

**WRITTEN DIRECT TESTIMONY OF DEBORAH J. WARD**

**(EXHIBIT B.17 a )**

Introduction and reasons for joining this contested case.

My name is Deborah J. Ward. I am a graduate of the University of Hawaii at Manoa, with Bachelor and Master of Science degrees. I served for twenty three years as a faculty member of the University of Hawaii Department of Natural Resources and Environmental Management. I have been a member, and have served in leadership positions within Sierra Club (SC), Conservation Council of Hawaii (CCH), and Big Island Invasive Species Committee for many years. I have administered grants and served as Quality Control Officer for the Hawaii Organic Farmers Association. I have been growing and marketing organic fruit and foliage in upper Puna for fifteen years, and I have lived in Hawaii for more than fifty years. Much of my adult life has been directed to protection and conservation of natural habitats unique to Hawaii.

My involvement in issues regarding the management of Mauna Kea began in the early 1970's. As a recreational hiker, I visited Mauna Kea with my father, a physicist and astronomer, when only one telescope, smaller than a garage, stood at the summit. The vast wilderness vistas from the highest peak in the Pacific, was awe-inspiring, breath-taking, and serene. The sound of silence remains with me today. I returned to Mauna Kea in the mid-70's as a hike leader affiliated with naturalist Lorin Eleni Gill and the Honolulu Botanic Gardens. In this capacity I witnessed the decline of the mamane forests due to sheep and mouflon browsing , and earned a photographic award for Mamane in Mourning from CCH in 1979.

I was introduced to the controversies when I lived in Honolulu, and I met numerous other hikers and naturalists who were concerned about the proliferation of telescopes, several without permits. Sierra Club member Mae Mull was an ardent advocate for a Mauna Kea Master Plan for long term land use and natural resource protection. She said " The primary goals of the master plan should be permanent protection of Mauna Kea's natural beauty and rare native ecosystems and to provide for public recreational use." "Big island residents, conservationists, hunters, public planners and most of Hawaii's people have special regard and respect for Maun Kea. ...To destroy the unique natural values of

the mountain for the sake of astronomical observation of outer space is not progress by any measure.” “Just because other countries won’t permit desecration of their mountaintops...these are not good reasons to turn our precious mountain into a playground for astronomers.” (Exhibit B.17 n Mae Mull Elepaio 1974)

Libert Landgraf, DLNR district forester, wrote “The apparent ploy by the University of Hawaii is a bombardment of information and proposals under the banner of education and scientific research. Under the same guise, they seemingly are trying to ramrod these programs through, forsaking controlled and wise planning.... The implication that the summit of Mauna Kea will be dotted with observatories because of its superiority for astronomical observations is distressing. This implication, by itself, reinforces the need for discreet and controlled planning.” Tom Tagawa, DLNR state forester wrote “I concur with L Landgraf’s comments. Please consider what happened to Haleakala on Maui.” The comments of Tagawa, Landgraf and Mull reflect the general sentiment of the people on the island, including Mayor Shunichi Kimura, who referred to the telescopes as “pimples”.

When I was hired by the University of Hawaii and moved to Hilo, I chaired the program committee of the Conservation Council of Hawaii (CCH) in 1983, when I invited astronomers to present their plans for discussion at a public meeting. I followed the development of the Mauna Kea Science Reserve Complex Development Plan (MKSRCDP) in 1983, and remember the UH assurances regarding future compliance with administrative rules and limits on development. I continued to use the trails, and visit the summit of Mauna Kea, during the 1970’s through to present, for recreation, wilderness experience, unfettered vistas, silence, spiritual peace, natural beauty, and cultural significance. As a long-time recreational user, I have felt it was my citizen’s responsibility during these years, to participate in dozens of hearings and meetings held to review, plan and propose appropriate management of the natural resources associated with Mauna Kea.

The cumulative impact of intensified industrial land use at the summit has impacted my recreational enjoyment and spiritual practice. The cumulative impact of the destruction of habitat, widespread waste accumulation, obstruction of viewplane, constant sound, alteration of the geology, and negative impact to the cultural practice of my colleagues is a source of personal grief. The summit would be silent if there was no development at all. It is not silent. The noise of observatory air conditioning, blowers, generators, associated vehicles and industrial activity is present and disturbing

to recreational users who hope for the pristine silence of wilderness. Development of six acres of industrial infrastructure with twice the County of Hawaii's allowable height limit (FEIS calls it a "new visual element on the northern plateau") on the last remaining unobstructed view plane facing Haleakala will significantly negatively affect my recreational practices. The view of Mauna Kea's summit, from my vantage point at my residence, from the beach at Hilo bay, from my hiking trails on Mauna Loa, all are fettered by the presence of multiple domes on the skyline; it is almost impossible to find a location on the island of Hawaii where one cannot see a telescope in one's view of Mauna Kea. I believe I am not alone in finding these visual obstructions a significant annoyance and an adverse impact.

Twenty years ago, while hiking near the summit of Mauna Kea with Nelson Ho, and Fred Stone in 1996, we discovered actions by IfA and DLNR which directly violated conditions in the BLNR approved Mauna Kea Management Plan, (part of the 1983 Mauna Kea Science Reserve Complex Development Plan approved by BLNR in 1985 and 1987). Actions taken by the IfA and DLNR allowed Subaru Telescope developers to alter the slopes, fill the lower part of the inner cinder cone of Pu`u Hau Oki and trench into the outer slopes of the cone (both high quality Wekiu bug habitat) for optical and electrical cables. This discovery was the nexus for my greater involvement in efforts to improve the management of this highly delicate and fragile natural environment.

The Wm M Keck Outrigger Telescope project was proposed late in 1999, and the CDUA was considered by the BLNR in early 2003. The NEPA FEIS concluded that cumulative impacts to the natural and cultural resources (past present and reasonably foreseeable future, including the TMT) were already significant, adverse and substantial. (Exhibit B.17 c OHA v OKeefe J Mollway)

My concerns led me to join an informal hui of participants, including Sierra Club, who took part in a contested case hearing and successful litigation to overturn the Department of Land and Natural Resources permit for Keck Outrigger telescope development, due in part to the absence of a current comprehensive development plan to address multiple uses on Mauna Kea. We were forced to intervene in the DLNR's management of Mauna Kea because BLNR had abdicated its fiduciary responsibility under the law to preserve and protect the summit. The BLNR failed to comply with its own administrative rules requiring that it manage the natural resources of the conservation district pursuant to a comprehensive management plan. The BLNR actively opposed the appellants' efforts to

bring BNLR into compliance with its own administrative rules. The DLNR administrative rules explicitly state that Astronomy facilities are among the uses requiring “approved management plans”, and that management in the conservation district must address “reliance on management plans to address cumulative land proposals.”

Eventually the Board’s decision to allow construction of the Keck Outrigger Telescopes was overturned by Judge Glenn Hara in 2007, and development of a management plan was directed. Judge Glenn Hara’s Decision and Order (January 19, 2007) ruled that a comprehensive management plan that covers multiple land uses in the conservation district must be developed for BLNR approval. The court order in *Mauna Kea Anaina Hou v. State of Hawai’i et. al.*, Third Circuit Court, Civil No. 04-1-397, (Exhibit B.17 d) requires the BLNR to prepare a comprehensive management plan for Mauna Kea and then act in accordance with that plan. The ruling also challenged the legal status of the University of Hawaii’s 2000 Master Plan—which was neither reviewed nor approved by BLNR. The University has not demonstrated its expertise and experience in managing important natural and cultural resources, nor does it have a history of protecting traditional and customary Native Hawaiian practices. The BLNR-approved 1995 Mauna Kea management plan update states that “It was determined that management and enforcement responsibilities—unless they are directly related to astronomy facilities, including the Mauna Kea access road—should be transferred back to DLNR.”

The court order led to the development of what the University deems a Comprehensive Management Plan (CMP) approved by BLNR in 2009 and four subplans approved the following year. The CMP is devoid of direct discussion of additional development, including the TMT, offering only references to the MP 2000. MP 2000 development plan has neither been scrutinized nor approved by the BLNR, yet it is referenced as the determining document for future development. The CMP claims that rules are needed to limit impacts by the public on resources, while ignoring the “significant, adverse and substantial” cumulative impact of astronomy development over the past 40 years.

As a result of the development of the 2000 Master Plan, and the subsequent initiation of the UH Hilo Office of Mauna Kea Management (OMKM), I have served at the request of OMKM on the Environment Committee since December 2000. I worked with a committee of scientists working in the fields of biology, geology and environmental management who formulated recommendations for biological inventory and monitoring in 2002. In 2005, after a two year hiatus, new committee members

and I identified natural resource monitoring and protection actions needed, and then requested proposals to hire a planning firm to construct a natural resources management plan for OMKM. I have contributed hundreds of hours as a volunteer. Not one hour has been compensated, not have I received any benefit from this effort, other than the knowledge that Mauna Kea deserves care and respect. If I believed that 40 years of citizen effort had led to appropriate management, I would not be sitting before you today. Instead, I have suffered as I observed the cumulative industrialization of the wild panorama of the summit. My best efforts have not remedied the habitat loss, the repeated pollution accidents, the introduction of multiple alien predators and weeds, the permanent and irreversible alteration of the geologic terrain. The summit landscape, once breathtakingly beautiful, is looking more like an industrial cityscape, in my eyes.

I have joined as a petitioner in the contested case regarding Conservation District Use Application HA-3568 to provide information, examine the record, and demonstrate the harm this project would cause, in order to provide the Board of Land and Natural Resources a better opportunity to make an informed decision regarding the Thirty Meter Telescope application.

**Issue: Is the proposed land use, including the plans incorporated in the application, consistent with Chapter 183C, HRS, the eight criteria in HAR §13-5-30(c), and other applicable rules in HAR, Title 13, Chapter 5 Conservation District?**

The University of Hawai'i at Hilo (University or UH) has not met the burden of demonstrating that its proposed land use -- the construction of the Thirty Meter Telescope (TMT) and related infrastructure on the summit of Mauna Kea -- satisfies the conservation district rules, including the permit criteria of HAR § 13-5-30(c). The TMT project does not conserve, protect, preserve, or promote the long-term sustainability of natural resources in the Mauna Kea conservation district, and thereby, it does not meet the Eight Criteria of HAR § 13-5-30(c). The BLNR is mandated to uphold all of the regulatory, statutory and constitutional requirements relating to both the public trust lands and conservation districts of Hawai'i. The Proposed TMT cannot not meet even one, much less all, of the eight criteria set out in Administrative Rules Haw. Admin. R. § 13-5-30(c).

***1. The proposed land use is not consistent with the purpose of the Conservation District.***

State Land Use Law (Act 187) of 1961 defined Conservation as meaning the protection of watersheds and water supplies; preserving scenic areas; providing park lands, wilderness and beach reserves; conserving endemic plants, fish, and wildlife; preventing floods and soil erosion; forestry; and other related activities. The objective of the Conservation District is “conserving, protecting and preserving the important natural resources of the State” through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. See HAR §13-5-30(c)(1), see also, HRS §205-2(e).

UH/TMT proposes that an 18-story, five-acre industrial structure in an undisturbed natural area is consistent with this purpose. This is an overbroad interpretation of HAR §13-5-30(c)(1) that, if accepted, would ultimately undermine conservation district protections. When interpreting a statute, the “whole act” rule demands that “the court will not look merely at a particular clause in which general words may be used, but will take in connection with it the whole statute . . . and the objects and policy of the law, as indicated by its various provisions, and give to it such a construction as will carry into execution the will of the Legislature.” *Azarte v. Ashcroft*, 394 F.3d 1287-88 (9th Cir. 2005) quoting *Kokoszka v. Belford*, 417 U.S. 642, 650 (1974). Against this rule of statutory interpretation, UH/TMT focuses solely on the latter half of the regulation to focus on “appropriate management,” ignoring the context of this general term and therefore the stated purpose of the conservation district. Because the TMT cannot meet this first criterion, this CDUA cannot be approved without abusing BLNR’s discretion.

**2. *The proposed land use is not consistent with the objectives of the subzone of the land on which the use will occur.***

Subzones are subset of a conservation district -- not an exception to it. See, HAR §13-5-30(c)(2). Any activity proposed for a subzone must comply with all of the requirements of the conservation district itself. While astronomy is an identified use in the conservation district subzone, such use is permitted if and only if it will not entail substantial adverse impacts on the conservation district. According to HAR §13-5-13(a), “[t]he objective of this [Resource] subzone is to develop, with proper management, areas to ensure sustained use of the natural resources of those areas.” *Id.* (emphasis added). Ensuring sustained use of Mauna Kea’s natural resources necessarily means ensuring that these resources are actually conserved, not degraded. Mauna Kea’s central location in mauka viewsheds, views from the summit itself, wekiu habitat, and its cultural significance are

resources would be degraded by the proposed TMT, as UH/TMT readily admits. FEIS Vol. 1, pp. S-12 through S-19. The University concedes that telescope construction has substantially undermined the long-term sustainability of the natural resources on Mauna Kea, and yet the University is again proposing to build another telescope. TMT FEIS, p. S-8. Thus, the TMT project cannot comply with criterion 2 and the CDUA should be denied.

**3. *The proposed land use fails to comply with provisions and guidelines contained in Chapter 205, HRS, entitled Coastal Zone Management, where applicable.***

The goals of the CZM program are to address issues from an integrated ecosystem perspective. In Hawai'i the entire State is considered to be in the Coastal Zone. Many of the objectives of the CZM program outlined in HRS 205A – protection of historic resources, scenic and open space resources, and recreational resources, from an integrated ecosystem perspective. HRS 205 aims to promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

UH/TMT has failed to show that the TMT can comply with CZM policies for protecting watersheds and aquifers. HRS Chapter 205A(c)(4)(E). The Mauna Kea Science Reserve is located above five State of Hawai'i delineated aquifers. Mauna Kea Comprehensive Management Plan for UH Management Areas, Jan. 2009 (CMP), p. 5-32. Ground water and aquifer contamination is a “potential side effect of a variety of human activities on the mountain,” and groundwater rates and flows at the summit are “unknown.” CMP 6-14. Moreover, as observatory operators have demonstrated, spills and run-off from telescopes, the Access Way, and a potential Mid-Level Facility have been allowed to “percolate into the ground[.]” (Exhibit R-3 FEIS Vol.1, p. 3-120). In May 2009, as much as twelve gallons of spilled hydraulic fluid at Caltech Submillimeter Observatory flowed down a drain pipe that opened directly into a cinder cone of the summit, where evidence of a previous spill was unearthed as well. In March 2008, as much as 1,000 gallons of sewage overflowed onto the ground and was “quickly absorbed” into highly porous ground, beneath which are flows to aquifers. CMP, p. 6-10). The TMT's three underground storage tanks (USTs), one of which will store hazardous wastes, raise additional concerns. Neither the CDUA nor the FEIS state whether they meet the EPA's standards for maintaining USTs. UH/TMT does not consider how this percolation impacts aquifers. The TMT project

would generate 120-250 tons of solid waste per week, and trucks taking waste down the mountain could overturn, spilling the contents into the porous substrate.

While the University claims that the aquifers will not be affected, it cannot demonstrate with any degree of certainty what the annual precipitation levels are, nor can it model the subsurface drainage of precipitation or pollution loads.

Unencumbered views from the summit are a treasured natural resource. The proposed TMT would directly interfere with scenic views to and from Mauna Kea's summit region in violation of CZM policies. HRS §205A-2(c)(3)(E). "To stand on the summit of Mauna Kea at sunset and see only Haleakala, Mauna Loa and Hualalai with their crests protruding above a solid cloud mass is a pleasure enjoyed by only a few." If built, the TMT would be an unavoidable blight on the remaining natural viewplanes in the line of sight between Mauna Kea and Haleakala on Maui. Native traditions, oral histories, and historical accounts of Mauna Kea contain many references to the north-facing view shed from Mauna Kea. (Exhibit R-5 E.g., Maly 2005, pp. 169, 209, 218, 231.)

**4. *The proposed land use will cause substantial adverse impacts to existing natural resources within the surrounding area, community, or region.***

The TMT Final Environmental Impact Statement (FEIS) identified the following areas of potential and cumulative impact:

**Cultural Practices and Historic Resources**

"The existing level of cumulative impact on cultural, archaeological, and historic resources is substantial, significant and adverse". (Exhibit R-3 FEIS 3.16 p 3-214) From a cumulative perspective, the impact of past and present actions on cultural, archaeological, and historic resources has been, and would continue to be, substantial, adverse, and significant. (Exhibit R-3 FEIS S-8-9) The TMT cannot be built because it would increase already substantial cultural impact. HAR 13-5-30 (c) (4) (2011).

The summit region of Mauna Kea is of great cultural significance to Hawaiians. The summit was traditionally, currently, and has always been used by Native Hawaiians as a place for religious ceremonies, for prayer to the gods, to connect to ancestors, and to bury the dead. Native Hawaiians continue to engage in these practices in the summit region. Cultural assessments conducted for the Mauna Kea summit region determined that Mauna Kea is one of the most sacred sites on Hawaii Island.



The Master Plan 2000 (Page V-12) notes that “a significant pattern is the virtual absence of archaeological sites at the very top of the mountain. MCCoy states that the “top of the mountain was clearly a sacred precinct that must, moreover, have been under kapu and accessible to only the highest chiefs or priests.” Most of the shrines in the Science Reserve are found on the northern and eastern slopes just above and below the 13,000 foot elevation. It quotes Maly in 1999 that the area above the forest line was so sacred that once in the upper region, one’s enemies could not pursue.

The proposed TMT and Access Way, majority of the MKSR, and MK historic properties are located within the Mauna Kea Summit Region Historic District. Due to the sacred attributes of Mauna Kea in Native Hawaiian traditions, traditional and customary and religious practices are performed in the summit region including prayer and ritual observances, gathering resources such as u’au or Hawaiian petrel, collection of water, deposition of piko, use of the summit region as a repository for human remains, solstice and equinox ceremonies and traditional navigation practices. (Exhibit R-3 FEIS S-3)

A number of historic trails also led to and crossed the summit plateau. Features found along these trails included religious and commemorative shrines, boundary markers, formal resting places (o`io`ina), places where mele were sung, and places where “propitiation would be made to various gods or spirits to insure safe passage of a completion of a task.” (Exhibit R-5 Holly McEldowney 1982, Appendix E Mauna Kea Science Reserve Master Plan)

The summit region of Mauna Kea is within the Conservation District and the Historic District. As such, the site of the TMT is recognized by our legislature as containing important natural resources—including cultural resources- “essential to the preservation of the State’s fragile ecosystems”. (HRS 183C-1 (2011); see also HAR 13-5-2 (1994) defining natural resources as including cultural, historic, recreational, geologic, and archaeological sites”). Accordingly, to construct the TMT, UHH must demonstrate that the project does not have a substantial adverse impact on natural resources, including cultural resources. HAR 13-5-30 (b) (2), (c) (4) (1994); HAR 13-5-2 (1994). In support of its CDUA, the university attached the final environmental impact statement (FEIS) for the project that concluded the TMT would have an adverse impact on cultural and natural resources. The university has appended the findings of the FEIS, and there is no evidence to refute the finding of cumulative and additive significant adverse impact on the cultural resources of Mauna Kea. For a resource that is already sustaining more adversity than is permitted in the conservation district, any “increment” additional harm is unacceptable. Thus, not only is the proposed TMT improper, but

existing development must also be mitigated to bring Mauna Kea conservation district management into compliance with the law.

The Legislative Auditor addressed the accumulation of impacts that have resulted in the findings of significant, adverse and substantial cumulative impacts to the natural and cultural resources of Mauna Kea in 1998: "(DLNR) has failed to define its relationship with the university, allowing the institution to oversee its own activities and not provide a mechanism to ensure compliance with lease and permit requirements." The auditor reported in three separate audits that without permit conditions or controls to ensure implementation of management plans, the university was allowed to continue development without completing prior tasks outlined in management plans. (Exhibit B.17d 1998 Legislative Auditor's report, B.17 j, B.17 k)

The Hawaii Supreme Court issued a concurrent opinion in December 2015 regarding the responsibility of the agency, in this case DLNR, to ensure the management of the land it is entrusted to protect:

The duty of the agency does not cease after it has engaged in the required balancing of competing interests in the course of evaluating whether a water use permit should issue and in determining whether a prescribed measure under the permit complies with the law; rather, the agency has a continuing duty, even after the issuance of the permit, to "ensure that the prescribed measures [under the permit] are actually being implemented after a thorough assessment of the possible adverse impacts the development would have on the State's natural resources." 1250 Oceanside Partners, 111 Hawai'i at 231, 140 P.3d at 1011. SCAP-14 0000873

In the case of fifty years of industrial astronomy on Mauna Kea, the DLNR has unlawfully delegated management of Mauna Kea to the University, and has not exercised a proactive duty to ensure that adverse impacts of development do not impact the State's natural resources.

#### Geological Resources

The US Department of Interior, National Park Service, National Natural Landmarks Program designated a portion of Mauna Kea as a National Natural Landmark in November 1972. A brief prepared by the program indicates that Mauna Kea was designated a NNL based primarily on its topography, morphology, and geology. (Exhibit R-3 FEIS 3.4 p 3-59)

The cumulative impact to geological resources in the summit region has been substantial, adverse, and significant, primarily due to the alteration of the geologic landscape. (Exhibit R-3 FEIS 3.16 p 3-232)

## Biological Resources

The endangered Hawaiian petrel, 'ua'u (*Pterodroma sandwichensis*) has been reported historically to have used the higher elevations of Mauna Kea, and it is currently found on the slopes of Mauna Loa, but to date no bird surveys have been conducted in the Mauna Kea Science Reserve.

The FEIS noted that University has failed to fully determine the significance of cumulative impact to the alpine stone desert ecosystem from activities to date. The project will add an increment to the current level of cumulative impact to all resources that have been substantially, significantly, and adversely impacted by present and future actions. (Exhibit 000R-3 FEIS S-8-9)

The TMT project would be developed in the region above 12,800 feet in the Alpine Stone Desert, where vegetation is characterized primarily by at least 10 lichens and a dozen mosses. Vascular plants include two endemic grasses, two endemic ferns, an endemic spleenwort, and non-native species more recently introduced. (Exhibit R-3 FEIS 3.4 p 3-62) The Douglas' bladderfern (*Cystopteris douglasii*) is considered a species of concern, and was found throughout the area proposed for construction of the TMT.

The Alpine Stone Desert is home to indigenous and endemic arthropods, including wekiu bugs, lycosid wolf spiders, two sheetweb spiders, two mites, two spring tails, a noctuid moth, and several non-native species more recently introduced. (Exhibit R-3 FEIS 3.4 p 3-62) Until recently the wekiu bug (*Nysius wekiuicola*) was proposed as a Candidate species for Federal listing under the Endangered Species Act. The Wekiu bug (*Nysius wekiuicola*) has garnered significant attention, through inventory, monitoring, autecology study, and public awareness, since its discovery over thirty years ago. Two of the two greatest threats to Wekiu bug identified by the scientists who have contributed to this study effort are habitat loss and predation by alien invasive ant species.

Wekiu bugs are generally concentrated on the cinder cones in the summit area, habitats include snow patches (Type 1), tephra ridges and slopes (Type 2), loose, steep tephra slopes on the outer flanks of the cones, known as Type 3 habitat, Lava flows (Type 4) talus slopes and rock outcrops (Type 5) and compacted fine-grained material (Type 6). The bulk of human impact has occurred on cinder cones (Types 1,2,3) near the summit of Mauna Kea, and this is where construction of existing observatories and supporting infrastructure and other human modifications have taken place.

It has been estimated that since 1963, approximately 62 acres (25 hectares) of potential arthropod habitat have been lost to astronomy-related development on the summit. CMP NRMP Threats to Invertebrate Communities on Mauna Kea p 2.2-43

(Exhibit R-3 FEIS 3.4 p 3-62/63) The TMT project would impact wekiu bugs in Type 3, 4, and 5 habitats. The wekiu bugs are present on the cinder slopes of Pu'u Hau Oki, and construction of the TMT and Access Way would impact 5.9 acres of wekiu bug habitat, a 10% additional increment of impacted habitat to the cumulative impact on the natural resources. Exhibit R-3 FEIS 3.4 p 3-73

The potential impacts to the biological resources would include replacement of existing habitat with the TMT observatory and Access Way, dust generated by vehicles travelling along the unpaved Access Way, and paving a portion of the Access Way. (Exhibit R-3 FEIS 3.4 p 3-69)

A prime example of habitat loss through development is the loss of Wekiu bug habitat on the summit through construction of telescope facilities. Wekiu bug habitat is easily altered by vehicular traffic and construction activity, as tephra cinders preferred by the bug are easily crushed into dust-sized particles. Prime habitat can be quickly degraded to compacted silt and mud by use of off-road vehicles. Wekiu bug habitat may also be altered by dust blown up from road grading and other construction activities on the summit. CMP NRMP 2.2.2.3 Threats to Invertebrate Communities on Mauna Kea p 2.2-43

The University of Hawaii, proposing to develop the Thirty Meter Telescope, would like to point to the "CMP", the FEIS, and the TMT CDUA, and claim that there is a new paradigm for the 21st century. The management plans in place indicate good intentions, but when a project such as the TMT is proposed, the good intentions are set aside. For example, the 2000 Master Plan (Exhibit R-3 FEIS 6.1.3) recommends that construction: "avoids facilities expansion into Nysius habitat wherever possible to avoid potential habitat disruption. In particular, observatory redevelopment will be limited within the existing site along the summit ridge to avoid expansion onto the surrounding cinder substrate. Mitigative Measure—the following measures will be implemented... 1) Minimize earthwork beyond existing disturbed sites... New facility development will also be contained to the smallest possible disturbance area to minimize impacts to endemic arthropods. 2) No new facilities on undisturbed cinder cone habitat." The 2000 Master Plan (Exhibit R-3 FEIS Volume 1 Section 6.2.4) states "Areas with cinder cone substrate will be avoided in long-term facility siting, and preserved from disturbance due to construction." The proposed project does not conform to the management recommendations and can only increase the cumulative impact on natural resources.

Incremental habitat fragmentation, exacerbated by biotic challenges, puts small isolated species at further risk of extinction. Invasions of non-native weeds can further degrade an altered habitat and landscape. Predatory insects, and those feeding on the same food sources as the species at risk, can

have rapid and devastating consequences. Invasive invertebrates are perhaps the greatest threat to native invertebrates in Hawaii, through competition, predation, habitat alteration, and parasitism. (Exhibit B.17s p 21-22 Bishop Museum) At the summit of Mauna Kea the greatest threat to the arthropod populations is the introduction of invasive arthropods that are adapted to alpine conditions. The potential of introduction of new invasive species to Hale Pohaku and the summit through the importation of goods from similar climates (such as astronomical equipment), construction equipment and fill, road grading equipment and gravel accidental transport on vehicles, clothing and equipment, and biological control agents. CMP NRMP 2.2, 4.2

DLNR Division of Forestry and Wildlife Administrator Paul J. Conry, in his CDUA Comments for the Thirty Meter Telescope wrote, on November 29, 2010, in response to 4.1.2 Natural Resource Management p. 4-13:

“It is possible that the introduction of an alien invasive species may occur in any area impacted by the construction process, and such invasion would ultimately impact the entire alpine ecosystem.”

For this reason, a management plan must incorporate prevention, robust on-going monitoring and response actions and reliable funding. Early detection of invasive species, in hand with effective mitigation measures, can halt or limit spread the before control becomes impossible. It is most cost effective to respond to invasive species while the populations are small or localized, and the probability of eradication is higher. Early detection and eradication is often the most neglected phase of the invasion process. The development of an Invasive Species Rapid Response Plan in conjunction with an Invasive Species Monitoring Plan for specific species considered to be the highest risk, referred to as Contingency Plans, should be in place for response to these species prior to detection. CMP NRMP 4.2-28-29

The 1983 MKMP, approved in 1985, called for arthropod inventory and monitoring, but that effort did not begin until multiple examples of the Wekiu bug habitat destruction brought legislative attention to mis-management by DLNR and the lessee. (1998 Auditor’s Report) Since 2005, several new alien predatory species that could adversely impact the Wekiu bug have been found, and Englund reported that alien ant species are the greatest potential threat in the summit area. Ants (family Hymenoptera)

are already well-established at the summit regions of Haleakala National Park, and this elevational range is well-within the lowest elevation that Wekiu bugs have been found. Because of the predatory and social nature of ants, and because ants have caused the extinction and decline of native arthropods throughout Hawaii, both the endemic wolf spider (*Lycosa* sp.) and the Wekiu bug would be expected to precipitously decline if ants ever become established. Additionally, a newly described flightless endemic moth (closely related to a moth that has declined due to an invasion of Argentine ants in Haleakala) is at risk should Argentine ants, found at the Access Road junction at Pu'u Huluhulu, become established in the Mauna Kea summit region. Since 2005, several new predatory beetle species have been found near Lake Waiau. The lake is in close proximity to the astronomy facilities and frequented by visitors from around the world. This underscores the regular monitoring and a mechanism for rapid response. (Exhibit B.17 | Bishop Museum Englund Wekiu 21-22)

A full assessment of environmental impacts can only be undertaken when data is available to review. In the case of Mauna Kea, the inventories and monitoring mandated as conditions in the 1983 MRSRCDP (referenced earlier) were not funded by the University, and as a result, baseline information required to manage and protect this fragile ecosystem from industrial development and visitor impact is still missing or incomplete, even 33 years after that plan was proposed. While recent funding has led to inventory and monitoring of several areas identified as Data Gaps, such as regular arthropod surveys, in the CMP Natural Resources subplan, many more remain unfunded.

The OMKM Environment Committee has worked with Big Island Invasive Species Committee and Hawaii Department of Agriculture to develop an invasive species response plan, and UH researchers have been able to identify the inventory, monitoring and rapid response goals. Preventive measures proposed are being undertaken, but on a very limited basis, when compared to the threats to the native fauna of introduced invasive arthropods (such as ants), flora (such as fireweed) and disease organisms.

The statement in the CDUA that potential impacts to cultural, archaeological, and historical resources (the text omits biological and natural) would cease upon decommissioning (to the extent practicable) is illogical. No decommissioning project will restore the cultural and natural landscape that has been altered. If the ecosystem of unique endemic fauna has been challenged or extirpated by introduced invasive species, the impact could be irrevocable.

**5. The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding area, appropriate to the physical conditions and capabilities of the specific parcel or parcels.**

The proposed TMT would not be compatible with the wide open and natural space that is the northern plateau of Mauna Kea. It is the conservation district that is the locality to be considered, not the existing telescopes (many of which were retroactively permitted after construction). UH/TMT contends that the TMT project - comprised of more than 12.5 acres (4.9.ac. for the observatory, 3.6 ac. for the access way, 4 ac. for the batch plant staging area, and a utilities corridor (that intrudes into the Natural Area Reserve) - and 400 foot corridor along Mauna Kea access road) must be assessed in the context of existing buildings (i.e. other observatories), otherwise the HAR §13-5-30(c)(5) criterion would be senseless because nothing could ever be built in a Conservation District. (Exhibit R-1 CDUA, p. 18.)

UH/TMT's interpretation ignores HAR §13-5-30(b), which establishes at the outset that generally, "[l]and uses shall not be undertaken in the conservation district" and further, if they are to occur, land uses must be evaluated to ensure that no adverse and significant impacts occur. Id.

**6. The existing physical and environmental aspect of the land, such as natural beauty and open space characteristics, will not be preserved or improved upon**

The TMT would intrude upon the currently unobstructed view of Haleakala Mountain as well as the primary view of the setting sun from the mountain. It will also obstruct viewplanes used for traditional and cultural spiritual and religious Native Hawaiian practice. The Northern Plateau is one of the last un-hindered open space areas with views down to the sea, along the coasts, and across the island chain. The TMT would neither preserve nor improve upon Mauna Kea's natural beauty; the eighteen-story building would be twice the highest allowable structure in Hawaii County, and would forever change the wilderness experience in the summit region.

**7. Subdivision of the land will not be utilized to increase the intensity of land uses in the Conservation District.**

UH subleases intensified land use by increasing the burden of vehicles, visitors, and long-term personnel that will use access roads, sewage, electricity, utilities, and base-level and mid-level facilities.

Land use in the Mauna Kea Science Reserve has the hallmarks of a subdivision: facilities and improvements cost sharing, planned development, and defined, independent property interests.

The TMT CDUA erroneously concluded that the “proposed TMT project does not involve the subdivision of land.” (Exhibit R-1 CDUA, 2-28). The TMT sublease would further parcel the original (single) lot leased to UH in 1968 (Exhibit B.17 f Lease No. S-4191). The General Lease allows for “an observatory”, but DLNR and the University have conveniently ignored that, opting instead to intensify land use in violation of HAR §13-5-30(c)(7) (“subdivision of land will not be utilized to increase the intensity of land uses in the conservation district”). Because the proposed TMT CDUA is premised on a subdivision of land that will intensify land use, the BLNR cannot approve it without abusing its discretion.

**8. *The proposed land use will be materially detrimental to the public health, safety and welfare.***

Our opening brief lays out the following:

a. Watershed, viewplanes, and hazardous waste exposure

The TMT proposal would increase the storage of hazardous wastes in the conservation district and poses unknown threats to aquifers; it therefore threatens public health and safety. The TMT will also increase the visibility of observatory construction on and from the mountain, which is already substantially adverse. Despite these examples of material detriment, UH/TMT asserts the Project will be a benefit to the public welfare because it will entail employment opportunities and generally bring significant funds to Hawai‘i. Although “public welfare” is one purpose of maintaining the conservation district, UH/TMT erroneously interprets this term to mean financial benefit, in order to fit their proposal. “Public welfare” does not mean job-creation or money generation. “The concept of welfare was added [to the conservation district mission] to include the notion of aesthetics -- preserving Hawaii’s unique natural beauty.” Department of Land and Natural Resources, State of Hawaii. “Conservation District Review Project: The Discussion Draft.” November 1993. Prepared by Gail W. Atwater, consultant, p. 16. Thus, the Rule intends that the public welfare will be served by conserving natural beauty in the conservation district, as opposed to using conservation lands for economic development.

b. Material detriment to the health of Native Hawaiians



HAR §15-3-30(c)(8) is concerned with public health, which includes that of Native Hawaiians. “Native Hawaiians are members of the general public and in addition have traditional and customary rights that are legally protected.” CMP Mauna Kea Public Access Subplan, p. 1-3

Telescope construction on Mauna Kea’s upper regions is materially detrimental to the health of the Hawaiian people. “Native Hawaiians have watched the University repeatedly erect telescopes on Mauna Kea over and against their protests and patient explanations of this site’s sacred importance. This ongoing violation of Hawaiians’ religious and cultural attachments to Mauna Kea is linked to a colonial, systemic deprivation of self-determination that is materially detrimental to Native Hawaiian health[.]” Statement of Dr. Liu, Exhibit F-3 of 2011 TMT case hearing.

The federal government recognizes, “the health and well-being of the Native Hawaiian people is intrinsically tied to their deep feelings and attachment to the land[.]” “Apology Bill”, Pub. L. 203-150 (1993). This attachment is not merely sentimental or romantic; and it links Mauna Kea and the physical, mental, and collective health of Native Hawaiians, individually and as a people. Maly reports from his interview with Pua Kanaka’ole Kanahēle, “[E]ach time she looks at Mauna Kea with the observatories built upon it she feels pain[.]” (Exhibit R-5 , FEIS. A-367).

c. Material detriment to the health and safety of the general public of Hawai’i

Observatory development on Mauna Kea’s upper regions is materially detrimental to the health, safety, and welfare of the general public of Hawaii. In the Native Hawaiian worldview, people are to live in harmony with the natural and sacred environment. When that harmony is tipped out of balance, nature strives to restore it. This can result in actual physical harm to the health, safety and welfare of people of Hawaii.

d. Ethnocentric methods for assessing materially detrimental impacts on sites of historic significance are inappropriate

UH/TMT purports to have evaluated TCP’s against adverse impacts, but has failed to apply the correct standard of evaluation. Instead the UH/TMT’s inability to allow for Native Hawaiian views of the sacred significance of Mauna Kea cause them to apply ethnocentric approaches to evaluations of the TMT’s impacts on Native Hawaiians. “Ethnocentrism means viewing the world and the people in it only from the point of view of one’s own culture and being unable to sympathize with the feelings, attitudes, and beliefs of someone who is a member of a different culture. It is particularly important to understand, and seek to avoid, ethnocentrism in the evaluation of traditional cultural properties.”

Patricia Parker and Thomas King, "Guidelines for Evaluating and Documenting Traditional Cultural Properties," U.S. Department of the Interior,

"For the economy, we have given up all of our sacred places". Pua Kanaka'ole Kanahele. Exhibit R-5, p. A-379. Mauna Kea Oral History Study Interview with Kep" Maly, December 11, 1998. Mauna Kea Science Reserve and Hale Pohaku Development Update: Oral History and Consultation Study, and Archival Literature Research, Kumu Pono Associates (1999).

National Park Service. National Register Bulletin 38, 10 (Revised 1998), p. 4. Native Hawaiian assertions that the telescopes desecrate a sacred cultural resource are not, as UH/TMT insists, matters of "opinion" that are counterbalanced by other Native Hawaiians who view the TMT project as a much needed economic development project or otherwise benign. (Exhibit R-2 CDUA, p. 3-13).

UH/TMT flouts guidelines for approaching conflicting claims over sites of cultural significance for Native groups. "Where one individual or group asserts that a property has traditional cultural significance, and another asserts that it does not or where there is disagreement about the nature or extent of a property's significance, the motives and values of the parties, and the cultural constraints operating on each, must be carefully analyzed." (Exhibit Patricia Parker and Thomas King, "Guidelines for Evaluating and Documenting Traditional Cultural Properties," U.S. Department of the Interior, National Park Service. National Register Bulletin 38, 10 (Revised 1998), p. 9.)

In the instant case, the motives and values of TMT supporters are explicitly linked to a need to increase employment opportunities and funding for research and education. The motives and values of Native Hawaiian cultural practitioners who testify in opposition to Mauna Kea are equally plain: they are motivated to preserve Mauna Kea's natural resources and cultural significance. For the purposes of evaluating a proposed conservation district land use, testimony motivated by conservation agendas should given more weight than those explicitly motivated by economic concerns.

**Issue : Is the proposed land use consistent with Article XII, Section 7 of the Hawai'i State Constitution and Ka Pa'akai O Ka'Aina v. Land Use Comm'n, State of Hawai'i, 94 Hawai'i 31, 7 P.3d 1068 (2000)?**

In Ka Pa'akai O Ka 'Aina v. Land Use Commission, 94 Haw. 31 (2000), hereafter, "Ka Pa`akai," the Hawai'i Supreme Court laid out a framework for assessing cultural impacts. An assessment must include:

(1) the identity and scope of "valued cultural, historic, or natural resources" in the area,

including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;

(2) the extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and

(3) the feasible action, if any, to be taken by the (agency) to reasonably protect native Hawaiian rights if they are found to exist.

The Supreme Court’s ruling in Kapa`akai specifically directs agencies confronted with a decision that might affect the traditional and customary practices of Native Hawaiians. The record in this case is replete with examples of how the BLNR has failed to conduct this type of detailed assessment, opting instead to rely on promises from the developer that the traditional and customary practices of Native Hawaiians will be protected through “after-the-fact” decisions by the developer through the developer-controlled management plan(s).

The Hawaii State Supreme Court, in a concurrent opinion issued regarding the Mauna Kea Anaina Hou appeal of the TMT CDUP in December 2015, stated:

(A)n agency of the State must perform its statutory function in a manner that fulfills the State’s affirmative constitutional obligations. See, e.g., *Ka Pa’akai O Ka’Aina*, 94 Hawai’i at 45, 7 P.3d at 1082 (placing “an affirmative duty on the State and its agencies to preserve and protect traditional and customary native Hawaiian rights”); *In re Water Use Permit Applications (Waiāhole I)*, 94 Hawai’i 97, 143, 9 P.3d 409, 456 (2000) (describing the state agency’s affirmative duty of “considering, protecting, and advancing public rights in the resource at every stage of the planning and decisionmaking process”). In particular, an agency must fashion procedures that are commensurate to the constitutional stature of the rights involved, see, e.g., *Waiāhole I*, 94 Hawai’i at 143, 9 P.3d at 455 (decisions involving public rights to a public-trust resource must be “made with a level of openness, diligence, and foresight commensurate with the high priority these rights command under the laws of our state”), and procedures that would provide a framework for the agency to discover the full implications of an action or decision before approving or denying it, see, e.g., *Kauai Springs, Inc. v. Planning Comm’n of Kaua’i*, 133 Hawai’i 141, 174-75, 324 P.3d 951, 984-85 (2014) (crafting an assistive framework that can guide agencies when considering the application of the public trust doctrine to water resources).

In light of the unique position that an agency occupies, the agency may be at the frontline of deciding issues that involve various interests that implicate

constitutional rights. Especially in instances where an agency acts or decides matters over which it has exclusive original jurisdiction, that agency is the primary entity that can and, therefore, should consider and honor state constitutional rights in the course of fulfilling its duties. Furthermore, to the extent possible, an agency must execute its statutory duties in a manner that fulfills the State's affirmative obligations under the Hawai'i Constitution. An agency is not at liberty to abdicate its duty to uphold and enforce rights guaranteed by the Hawai'i Constitution when such rights are implicated by an agency action or decision.

The non-delegable nature of an agency's duty to protect and enforce constitutional rights only intensifies the important role that an agency plays. See *Ka Pa'akai O Ka'Aina*, 94 Hawai'i at 51, 7 P.3d at 1088 (holding that "the delegation of the protection and preservation of native Hawaiian practices to [the party petitioning for the reclassification of land] was inappropriate"). In this case, outside of judicial review, no other entity but the Board can preserve constitutional rights involved in the permitting of a proposed use of a conservation land. See HRS § 26-15(a) (Supp. 2005). (p47)

**Issue: Is the proposed land use consistent with Article XI, Section 1 of the Hawai'i State Constitution and the public trust doctrine?**

The BLNR is mandated to uphold all of the regulatory, statutory and constitutional requirements relating to both the public trust lands and conservation districts of Hawai'i. The legal requirements that fall within the BLNR's responsibility include the public trust doctrine, Hawai'i State Constitution Article XI § 1, § 9, and XII § 4 and §7; section 5(f) of An Act to Provide for the Admission of the State of Hawaii into the Union 1959, Pub. L. No. 86-3, 73 Stat. 4; and Haw. Rev. Stat. Chapters 7, 171, 183C, 205 and 205A. Haw. Rev. Stat. §205 and Haw. Rev. Stat. §183C are the controlling statutes in this case and they clearly identify BLNR's duty to the greater public as trustee of the public lands trust and as the conservation lands manager for the State. Moreover, the Constitution specifically requires the BLNR to preserve and protect the customary and traditional practices of Native Hawaiians. The whole of Mauna Kea from 8,000 feet to the very summit is comprised of public trust lands, as well as conservation district lands, which are recognized by all parties as culturally significant.<sup>3</sup> Mauna Kea was set aside in 1961 as part of the on-going effort to protect Hawaii's watersheds. HRS §205-2. The upper regions of this area had long been recognized as ecologically significant, culturally sacred, and extremely fragile.

The Hawaii State Supreme Court, in a concurrent opinion issued regarding the Mauna Kea Anaina Hou appeal of the TMT CDUP in December 2015, stated: (SCAP-14 0000873)

The public trust doctrine under the Hawai'i Constitution, and the principles that it embodies, applies to the conservation land--the summit of Mauna Kea--involved in this case. This conclusion is supported by the plain language of Article XI, Section 1, the historical context under which this provision was ratified, and this court's precedents. (P 13)

Construction of constitutional provisions is largely guided by the same principles that courts use in interpreting statutes. Because of the exalted position that constitutional provisions occupy in the constellation of laws that operate in our State, "we have long recognized that the Hawai'i Constitution must be construed with due regard to the intent of the framers and the people adopting it, and the fundamental principle in interpreting a constitutional provision is to give effect to that intent". (p22-23)

Article XI, Section 1 (of the Hawaii State Constitution) provides that "the State and its political subdivisions shall conserve and protect . . . all natural resources, including land." Further, "[a]ll public natural resources are held in trust by the State for the benefit of the people." Haw. Const. art. XI, § 1. Thus, it was the express intent of the legislature that the protections afforded by the public trust doctrine extend to one of our most precious natural resources--land. A conclusion that would exclude public lands from the scope of the public trust doctrine would be contrary to the express statements that all public natural resources are held in trust and natural resources include land. (p 25)

(T)his court's precedents support the interpretation that the public trust doctrine under Article XI, Section 1 applies to lands in the public domain. As discussed, this court held in *Zimring* that all lands in the public domain are within the public trust, which means that the sovereign is obligated to protect and maintain them and to regulate their use. *Zimring*, 58 Haw. at 121, 566 P.2d at 735 (p26)

Additionally, in *Morimoto v. Board of Land and Natural Resources*, 107 Hawai'i 296, 113 P.3d 172 (2005), this court implicitly concluded that the public trust doctrine under Article XI, Section 1 applies to conservation district lands. (p 27)

Accordingly, based on the plain language of Article XI, Section 1, the application of principles guiding the interpretation of constitutional provisions, the special history of the public trust doctrine in this State, and this court's precedents implicating the public trust doctrine in land cases, the summit area of Mauna Kea, as state conservation land, is within the public trust and entitled to the protections that the public trust doctrine provides.  
(p27)

In the context of water resources, this court in *In re Water Use Permit Applications (Waiāhole I)*, 94 Hawai'i 97, 9 P.3d409 (2000), determined that "[t]he plain reading of" Article XI, Section 1 "manifests the framers' intent to incorporate the notion of the public trust into our constitution." *Id.* at 131,9 P.3d at 443. Hence, we held "that article XI, section 1 . . . adopt[s] the public trust doctrine as a fundamental principle of constitutional law in Hawai'i." *Id.* at 132, 9 P.3d at 444. Defining the substance of

the public trust, the court stated that it “is a dual concept of sovereign right and responsibility.”*Id.* at 135, 9 P.3d at 447. As a logical extension of this duality, the court concluded, based on the express language of Article XI, Section 1, that the public trust represents the twin “mandate of 1) protection and 2) maximum reasonable and beneficial use.” *Id.* at 139, 9 P.3d at 451. (p17)

Applied to water resources, the court found that “the [S]tate has both the authority and duty to preserve the rights of present and future generations in the waters of the [S]tate.” *Id.* at 141, 9 P.3d at 453. This means that the State and its agencies may not grant or assert “vested rights to use water to the detriment of public trust purposes.” *Id.* Therefore, in planning and allocating various water resources, the State “bears an ‘affirmative duty to take the public trust into account.’”*Id.* (quoting *Nat’l Audubon Soc’y v. Super. Ct.*, 658 P.2d 709, 728 (Cal. 1983)). (p18)

Waiāhole I was an explicit acknowledgement by this court that the public trust doctrine, as incorporated into the Hawai’i Constitution, necessitates “a balancing process” between the constitutional requirements of protection and conservation of public trust resources, on the one hand, and the development and utilization of those resources, on the other. *Id.* at 142, 9 P.3d at 454. This balancing process, however, exists in a framework demanding that “any balancing between public and private purposes [must] begin with a presumption in favor of public use, access, and enjoyment.” *Id.* The burden of showing that the requisite balance has been properly evaluated “in light of the purposes protected by the trust” rests on “those seeking or approving such uses.”*Id.* (p 18)

Because of the constitutional stature of the State’s duties under the public trust doctrine, the Waiāhole I court described the following standard by which the State’s actions concerning public trust resources are reviewed on appeal: “The duties imposed upon the state are the duties of a trustee and not simply the duties of a good business manager.” Just as private trustees are judicially accountable to their beneficiaries for dispositions of the res, so the legislative and executive branches are judicially accountable for the dispositions of the public trust. The beneficiaries of the public trust are not just present generations but those to come. The check and balance of judicial review provides a level of protection against improvident dissipation of an irreplaceable res. *Id.* at 143, 9 P.3d at 455 (emphases added) (citation omitted) (quoting *Ariz. Ctr. for Law in Pub. Interest v. Hassell*, 837 P.2d 158, 168–69 (Ariz. Ct. App. 1991)). (p 19)

The compelling duty of the State is “to consider the cumulative impact of existing and proposed diversions on trust purposes[,] to implement reasonable measures to mitigate this impact, including the use of alternative sources,” and to plan and make decisions “from a global, long-term perspective.” *Id.* Distilled to its essence, “the [S]tate may compromise public rights in the resource pursuant only to a decision made with a level of openness, diligence, and foresight commensurate with the high priority these rights command under the laws of our state.” *Id.* (p 19)

The court clarified, in *In re Contested Case Hearing on Water*

Use Permit Application Filed by Kukui (Molokai), Inc., 116 Hawai'i 481, 174 P.3d 320 (2007), that in cases where Native Hawaiian rights figure in an agency's public trust balancing, the burden is not on parties of Native Hawaiian ancestry to prove that the proposed use would harm traditional and customary Native Hawaiian rights; rather, the permit applicants and the agency are the parties obligated to justify the proposed use and the approval thereof in light of the trust purpose of protecting Native Hawaiian rights. Id. at 507-09, 174 P.3d at 346-48. (p 21)

The statutory source of the appellants' entitlement to exercise Native Hawaiian rights is the "Hawaiian usage exception to the adoption of the English common law" under HRS § 1-1,11 which was intended "to avoid results inappropriate to the isles' inhabitants by permitting the continuance of native understandings and practices which did not unreasonably interfere with the spirit of the common law." Kalipi v. Hawaiian Trust Co., 66 Haw. 1, 10, 656 P.2d 745, 750—51 (1982).

In Kalipi, this court concluded that the Hawaiian usage exception is "a vehicle for the continued existence of those customary rights which continued to be practiced and which worked no actual harm upon the recognized interests of others." Id. at 12, 656 P.2d at 751-52. Inasmuch as the exercise of Native Hawaiian customs and traditions on the summit of Mauna Kea is statutorily supported by HRS § 1-1, it is a property interest protected by constitutional due process. See 'Īao, 128 Hawai'i at 241-42, 287 P.3d at 142—43. (p 36-37)

As Hawai'i citizen and Native Hawaiian beneficiaries of §5(f) public trust lands, we Petitioners assert a private right of action to compel the BLNR to enforce compliance with statutory provisions that ensure the protection of public trust lands.

#### Conclusion

In summary, the plans proffered by the University to justify its request to intensify the land use on Mauna Kea do not address cumulative adverse impact to the natural and cultural resources. The Environmental Impact Statement does not address consideration of alternate locations being discussed for this project, such as Canary Islands and India. Nor do they do not provide effective, appropriate or sufficient mitigation for significant and substantial cumulative impact that has already impacted the resource, much less describe mitigation that would address new development, and they do not meet the criteria for protection of natural and cultural resources of the Conservation District as required by statute and by the Constitution of the State of Hawaii. For this reason, it is the duty and responsibility of the Board of Land and Natural Resources to deny this proposal.