

**WRITTEN TESTIMONY OF NELSON HO
FOR THE 2ND TMT CONTESTED CASE HEARING
OCTOBER 2016
WITNESS FOR LEINA'ALA SLEIGHTHOLM, PETITIONER.**

The proposed Thirty Meter Telescope should be built. It will be a magnificent scientific instrument, and it should not be built on Mauna Kea. The reason is because land use mismanagement has been going on since the beginning of the UH lease and those conditions should not be allowed to continue.

My name is Nelson Ho. I have been a volunteer Sierra Club leader since 1982, however I am giving this testimony as a private individual. I became directly involved with the controversy on the mountain in 1995, when I was asked by Sierra Club members to investigate and stop the wind blown construction debris from entering the Ice Age NAR and impinging on the shrines that ring the summit. Later, I was asked to serve on UH President Kenneth Mortimer's Mauna Kea Advisory Committee (1998-2000), and witnessed the creation of the UH 2000 Mauna Kea Master Plan. From 2003 through 2011, I was part of the federal lawsuit that compelled NASA to complete the first EIS ever conducted on Mauna Kea since 1968.

I have been a lecturer on Environmental Studies courses at the Hawaii Community College for four years and later served under Mayor Harry Kim as Deputy Director for the Department of Environmental Management from 2004 to 2008.

Why have I been a critic of the mismanagement of Mauna Kea for 21 years? And why should the decision makers representing the University of Hawaii, the Department of Land and Natural Resources, the Thirty Meter Telescope, the University of California, the California Institute of Technology and the TMT funding countries seriously consider what I have to say?

Beginning in 2003, the Mauna Kea Legal Hui ultimately won a federal lawsuit involving UC-Caltech and NASA. The victory compelled NASA to complete the first ever federal EIS conducted on Mauna Kea. That EIS concluded "the cumulative impact of the past, present and reasonably foreseeable astronomy developments have resulted in significant, adverse and substantial impacts to the cultural and natural resources of Mauna Kea." NASA Federal Environmental Impact Statement (EIS) and OHA v. Sean O`Keefe, Civil. No. 02-00227 July 15, 2003.

The people of Hawai`i have been actively opposing more development and destruction on Mauna Kea since the lease was first issued in 1968. People marched at the State Capitol in the 70's and 80's to show they did not want astronomy to take over the mountain. We are only the latest people that have been engaged in the struggle. This Mauna Kea controversy got started because the UH and DLNR made bad land management decisions from the beginning of the lease.

Former Mayor Lorraine Inouye said that because Mayor Herbert Matayoshi (1974-1984) came from a business background, many did not see his environmental side and that he opposed having so many telescopes on Mauna Kea. (Star Advertiser 071411) In fact, he was the person that first publicly, called the growing cluster of early 1980's telescopes visible from Hilo "pimples" marring the mountain.

On a historical note, Sierra Club and other Big Island environmental groups had spoken out against land mismanagement on the summit since the early 1970's. It is a common misperception that no Hawaiians nor islanders cared about the development that was going on in the early days of astronomy. Those concerned were not labeled cultural practitioners, religious figures, activists nor Hawaiians. They generally spoke out as hunters and hikers. My early mentors were Mae and Bill Mull, who were concerned about the "urbanization" of the summit and opposed restrictions favoring a locked, private astronomical preserve. Dr. Wayne Gagne and Dr. Fred Stone and Dr. Frank Howarth were concerned about the Wekiu bug and the summit ecosystems that were not being studied, let alone being protected from increasing human intrusions. Mrs. Leinaala Apiki McCord and Mrs. Pele Hanoa were Hawaiian elders that were concerned about the "hewa" or grave harms that were being done by the industrialization of the

summit. Mrs. Hanoa, in particular conveyed to me in 1995 that she wanted the use of unlined cesspools to be stopped. This was soon after I began publicizing the neglect of the Institute for Astronomy in policing the construction activities and allowing construction debris to be strewn all over the summit region by the high winds.

Mrs. Mull asked me several times to be involved with the summit protection beginning in 1981, but I had already committed to protecting the Volcano National Park from the industrial activities surrounding geothermal energy development upwind of the Park and in sensitive intact Hawaiian rainforests.

Spills/seepage of sewage, diesel fuel spills, hydraulic fluid spills, aluminizing fluid going down cesspool drains, mercury spills, were all documented to occur with alarming frequency within the UH managed area. Little education and sensitization is offered to the hundreds of tourists who frequent the mountain night and day. The University continues to sell trinkets and collect tourist fees without any of the money going to significant environmental and cultural mitigation. Floral and faunal inventories and monitoring promised since the mid-eighties were only recently funded, if ever. Weeds were spreading unchecked, and insects moved on equipment from other astronomy facilities, imperiling our vulnerable native arthropods.

The "OMKM Environment Committee" was NEVER convened to review the TMT EIS, or any other astronomy facility, and has never convened before or since the much criticized CMP was approved by the BLNR, and challenged in court. The EM committee, like the MKMB is a convenient cover for the University to claim community involvement, but community participants used to be ridiculed and silenced when they show up at the public meetings to speak.

Just about everything Peter Adler had reported, in 2007, to the Gordon Moore Foundation about the risks to the proposed TMT, has come true. The Mauna Kea Legal Hui (represented by Richard Naiwi Wurdeman) spoke frankly in a three hour private discussion of specific land mismanagement issues with Dr Jean-Lou Chameau then President of California Institute of Technology (TMT BOD Member), Dr. Henry Yang, Chancellor of UC Santa Barbara (Chair, TMT Board) and Dr. Michael Bolte,

Director of University of California (UC) Observatories (TMT BOD Member). Also in attendance were a Gordon Moore Foundation representative, Kealoha Pisciotta, Paul Neves, Clarence Ku Ching, and other original Mauna Kea Legal Hui Petitioners. This happened in the office of then Chancellor Rose Tseng. We were sorely disappointed that they did not heed our warnings nor take more seriously consultant Peter Adler, whose honest appraisal outlined the controversy in "Assessment of Risks for Siting the Thirty Meter Telescope on Mauna Kea," October 26, 2007.

WHAT HAS THE UH AND TMT DECISION MAKERS GAINED IN THE NINE YEARS OF DOING THINGS THEIR WAY?

I would argue that the tipping point has occurred where the mismanagement structure that has controlled Mauna Kea can no longer rule as it has been. What that actual tipping point was, is open to debate. Was it the disruption the the Oct. 7, 2014 ground breaking ceremonies? Was it the massive walls of Protectors who were willing to get arrested starting in the summer of 2015? Or was it the ruling of the state Supreme Court in December of 2015?

Despite the pleas for Kapu Aloha from the Protectors of Mauna Kea, is everybody else blind to the growing enmity surrounding the construction of yet another gigantic industrial facility on the mountain?

ENMITY IS A WORD I USE ON PURPOSE. ENMITY- the state of or feeling of being actively opposed or hostile to someone or something. Synonyms: hostility, animosity, antagonism, friction acrimony, bitterness, rancor, resentment, ill feeling. Does this sound familiar? Are you an astronomer or administrator who wonders why the state Supreme Court ruled against the DLNR and why there were feelings of enmity when you saw the emotional Protectors gathered at Hale Pohaku in 2015?

Why should a "pure science" proposal for the next technological leap of humankind to peer deep into space be opposed? Pursuing the answer to that question would be misleading. The question should be "What structural changes must be made in the decision making and management of the Mountain, that would make this enmity disappear?"

A. WHY SUBSTANTIAL, SIGNIFICANT and ADVERSE Environmental and Cultural Impacts have to be Completely Mitigated before UH and TMT DESIRES are met

- Stringent state EIS law requirements for legitimate ALTERNATIVE ANALYSES TO THE PROPOSED ACTION should be enforced in this critically significant and already impacted cultural and natural resource landscape.

This was not done in the first TMT EIS. It should be done in the NEXT draft EIS. That one shall describe in a separate and distinct section alternatives which could attain the objectives of the action, regardless of cost, in sufficient detail to explain why they were rejected. The section shall include a rigorous exploration of the environmental impacts of all such alternative actions.

- There should be FULL AND FAIR DISCLOSURES OF ALTERNATIVES related to different designs or details of the proposed action which would present different environmental and cultural impacts, INCLUDING NO ACTION.

- There has been no honest consultations with impacted Hawaiians, of any value, from the decision makers. When does real consultation with Hawaiians begin? DLNR and the UH can't just continue to use agreeable Hawaiians who are already in alignment with UH perspectives.

- Until there is regime change in the substance for which decisions are made for the mountain, the UH and DLNR should agree to a MORATORIUM on all development, including the TMT proposal, until the reorganization is completed.

B. WHY THE UNIVERSITY SHOULD NOT BE GIVEN THE TMT SUBLEASE AND CDUA PERMIT

- The Industrial nature of modern astronomy facilities fails to conform to 8 criteria destroys culturally sensitive sacred landscapes and endangers vulnerable environment. The DLNR has failed to control the commercial activities on the summit and at Hale Pohaku. Who gets the money and

where is the fee money going? How much was collected each year since its inception in 1995?

- The regulatory tangle that DLNR and the UH system are in, is permanently and fatally flawed. Who monitors activities, lease conditions, permit compliance and construction activities? OMKM is merely an advisory group to the UHH Chancellor.

There is an unacceptable pattern of practice allowed where the Hawaii taxpayer is being cheated by the UH system to pay for all the legal costs defending the TMT corporation and all the foreign countries that use the summit landscape and public lands at lower elevation for their facilities. The public should not have to bear these costs.

- The “militarization of space” is real and it needs facilities on the ground to dominate. There must be real prohibitions and transparency regarding the use of summit facilities for proposed military and defense purposes.

- Potential Toxic cleanups - no testing has been done to examine the soil beneath the septic tanks and their leachate fields. When was each cesspools placed in service and when was each one closed? What has 50 years of chemical and biosolids waste dumping done to the land beneath the facilities?

- DECOMMISSIONING OF ASTRONOMICAL FACILITIES WITHIN THE MKSR

“The manner in which observatories would close is governed by the CMP’s Decommissioning Subplan (University of Hawai`i, January 2010). The CMP notes that the existing subleases specify terms for the disposition of observatory facilities in the event of termination or expiration of tenancy (Table 2.1). Unless and until existing observatories revise their subleases, they are obligated to comply with only their existing sublease terms. In general, the terms require sub lessees either:

- (1) Remove the facilities and restore the property at the expense of the sublessee;
- (2) Sell the facilities to UH or a third party; or

(3) Surrender the facilities to UH upon approval of UH and the Chairman of BLNR.

The impact analysis presented in the EIS for Alternative 1, the No Action Alternative, will assume that all of the existing facilities would eventually be removed as described according to the terms of the lease or subleases.

Subleases are terminated upon conclusion of operation of a particular telescope by a sublessee, expiration of tenancy at the end of a lease, or revocation of a sublease by UH. Unless the facility is recycled, it must be deconstructed and the site restored per the terms of the sublease.⁵ As described in the CMP's Decommissioning Plan, decommissioning entails the removal of the facility and restoration of the observatory site to either "even grade" or "original condition". The subleases do not state whether removal means complete removal of all facilities and infrastructure. PAGE 2-2"

UNINTENDED CONSEQUENCES REGARDING TELESCOPE FACILITIES DECOMMISSIONING

The Subplan further states, "The decommissioning of facilities will place an increasing financial burden on UH (and therefore the Hawaii taxpayer) in its effort to comply with the CMP. This will occur because: (i) the decommissioned observatories would no longer contribute to road maintenance and snow removal; and (ii) as observatories decommission, commercial tour demand may decrease resulting in reduced income from the per passenger fee collected. PAGE 2-5"

What has to be changed so that the taxpayer does not bear the financial burden for decommissioning? What is disposition of all moneys collected to date for decommissioning obligations, including TMT?

C. WHY THE CURRENT MASTER LEASE NEEDS TO BE RENEGOTIATED WITH THE PROTECTORS AT THE TABLE

The current Mauna Kea Summit lease expires Dec. 31, 2033. There is also a lease on 71 acres of non exclusive easement s4697 for access road

which also expires Dec. 31, 2033. The Hale Pohaku lease s5529 expires in 2041.

There is a need to rebalance the land management priorities of Mauna a Wakea. The cultural and natural resource protection has been neglected for the benefits of attracting cutting edge astronomy research on Mauna Kea.

There has been a willful neglect in looking at the question of carrying capacity, constraints on human activity and ultimate build out of the summit. With the temptation of another 65 year lease coming to the rescue, there is no need for an adequate planning horizon for the restoration of these natural and cultural resources while finding an acceptable level of astronomy activity, if any.

-The TMT is the Trojan horse that will allow significant industrialization to continue indefinitely on the summit. That Trojan horse could stymie all calls for major constraints on how future telescope developers can operate, contaminate, control and desecrate.

- The UH has a long proven history of breaking agreements thus failing the people and failing to care for the land they agreed to care for. In 1998, State Legislative Auditor Ms. Marion Higa found the following problems with the University's oversight of Mauna Kea:

"Over thirty years have passed since construction of the first telescope on Mauna Kea. During this period, little was done to protect its natural resources. The university, as the leaseholder, should have provided sufficient protection to the natural resources and controlled public access and use. These requirements have not been adequately met. The Department of Land and Natural Resources, in its role as landlord, should have overseen the university's activities and enforced permit conditions and regulations in protecting the State's interests. Neither state agency has been proactive in maintaining the conservation district. The University has failed in the management of these lands."

The 1968 Lease did not foresee a lot of the changes that the UH has made. The 65 year lease seriously underestimated the cultural and natural resource damage to the summit by the industrial nature of modern

telescope facilities. Lastly, proper oversight and management was lacking by DLNR and the UH which resulted in insufficient mitigation and restraint on UH desires.

Not much has changed with the management structure since 1998. A major shift has happened with those who no longer find that management acceptable.