



PROTECTING

NATIVE HAWAIIAN

CUSTOMARY &

TRADITIONAL RIGHTS

AND OUR FRAGILE

ENVIRONMENT

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KAHEA: the Hawaiian-Environmental Alliance is a non-profit 501(c)3 working to protect the unique natural and cultural resources of the Hawaiian islands. KAHEA translates to english as "the call."

S. Michael Cain
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

November 23, 2010

Re: CDUA HA 3568 for the Thirty Meter Telescope

Aloha pumehana Mr. Cain,

Mahalo for accepting our comments in strong opposition to the Conservation District Use Permit requested by the Thirty Meter Telescope Observatory Corporation (TMT) for construction of yet another telescope in the conservation district on the summit of Mauna Kea. Because the TMT will add to the already substantial, adverse and significant impact of telescopes on this sacred mountain, which the law does not allow, the staff recommendation to the Board on this application must be deny.

KAHEA is a community-based network of nearly 10,000 kupuna, cultural practitioners, resource users, educators, and concerned residents working to protect the unique natural and cultural resources of Hawai'i nei.

We look forward to receiving the Department's responses to our comments and questions.

I. TMT contributes to the substantial, adverse and significant impact of telescopes

By all accounts, the Thirty Meter Telescope will be an imposing human-made structure on the sacred summit of Mauna Kea. Although, to be clear, it is not largest ground-based telescope to be

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built,¹ it will be more than 18-stories tall and more than 50,000 square feet; larger than anything that is currently on the summit. Proponents propose to construct this monstrosity on the last undisturbed plateau left on the summit. It would be a new, massive addition to the already 30+ telescope-related structures on the summit.²

The affects of telescope construction on Mauna Kea has been evaluated through multiple environmental assessments since 2005. All of them have concluded that the cumulative impact of past, present, and reasonably foreseeable telescope construction has had and will continue to have a substantial, adverse, and significant impact on the conservation district of Mauna Kea. In the 2005 federal EIS on the Keck Outrigger telescopes, NASA noted:

*“Future activities on the summit of Mauna Kea would continue the **substantial adverse impact on cultural resources**. No area at or near the summit is assumed to be devoid of archaeological properties, including the slopes surrounding the pu’u, which can be indirectly affected by development on the pu’u. Grading and removal of earth for new structures or roads, infrastructural redevelopment, or other observatory projects could adversely affect these resources.”³*

Even with considerable mitigation, NASA concluded:

*... some reasonably foreseeable future projects will have an unavoidable adverse impact on cultural resources. In particular, **projects proposed for previously undisturbed areas (such as TMT) have greater potential for altering topographical contours and disturbing archaeological sites and human burials**. In addition, any project involving construction of an above-ground structure has the potential to affect viewplanes.”⁴*

Given the conclusion of previous environmental reviews, the TMT could not avoid concluding that:

*“From a cumulative perspective, the **impact on cultural resources has been and would continue to be substantial, adverse and significant**. The cumulative impact to geological resources in the Astronomy Precinct has been substantial, adverse, and significant, primarily related to modifications of cinder cone morphology. The cumulative impact to the alpine shrublands and grasslands and mamane subalpine woodlands has also been substantial, adverse, and significant, primarily due to grazing*

¹That distinction goes to the 42-meter European Extremely Large Telescope currently under construction in Chile. See, www.eso.org.

²Table 3.7 “Present and Proposes(sic) Uses,” TMT Management Plan, page 3-15.

³NASA Keck Outrigger EIS, 2005, page. 4-73 (emphasis added).

⁴NASA Keck Outrigger EIS, 2005, page. 4-73 (emphasis added).

hoofed animals. The magnitude of significance of cumulative impact to the alpine stone desert ecosystem is not yet fully determined.”⁵

The TMT attempts to suggest that its contribution to this negative impact would be minimal and should therefore be ignored. But the reality is, the cumulative impact of past telescope construction on the summit cannot be circumvented. Any additional construction -- no matter how minor or mitigated -- will contribute to the on-going substantial, adverse, and significant negative consequences suffered in this unique and fragile environment. Such consequences are not allowed.

II. Substantial, adverse impacts are not permitted in the conservation district

The regulations implementing Hawai‘i’s conservation district protections are clear. To issue a permit for a land use in the conservation district, the applicant must demonstrate that:

*“The proposed land use **will not cause substantial adverse impact to existing natural resources** within the surrounding area, community or region.”⁶*

This means that given the conclusions of the TMT EIS, CDUA, and Management Plan, the Department cannot legally grant the TMT a permit to build in the conservation district, no matter how well it mitigates its negative impacts.

In its application for a permit, the TMT ignores this requirement, along with four others, that must be satisfied before a conservation district use permit can be granted. These additional requirements include ensuring that:

- the land use is “**compatible with the locality** and surrounding areas [and] appropriate to the physical conditions and capabilities of the specific parcel,”
- “existing physical and **environmental aspects of the land, such as natural beauty** and open space characteristics, **will be preserved or improved upon**
- “subdivision of land will not be utilized to increase the intensity of land uses in the conservation district; and”
- the land use “will not be materially detrimental to the public health, safety and welfare.”⁷

⁵TMT Management Plan, page 3-12. Similar statements are found in the FEIS and CDUA for the TMT project.

⁶Hawai‘i Administrative Rules §13-5-30(c)(4)

⁷HAR §13-5-30(c)(5), (6), (7), and (8).

Not surprisingly, instead of admitting that it is unable to satisfy these requirements, the TMT opted to simply ignore them in their application.

We have repeatedly highlighted that while the Department and Board are obligated by law to protect the natural and cultural resources of the conservation district, and the traditional, customary, and religious Native Hawaiian practices that are dependent upon them, there is no legal protection for or inherent right to build telescopes in the conservation district. It is a privilege to do business on public land in the conservation district; a privilege reserved for those land uses that can demonstrate no substantial adverse harm to the public's resources. TMT cannot meet this burden and thus cannot be granted this construction permit.

III. TMT is offensive

The TMT's analysis of the consequences of building such a massive structure in such a pristine place are offensive. Despite the findings of every EIS evaluating telescopes on Mauna Kea, the TMT CDUA concludes that:

*"while the introduced elements associated with existing observatories may have had an effect on the perceived quality of the observances conducted, or **may have caused some practitioners to conduct their observances further away from the vicinity of the observatories, there is no evidence suggesting that the presence of the existing observatories has prevented or impacted those practices.**"⁸*

Astronomy facilities on the summit do prevent and impact cultural practice, *ipso facto*, that people are forced to hunt the summit for a quiet space with an uninterrupted viewplane in order to worship. The TMT's conclusion that construction of yet another massive telescope will not contribute to the undermining of traditional, customary and religious practice on the summit is like saying construction of a football stadium at the Vatican will not interfere with Catholic worship because there will probably be some pews left that can still see the stained glass windows. This is offensive. Who is the TMT to uproot our piko, disturb our burial grounds, alter the profile of our summit, and say it does not matter? This is not the kind of business that should be granted the privilege of doing business on Hawai'i's public trust conservation lands.

IV. Flawed process and conflicts of interest plague summit management

Since 1968, the University's presence on Mauna Kea has been fraught with issues of abuse, misuse, disingenuous process, and conflicts of interest. Despite their claim that they have found a new paradigm, we can see that these issues continue today. For example:

⁸TMT CDUA page 4-7 (emphasis added).

A. Management Plan and Subplans Not Finalized

As the TMT acknowledges, a comprehensive management plan is a necessary prerequisite for the approval of any activity in the Mauna Kea conservation district. Both the CMP and subplans drafted by the University are currently undergoing legal review. The CMP is at the Intermediate Court of Appeals. The subplans, mandated as a condition to the adoption of the CMP, have been formally contested. The Department has yet to take action on our request for a contested case hearing on the subplans. It is wholly improper for the University to advance this permit application given these pending legal questions.

B.TMT Agrees Management Plan is Not Comprehensive

One of our many challenges to the University's most recent version of a management plan is that it is not comprehensive. It appears that the TMT agrees. In its site-specific management plan, the TMT states "it should be noted that the CMP and subplans only apply to UH's managed lands on Mauna Kea and do not apply to all of Mauna Kea."⁹ If the University's "Comprehensive Management Plan" does not address the management needs of the conservation district encompassing the entire summit of Mauna Kea, then it is not comprehensive.¹⁰ If this plan is not comprehensive, then new applications for land uses cannot be authorized under it.

C. The University Serves Conflicting Interests

On one side of the table, the University asserts itself as the objective land manager and enforcer of management activities on the summit of Mauna Kea. It hires 100% of the staff at the Office of Mauna Kea Management. It appoints 100% of the members on the Mauna Kea Management Board and the cultural advisory group, Kahu Ku Mauna. It holds meetings and makes decisions about the management of resources on the summit.¹¹

Then, at the same time, on the other side of the table, the University sits with the corporations and foreign governments seeking permission to exploit the conservation lands on the summit. The University facilitates and benefits from this ongoing exploitation of summit resources. Just as one example of the University's perverse incentive to encourage construction on the summit, the TMT repeatedly highlights throughout the

⁹TMT CDUA management Plan page 1-1

¹⁰For a definition of comprehensive, please see Mauna Kea et al., v. BLNR, Civil No. 04-1-397 (2007).

¹¹It is our contention that the BLNR has improperly delegated this authority to the University, per the Supreme Court's ruling in Kapa'akai O Ka Aina v. Land Use Commission, 94 Hawai'i 1, 7 P. 3rd 1068 (2000). The BLNR's failure to provide any meaningful oversight of the University's actions on the summit of Mauna Kea has created this conflict of interest.

CDUA and management plan that in order to construct the telescope the TMT corporation will make sublease payments directly to the University.¹²

V. Significant questions remain unanswered

The TMT CDUA is not complete. At a minimum, the following questions should be answered and a new CDUA released for public comment before this process proceeds.

It is our understanding the University of Hawai'i is submitting this application "on behalf of the Thirty Meter Telescope Observatory Corporation."¹³ Why? TMT is the actual applicant. The TMT will hold the sublease, the TMT will be responsible for compliance with all expectations and conditions on the CDUP, the sublease, etc., so it should be TMT, not UH, applying for this privilege to build.

How does the University rationalize serving the conflicting roles of "applicant" and "manager" in this situation? What safeguards are in place to prevent events similar to the previous violations of CDUP conditions and state law by observatories?¹⁴

What is the carrying capacity of the summit? It is possible that the TMT is one too many telescopes? The 1983/85 Management Plan for Mauna Kea limited construction on the summit to only 2 minor and 11 major telescopes, less than 125 feet tall, based on the best available science. This limit was carried forward to the 1995 management plan because it made no mention of a limit or carrying capacity. Since the University's new "CMP" fails to mention any kind of limit on construction in this conservation district, it seems reasonable to rely on this limit again, until there is some scientific basis for changing.

How many telescopes are currently on the summit? On page 1-5 of the application, TMT indicated there are 13 telescopes. On page 1-3, TMT said there are 12 telescopes. On page 1-4, they said 11. Just FYI, we counted the structures indicated on figure 3-7 in the TMT management plan, entitled "Site Plan showing Existing and Proposes(sic) Uses," at least 32 telescope-related structures are indicated there.

¹²TMT CDUA, page 2-1.

¹³TMT CDUA page 1-5.

¹⁴For the record, we note the repeated testimony of the University in response to the \$12 million transaction between University of California and Yale University for telescope time on Mauna Kea, where University of Hawai'i representatives stated that they have no idea what goes on inside the observatories. See, Testimony of Jim Gaines, Vice Chancellor of Research, University of Hawai'i, Hearing before House Committee on Higher Education, HB 1174, Act 132, SLH 2009.

How big is the TMT? On the first page of the CDUA, TMT said 8.7 acres. On page 1-11, TMT said 5 acres. On the architectural site plan (they forgot to put a page number on it), it says "4.5 acres (3.9 acres before "re-contouring")."

Kahu Ku Mauna was allowed to identify four days for cultural practice where the TMT would "minimize daytime activities." Why did Kahu Ku Mauna only get four days? What about the many other important religious observances, such as Makahiki, funeral services, and other events where peace and quiet are prerequisite?

What is the operational noise level, in dBA, of the TMT? Considerable verbiage is given in the CDUA and EIS to how quiet the TMT will be, but an actual measurement of likely decibels created by this project is never given.

The TMT mentions taking all the trash produced by the construction and use of this massive telescope to "an approved landfill or other waste disposal facility" on Hawai'i Island. Where are these facilities located? The small county dumps on Hawai'i are only allowed to accept: "Household refuse, residential do-it-yourself construction and demolition not exceeding 4 feet in length, soft compactable bulky items (mattresses, stuffed chairs, and couches) and residential self-hauled green waste."¹⁵

Where would the TMT dispose of the toxic chemical wash wastewater produced weekly by mirror maintenance? What is in that water?

How does the TMT manage to "not cause substantial adverse impact to existing natural resources withing the surrounding area, community or region?"

How could the TMT ever "be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels?"

How can the TMT be built and "the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon?"

If the University holds a lease for "one observatory" on Mauna Kea, then how can it be that more than 13 subleases have been issued for telescopes on the summit when the law requires that "subdivision of land will not be utilized to increase the intensity of land uses in the conservation district?"

¹⁵http://co.hawaii.hi.us/env_mng/swm/SW%20Informational%20Sheet.pdf

How can the TMT ensure it “will not be materially detrimental to the public health, safety and welfare” when it will be hauling chemical wastewater and hazardous waste down to the county dump?

What is the decommissioning plan for the TMT? This should be an element of the CDUP and left for future negotiation.

Did the TMT commit to begin decommissioning by 2028, per the requirements of the University’s management plan?

Did the TMT commit to fully restore the northern plateau by 2033, when the University’s lease for one observatory” expires? Hope so.

Does the TMT hope to stay pass the expiration of the University’s lease in 2033? ¹⁶

Mahalo,



Miwa Tamanaha
Executive Director



Marti Townsend
Program Director

¹⁶The TMT’s stated decommissioning plan is: “The project will comply with the Decommissioning Plan, a sub plan of the CMP. This provides a detailed methodology for planning the removal of the TMT Observatory and the Access Way exclusively used to access the TMT Observatory at the appropriate time.” TMT MP pg. A-9. “The level of restoration to be performed by TMT would be negotiated between TMT, the University, and DLNR according to the TMT sublease terms and CDUP. Site restoration activities may involve using cinder or materials similar to the surroundings either to fill holes or reconstruct topography. ...” TMT MP pg. 4-44. This is not a plan to decommission, this is a plan to consider whether to decommission and to what extent.