obtained. It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.
- (b) It shall be a civil and administrative violation for any person to knowingly take, appropriate, excavate, injure, destroy, or alter any burial site, or the contents thereof, located on private lands or lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, to knowingly fail to re-inter human remains discovered on the lands in a reasonable period of time as determined by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.
- (c) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or burial site during the course of land development or land alteration activities to which section 6E-42 applies, without obtaining the required approval.

(d) It shall be a civil and administrative violation for any person who inadvertently discovers a burial site to fail to stop work in the immediate area and report the discovery, as required by section 6E-43.6.

(e) It shall be a civil and administrative violation for any person to knowingly glue together any human skeletal remains, label any human skeletal remains with any type of marking pen, or conduct any tests that destroy human skeletal remains, as defined in section 6E-2, except as permitted by the department.

(f) Any person who violates this section shall be fined not more than \$10,000 for each separate violation. If the violator directly or indirectly has caused the loss of, or damage to, any historic property or burial site, the violator shall be fined an additional amount determined by the environmental court or an administrative adjudicative authority to be equivalent to the value of the lost or damaged historic property or burial site. Each day of continued violation of this provision shall constitute a distinct and separate violation for which the violator may be punished. Equipment used by a violator for the taking, appropriation, excavation, injury, destruction, or alteration of any historic property or burial site, or for the transportation of the violator to or from the historic property or burial site, shall be subject to seizure and disposition by the State without compensation to its owner or owners.

(g) Any person who knowingly violates this chapter with respect to burial sites shall also be prohibited from participating in the construction of any state or county funded project for ten years.

(h) Nothing in this section shall apply to land altering activities relating to family burial plots under section 441-5.5.

(i) The civil and administrative penalties imposed pursuant to this chapter shall be in addition to the criminal penalties provided by this chapter and any other penalties that may be imposed pursuant to law. [L 1976, c 104, pt of §2; gen ch 1985; am L 1990, c 306, §8; am L 1992, c 113, §3; am L 1996, c 97, §8; am L 2003, c 104, §3; am L 2005, c 128, §3; am L 2006, c 38, §1 and c 45, §2

***Kahu Ku Mauna recognizes that the creation of new cultural features could include the stacking and piling of rocks. Therefore, the policy for CR7 applies to CR9.**

DISCUSSION:

The construction of Hawaiian cultural features is a sensitive issue. Many Native Hawaiians will be the first to say that it is not their kuleana to judge the cultural practices of another Hawaiian or to judge without knowing the reason for constructing a feature. The CMP discussion on CR-7 states the intent of this management action is to develop a process to determine cultural

appropriate protocols and to develop guidelines to assist in formulating culturally appropriate protocols, such as determining “which kinds of features and locations are appropriate or inappropriate as well as if and when a regulatory review process is necessary.

CR-7 states that Kahu Kū Mauna should “take the lead in determining the appropriateness of constructing New Hawaiian cultural features”. However, in reviewing this management action Kahu Kū Mauna agrees that it is not their kuleana to develop culturally appropriate protocols for constructing cultural features. Protocols are personal and private in nature and to develop a one-size-fits-all protocol is not appropriate. Further to question a person’s reasons for constructing a cultural feature may be viewed as niele or not another person’s business. More importantly the exercise of Native Hawaiian traditional and customary rights is constitutionally protected subject to reasonable regulation as permitted by law. Kahu Kū Mauna does not have the authority to regulate the traditional customary practices of other Native Hawaiians.

Legal consideration

A legal consideration is compliance with existing regulations. The University’s managed lands on Mauna Kea are classified Conservation District lands and fall under HAR 13-5 which governs land uses. Land uses are defined in the HAR and may be allowed depending on the type and subzone designation. The rules do not specifically address the construction of cultural features, however the construction of cultural features falls under this definition. Also, a cultural feature that remains as a permanent structure changes the land area.

Although rules governing the Mauna Kea Ice Age Natural Areas Reserves (NAR) do not apply to UH’s managed lands, the NAR is an integral part of the cultural landscape of Mauna Kea. OMKM recognizes the cultural landscape encompasses the NAR and UH’s managed lands and political boundaries should not be a reason for parceling the cultural landscape. OMKM acknowledges the NAR rules which prohibits engaging in construction or improvement and removing, damaging, or disturbing geological features or substance. But OMKM also acknowledges that the right of Native Hawaiians to practice and exercise traditional and customary practices is constitutionally protected subject to reasonable regulation of such rights as permitted by law.

Historic Sites

Pursuant to HRS 6E-11, it is violation to injure, destroy or alter any historic property (an historic property includes, for example, any building, structure, object or site that is over fifty years old). The potential exist for the uninitiated to use rocks from an existing historic site for the construction of a cultural feature.

Preserving the cultural and natural landscape

Another major consideration is preservation of the cultural landscape. The building of new features should not be constructed without some thought for maintaining or removing them after the purpose for which they were built has ended. It is not OMKM's kuleana to maintain these features but rather the responsibility of the individual(s) who erected them.

The creation of new features that are visible to the public might encourage others who do not understand the nature or purpose of these new cultural features to engage in "copycat" behavior. Further, having cultural features in plain view can also result in vandalism or inadvertent disturbance or damage to the sites. Constructing the features out-of-site or a distance away from the road and historic sites will help to prevent disturbance to new and historic sites.

It is OMKM's responsibility to preserve not only the cultural landscape, but also the natural landscape and biological community. It is not uncommon to bring and leave flowers, leaves and other plant parts, sometimes with viable seeds, especially those that are easily distributed by wind. Food items left behind can attract vermin such as rats and mongoose, or undesirable arthropods, including ants. Often times man-made articles are left behind such as beer cans, crystals, and statues. These, plus plant material, and food items left behind eventually become trash or are blown about by the winds.

The BLNR approved Public Access Plan for UH's managed lands on Mauna Kea, contains a hierarchy of public access control with personal responsibility being the fundamental and lowest level of control. It states:

"As individuals we bring our own personal sense of responsibility and kuleana to Mauna Kea. This sense of kuleana is shaped by our upbringing and by the degree to which we have been taught to act with common courtesy, humility and respect both for nature and for other people...Although this sense of responsibility may not be shared equally by all members of the public, there is a foundation of personal accountability upon which to build. The most effective management tool is the ability of each individual to take responsibility for their own actions...."

It follows that the maintenance of newly constructed features should be the responsibility of the individual(s) who erected them. Items left behind that are not originally part of the natural landscape should be removed.

PROPOSED OMKM FOR BOTH CR-7 AND CR-9

Construction of new cultural features and /or the stacking of rocks

The construction of new cultural features and/or the stacking and piling of rocks is not allowed unless a permit is first obtained from the Office of Mauna Kea Management.

Guidelines for erecting and maintaining new cultural features such as, for example, shrines or alters:

1. Definition:
 - a. Cultural features is defined as Native Hawaiian cultural feature
2. New cultural features shall be placed out of plain sight, or a minimum of 100 yards from existing roads and in designated areas. Plain sight includes areas close to or adjacent to roads, parking areas unless hidden by natural features such as rock outcroppings or mounds.
3. New cultural features shall be placed at least 200 feet from existing historic sites.
4. New cultural features shall be made of natural materials from the surrounding area, but shall not be removed from existing historical sites. Removal, disturbance or damage to historic sites is a violation of state law, HRS 6E-11.
5. New cultural features are to be maintained by those who erected them.
6. Upon observation that the structure has been disturbed or damaged, OMKM shall contact the responsible individual.
7. Cultural features for which OMKM did not issue a permit shall be removed.
8. Material from dismantled non- permitted structures shall be disposed of.
9. All applicable Hawaii state laws and regulations shall apply.

Maunakea Comprehensive Management Plan Action:

CR-8 Develop and adopt a management policy for the UH Management Areas on the scattering of cremated human remains.

Mauna Kea Comprehensive Management Plan

The Mauna Kea Comprehensive Management Plan states:

“CR-8. Management policy on the scattering of cremated human remains. The scattering of the ashes of cremated human remains and the burial of urns in the summit area of Mauna Kea are on-going cultural practices. These private affairs are not well known or documented, but they may impact historic properties. One recommendation is to adopt a policy similar to that recently instituted at Hawai‘i Volcanoes National Park, with the following considerations: The scattering of cremated human remains requires a special use permit.

A death certificate is required to obtain a special use permit. Conditions of the permit include: scattering must take place in a such a manner and in such a location that the ashes will not be located and identified as human remains; no memorials, plaques, photos or flowers may be left behind; the permittee recognizes and is aware of the sensitivity of this activity and agrees to perform it in a discrete and private manner; all local, state, and county rules and regulations must be followed; violation of Mauna Kea Comprehensive Management Plan Section 7: Management Component Plans April 2009 7-10 the terms and conditions of the permit may result in the immediate revocation of the permit and/or other law enforcement action.⁵ However the ultimate determination will be based upon appropriate cultural consultation and applicable rules.”

Mauna Kea Cultural Resources Management Plan

The “Mauna Kea Cultural Resources Management Plan” (CRMP), along with the “Mauna Kea Comprehensive Management Plan” (CMP) outline the types of management actions to be implemented by the Office of Maunakea Management (OMKM) on the University of Hawaii’s (UH) managed lands on Maunakea.

The CRMP makes the following observations:

Scattering and Burial of Cremated Human Remains The scattering of cremated human remains and the burial of urns in the summit area of Mauna Kea is an on-going cultural practice, that although a private affair and thus not well known or documented, should nevertheless be regulated to prevent disturbance of historic properties and to avoid the situation of OMKM rangers having to respond to reports of disinterred human remains in the future Mauna Kea is, of course, not the only place in Hawai‘i where the scattering and burial of ashes is taking place. Another well-known location is Hawaii Volcanoes National Park. . (CRMP 4.2.1.7)

The CRMP also makes the following specific recommendations:

A management policy on the scattering of cremated human remains, like that recently instituted at Hawai'i Volcanoes National Park, will be developed and implemented for the Science Reserve. The National Park requires a copy of the death certificate before a Special Use Permit is granted. The Special Use Permit contains a number of conditions.

1. A death certificate will be required to obtain a Special Use Permit to scatter ashes
2. Scattering must take place in such a manner and in such a location that the ashes will not be located and identified as human remains; interment is prohibited.
3. No memorials, plaques, photos, or flowers will be left.
4. The permittee recognizes and is aware of the sensitivity of this activity and agrees to perform it in a discreet and private manner.
5. All local, state and county rules and regulations will be followed. (CRMP 4.2.1.7)

DISCUSSION

In 2011 Kahu Kū Mauna discussed this CMP management action. Initially the office felt that this activity didn't need a permit, however, OMKM is reconsidering that we should require a permit to be consistent with DLNR rules. The reason being is that there are no physical boundaries that delineate UH's managed lands from DLNR lands, including the Mauna Kea Forest Reserve and Mauna Kea Ice Age Natural Area Reserve, which are adjacent to UH lands on Mauna Kea. Most individuals are unaware there are political boundaries much less where those boundaries lie.

Under frequently asked questions in the DLNR website it states "[g]enerally speaking, no environmental permit is required for scattering of cremated ashes on land, sea or from the air from the Department of Health, but this should be done discreetly and some distance away from the general public. Ashes may not be dispersed within a state forest reserve or watershed area..." However, in discussion with DLNR, they issue permits for the scattering of ashes.

The policy for scattering cremated human remains at Hawaii Volcanoes National Park states "The remains to be scattered must have been cremated and pulverized. The scattering of remains by persons on the ground is to be performed at 100 yards from any trail, road, developed facility, or body of water." Scattering must take place in such a manner and in such a location that the ashes will not be located and identified as human remains. No memorials, plaques, photos, or flowers will be left in the park."

OMKM feels the act of scattering ashes is a private matter. In addition, some might view this type of activity offensive to their personal or cultural beliefs. The phrase "some distance" is vague and it might be helpful to provide guidelines, such as a minimum of 100 yards as required by Hawaii Volcanoes National Park. While it is understandable that people would want to leave something to memorialize the spot where the ashes were scattered, such objects end up over

time as rubbish and can be blown about the landscape. In addition, flowers and plants have the potential for introducing invasive species which OMKM is charged with preventing; and food articles may introduce invasive species and also attract rats and mongoose which are threats to the native wildlife.

University Hawaii Administrative Rules

In addition, the rule making authority granted to the University of Hawaii regarding rules for the management of Maunakea state, in pertinent part explicitly that the UH's administrative rules must :

“Strive for consistency with the administrative rules of the division of forestry and wildlife of the department of land and natural resources(DLNR) related to forest reserves and natural area reserves;” [§304A-1903] Mauna Kea lands[;] rules.

Therefore, any policy implemented by the OMKM needs to be consistent with the administrative rules of the division of forestry and wildlife of the department of land and natural resources related to forest reserves and natural area reserves whose land surround the UH managed lands on Maunakea.

The OMKM's policies also need to comport with the DLNR's administrative rules that apply to Conservation District Lands.

The OMKM's policy on the placement and removal of offerings will be formalized by the adoption of administrative rules for UH's managed lands.

Department of Land and Natural Resources:

- a. Division of Forestry and Wildlife issues permits for the scattering of remains on forest reserve lands.
- b. Burial Councils do not take up matters concerning the scattering of human remains.
- c. Natural Areas Reserves Systems issues a permit.
- d. Conservation and Coastal Lands regards the scattering of human remains an activity and not a land use, and therefore does not require a land use permit

Hawaii Revised Statutes

There are no statutes or rules that prohibit the spreading or placement of human cremated remains.
Department of Health allows the scattering of ashes provided it is done discretely.

PROPOSED OMKM POLICY for CR-8

Scattering of cremated remains

The scattering of cremated human remains, or ashes, is allowed provided the manner in which the scattering of the cremated remains is carried out discretely and away from public view and areas where the public frequents. The cremated remains must not be identifiable as human remains. Further, no memorials, including plaques, flowers, plants or plant material, food or religious symbols or personal objects are to be left in the area. The permittee recognizes and is aware of the sensitivity of this activity and agrees to perform it in a discreet and private manner.

1. Cremated remains must be scattered and not left or buried in a container such as a bag or urn.
2. No memorials, such as photos, personal objects, religious symbols, flowers, plant material, food, plaques, etc. shall be left at, near or on the landscap³
3. The scattering of cremated remains shall take place in areas away from public view and at a minimum of 100 yards where the public frequents including trails, roads, developed facility or body of water.
4. The scattering of cremated remains is prohibited in the vicinity of any ohelo berry bushes.
5. Cremated remains must be pulverized so as not to identifiable as human remains including bone fragments.
6. In the event that any cremated remains are discovered on any University of Hawaii at Hilo managed lands they will be buried and the location documented.
7. All applicable Hawaii state laws and regulations shall apply.

Maunakea Comprehensive Management Plan Action:

CR –9 A management policy for the cultural appropriateness of building ahu or “stacking of rocks” will need to be developed by Kahu Kū Mauna who may consider similar policies adopted by Hawai’i Volcanoes National Park

Hawaii State Constitution

The Hawaii State Constitution states in Article XII, Section 7 that:

“The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights. [Add Const Con 1978 and election Nov 7, 1978]”

While traditional and cultural rights are recognized as an important aspect of our political heritage the Hawaii State Constitution also tasks the state with the regulation of these rights.

Mauna Kea Comprehensive Management Plan

The Mauna Kea Comprehensive Management Plan states:

“CR-9. Management policy on the piling and stacking of rocks Ahu, which are created by placing single rocks or stacks of rocks on boulders and outcrops, dot the landscape in the summit area of Mauna Kea. Most of the 336 “find spots” recorded in the 2005–2007 archaeological survey are piled and stacked rocks. Such features, which are widespread in Hawai’i, may have as their basis a traditional cultural practice, but whose purpose and meaning have probably changed over time.

At the same time, there is reason to believe that a large number of the single rock features and small concentrations of piled or stacked rocks on Mauna Kea are modern and that many were constructed by non-Hawaiian visitors in the last decade or so.

The management policy for piling and stacking rocks could be similar to that recently instituted at Hawai’i Volcanoes National Park (Kubota 2005). A culturally trained staff person will be responsible for the culturally appropriate removal of rock piles that are made on Mauna Kea. Visitors to and users of Mauna Kea will be educated about the importance of preserving the cultural landscape, with particular attention to prohibitions on the piling and stacking of rocks.” (CMP, 7-10)

The Mauna Kea Cultural Resources Management Plan

The Mauna Kea Cultural Resources Management Plan notes:

“The piling and stacking of rocks (CR-9)

Single rocks and mounds of piled or stacked rocks on boulders and outcrops dot the landscape in the summit area of Mauna Kea. The majority of the 336 “find spots” recorded in the archaeological survey of the Science Reserve as of 2007 are piled and stacked rocks. Such features, which are widespread in Hawai‘i, represent a traditional cultural practice which undoubtedly has some time depth, but whose purpose and meaning have probably changed over time. At the same time, there is reason to believe that a large number of the single rock features and small concentrations of pile or stacked rocks on Mauna Kea are modern and that many were constructed by non-Hawaiian visitors in the last decade or so.

The proliferation of such features is undoubtedly a result in part of what is popularly known as the “copy-cat effect.” The appearance in recent years of large numbers of rock piles at Hawaii Volcanoes National Park led the Park’s committee of cultural advisors to view the construction of such features as a misguided practice resulting in the desecration of Hawaiian culture and, thus, a “cultural sacrilege” (Honolulu Advertiser Nov. 4, 2005). The increase in the number of rock piles and the implications for land managers was discussed in a draft interim monitoring plan developed by PCSI in 2006 (see Section 4.3.1)(CRMP 4.2.1.8)

Management Actions for Piling/Stacking Rocks

1. OMKM shall adopt a policy similar to the one developed at Hawaii Volcanoes National Park to remove modern rock piles that are deemed to reflect a misguided practice.
2. Commercial tour operators shall warn their customers that piling/stacking rocks is disrespectful “because the piles don’t belong there” and that such behavior is prohibited. At the same time there should be a campaign to educate the public about the importance of preserving the cultural landscape. This could be done with an informational flier and posted signs where rock piles are most common, such as the area near the VLBA.

A culturally trained staff person shall be responsible for the culturally appropriate removal of rock piles that are made on Mauna Kea.” (CRMP 4.2.1.8)

University Hawaii Administrative Rules

In addition, the rule making authority granted to the University of Hawaii regarding rules for the management of Maunakea state, in pertinent part explicitly that the UH's administrative rules must :

“Strive for consistency with the administrative rules of the division of forestry and wildlife of the department of land and natural resources(DLNR) related to forest reserves and natural area reserves;” [§304A-1903] Mauna Kea lands[;] rules.

Therefore, any policy implemented by the OMKM needs to be consistent with the administrative rules of the division of forestry and wildlife of the department of land and natural resources related to forest reserves and natural area reserves whose land surround the UH managed lands on Maunakea.

The OMKM's policies also need to comport with the DLNR's administrative rules that apply to Conservation District Lands.

The OMKM's policy on the placement and removal of offerings will be formalized by the adoption of administrative rules for UH's managed lands.

Department of Land and Natural Resources Administrative Rules

Natural Areas Reserve

HAR 13-209-4, prohibited activities within the Natural Area Reserve

The following activities are prohibited within a natural area reserve:

- (1) To remove, injure, or kill any form of plant or animal life, except game mammals and birds hunted according to department rules;
- (2) To introduce any form of plant or animal life, except dogs when permitted by hunting rules of the department and service animals accompanying their handlers;
- (3) To remove, damage, or disturb any geological or paleontological features or substances;
- (4) To remove, damage, or disturb any historic or prehistoric remains;
- (5) To remove, damage, or disturb any notice, marker, or structure;
- (6) To engage in any construction or improvement

Forest Reserve

HAR 13-104-4, preservation of public property and resources.

The following activities are prohibited within a forest reserve:

- (1) To remove, injure, or kill any form of plant or animal life, either in whole or in part, except as authorized by the Board or authorized representative or as provided by rules of the Board;
- (2) To remove, damage, or disturb any natural feature or resource (e.g. natural stream beds except as authorized by the board or its authorized representative;
- (3) To remove, damage, or disturb any historic or prehistoric remains;
- (4) To remove, damage, or disturb any notice, marker, or structure;
- (5) To enter, occupy, or use any building, structure, facility, motorized vehicle, machine, equipment, or tool within or on forest reserve except as authorized by the board or its representative;
- (6) To engage in any construction or improvement except as authorized by the board.
- (7) To sell, peddle, solicit, or offer for sale any merchandise or service except with written authorization from the board.
- (8) To distribute or post handbills, circulars, or other notices. Unofficial compilation:
- (9) To introduce any plant or animal except as approved by the Board.
- (10) To enter or remain within forest reserves when under the influence of alcohol, narcotics, or drugs, to a degree that may endanger oneself or endanger or cause annoyance to other persons or property. The use or possession of narcotics, drugs or alcohol within forest reserves is prohibited. [Eff 9/28/81; am and comp 10/15/93] (Auth: HRS §183-2) (Imp: HRS §§183- 2, 183-17) §

Conservation District Rules

HAR 13-5-2 Definitions

"Land use" means:

- (1) The placement or erection of any solid material on land if that material remains on the land more than thirty days, or which causes a permanent change in the land area on which it occurs;
- (2) The grading, removing, harvesting, dredging, Unofficial Copy §13-5-2 5-6 mining, or extraction of any material or natural resource on land;

(3) The subdivision of land; or

(4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

For purposes of this chapter, harvesting and removing does not include the taking of aquatic life or wildlife that is regulated by state fishing and hunting laws nor the gathering of natural resources for personal, noncommercial use or pursuant to Article 12, Section 7 of the Hawaii State Constitution or section 7-1, HRS, relating to certain traditional and customary Hawaiian practices.

§13-5-6 Penalty

(d) No land use(s) shall be conducted in the conservation district unless a permit or approval is first obtained from the department or board.

Hawaii Revised Statutes

Conservation District

183C-2 Definitions

"Land use" means:

(1) The placement or erection of any solid material on land;

(2) The grading, removing, harvesting, dredging, mining, or extraction of any material or natural resource on land;

(3) The subdivision of land; or

(4) The construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.

Historic Preservation Program

§6E-11 Civil and administrative violations.

(a) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon the private lands of any owner thereof without the owner's written permission being first obtained. It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or aviation artifact located upon lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.

(b) It shall be a civil and administrative violation for any person to knowingly take, appropriate, excavate, injure, destroy, or alter any burial site, or the contents thereof, located on private lands or lands owned or controlled by the State or any of its political subdivisions, except as permitted by the department, to knowingly fail to re-inter human remains discovered on the lands in a reasonable period of time as determined by the department, or to knowingly violate the conditions set forth in an approved mitigation plan that includes monitoring and preservation plans.

(c) It shall be a civil and administrative violation for any person to take, appropriate, excavate, injure, destroy, or alter any historic property or burial site during the course of land development or land alteration activities to which section 6E-42 applies, without obtaining the required approval.

(d) It shall be a civil and administrative violation for any person who inadvertently discovers a burial site to fail to stop work in the immediate area and report the discovery, as required by section 6E-43.6.

(e) It shall be a civil and administrative violation for any person to knowingly glue together any human skeletal remains, label any human skeletal remains with any type of marking pen, or conduct any tests that destroy human skeletal remains, as defined in section 6E-2, except as permitted by the department.

(f) Any person who violates this section shall be fined not more than \$10,000 for each separate violation. If the violator directly or indirectly has caused the loss of, or damage to, any historic property or burial site, the violator shall be fined an additional amount determined by the environmental court or an administrative adjudicative authority to be equivalent to the value of the lost or damaged historic property or burial site. Each day of continued violation of this provision shall constitute a distinct and separate violation for which the violator may be punished. Equipment used by a violator for the taking, appropriation, excavation, injury, destruction, or alteration of any historic property or burial site, or for the transportation of the violator to or from the historic property or burial site, shall be subject to seizure and disposition by the State without compensation to its owner or owners.

(g) Any person who knowingly violates this chapter with respect to burial sites shall also be prohibited from participating in the construction of any state or county funded project for ten years.

(h) Nothing in this section shall apply to land altering activities relating to family burial plots under section 441-5.5.

(i) The civil and administrative penalties imposed pursuant to this chapter shall be in addition to the criminal penalties provided by this chapter and any other penalties that may be imposed pursuant to law. [L 1976, c 104, pt of §2; gen ch 1985; am L 1990, c

306, §8; am L 1992, c 113, §3; am L 1996, c 97, §8; am L 2003, c 104, §3; am L 2005, c 128, §3; am L 2006, c 38, §1 and c 45, §2

DISCUSSION

Ahu are cultural features (defined as Native Hawaiian cultural features, see CR-7 of the CMP) and not simply the “stacking of rocks.” Ahu are culturally significant and have as their basis a Native Hawaiian traditional cultural practice with purpose and meaning.

There is reason to believe that a large number of the single rock features and small concentrations of piled or stacked rocks on Mauna Kea are modern and that many were constructed by non-Hawaiian visitors in the last decade or so. (CMP, 2009)

The management policy for piling and stacking rocks could be similar to that recently instituted at Hawai'i Volcanoes National Park (Kubota 2005). A culturally trained staff person will be responsible for the culturally appropriate removal of rock piles that are made on Mauna Kea. Visitors to and users of Mauna Kea will be educated about the importance of preserving the cultural landscape, with particular attention to prohibitions on the piling and stacking of rocks. (CMP, 2009)

Legal consideration

A legal consideration is compliance with existing regulations. The University's managed lands on Mauna Kea are classified Conservation District lands and fall under HAR 13-5 which governs land uses. Land uses are defined in the HAR and may be allowed depending on the type and subzone designation. The rules do not specifically address the construction of cultural features, however the construction of cultural features falls under this definition. Also, newly found stacks of rock that remain become permanent structures that change the land area.

Although rules governing the Mauna Kea Ice Age Natural Areas Reserves (NAR) do not apply to UH's managed lands, the NAR is an integral part of the cultural landscape of Mauna Kea. OMKM recognizes the cultural landscape encompasses the NAR and UH's managed lands and political boundaries should not be a reason for parceling the cultural landscape. Unlike the construction of cultural features, such as shrines and alters (refer to CR-7 of the CMP), OMKM agrees with the NAR rules which prohibits engaging in construction or improvement and removing, damaging, or disturbing geological features or substance.

OMKM believes that the stacking of rocks is a widespread activity and has strayed from its original purpose such as their use as markers which have been replaced with trail boundaries/barriers and signs. While OMKM acknowledges the right of Native Hawaiians to practice and exercise traditional and customary practices, rock stacking appears to have become a ubiquitous activity that is no longer steeped with a cultural purpose but may instead be a result of copycat behavior. Rock stacking appears to be more of a spontaneous activity versus the more deliberate construction of a cultural features such as a lele. Over

the years OMKM rangers reported stacks of rocks appearing along the side of the road side and on the summit. Another example is the numerous lettering and designs made by the placement of rocks along the roadways in Kona.

Historic Sites

Pursuant to HRS 6E-11, it is a violation to injure, destroy or alter any historic property (an historic property includes, for example, any building, structure, object or site that is over fifty years old). The potential exists for the uninitiated to use rocks from an existing historic site to construct a new stack of rocks. A few years ago an OMKM ranger reported a new stack of rocks on the summit, which is designated and registered as a traditional cultural property (tcp) with the State Historic Preservation Division. Some of the rocks used for this new structure were taken from a nearby historic property which is also on SHPD's list of historic properties.

Preserving the cultural and natural landscape

As stated above there was a large number of "find spots" recorded during the archaeological inventory of the Mauna Kea Science Reserve. Many of those were stacks of rocks are now permanent features that dot the cultural landscape.

Seeing stacks of rocks can encourage others who do not understand the cultural purpose of ahu to engage in "copycat" behavior.

ACTION:

The ubiquitous nature, the ease in stacking rocks, and the large number of them in the Mauna Kea Science Reserve, make it nearly impossible for OMKM to manage and control through a permitting process. The potential for further alteration to the landscape from the random and sudden appearance of stacked rocks is very high.

To comply with conservation district rules the OMKM policy is to prohibit the stacking of rocks including the placement of rock to form letters or figures.

- New stacks of rocks which are not permitted shall be removed .
- OMKM shall request a permit from DLNR to place signs with the symbol similar to the one designed by Volcanoes National Park indicating the stacking of rock is a prohibited activity.

Kahu Ku Mauna recognizes that the creation of new cultural features could include the stacking and piling of rocks. Therefore, the policy for CR7 applies to CR9 (see CR-7 for OMKM's proposed policy).

**Please refrain from
using the terrain as
a restroom!**

***This area is under video
surveillance.***

There are luas at the bottom of the Access Road at the Hunter's
Check-in Station across from the Access Road, or at the Maunakea
County Park about 10 miles west on Saddle Road.

The landscape is sensitive and gets little rain to clear any
waste out.

We are sorry for the inconvenience and hope to be opening our
restrooms shortly.

Please help us take care of this very special place!

Mahalo for your patience and understanding.

Exhibit L21



640 N. A'ohoku Place, Room 203, Hilo, Hawai'i 96720

Telephone: (808) 933-0734

Fax: (808) 933-3208

Mailing Address: 200 W. Kawili Street, Hilo, Hawai'i 96720

KAHU KŪ MAUNA COUNCIL GUIDELINES Amended August 13, 2013

FOREWORD

The Auditor of the State of Hawaii (hereinafter, Auditor), in the February 1998 report entitled *Audit of the Management of Mauna Kea and the Mauna Kea Science Reserve*, noted that the University of Hawai'i's focus on development of, and efforts to develop, the summit of Mauna Kea have, since 1967, "overshadowed the university's commitment to provide reasonable assurance of protection for the summit's natural resources." The Auditor concluded that, since the effective date of the lease between the State and the University, "little was done to protect [the] natural resources [of Mauna Kea]. The university, as leaseholder, should have provided sufficient protection to the natural resources and controlled public access and use." In order to improve the current management of Mauna Kea and the Mauna Kea Science Reserve, the Auditor recommended, among other things, that "a new method of measuring the impact of future development on Mauna Kea" be developed and that it include a "forum for continuous community input."

Given the findings and recommendations of the Auditor, the Mauna Kea Science Reserve Master Plan dated June 2000 creates a "community based" management structure intended to provide the necessary stewardship for the sustainable use of Mauna Kea. Community involvement in the management process begins with the Mauna Kea Management Board (hereafter MKMB), an advisory board composed of seven Hawai'i Island residents representative of "the major stakeholders of Mauna Kea." The Master Plan envisions the MKMB as the collective voice of the community.

The Auditor also noted that, "[v]ery little effort was made to recognize the cultural significance of [Mauna Kea]." In the auditor's opinion, "[m]any of the subsequent problems stem from this limited approach to protection." Given the above, the Auditor recommended that this "new method of measuring the impact of future development on Mauna Kea" also "include methodology that distinguishes and gauges the impact on land area, biota/fauna, and sites of historic/cultural significance." Mauna Kea is, no doubt, a sacred place in Hawaiian culture and history.

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In response to the above recommendations of the Auditor and in recognition of Mauna Kea's sacredness, the Master Plan emphasizes the need for a sincere sensitivity toward and consideration of Hawaiian cultural values and issues in any deliberation over further development and/or the continued management of the Mauna Kea Science Reserve. The Master Plan therefore establishes a second, very specific level of community involvement. It recommends "a special Kahu Kūpuna Council made up of representatives of native Hawaiian organizations as well as individuals recognized for their specialized knowledge" be created. The Master Plan contemplates that this Kahu Kūpuna Council operate much like the State Burial Council, a group that provides guidance on the disposition of Hawaiian human remains. As such, the Kahu Kūpuna Council would assist the MKMB in matters pertaining to the management of the 11,288 acre Science Reserve and related native Hawaiian cultural issues. The Master Plan tasks the MKMB with organizing this Council.

I. NAMING OF THE COUNCIL

The term "Kahu Kūpuna Council" was first used in the 2000 Mauna Kea Science Reserve Master Plan (hereafter Master Plan) to refer to the MKMB's advisory council on native Hawaiian issues. As its first order of business, the newly appointed members of this Council recommended that this Council be officially named and hereafter known as "**Kahu Kū Mauna**" to more accurately reflect its mission. The general English translation of Kahu Kū Mauna is "**Guardians for the Mountain.**"

II. INTERNAL POLICIES

The Kahu Kū Mauna Council (hereafter KKMC) shall develop a Vision/Mission Statement of Purpose and Philosophy. It shall also develop Bylaws, Rules of Conduct, establish short and long term goals, and develop other policies and/or guidelines the KKMC deems necessary to properly carry out its duties.

III. ORGANIZATION

A. Appointment, Number of Members and Terms

1. Approving Authority. Pursuant to the Master Plan, the MKMB shall be the approving authority for prospective candidates to fill seats within the KKMC.
2. Structure. The basic structure of the KKMC shall consist of a minimum of seven (7) to a maximum of 9 members composed of representatives from the East Hawai'i and West Hawai'i Districts.

- a. On occasion the KKMC's activities may require additional assistance and input. The KKMC may invite individual(s) to consult on an ad hoc basis until the task or issues has been completed or resolved.
3. Vacancies. Vacancies for seats on the KKMC may be filled either by advertising in local newspapers or through recruitment by members of the MKMB, the Office of Mauna Kea Management (hereafter OMKM), the KKMC, or by referrals from others who are knowledgeable in the qualifications of the prospective candidates. These candidates will be asked to submit their applications and resumes to OMKM who will screen the applications to insure that the applicant qualifies for the position. The OMKM will thereafter forward the applications and resumes to KKMC for review, and to set up appointment dates for interviewing the candidates.
4. Initial Terms. Upon approval of the June 2000 Mauna Kea Science Reserve Master Plan, and the subsequent inception of the previously named "Kahu Kūpuna Council", it was necessary at that time to stagger the completion dates of the first term tenure of the newly appointed 9 council members. Thus the staggered tenure was determined by the drawing of lots in the following manner:
 - a. Two (2) members would serve a one [1] year term, three (3) would serve a two [2] year term, two (2) would serve a three [3] year term, and two [2] would serve a four [4] year term.
 - b. After serving the staggered terms, each member then become eligible to serve a second term of four (4) full years, upon approval of the MKMB.
5. Terms. Effective on the issue date of these revised Guidelines (_____, 2013), new replacement members shall serve a term of four years with each member being eligible for a second term. Current members shall serve staggered terms based on the following:
 - a. Of the longest serving members, one (1) would serve a one [1] year term, two (2) members would serve two [2] year terms; and one (1) would serve one three year term. Of the remaining three members, one (1) would serve a three [3] year term; and two (2) would serve a four (4) year term.
 - b. After serving the staggered terms, each member serving three or more years would be eligible for a second four year term upon approval of the MKMB.

6. Emeritus KKMC members may confer emeritus status to any long serving member whose term has expired but whose mana'o and institutional knowledge are invaluable resources to the KKMC. An emeritus status is a non-voting position, except under situations when the KKMC lacks a quorum of regular KKMC members. .
7. Replacements: When a member of the KKMC must step down or leave the KKMC, a letter will be forwarded to the MKMB via the OMKM Director, explaining the circumstances and requesting approval to initiate a search for a replacement.

B. Removal for Cause

KKMC members may be removed for justified causes, for example, inability to work harmoniously with one or more KKMC members. At the request of the majority of KKMC members, a letter shall be submitted to the MKMB requesting approval to require a KKMC member to step down and relinquish his/her seat on the KKMC and initiate a search for a replacement.

C. Selection Process for New Applications

The KKMC will review new applications and resumes forwarded by OMKM to set up interviews and appointment dates and times. The KKMC may elect to interview the candidates as a body or as a subcommittee of three (3), whichever is deemed appropriate. Results of the interviews will be forwarded with selection recommendations to the MKMB via the OMKM Director for approval.

D. Membership Qualifications

1. Knowledge and Experience. Each applicant shall have sufficient knowledge of and experience with or be in the process of gaining such knowledge of and experience with the cultural significance and sacredness of Maunakea. It is desirable that the applicant be familiar with cultural practices as applied to traditional and customary use of Maunakea.
2. Applicants will be expected to make occasional trips to the summit of Maunakea in order to become familiarized with the various landforms and locations of astronomy facilities.
3. Each applicant shall be a resident of the Island of Hawai'i; and have basic knowledge of each 'āpana representing the six (6) districts of this moku.

E. Council Chairman

1. A KKMC Chairman shall be selected by the membership to serve in various capacities as follows: Attend MKMB meetings to give reports on KKMC activities, prepare schedules and agendas for KKMC meetings,

attend other meetings when KKMC representation is appropriate, work closely with OMKM to disseminate information to the KKMC on requests for permits to conduct various activities in the Mauna Kea Science Reserve, and to perform any other duties that are deemed appropriate to the mission of the KKMC.

2. A Vice Chairman shall be selected by the membership to assist the Chairman in matters pertinent to KKMC business.
3. Anytime a new Chairman or Vice Chairman is selected as a replacement, the OMKM and MKMB shall be notified.

F. Meetings

1. Meetings of the KKMC shall be conducted at least once a month. Additional meetings may be scheduled at the discretion of the Chairman. Special Meetings and/or Workshops/Retreats shall be scheduled at the call of the Chairman.
2. A quorum for meetings shall be 50 per cent plus one (1) of the authorized membership.

G. Voting

At times when the KKMC requires a vote on certain action items, 50 per cent plus one (1) of its current members' votes shall be required to carry the vote. If there are not enough members present at the meeting to have a quorum and the action item needs to move forward because of pressing deadlines, the votes needed to obtain the majority vote shall be taken either by proxy vote or by telephone poll before or after the meeting.

H. Attendance

Good attendance is critical in ensuring the KKMC's effectiveness in attaining goals and realizing its mission. Good attendance is a positive reflection of the KKMC member's motivation and desire to actively contribute to the KKMC's business. Poor attendance shall be quantified and treated as follows: Three (3) successive absences or six (6) absences in a calendar year shall be grounds for dismissal.

IV. GENERAL DUTIES

- A. Recommend policy and management guidelines to the MKMB, covering the natural and cultural landscape concerning Native Hawaiian traditions and practices associated with Maunakea.
- B. Recommend appropriate rules and guidelines for the proper protection, preservation, and enhancement of traditional and customary practices, and for the overall cultural integrity of Maunakea.
- C. Participate in the implementation of the Comprehensive Management Plan for the University of Hawaii's managed lands on Maunakea as specified under the key tasks for KKMC. This includes monitoring of plans covering cultural and natural resources, including programs and policies to protect all historic properties on Maunakea.
- D. Recommend policy and management guidelines to MKMB for the identification of culturally significant sites requiring signage and/or barriers which would help in heightening sensitivity and awareness in the prevention of inadvertent destruction to historic properties.
- E. Review all major and minor project proposals, temporary facility proposals, variance requests, and amendments to the Master Plan for impact on cultural, spiritual, and historic values of Maunakea and advise MKMB of its findings and recommendations.
- F. Undertake cultural assessments prior to any minor or major proposed activity that may adversely impact any culturally significant feature, practice, tradition, or site of Maunakea and advise the MKMB of its findings and recommendations.
- G. At the discretion of the KKMC, assist in dispute resolution when requested.

V. REIMBURSEMENTS OF EXPENSES

Reasonable and properly documented costs associated with the use of a personal vehicle or of the expenditure of personal assets for KKMC business shall be reimbursable. KKMC members will be required to complete, sign and submit documentation in order that OMKM may commence with processing reimbursements on a timely basis.

Assessment of the Risks for Siting the Thirty Meter Telescope on Mauna Kea

October 26, 2007

I. Introduction and Background

This document reports on The Keystone Center's (Keystone) independent risk assessment regarding a possible siting of a Thirty Meter Telescope (TMT)¹ on Mauna Kea on the Island of Hawaii. All findings, conclusions, and options for consideration in this report are solely the opinions of Keystone and do not reflect the views of The Gordon and Betty Moore Foundation, the TMT Observatory Corporation, or anyone other than Keystone. The Keystone Center, founded in 1975, exists for two interrelated purposes: to help solve today's most pressing, science-intensive environment, energy, and public health problems and, simultaneously, to help prepare the next generation to take the reins and do better than their predecessors. Keystone takes no position on the issues it becomes involved in but seeks to help analyze, design, and facilitate discussions when requested and when appropriate. Detailed information about Keystone is available at www.keystone.org. This analysis was conducted by Peter S. Adler, PhD, President and Janesse Brewer, Senior Associate.

The Gordon and Betty Moore Foundation is dedicated to advancing environmental conservation and cutting-edge scientific research around the world. The Foundation is a funder of the development stage of the Thirty Meter Telescope project and a potential funder for the construction of the telescope. In late June 2007, the Foundation asked The Keystone Center to undertake an independent assessment of the feasibility of siting the Thirty Meter Telescope on Mauna Kea in Hawaii. More specifically, the Moore Foundation asked that the assessment consider the environmental, economic, scheduling, and political risk factors for a TMT project in Hawaii, and that Keystone suggest one or more approaches for how TMT might work with interested stakeholders for the potential siting of the TMT in Hawaii should it go forward (Attachment A).



Photo courtesy of <http://www.ucolick.org>.

II. Method

After designing an interview protocol, Keystone conducted a set of interviews with Hawaii state regulators, political and community leaders, environmental NGOs, Native Hawaiian thought leaders, educators, members of the business community, and others who might help inform the assessment. Keystone identified the initial set of interviewees through its contacts in Hawaii and by using a rolling "snowball" method. In total, Keystone talked to over 60 stakeholders. While it was impossible to talk with every potential stakeholder, Keystone sought a diverse sample of perspectives including known

¹ This report uses TMT interchangeably to represent the telescope, the project, and the non-profit TMT Observatory Corporation.

project opponents, known proponents, political “gatekeepers” and decision makers, and individuals who did not seem aligned with any specific position but who are reasonably knowledgeable of the mountain and its issues. The list of interviewees is located in Attachment B.

We characterized our initial telephone conversations as a set of “shallow dives.” These were phone interviews from Colorado to Hawaii that usually lasted an hour or less for each person. The calls helped to orient Keystone, identify prospective interviewees, refine the method, and provide a preliminary sense of different stakeholder perspectives regarding Mauna Kea telescope issues. “Deep dive” interviews took place in person at meetings held on Oahu and Hawaii from August 24–September 9, 2007. These interviews delved into much greater detail on potential hurdles, flash points, delays, and showstoppers should TMT decide to pursue a site on Mauna Kea.

Additionally, The Keystone Center asked most interviewees with a working knowledge of Mauna Kea issues to do a simple “probabilistic analysis” of their views on the likelihood of different scenarios coming to pass. The question posed was, “What do you think will happen, as opposed to what you may hope, fear, or want to have happen?” While this analysis was presented in a somewhat whimsical format as a series of “bets,” the methodology is grounded in prediction theory and provides a rough quantitative sense of how different stakeholders view TMT’s risks and probabilities should they go forward with a Mauna Kea site (Attachment C).

III. Caveats

We do not offer this report as a definitive picture or analysis of all risks. It is a snapshot constrained by a short time frame, a limited cross-section of persons interviewed, and by events taking place in real-time even as the interviews were underway. With additional time, there are many other people we would have sought to meet with and interview. Our intent throughout the process was to courteously but intentionally go to the heart of the issues that TMT would encounter should it pursue a Mauna Kea site. We apologize to the many good people we would have liked to have spoken to but could not because of the press of schedules. We are especially appreciative to Mr. Sam Callejo and Ms. Stephanie Nagata for their assistance in coordinating and scheduling some of our meetings on Oahu and Hawaii.

IV. Findings

1. **The “Bets.”** Our small and very limited probabilistic analysis device of asking interviewees what they think will happen (as opposed to what they want to have happen) yielded interesting results, as follows:

	Bet Question	Betting \$100 <u>for</u>	Betting \$100 <u>against</u>
1	The revised Comprehensive Management Plan will be completed by May 1, 2008.	N = 12 (34.3%)	N = 23 (65.7%)
2	The revised Comprehensive Management Plan will be a solid document and not be further challenged through appeals or litigation.	N = 4 (12.5%)	N = 28 (87.5%)
3	A new lease for the summit will be successfully negotiated and put in place by June 2008.	N = 10 (29.4%)	N = 24 (70.6%)

	Bet Question	Betting \$100 <u>for</u>	Betting \$100 <u>against</u>
4	The University of Hawaii and the State of Hawaii will agree to distribute ceded land payments from the Mauna Kea observatories by April 2008.	N = 12 (35.3%)	N = 22 (64.7%)
5	A robust and culturally appropriate consultation process can be set up between members of the Native Hawaiian community and the TMT project.	N = 28 (82.4%)	N = 6 (17.6%)
6	The TMT can create new educational opportunities for Native Hawaiians and others on Hawaii Island.	N = 31 (93.9%)	N = 2 (6.1%)
7	The potential environmental impacts of the TMT can be satisfactorily mitigated.	N = 28 (84.8%)	N = 5 (15.2%)
8	The visual impacts of the TMT can be satisfactorily mitigated.	N = 21 (68.8%)	N = 13 (38.2%)
9	A satisfactory environmental impact statement that is not appealed or litigated will be completed by June 2010.	N = 17 (48.6%)	N = 18 (51.4%)
10	A Conservation District Use Permit will be approved by April 2011.	N = 25 (75.8%)	N = 8 (24.2%)

We offer the following specific cautions on these results. First, this was not meant to be a highly-rigorous, scientifically-calibrated survey, but rather it was intended to provide further insight as to where our interviewees would “put their money” regarding the various risks TMT might encounter were it to proceed. Second, it is a very small sample of people. Third, if we were revising the questionnaire, we would probably alter some of the questions. For example, the use of the word “can” in questions 5–8 may have given us slightly different data than if we had asked whether there was “confidence in” or even if we had said “will be” or “is/are likely to be.” In walking through the questions many participants remarked, “Well sure it *can* be done. It is possible. Whether I have confidence that it will be is a different question.” Finally, question 9 probably should have been broken into two questions to determine whether interviewees felt that any environmental impact statement (EIS) would be appealed or litigated and, second, whether an EIS conducted by TMT could be logically completed by June 2010. It is unclear if the results would have been different by de-coupling those concepts.

With those caveats in mind, we think the bets do offer more calibrated echoes of what we heard in the conversations and have summarized below.

2. **The Interviews.** Our interviews produced many thoughtful comments, perspectives, and ideas. Five major themes emerged:

- A. **A Sour History and Heavy Baggage.** Unfailingly, almost every interviewee we spoke with, even those who are great proponents of placing observatories on Mauna Kea, acknowledge a complex and, for many, a bad history on the mountain. Hawaiians, both Native and non-Native, speak of poor planning, bureaucratic bumbling, broken promises, technocratic arrogance, and a persistent failure to engage the Native Hawaiian community in meaningful and appropriate ways. Some of this has been reported in two legislative audits. While there are many fine individual efforts underway to rectify long-running problems, the situation remains contentious and confusing. Should TMT decide to pursue a Mauna Kea site, it will

inherit the anger, fear, and great mistrust generated through previous telescope planning and siting failures and an accumulated disbelief that any additional projects, especially a physically imposing one like the TMT, can be done properly. One interviewee said of future development, “It can be less objectionable, but it can’t be alright.”

- B. Land Use, Not Astronomy.** In our discussions with a number of Native Hawaiians, we were repeatedly told that the objections that have been brought up over many years are not to astronomy but to land use practices on a mountain that is revered and sacred. Hawaiians were, and are, great astronomers. What we think of and often dichotomize as traditional “Native Science” and “Western Science” sit very comfortably for most Native Hawaiians. The ‘Imiloa Astronomy Center is a fine example of this. Most objections are not to science but to the way science has been conducted on the mountain. There is a long litany of perceived problems that includes poor master and management planning, placing telescopes on inappropriate sites, poor disposal of rubbish and waste, the failure to consult Native Hawaiians in management decisions, and inadequate access for cultural and spiritual practices. We make no judgment as to the veracity of these concerns, but note that they will be an inevitable part of any future interactions should the TMT proceed.
- C. Legal Confusions and Bureaucratic Ambiguity.** Considerable jurisdictional, legal, and bureaucratic wrangling remains as to which agencies actually control what actions on the mountain. There are at least two large and ambient sets of tensions. One has to do with the role of the Board of Land and Natural Resources (BLNR, the land owner) and the other with the University of Hawaii (UH, the lessee). The first is, in part, a legal problem as to who actually has what authorities to write and enforce rules. The second tension is within the University of Hawaii itself and its many moving parts: the University of Hawaii’s Board of Regents, the system office (the president and his administration), the Institute for Astronomy (IFA), the University of Hawaii at Hilo, the Office of Mauna Kea Management (OMKM), and a number of key vice presidents and advisors to the president. Embedded in this second tension are questions as to which campus and community on which island, Oahu or Hawaii, really leads and controls. People want to know who, in effect, holds the cards. Many of these inter-island and inter-campus strains are old and continuing issues played out against the newer tapestry of Mauna Kea questions. They have now come to a head in the wake of Judge Hara’s order requiring that a Comprehensive Management Plan (CMP) be done for the mountain as a precursor to any further development. However, the continuing confusions and wrangling over the University’s different faces, voices, and roles creates potential delays for TMT should it decide to proceed.
- D. Leadership Vacuum.** One function of having so many people in charge of so many different related, overlapping, and connected functions is that no one actually appears to be in charge. One respondent characterized the situation as “multiple layers of advisers to advisers to nobody.” In the past, the IFA appeared to be the key leader for both the vision of astronomy on Mauna Kea as well as the critical point of contact for policy issues, management problems, and cultural frustrations. As well intentioned as they are, we were told by many different individuals that the IFA has failed in its interactions with non-university communities of interest. Individually, the astronomers associated with IFA are liked and respected. Collectively, they have lost their effectiveness and are the wrong group to lead Mauna Kea strategies or be the face and voice for UH interactions on the Science Reserve. Many of these long-running frustrations led to the 2000 Master Planning process and the development of the Office of Mauna Kea Management, which was expected to have greater authority and nimbleness in its responsiveness. While OMKM enjoys a solid relationship with many on Hawaii Island, many still perceive that UH-Manoa is in charge and

that OMKM does not have the weight and independence to negotiate solutions to local concerns. OMKM must continually “run things up the flagpole” when it comes to most issues.

We were surprised at the lack of strong and assertive leadership from other parts of the political map as well, whether it be the Board of Regents, the Governor, BLNR and the Department of Land and Natural Resources (DLNR), the legislature, or the president of the university. There are indications that this could change in the very near future if President McClain’s involvement becomes more evident and prominent. As many interviewees suggested, and Judge Hara’s August 6, 2006 ruling indicated, there is a need for more active leadership by BLNR. The former chairman of BLNR, Peter Young, was highly engaged on Mauna Kea development issues and by several accounts was bridge-building with the most vociferous of opponents towards the end of his term. However, given the recent changes at DLNR and Laura Thielen’s short time on the job, it is too early to tell what level of BLNR leadership will be applied toward Mauna Kea issues.

- E. **Continuum Politics: Hard on the Edges, *Kanalua* in the Middle.** As with many controversial issues in Hawaii, there is a hard core of proponents at one end of the political continuum who believe science should always trump culture and, at the other, an equally strident core that believes culture should always supersede science. More towards the middle are many people who, at least at this moment, are *kanalua* (“dubious” or “skeptical”) that the legacy of contention over Master Plans, management practices, and the Outriggers project can be overcome. We spoke with a number of individuals, including a number of Native Hawaiians, who would love to support a culturally sensible and environmentally sensitive science industry on Hawaii Island, but who cannot do so at the moment. Sentiments against further telescope development are strong. Should TMT choose to proceed, it will need to reach out extensively to the skeptics and critics as well as to those supporters who remain publicly quiet. Much of the burden for this does not lie within TMT’s control and maybe not even within its influence. The burden sits squarely with the University of Hawaii and the State of Hawaii. One respondent put it this way, “The university needs a catalyst that will ignite the silent majority of Native Hawaiians who really care deeply about both science and Mauna Kea, and who do not believe one automatically forecloses the other.”
3. **The Gauntlet.** After more than 60 interviews, we have an increased understanding of the “gates,” hurdles, and tripwires that a potential project will need to pass through. That being said, it is not an understatement to say that there are a multitude of interpretations and confusions that will need to be sorted out in the process. To succeed at a Mauna Kea site, TMT must run a gauntlet that entails a number of potential challenges, not all of which are of TMT’s making and some of which could be potential showstoppers if TMT’s schedule and timing do not have great flexibility. One opponent described this gauntlet as potential opponents having “fifty bites at the apple.” Our interviews tell us the following:
- A. **Comprehensive Management Plan.** The path the CMP must travel is complicated, poorly-marked, and subject to potential showstoppers if TMT’s timeline remains tight. Prior to the legal challenge brought by *Anaina Hou et. al. v. Board of Land and Natural Resources*, OMKM had initiated work on a cultural and biological plan that would guide its own efforts on the mountain regarding the stewardship of natural and cultural resources. Sections of this plan are being drafted now. Judge Hara’s ruling on August 6, 2006 effectively put further telescope development in abeyance pending a completed CMP and instantly placed OMKM’s work in a legally and politically more volatile context. Unfortunately, Judge Hara gave no guidance as to what must be in the CMP and the conservation district rules do not offer much

help or direction.

As of this writing, a proposed plan is being developed by various authors within the UH system (OMKM and consultants to UH's VP for Legal Affairs). It is unclear whether this plan will need approval by the UH Board of Regents. There has been little or no consultation with CMP stakeholders, including those opponents who litigated the matter in Judge Hara's court. That also may change as UH has secured the services of a reputable Hawaiian consultant team to assist with the CMP and other Mauna Kea-related issues.

We understand any new CMP must ultimately be brought to BLNR for approval because the conservation district rules for obtaining a conservation district use permit (CDUP) require an approved management plan for all astronomy projects. Should that be the case, it is unclear whether BLNR could act on a draft CMP or choose to not act on it until they actually have a conservation district use application (CDUA) in front of them for a new telescope project. Finally, should the CMP embody any new development features (number, placement, and timing of telescope development), as opposed to pure management practices, it could trigger administrative litigation in the form of a contested case hearing and possibly an EIS.

- B. **Master Plan.** The 1983 Complex Development Plan, of which BLNR approved only the Management section (and not those portions dealing with future development or the number of telescopes), references a 1982 Research Development Plan which the Board of Regents approved. That Research Development Plan allows for up to 13 telescopes. Our interviews lead us to believe that the university intends to take at least two older telescopes down, but there is no clarity yet as to: (a) which telescopes would come down; (b) by when (since leases run until 2033); (c) who has the authority to remove them; and (d) who, if anyone, might need to consent to removal. Further, some respondents believe that the Master Plan might need to be amended should any new telescope require a new site to be disturbed and developed or should it include new statements about the number and longevity of telescopes. While the Master Plan did indicate the future development of the site commonly referred to as "13 North," there may be other developments or redevelopments that may call for amendments to the Master Plan. Additionally, while previous DLNR interpretations were that BLNR did not need to approve the Master Plan, some believe that Judge Hara's ruling indicates a desire for DLNR to increase its oversight of all plans affecting development and management of the Mauna Kea Science Reserve.
- C. **Lease Negotiations.** The University of Hawaii holds the Master Lease for the Science Reserve from the State of Hawaii. Similar to many other state leases, UH pays one dollar a year for their lease. The Master Lease expires in 2033. Dollar-a-year leases of land zoned for conservation are a sensitive issue in Hawaii, especially so for the Mauna Kea Science Reserve, which involves long-standing cultural conflicts. Should TMT require a new lease as a condition for pursuing a Mauna Kea site early next year, and should legislative approval be required, a lease may need to be renegotiated by January or February of 2008 in time for the next legislative session. One very politically seasoned respondent who is not aligned nor positioned on Mauna Kea issues believes that a new lease will be the single-most challenging issue on the gauntlet described in this report.
- D. **Ceded Lands.** The Science Reserve sits on ceded lands, another long-standing and highly contentious issue. The manner and amount of ceded land payments that should be made from the State to one or more Hawaiian entities for all such lands has never been negotiated at a global level, though discussions have been ongoing for many years. Nor is it likely to be in the near future. This problem adds additional complexity to the lease questions discussed

above. In our interviews, we heard estimates that the real currency among telescopes and astronomers is observation time, which one person estimated to have an annual \$10 million value. It is unclear if this is based on an audited number. Hawaiians routinely talk of a 20% ceded land payment. President McClain's recent Convocation speech indicates a substantial increase in educational aid for Native Hawaiians, but there is no specific nexus to Mauna Kea.

- E. **Visual Impact.** Should the TMT proceed with a Mauna Kea site, it will be the largest structure on the mountain. It will be physically imposing and visible from Waimea on the north side of the island if it is sited at or around test site 13 North. Sheer size will draw criticism and controversy, and questions about how to mitigate its visibility are inevitable.
- F. **Environmental Impact Statement.** TMT will need to undertake a thorough impacts analysis that arrays alternatives, addresses disturbances, and identifies mitigations as appropriate. While NEPA is not formally triggered unless a federal agency becomes involved in the TMT proposal, TMT is required to perform a State EIS, which must be approved by the Governor and has the potential for litigation. Traditionally, EIS documents are a battleground for development projects and it would seem likely that TMT will be a magnet for litigation, especially if the prior issues (CMP, lease, ceded land payments, visual issues) have not been meaningfully addressed and resolved. Both the PanSTARRS and ATST environmental impact statements are currently behind schedule.
- G. **Context and Timing.** It is important to note the context and the timing of TMT's interest in pursuing a Mauna Kea site. The halting of the Outriggers project is attributed by some to NASA budget cuts and by others to victory by the plaintiffs in *Anaina Hou et. al. v. Board of Land and Natural Resources*. The PanSTARRS EIS, telescope issues on Haleakala, unsettled clean-up issues on Kaho'olawe, EIS concerns for the Superferry on Kauai and Maui, disputes over depleted uranium shells, and the realignment of the Saddle Road on Hawaii Island may fuel environmental issues related to TMT.
- H. **Consultation.** The history of poor or no consultations with Hawaiians, both Native and non-Native, was chronicled repeatedly in our conversations as a serious problem. None of this is TMT's fault, but all of it will be inherited. We heard many criticisms in our interviews, among them the following. As before, we make no comment on the veracity of these statements and simply report them as major themes from the interviews.
 - i. Benefits. The Native Hawaiian community derives little to no benefit from the Science Reserve. In contrast, the State of Hawaii, the University of Hawaii, UH scientists, and the Hawaii Island business community derive much benefit, none of which seems to flow back in the form of cash, education, and community enhancement for Native Hawaiians. If there is some trickle-down effect for the greater Native Hawaiian community, it is invisible.
 - ii. Discouragement. The long-running history of disputes on Mauna Kea has been disappointing for many who are deeply supportive of both Native Hawaiian culture and a solid Hawaii Island science industry. Moreover, possibilities for a successful reconciliation of the two are, for many, diminishing. "It is the wrong mountain at the wrong time by the wrong people," one interviewee told us. "It might have been right 20 years ago, but not today. They've broken our hearts." Alternatively, we also heard the

following from another knowledgeable interviewee, “The community is winnable, but it is far from automatic and by no means guaranteed.”

- iii. Patterns of Practice. Some of our interviewees do not believe the history on Mauna Kea is an accident of miscommunications. They described the situation as “a pattern of practice,” of not doing things that the public wants and that, in some cases, the law requires. As we probed these comments, we came to understand them as a kind of cumulative comment on the making of long-term plans for the mountain and a surrogate for issues regarding past telescope construction and operation, poor cultural and environmental management, and, most especially, the failure to consult. Most prior attempts at consultation, we were told, have been led by well-intentioned scientists from IFA in the face of specific proposed new telescopes. OMKM was praised for being more knowledgeable and sensitive to local consultation, but criticized for having no meaningful authorities or resources to make real and implement real policy and management decisions. One interviewee put it this way, “Letting the scientists lead has created a cultural disconnect of epic proportions.”
 - iv. Mutual Disconnect. Native Hawaiians repeatedly told us they feel “run around” by state officials. Interestingly, some state officials and astronomy proponents have very similar feelings of being sent in circles to talk to different Hawaiian groups and organizations, only to see those conversations hijacked by the shrillest and most strident opponents while actual supporters stay silent. A few people quietly told us they do not know who among Native Hawaiians they should seek reliable guidance from nor how. “One Native Hawaiian says talk to *kupuna*. Another says speak with young people. Others say talk to well-known cultural practitioners from hula *halau*, while others say they are the wrong people. Some tell us to conduct consultations through public meetings. Others tell us it is a waste of time. Who do we believe?”
- I. **Conservation District Use Permit.** Should TMT decide to pursue a Mauna Kea site, a CDUP will be required. This final “license to operate” will require a satisfactory EIS and may also prove to be a final point of contest should many of the previous issues not be resolved.

V. Keystone’s Conclusion

Should TMT decide to proceed, it will face serious “headwinds” as described in the findings above. There are also some potentially favorable “tailwinds” if some of the problems described above can be confronted and meaningfully resolved, first by the University of Hawaii, then by the Board of Land and Natural Resources, and then by the TMT itself.

However, we believe there will be no fast track to bringing the TMT to Mauna Kea. Potential funders and supporters of the project must be prepared to be extremely patient and pay a premium in social, political, and legal transaction costs. There are serious risks to TMT’s proposed schedule. Even those who support additional development on the mountain told us that it will be a lengthy process and one that cannot be rushed. The hard reality is that it will need to proceed on timelines and deadlines established in Hawaii by different groups and agencies, most of whom are not presently coordinated and some of whom are antagonistic to further telescope development. Furthermore, we believe that having a tight timeframe and a simultaneous development project like TMT in the works makes it even more difficult to have the broad community conversations that are necessary for drafting a satisfactory CMP and working through issues related to leases and ceded land payment questions.

Given the present political climate, we believe there is a high probability that litigation will occur that will negatively affect TMT's schedule of pending telescope permitting and construction, so far as we understand that schedule. Based on our interviews, we believe that the CMP, possible Master Plan revisions should those be needed, and lease negotiations will be particularly sensitive and open up junctures for legal and political contests. If we were asked to make bets (as we asked our interviewees to do), we would place our wagers on further litigation, first regarding the CMP, then regarding the lease, and finally over TMT's EIS. While rulings can and often do differ from judge to judge, there is precedent for an active and engaged Hawaiian Judiciary on controversial issues that involve EISs (see, for example, the Hawaii Supreme Court's 106-page Superferry decision). Furthermore, given the high-profile nature of issues related to Mauna Kea, there is always the possibility that the legislature could choose to become more involved. Such action could potentially bog matters down further unless the legislature is unified enough to take a positive leadership role.

VI. Options for Consideration

As stated previously, all findings, conclusions, and options for consideration in this report are solely the opinions of Keystone and do not reflect the views of The Gordon and Betty Moore Foundation, the TMT Observatory Corporation, or any of the individuals and groups we met with. In fact, should a decision be made to proceed, many aspects of a successful siting will be out of the control of TMT, the Moore Foundation, and any other potential funders. However, the Moore Foundation's significant interest in funding a Thirty Meter Telescope project ensures that it is an important stakeholder with significant influence. We suggest the following ideas for consideration:

1. **Insist on high-level leadership from the university.** The confusions and ambiguities within the UH system and between UH and DLNR create a decision-making vacuum. Fresh leadership is now essential. Given the long-standing history of distrust, increased and high-level political attention is needed on Mauna Kea matters. This will require direct meetings with some of the most respected senior Native Hawaiian voices on the Island of Hawaii, managing the many internal offices within the UH system, and interacting with the Office of Hawaiian Affairs (OHA), DLNR, and the Governor's office. One person with the fullest possible negotiating authorities should serve as a key point of contact on matters pertaining to the lease, the Master Plan, the trajectory of the CMP, and overall relations with the Hawaiian community. If that person is from Oahu, it may inevitably exacerbate the long-running push-pull between Oahu and Hawaii. If that person is from Hawaii, they may not have the fullest access to the many state level entities and individuals who must play a role in solving the problems discussed in this report. Regardless of where it comes from, without this more singular leadership, TMT will likely flounder in a continuing morass of different agencies, offices, organizations, and the continuing concerns of those who favor or oppose telescopes on Mauna Kea. Mistakes have been made in the past regarding UH's interactions with the Native Hawaiian community vis-à-vis policy formation, management, and telescope development planning. While we believe that none of these was intentional, they were mistakes nonetheless and the current result is great mistrust.
2. **Request an early role-clarification meeting between UH, DLNR, and TMT.** Should TMT decide to pursue a Mauna Kea location, we strongly urge that the key decision-making and "gate-keeping" entities involved in such a decision come together to develop a common pathway for the CMP, coordinate if and how the Master Plan may need to be revised, discuss any proposed new leasing arrangements, and further discuss any possible ceded land obligations. Legal counsel for each of the agencies should be engaged in these meetings or be available on-call for clarification of legal issues

and precedents. Once this group of stakeholders has a common set of understandings, it will be helpful to expand these discussions to include others from the Native Hawaiian community on Hawaii Island as well as OHA. Some of the questions that might be taken up by initial and/or expanded discussions include:

The CMP

- What are the working assumptions about what the CMP needs to entail?
- What is the flowchart of “gates” and the “approval chain” for the CMP?
- Can the CMP be approved internally by DLNR, or does the CMP need to be approved by BLNR?
- Is the CMP contestable? If so, how, when, and where?
- Will there be opportunity to provide public comment?
- Can the CMP be approved independent of a CDUP application?

Master Plan

- Does the present Master Plan need to be approved by BLNR?
- What is the flowchart of “gates” of the “approval chain” for any revised Master Plan?
- If the CMP consultations result in necessary amendments to the Master Plan, how will this occur?
- Can the sequencing of a revised Master Plan and CMP be concurrent?
- Is a revised Master Plan contestable?
- Will there be opportunity to provide public comment?

Lease and Ceded Lands

- What is the flowchart of “gates” or the “approval chain” for a new lease or revisions to the existing lease between DLNR and UH?
- Does the legislature ultimately need to approve a new lease or revise this lease? If so, what is the timing to ensure this is handled in the appropriate legislative session?
- Can a different entity (other than UH) apply for the Science Reserve lease?
- Can a different entity (other than UH) lease a potential TMT site independently of the rest of the Science Reserve?

EIS Requirements

- If a TMT proposal proceeds, who is the responsible party for developing an EIS?
- What level of analysis for the State EIS will be done and by whom?
- How do you go about choosing a good EIS preparer given the baggage of past EIS processes?
- What kind of public engagement can stakeholders anticipate?

CDUP

- If a proposal for TMT proceeds, what is the flowchart of “gates” or the “approval chain” for a new lease or revisions to the existing lease between DLNR and UH? We understand that the Office of Mauna Kea Management Board has developed this material, but it should be reviewed and understood by each of the entities involved.
- Is this contestable?

- Will there be opportunity to provide public comment?
3. **Organize a meeting with a high-level Native Hawaiian delegation.** If UH is serious about creating a new and enduring relationship with the Native Hawaiian community, which they appear to be, they must seek out a series of substantive conversations with representative Hawaiian organizations early in this process and conduct them at an appropriate site. The focus should be on disentangling past issues and creating new understandings of what it would mean for UH, DLNR, the Gordon and Betty Moore Foundation, the TMT Observatory Corporation, and others with long-term science interests to be “good neighbors” with Native Hawaiians and others who deeply treasure Mauna Kea for values other than advancing science. The conversations must go slow and not focus on the TMT. As one person told us, undertaking relationship building while simultaneously pursuing a specific project like TMT is akin to flying an airplane while you are trying to build it.
 4. **Find a Hawaii-based attorney that can advise on the legal implications for various issues.** Given the complexity of the issues and the decision paths for the CMP, Master Plan, lease, ceded lands, and a CDUP, we highly recommend that TMT find a Hawaii-based legal counsel who understands the legal issues and their precedents in Hawaii’s courts. Legal counsel should particularly advise on implications regarding the lease, which many have stated is one of the major potential tripwires.
 5. **Consider pulling together a “lessons learned” roundtable.** The Subaru and Gemini telescope teams were both cited by some of our interviewees as having reasonably positive ongoing relationships with local communities. The Japanese-owned Subaru telescope may have an important perspective as they know and understand old cultures, sacred mountains, and native peoples. Gemini has an extensive and well-staffed outreach program that enjoys community recognition and good, independent working relationships. The ‘Imiloa Astronomy Center’s consultation process sought to find a special balance between culture and astronomy, and most believe they have succeeded in a remarkable way. The Center will have important lessons learned to share with UH, TMT, and others seeking pathways for honoring the mountain while maintaining a thriving astronomy program.
 6. **Undertake both broad and deep consultations with Native Hawaiians.** Should TMT decide to proceed, discussions with the Native Hawaiian community will be imperative. In partnership with UH and DLNR, we recommend that the Moore Foundation and TMT perform the broadest possible range of consultations with the widest possible range of stakeholders in the Native Hawaiian community on Hawaii Island. Avoid fancy public relations splashes and glossy media campaigns and hire Hawaii talent, those with Hawaii Island roots, and those who are trusted by everyone to pave the way and provide guidance. Additional on-island meetings and outreach with non-Native Hawaiians will also be important. Again, it will be important to acknowledge the long and difficult history that has taken place before the proposed TMT project.

In our interviews on Hawaii Island, stakeholders also emphasized the importance of appropriately weighting the input of Native Hawaiian Island stakeholders, most especially those with direct lineal connections to the mountain. While Mauna Kea is a sacred treasure for all Native Hawaiian people, people on Hawaii Island have, in the past, resented their input being weighed equally with the opinions of Hawaiians from other islands. Each island has its unique communities and these distinctions are important, understood, and respected by Native Hawaiians from other islands.

7. **Start by confronting the toughest issues raised by the most vociferous opponents.** Even though many people remain *kanalua* and undecided about the future of science on Mauna Kea, there is a small but vociferous opposition to any further telescope development. The tendency in many consultative processes, especially if litigation is in the air, is to not talk with opponents. We take an opposite view and would urge that they be at the proverbial negotiating table when solution-oriented

discussions begin. We understand there to be three big issues that must ultimately be discussed: (1) future telescope development on Mauna Kea; (2) fair payment for the use of the mountain and good accompanying benefits for the community; and (3) the creation of an independent and involved management authority with decision-making powers. These are discussions that must be undertaken, not just by UH, but with other telescope operators, any prospective TMT team, and others. In consultation with Native Hawaiians, TMT will want to look for ways to create a wider range of benefits for Native Hawaiians at all levels of the education system and seek new mechanisms for local cultural oversight on the mountain.

8. **Consider a three-pronged approach to public consultation and community engagement.** In our interviews, we found there was much confusion about who the legitimate “community” is that should be consulted on Hawaii Island. Everyone agrees that the Native Hawaiian community should be consulted. However, there is no broad agreement on exactly who can speak for the community or how best to understand overall community sentiment. A number of people we spoke with referenced a large “silent majority.” It is unclear as to why the silent majority stays quiet and, if they felt free to speak, precisely what they would say. Possible reasons we heard for the silence are: (1) they feel their issues are already properly represented by those more vocal in the debates; (2) they are intimidated to speak out against others in their identified cultural groups; (3) they do not care one way or another or have no knowledge of the issues that allows them to fully participate; or (4) they are simply fatigued by the poor dialogue and want to get on with something one way or another.

For these reasons, Keystone recommends that TMT, should it decide to go forward, work in concert with UH and DLNR to undertake a simultaneous, three-pronged approach that can really triangulate issues and options.

- A. Hold public meetings. While not conducive to problem-solving, these meetings are necessary and important for disseminating information, answering factual questions, gathering public comments, and helping to identify the issues that are on people’s minds at the moment. These meetings must be preceded by a careful, quiet run-up (i.e., one-on-one meetings in each community to set the stage for public gatherings and understand how local meetings are best sponsored and conducted).
- B. Create a well-constructed, randomized community survey. On the theory that public meetings tend to draw people with strong and usually negative views, this mechanism attempts to gauge the views of the greater community-at-large, and particularly the “silent majority,” on the issues identified at public meetings. TMT should work carefully with experts (and potentially other stakeholders) to develop and conduct the survey. Given the high expense of surveys, TMT would need to be strategic about the right moment for conducting such a survey. This will vary depending on what questions are of highest concern.
- C. Convene an expert stakeholder advisory group. Over the past 30 years, we have had good, and sometimes extraordinary, results with a small but diverse group of stakeholders who are pulled together to try to fashion solutions to the issues raised in public meetings and further understood through surveys. Sometimes these are called “Working Groups.” Sometimes we call them “Dialogues,” “Roundtables,” or “Forums.” A TMT group of this sort would seek to understand, explore, and help formulate possible solutions to critical issues that might become solutions acceptable to all or at least a preponderance of stakeholders. This group might particularly help TMT scope EIS issues and perhaps develop new and innovative approaches to community EIS consultation. Representatives could include TMT, UH, DLNR, OHA, Native Hawaiian groups (associations, civic clubs, etc.), community-at-large

representatives (not Native Hawaiian), commercial vendors using Mauna Kea, the business community, rangers, 'Imiloa Astronomy Center, legislative staff, and others.

VII. A Final Thought

If TMT decides to proceed, coordination with UH, OHA, BLNR, and many different local communities on Hawaii will be essential. Struggles lie ahead, especially with the Comprehensive Management Plan and the lease. It is very important for UH and TMT to do advance thinking about what advice they each will want, from whom, and for what purposes. OHA, Native Hawaiians, and others on Hawaii Island must become part of the conversation. As a rule, The Keystone Center urges groups like TMT not to ask for advice if they are not prepared to first hear it and to then reciprocally enter into principled negotiations that respond to the requested advice when it involves criticisms and concerns. We would offer this same counsel to anyone else, including the agencies and communities involved in this most complex and challenging set of issues. If early hurdles can be overcome, TMT has a chance to model a new kind of dialogue with Native Hawaiians and others involved in, affected by, or interested in the future of Mauna Kea.



July 17, 2007

Peter S. Adler, PhD
President & CEO
The Keystone Center
1628 Sts. John Road
Keystone, Colorado 80435

Dear Dr. Adler,

The Gordon and Betty Moore Foundation is dedicated to advancing environmental conservation and cutting-edge scientific research around the world. In advancement our mission, we request that The Keystone Center undertake an independent assessment of the feasibility of siting the Thirty Meter Telescope (TMT) on Mauna Kea in Hawaii. This assessment will consider the environmental, economic, scheduling, and political risk factors in siting the Thirty Meter Telescope at Mauna Kea.

As part of this exercise, we ask that Keystone conduct a discrete set of interviews with Hawaii state regulators, political and community leaders, environmental NGOs, Native Hawaiian thought leaders, educators, members of the business community, or others who might help inform the assessment. These interviews will seek to: 1) further flesh out the risk factors in TMT pursuing Mauna Kea as a site; and, 2) test and refine one or more approaches for how TMT might work with interested stakeholders for the potential siting of the TMT in Hawaii.

After completion of the interviews, Keystone will provide an analysis of the risk factors and best advice to the Gordon and Betty Moore Foundation. After reviewing the final report, the Moore Foundation intends to make this report publicly available.

The Gordon and Betty Moore Foundation is a funder of the development stage of the TMT project, and a potential funder of the construction of the telescope. The Gordon and Betty Moore Foundation will use this analysis as one of the factors for determining whether Mauna Kea is a viable site.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jim K. Omura". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Jim K. Omura, PhD
Technology Strategist
The Gordon and Betty Moore Foundation

Mauna Kea Interviews

	Name	Affiliation
1.	Anelle Amaral	Former State Legislator
2.	Billy Bergen	Waimea Resident; Former Board of Regent, UH
3.	Mike Bolte	Thirty Meter Telescope Board Member
4.	Sam Callejo	VP for Administration, University of HI
5.	Dawn Naomi S. Chang	Principal, Ku iwalu
6.	James Chang	Legislative Assistant for Judiciary and Environment, Senator Inouye's Office
7.	Roberta Fujimoto Chu	Senior VP & Manager, Bank of Hawaii; President of HI Economic Development Board (HIEDB)
8.	Linda Colburn	Facilitator, Where Talk Works
9.	Paul Coleman	Astrophysicist, IFA
10.	Moses Crabbe	Hawaiian Language Teacher; Community Member; Mauna Kea Management Board Member, Hawaiian Culture Committee
11.	Sandy Dawson	Thirty Meter Telescope Team
12.	Rockne Freitas	Chancellor, Hawaii Community College
13.	James Gaines	Vice President for Research, UH
14.	Peter Giles	Executive Director, Imiloa
15.	Sam Gon	The Nature Conservancy
16.	Richard Ha	President, Hamakua Springs Country Farms; Member, HIEDB
17.	Mike Hamnett	Executive Director, Research Corporation of UH
18.	Masa Hayashi	Director, Subaru Telescope
19.	Hon. Clayton Hee	Senator, Hawaii State Legislature
20.	Walter Heen	Trustee, Office of Hawaiian Affairs
21.	Paula Z. Helfrich	CEO, Economic Development Alliance of HI
22.	Arnold Hiura	MBFT Media; Consultant to OMKM
23.	Lea Hong	HI Trust for Public Lands (formerly with Alston, Hunt, Floyd, and Ing)
24.	Julie Hugo	Realtor; Community Leader
25.	Herring Kalua	Mauna Kea Management Board Member
26.	Harry Kim	Mayor, Hawaii County
27.	Larry Kimura	Assistant Professor in the Hawaiian Language & Hawaiian Studies, UH Hilo; Kahu Ku Mauna Council Member
28.	Hon. Russell Kokubun	Senator, Hawaii State Legislature
29.	Rolf-Peter Kudritzki	Director, IFA
30.	John Lee	NASA
31.	Sam Lemmo	Administrator, Conservation and Coastal Lands, DLNR

	Name	Affiliation
32.	Darolyn Lendio	VP for Legal Affairs, UH
33.	Robert Lindsey	Trustee, Office of Hawaiian Affairs
34.	Ted Liu	Director, Department of Business, Economic Development and Tourism
35.	Kawika Lovell	Research Corporation of UH
36.	Kem Lowry	Department of Urban and Regional Planning
37.	Kepa Maly	Cultural Historian & Resource Specialist, Kumu Pono Associates LLC
38.	Robert Masuda	Special Assistant, UH
39.	Harold Matsumoto	Program Director, Pacific International Center for High Technology Research
40.	David McClain	President, UH
41.	Robert McLaren	Associate Director, IFA
42.	Mark McGuffie	HI Economic Development Board
43.	Jeff Melrose	Island Planning
44.	Clyde Namuo	Office of Hawaiian Affairs
45.	Stephanie Nagata	Associate Director, Office of Mauna Kea Management
46.	Tetsuo Nishimura	Associate Director, Subaru Telescope
47.	Sean Naleimaile	Kahu Ku Mauna Council
48.	Francis Oda	Group 70
49.	Gary Ostrander	VP for Research, UH
50.	Tom Peek	Community Member
51.	Kealoha Pisciotti	Mauna Kea Anaina Hou
52.	Cha Smith	Kahea
53.	Kapua Sproat	Richardson School of Law
54.	Ed Stevens	Kahu Ku Mauna Council
55.	Bill Stormont	Director, Office of Mauna Kea Management
56.	William Tam	Alston, Hunt, Floyd, and Ing (Law Firm Representing Plaintiffs in the Outrigger Case)
57.	Barry Taniguchi	Mauna Kea Management Board Member
58.	Ron Terry	Mauna Kea Management Board Member; Principal Scientist, Geometrician Associates
59.	Laura Thielen	Chairman, Board of Land and Natural Resources
60.	Rose Tseng	Chancellor, UH at Hilo
61.	W. Mapuana Waipa	Ke Ana La ahana PCS; Community Member; Mauna Kea Management Board Member
62.	Deborah Ward	Sierra Club
63.	Harry Yada	Property Manager, County of HI, Department of Finance; Mauna Kea Management Board Member, Hawaiian Culture Committee
64.	Peter Young	Former Chairman of DLNR



PREDICTION EXERCISE

As part of our assessment for The Gordon and Betty Moore Foundation, we are interested in the predictions knowledgeable people might make about various issues related to the Thirty Meter Telescope. Individual names are not important and will not be reported to anyone. All information will be aggregated by Keystone and the collective results made fully available to those who participate.

You have \$1,000 available to make ten different bets of up to \$100 each. If you win the most bets, it means your experience, knowledge, and political acumen is better than everyone else's.



One Thousand Keystone Bucks! Not Negotiable or Available for Deposit.

Example

“The new Hawaii Superferry will force one or more of Hawaii’s three carriers (Hawaiian, Aloha, Go) out of business within two years of startup.”

_____ I bet \$100 for.
 _____ I bet \$100 against.

#1 - The revised Comprehensive Management Plan will be completed by May 1, 2008.

___ I bet \$100 for.

___ I bet \$100 against.

#2 - The revised Comprehensive Management Plan will be a solid document and not be further challenged through appeals or litigation.

___ I bet \$100 for.

___ I bet \$100 against.

#3 - A new lease for the summit will be successfully negotiated and put in place by June 2008.

___ I bet \$100 for.

___ I bet \$100 against.

#4 - University of Hawaii and State of Hawaii will agree to distribute ceded land payments from the Mauna Kea observatories by April 2008.

___ I bet \$100 for.

___ I bet \$100 against.

#5 - A robust and culturally appropriate consultation process can be set up between members of the Native Hawaiian community and the Thirty Meter Telescope project (TMT).

___ I bet \$100 for.

___ I bet \$100 against.

#6 - The TMT can create new educational opportunities for Native Hawaiians and others on Hawaii Island.

___ I bet \$100 for.

___ I bet \$100 against.

#7 - The potential environmental impacts of the TMT can be satisfactorily mitigated.

___ I bet \$100 for.

___ I bet \$100 against.

#8 - The visual impacts of the TMT can be satisfactorily mitigated.

___ I bet \$100 for.

___ I bet \$100 against.

#9 - A satisfactory Environmental Impact Statement (EIS) that is not appealed or litigated will be completed by June 2010.

___ I bet \$100 for.

___ I bet \$100 against.

#10 - A Conservation District Use Permit will be approved by April 2011.

___ I bet \$100 for.

___ I bet \$100 against.

Lanny Alan Sinkin
P. O. Box 944
Hilo, Hawai'i 96721
(808) 936-4428
lanny.sinkin@gmail.com

Lay representative for Temple of Lono

BOARD OF LAND AND NATURAL RESOURCES

FOR THE STATE OF HAWAII

IN THE MATTER OF) Case No. BLNR-CC-16-002
)
A Contested Case Hearing Re Conservation)
District Use Permit (CDUP) HA-3568 for) **CERTIFICATE OF SERVICE**
The Thirty Meter Telescope at the Mauna)
Kea Science Reserve, Kaohe Mauka,)
Hamakua District, Island of Hawai'i,)
TMK (3) 4-4-015:009)
_____)

CERTIFICATE OF SERVICE

I hereby certify that on this day a copy of the **TEMPLE OF LONO FIRST SUPPLEMENTAL EXHIBIT DESIGNATION** was served on the following parties by email on December 23, 2016:

Michael Cain <michael.cain@hawaii.gov>, Kealoha Pisciotto-Keomailani Von Gogh <keomaivg@gmail.com>, Clarence Ching <kahiwaL@cs.com>, Uncle Kalani Flores <ekflores@hawaiiintel.net>, Pua Case <puacase@hawaiiintel.net>, cordylinacolor@gmail.com, kealiikea@yahoo.com, Bianca Isaki <bianca@kahea.org>, Ian Sandison <isandison@carlsmith.com>, tluikwan@carlsmith.com, John P. (Pete) Manaut <jpm@carlsmith.com>, Lindsay N. McAneeley <lmcaneeley@carlsmith.com>, T. Shinyama' <RShinyama@wik.com>, douging@wik.com <douging@wik.com>, mehana kihoi <uhiwai@live.com>, Kahookahi Kanuha <kahookahi@gmail.com>, Joseph Camara <kualiic@hotmail.com>, lsa@torkildson.com <lsa@torkildson.com>, njc@torkildson.com <njc@torkildson.com>, leina'ala s <leinaala.mauna@gmail.com>, Maelani Lee <maelanilee@yahoo.com>, Lanny Sinkin <lanny.sinkin@gmail.com>, akulele@yahoo.com <akulele@yahoo.com>, s.tabbada@hawaiiintel.net <s.tabbada@hawaiiintel.net>, tiffniekakalia <tiffniekakalia@gmail.com>, Glen Kila <makakila@gmail.com>, Brannon Kealoha <brannonk@hawaii.edu>, hanahanai@hawaii.rr.com <hanahanai@hawaii.rr.com>, pohaku7@yahoo.com <pohaku7@yahoo.com>, Ivy McIntosh <3popoki@gmail.com>, Kealamakia Jr. <mkealama@yahoo.com>, Patricia Ikeda

<peheakeanila@gmail.com>, Yuklin Aluli <yuklin@kailualaw.com>, Dexter Kaiama
<cdexk@hotmail.com>

and will be served by first class mail on December 24, 2016 to:

1. Dwight J. Vicente
2608 Ainaola Drive
Hilo, Hawaiian Kingdom
2. Harry Fergerstrom
P.O. Box 951
Kurtistown, HI 96760
3. Michael Cain, Custodian of Records
Conservation and Coastal Lands
1151 Punchbowl, Room 131
Honolulu, Hawai'i 96813

Dated: December 23, 2016

_____/s/_____
Lanny Alan Sinkin