

BOARD OF LAND AND NATURAL RESOURCES
STATE OF HAWAII

A Contested Case Hearing Re Conservation) DLNR File No. HA-CC 16-002
District Use Application HA-3568 for the) (CDUA HA-3568)
Thirty Meter Telescope on the Northern)
Plateau in the Mauna Kea Conservation) **TIFFNIE KAKALIA PROPOSED**
District, Ka`ohe, Hamakua District, Island) **FINDINGS OF FACT,**
of Hawai`i TMK (3) 4-4-015:009) **CONCLUSIONS OF LAW,**

) **DECISION AND ORDER, COS**

TIFFNIE KAKALIA PROPOSED FINDINGS OF FACT,
CONCLUSIONS OF LAW, DECISION AND ORDER

The University of Hawaii at Hilo, an entity of the state University of Hawaii (hereinafter referred to as "The University" or "Applicant"), filed an application for a Conservation District Use Permit (hereinafter referred to as "CDUA") on September 2, 2009, pursuant to chapter 183C of the Hawaii Revised Statutes (hereinafter "HRS") and chapter 13-5 of the Hawaii Administrative Rules (hereinafter "HAR") for the construction of a Thirty Meter Telescope (hereinafter referred to as "TMT" or "project") on the northern plateau of the conservation district on Mauna Kea in the Mauna Kea Science Reserve, Ka`ohe Mauka, Hamakua, Hawai`i, TMK (3) 4-4-015:009.

The State of Hawaii Board of Land and Natural Resources (hereinafter referred to as "BLNR"), having heard and examined the testimony, evidence, and arguments of all parties, hereby makes the following Findings of Fact, Conclusions of Law, and Decision and Order denying CDUA HA-3568 for the Thirty Meter Telescope (TMT).

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I. INTRODUCTION

Pursuant to the opinion of the Supreme Court filed on December 2, 2015 in *Mauna Kea Anaina Hou et al vs. Board of Land and Natural Resources et al* 136 Hawaii 376 (2015) and the Judgment on Appeal filed by the Supreme Court on December 29, 2015 and Order of Remand filed by the Third Circuit Court on February 22, 2016, the Hearings Officer has heard and considered the evidence presented, and being fully apprised of the premises, makes the following Findings of Fact and Conclusions of Law.

These Findings of Fact and Conclusions of Law shall be construed as follows:

- (1) If it is later determined that a Finding of Fact should be properly deemed to be a Conclusion of Law, the Hearings Officer so concludes on those legal issues.
- (2) If it is later determined that a Conclusion of Law should properly be deemed to be a Finding of Fact, the Hearings Officer so finds on those factual issues.
- (3) To the extent that any of the following Findings of Fact and Conclusions of Law include a mix of finding of fact and conclusion of law, each shall be given full effect.

II. FINDINGS OF FACT

A. First Proceeding - Procedural Matters

Public Hearings

1. Public hearings on CDUA HA-3568 for the proposed Thirty Meter Telescope (TMT) in the Mauna Kea Conservation District, Mauna Kea Science Reserve, Ka'ohē Mauka, Hamakua, Hawai'i, TMK (3) 4-4-015:009 were held:
 2. on December 2, 2010 at the Hawaii County Council Room, 25 Aupuni Street in Hilo, on December 3, 2010, at the Natural Energy Laboratory in Kona. (Ex. A059)
3. On February 25, 2011, the Board of Land and Natural Resources (BLNR) held a public hearing in Honolulu and voted to approved the CDUA HA-3568 for the Thirty-Meter Telescope in the Mauna Kea Conservation District, Mauna Kea Science Reserve, Ka'ohē Mauka, Hāmakua, Hawai'i. (Ex. A059)
4. On February 25, 2011 and March 7, 2011, the Office of Conservation and Coastal Lands (OCCL) received seven requests for a contested case hearing on CDUA-HA-3568, in compliance with HAR 13-1-28, from Mo'oinanea (represented by E. Kalani Flores), the Flores-Case 'Ohana, Deborah J. Ward, Paul K. Neves (as an

individual and as representative of the Royal Order of Kamehameha I (ROOK)), Clarence Kūkauakahi Ching, KAHEA: The Hawaiian-Environmental Alliance (represented by Marti Townsend), and Mauna Kea Anaina Hou (represented by Kealoha Pisciotta). (Ex. A059)

5. On February 25, 2011, the board granted the permit with conditions, one of which was that a contested case be conducted, thus “putting the cart before the horse”, as later described by the Hawaii State Supreme Court. (Ex A059)

Hearing Officer for first contested case

6. On April 15, 2011, the BLNR Chairperson appointed Mr. Paul Aoki as the presiding officer over the contested case hearing (hereinafter Mr. Aoki is referred to as “Hearing Officer” or “HO”). (Min. Ord. 1, April 15, 2011)

Pre-hearing matters

7. On May 13, 2011, a pre-hearing conference was held on CDUA HA-3568 in Hilo. (Min. Ord. 1, April 15, 2011; Aoki, Tr. May 13, 2011, 4:1).
8. At the pre-hearing conference, the issue of the Petitioners’ standing was discussed. Applicant did not object to the standing of petitioners Mauna Kea Anaina Hou, Paul K. Neves, Deborah J. Ward, Clarence Kukauakahi Ching, or KAHEA: The Hawaiian-Environmental Alliance. (Aoki, Tr. May 13, 2011, 6:17-20; Pisciotta, Tr. May 13, 2011, 43:24-46:25)

Parties

- a. Applicant University of Hawai`i at Hilo
- b. Petitioner Mauna Kea Anaina Hou
- c. Petitioner Kumu Hula Paul K. Neves
- d. Petitioner Deborah J. Ward
- e. Petitioner Clarence Kukauakahi Ching
- f. Petitioner Flores-Case Ohana
- g. Petitioner KAHEA: The Hawaiian-Environmental Alliance

Evidence and Experts

9. On August 25, 2011, Petitioners Neves, Ching, Pisciotta, and Flores were recognized as Native Hawaiian cultural practitioners and experts in the traditional and customary practices of Native Hawaiians. (Lui Kwan, Tr. August 25, 2011, 28:4-30:6)
10. On September 26, 2011, Flores was also recognized as expert in Native Hawaiian traditions and culture. (Flores, Tr. September 26, 2011, 4:25-6:25)

11. The first contested case was conducted in 2011, and after seven days of testimony, the hearing closed, and the Applicant and Petitioners (combined) filed findings of fact, conclusions of law and decision and order. Each party provided the Hearing Officer with responses to the other's document, and a year later the Hearing Officer issued a decision. BLNR held a public hearing regarding the Hearing Officer's recommendation, but made the decision to (again) grant the permit outside of public scrutiny.
12. The BLNR approval of the permit was vacated in 2015 by the Hawai'i Supreme Court, which remanded the case back to the BLNR for further proceedings. *Mauna Kea Anaina Hou v. Bd. of Land & Nat. Res.*, 136 Hawai'i 376, 363 P.3d 224 (2015).

B. Second Proceeding - Procedural Findings of Fact

Second Contested Case Hearing in 2016-2017

13. BLNR failed to hold a new public hearing to revisit the application filed six years earlier and the Final Environmental Impact Statement accepted seven years earlier, nor was anyone in the public invited to comment, call for participation in a contested case hearing, or given the opportunity to establish standing in accordance with the Hawaii Administrative Rules.. Instead the BLNR issued an RFP for applications for the position of Hearing Officer for a second contested case hearing process.

Hearing Officer Appointment

14. Hearing Officer Riki May Amano was appointed, and in spite of opposition from both the Applicant and the original petitioners, (Doc) the Board elected not to recuse Hearing Officer Riki May Amano.
15. The Hearing Officer called for a prehearing conference on Oahu, with less than the required notice, and six petitioners, not notified in a timely manner, were unable to attend. Attorney Richard Naiwiehu Wurdeman represented petitioners at the pre-hearing conference.

Pre-Hearing Conferences

16. DOC 016/MO 5 dated May 6, 2016 set May 16, 2016, for the first 1st pre-hearing conference to be held in Honolulu at the DLNR office in the Kalanimoku Board Room located on the first floor, Makai side, of the Kalanimoku Building at 1151 Punchbowl Street, Honolulu, Hawaii. The conference was held to establish Record for contested case hearing; set schedule regarding applications, motions, requests to intervene as a party; set hearing on interventions and 2nd pre-hearing conference for June 17, 2016 (Minute Order Nos. 7 and 8) TR V. i Titled “Prehearing Conference”.
17. The first 1st pre-hearing conference was not noticed to parties in a timely manner. According to Minute Order 5, dated May 6, 2016, a pre-hearing conference was set for Monday, May 16, 2016. Notice requirements in Ch 91-9.5 (a) states: Unless otherwise provided by law, all parties shall be given written notice of hearing by registered or certified mail with return receipt requested at least 15 days before the hearing.
18. DOC 49/MO 08 Dated May 27, 2016 set a second 2nd Pre-Hearing Conference to be held on June 17, 2016 at the Hilo State Office Rooms A, B, and C. 75 Aupuni Street, Hilo, Hawaii 96720. Minute order titled “Minute Order 8: Order setting hearings on motions to intervene and 2nd pre-hearing conference; COS (3)”. Tr. Vol ii
19. Also, on June 17, 2016, as part of the 2nd pre-hearing conference, there was a scheduling discussion on how many witnesses the parties would be calling, establishing a date for site inspection, deadlines for pre-hearing motions, deadlines for subpoenas.
TR VOL ii Titled: “Request for Admission and Motions”.
20. The new parties were expected to discuss or state their case on how many witnesses they would be calling for example, when they had no access to any motions filed and were not informed that they needed to come prepared with that information because they were not a party up until that point. All new parties except TIO and P.U.E.O were pro se.
21. Hearing Officer stated she will be filing a minute order describing the filing procedures. TR VOL iii Titled: “Request for Admission and Motions” - P 7: 4-6.
22. On August 5, 2016, a third 3rd pre-hearing conference was held at the YMCA building to hear motions. 300 West Lanikaula Street, Hilo, Hawaii 96720.
TR VOL iv Titled “Motions Hearing”.

23. August 12, 2016, the fourth 4th pre-hearing conference was held at Hawaii Community College Cafeteria, 1175 Manono St, Hilo, Hawaii 96720 to argue motions.
TR VOL v. Titled “Motions Hearing”.
24. August 29, 2016, the fifth 5th pre-hearing conference was held at Hawaii Community College Cafeteria, 1175 Manono, Hilo, Hawaii, 96720. Further Motions were heard.
TR VOL vi. Titled “Motions Hearings”.
25. October 3, 2016 the sixth 6th pre-hearing conference was held at the Grand Naniloa Hotel, Crown Room, 93 Banyan Drive, Hilo, Hawaii 96720.
TR VOL vii. Titled “Motions Hearing”.
26. October 17, 2016, the seventh 7th pre-hearing conference was held at the Grand Naniloa Hotel, Crown Room, 93 Banyan Drive, Hilo, Hawaii 96720.
TR VOL viii. Titled “Prehearing”.

Parties/Intervenors

27. The Applicant and six petitioners were the original parties in the first contested case.
 - a. Applicant University of Hawai`i at Hilo
 - b. Petitioner Mauna Kea Anaina Hou and Kealoha Pisciotta
 - c. Petitioner Kumu Hula Paul K. Neves
 - d. Petitioner Deborah J. Ward
 - e. Petitioner Clarence Kukauakahi Ching
 - f. Petitioner Flores-Case Ohana
 - g. Petitioner KAHEA: The Hawaiian-Environmental Alliance

 - h. Intervenor Thirty Meter Telescope International Observatory LLC
 - i. Intervenor Harry Fergstrom
 - j. Intervenor Mehana Kihoi
 - k. Intervenor C. M. Kaho`okahi Kanuha
 - l. Intervenor Joseph Kualii`i Lindsey Camara
 - m. Intervenor J. Leina`ala Sleightholm
 - n. Intervenor Maelani Lee
 - o. Intervenor The Temple of Lono
 - p. Intervenor Kalikolehua Kanaele
 - q. Intervenor Perpetuating Unique Educational Opportunities, Inc.

- r. Intervenor Stephanie Malia Tabbada
- s. Intervenor Tiffnie Kakalia
- t. Intervenor Glen Kila
- u. Intervenor Dwight J. Vicente
- v. Intervenor Brannon Kamahana Kealoha
- w. Intervenor Cindy Freitas
- x. Intervenor William Freitas
- y. Intervenor Perpetuating Unique Educational Opportunity (P.U.E.O.)

Hearing Officer Witnesses

- z. Wilma Holi
- a. Several others, who had intended to be parties, agreed to be witnesses for the Hearing Officer as well.

Party: Applicant University of Hawai`i at Hilo

- 28. The Applicant, University of Hawai'i at Hilo (UH-Hilo), is seeking a Conservation District Use Permit (CDUP) relative to CDUA HA-3568 on behalf of TMT Observatory Corporation ("TMT"). Ex A001 p.13, K-1 (CDUA)
- 29. The Agent (signatory) for the Applicant UH-Hilo on CDUA HA-3568 is Dr. Donald Straney, Chancellor. Dr. Donald Straney is the Chancellor of UH-Hilo. UH-Hilo is a subdivision of the University of Hawaii System. (Ex A001 p1 of Item K-1, Ex. A009, 3-9)
- 30. The University of Hawaii System was established as an institution of higher education. Its purpose is: "to give thorough instruction and conduct research in, and disseminate knowledge of, agriculture, mechanic arts, mathematical, physical, natural, economic, political, and social sciences, languages, literature, history, philosophy, and such other branches of advanced learning as the board of regents from time to time may prescribe and to give such military instruction as the board of regents may prescribe and that the federal government requires..." (HRS §304A-102)
- 31. Conservation land management is not listed as a purpose of the University system. HRS 304A-102.

Petitioner Tiffnie Kakalia

- 32. On July 21, 2016, the HO issued Minute Order 13 granting Ms. Kakalia standing in the 2016 contested case hearing. (Min. Ord. 13; Amano)

33. Petitioner Tiffnie Kakalia is a Native Hawaiian descendent of native inhabitants in Hawaii prior to 1778. [Doc. 54].
34. Kakalia served 2, 4-year terms as a volunteer on the Kahu Ku Mauna Advisory Council (KKMC), both in Interim Chair and Vice-Chair capacities. She contributed to many discussions relating to management issues, astronomy initiatives, including development and the lack of attention to cultural matters relating to Maunakea. [Doc. 54]
35. Kakalia states that the TMT project will provide substantial, adverse and irreversible damage to a significantly sacred cultural site, which will impact her family practice, the wellness of her 'ohana and community.[Doc. 54]
36. Kakalia states that in understanding the three piko and Native Hawaiian health, one will understand the significance of this sacred site and its affect on wellness. [Doc. 54]
37. Kakalia states that continued development of facilities in sacred space will increase the already disruptive flow of energies imposed on her practice of Aloha 'Āina, a cultural tradition significant to Native Hawaiian health and healing. [Doc. 54]
38. Kakalia states that the quality of relationship, particularly to place sustains native Hawaiian wellbeing. [Doc. 54]
39. Kakalia states that construction of this magnitude will impose an unbearable burden on the spiritual energies that engage in wellness of her family. [Doc. 54]
40. Kakalia expresses that in understanding the three piko and Native Hawaiian health, one will understand the significance of this sacred site and its affect on wellness. [Doc. 54]

Pre-Hearing Matters, Motions, and Minute Orders

Representation

41. Petitioners Mauna Kea Anaina Hou and Kealoha Pisciotta, Clarence Kauakahi Ching, Paul Neves, Deborah J Ward, and Flores Case Ohana, and KAHEA: The Environmental Alliance (hereinafter "Mauna Kea Hui Petitioners") were represented by attorney Richard Naiwieha Wurdeman from May to October 10, 2016.
42. Thereafter, Mauna Kea Anaina Hou and Kealoha Pisciotta, Clarence Kauakahi Ching, Paul Neves, Deborah J Ward, and Flores Case Ohana represented

themselves pro se, and KAHEA: The Environmental Alliance was represented by attorneys Yuklin Aluli and Dexter Kaiama.

43. Tiffnie Kakalia represented herself pro se.

Evidentiary Hearing Motions

Motions filed by Mauna Kea Hui Petitioners

44. By motion dated April 15, 2016, Mauna Kea Hui Petitioners filed [Doc. 6] Petitioners' objections to selection process and to appointment of Hearing Officer made pursuant to Minute Order No. 1, dated March 31, 2016.
45. By motion dated May 6, 2016, Mauna Kea Hui Petitioners filed [Doc. 15] Petitioners' objections regarding procurement committee and process and committee member / BLNR Board member.
46. By motion dated May 13, 2016, Mauna Kea Hui Petitioners filed [Doc. 17] Petitioners' motion for reconsideration of Minute Order No. 4, filed on May 6, 2016 and/or motion to strike selection process and to disqualify various members and hearing officer.
47. By motion dated May 31, 2016, Mauna Kea Hui Petitioners filed [Doc. 52] Petitioners' submissions and positions on record; Exhibit "A."
48. By motion dated June 16, 2016, Mauna Kea Hui Petitioners filed [Doc. 69] Petitioners' memorandum in opposition to Perpetuating Unique Educational Opportunities, Inc.'s motion to intervene, dated May 16 2016.
49. Petitioners motion of joinder of 1) Mauna Kea Anaina Hou matin requesting time to respond to exhibit objections and related matters and 2) Temple of Lono's joinder to Mauna Kea Anaina Hou motion requesting time to respond to exhibit objections and related matters.
50. By motion dated June 13, 2016, Mauna Kea Hui Petitioners filed [Doc. 70] Petitioners' memorandum in opposition to TMT's motion to have TMT International Observatory, LLC admitted as a party in the contested case hearing.
51. By motion dated July 11, 2016, Mauna Kea Hui Petitioners filed [Doc. 81] Petitioners Mauna Kea Anaina Hou et al.'s request for continuance on submissions and next hearing date.

52. By motion dated July 12, 2016, Mauna Kea Hui Petitioners filed [Doc. 83] Petitioners Mauna Kea Anaina Hou et al.'s supplement to request for continuance on submissions and next hearing date.
53. By motion dated July 14, 2016, Mauna Kea Hui Petitioners filed [Doc. 87] Petitioners Mauna Kea Anaina Hou et al.'s supplement to request for continuance on submissions and next hearing date.
54. By motion dated July 18, 2016, Mauna Kea Hui Petitioners filed [Doc. 94] Petitioners Mauna Kea Anaina Hou et al.'s motion to strike Conservation District Use Application, HA-3568, dated September 2, 2010, and/or motion for summary judgement.
55. By motion dated July 18, 2016, Mauna Kea Hui Petitioners filed [Doc. 95] Petitioners Mauna Kea Anaina Hou et al.'s motion to disqualify BLNR's and Hearing Officer's counsel.
56. By motion dated July 18, 2016 Mauna Kea Hui Petitioners filed [Doc. 103] Petitioners Mauna Kea Anaina Hou et al.'s witness list.
57. By motion dated July 18, 2016, Mauna Kea Hui Petitioners filed [Doc. 104] Petitioners Mauna Kea Anaina Hou et al.'s supplemental witness list.
58. By motion dated July 26, 2016, Mauna Kea Hui Petitioners filed [Doc. 130] Petitioners Mauna Kea Anaina Hou et al.'s: (1) Renewal of objections to hearing officer selection process and hearing officer appointment, and (2) supplemental arguments on motion to disqualify BLNR's and Hearing Officer's counsel, filed on July 18, 2016.
59. By motion dated August 1, 2016, Mauna Kea Hui Petitioners filed [Doc. 163] Mauna Kea Anaina Hou, et. al. Petitioners' initial objections to witnesses designated by other parties
60. By motion dated August 1, 2016, Mauna Kea Hui Petitioners filed [Doc. 165] (email) Note for the record.
61. By motion dated August 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 188] Wurdeman correspondence addressed to Hearing Officer Judge (Ret.) Riki May Amano and BLNR Chair Suzanne Case re: Hearing on Petitioners' motion to disqualify BLNR's and Hearing Officer's counsel, Filed on July 18, 2016, filed on August 10, 2016.

62. By motion dated August 17, 2016, Mauna Kea Hui Petitioners filed [Doc. 218] Petitioners Mauna Kea Anaina Hou, et al.'s site visit recommendations
63. By motion dated August 22, 2016, Mauna Kea Hui Petitioners filed [Doc. 233] Petitioners Mauna Kea Anaina Hou, et al.'s memorandum in opposition to motion for protective order for the Honorable David Y. Ige, Suzanne Case and Stanley Reohrig, filed on August 8, 201.
64. By motion dated September 8, 2016, Mauna Kea Hui Petitioners filed [Doc. 254] Petitioners Mauna Kea Anaina Hou, et al.'s request for further status conference and/or consideration of proposed scheduling.
65. By motion dated September 19, 2016, Mauna Kea Hui Petitioners filed [Doc. 270] Mauna Kea Anaina Hou, et al. Petitioners' response to P.U.E.O., Inc.'s proposed minute order granting P.U.E.O., Inc.'s motion to set issues.
66. By motion dated September 23, 2016, Mauna Kea Hui Petitioners filed [Doc. 282] Correspondence regarding notice of contested case hearing.
67. By motion dated September 26, 2016, Mauna Kea Hui Petitioners filed [Doc. 288] Petitioner Mauna Kea Anaina Hou, et al.'s objections to site visit and Minute Order No. 18.
68. By motion dated October 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 340] Petitioners Mauna Kea Anaina Hou, et al.'s renewed motion to disqualify hearing officer.
69. By motion dated October 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 341] Notice of withdrawal of counsel.
70. By motion dated October 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 342] Petitioners Mauna Kea Anaina Hou and Kealoha Pisciotta, Clarence Kukauakahi Ching; Flores Case Ohana, Deborah J. Ward, Paul K. Neves, and Kahea: The Environmental Alliance list of e-mail addresses for service of process.
71. By motion dated October 17, 2016, Mauna Kea Hui Petitioners filed [Doc. 383] Petitioners' Statement of Position in Response to the University's Statement Re Petitioners Renewed Motion to Disqualify Hearing Officer Document 369.

Motions filed by Tiffnie Kakalia pro se

72. By motion dated May 31, 2016, Petitioner Tiffnie Kakalia filed [Doc. 54] Petitioner Tiffnie Kakalia's request to be admitted as a party to the contested case hearing.
73. By motion dated July 18, 2016, Petitioner Tiffnie Kakalia filed [Doc. 109] Petitioner Tiffnie Kakalia's witness list, later resubmitted with COS August 1, 2016 [Doc.160].
74. By motion dated September 19, 2016, Petitioner Tiffnie Kakalia filed [Doc. 273] Petitioners addition to P.U.E.O., Inc.'s motion to set issues.
75. By motion dated March 9, 2017, Petitioner Tiffnie Kakalia filed [Doc. 503] Petitioners motion to admit exhibits and written direct testimony into evidence.
76. Petitioners motion of joinder of 1) Mauna Kea Anaina Hou matin requesting time to respond to exhibit objections and related matters and 2) Temple of Lono's joinder to Mauna Kea Anaina Hou motion requesting time to respond to exhibit objections and related matters.

Conduct of Contested Case Hearing

Exhibit Admittance and Numbering: due process violation

77. The Hearing Officer ordered Applicant and Petitioners to submit Witness Written Direct Testimony and Exhibits simultaneously on or by October 11, 2016.
78. Later, the petitioners were made aware that a documents library had been set up online, where Shared Exhibits Numbers R-8 were added to the Mauna Kea Documents Library Evidentiary Hearing Submittals. At the beginning of the evidentiary hearings, there were several duplications of exhibits from the various parties.
79. During the hearings references were made to the duplicated documents by number, as reflected in the transcripts. No attempt was made at any time to resolve the duplication, nor was there an opportunity to compare documents or rectify discrepancies between documents and the various versions. The parties did not have the opportunity to compare the documents and collectively agree on the documents to be used.
80. The Officer also received in to evidence the Applicant's document(s) over the Shared documents uploaded by BLNR's librarian. Consequently, at the close of

- the hearing, the Hearing Officer verbally expressed her intent to accept all exhibits to be judged by her on weight. Following the close of the evidentiary hearing, petitioners relied upon her assertions, made few objections, assuming that statements regarding weight would be issued in the findings of fact.
81. However, the Applicant(s) UH/TIO offered a barrage of objections to the exhibits petitioners had relied on throughout the evidentiary hearing process. Petitioners were not extended the opportunity to respond to objections to defend our own exhibits, and Hearing Officer made her decisions on admissibility based in part, if not primarily, on the the Applicants' arguments.
 82. On Mar 2, 2017 the Hearing Officer stated on March 23, "I will by Minute Order identify all exhibits that I will be receiving onto evidence". (Tr. Mar 2, 2017, Vol 44:288:1-22). After accepting objections on March 16, it wasn't until April 20, 2017, Minute order 44 was issued.
 83. Based on the HO representation (Tr. 3.2.17) petitioners expected that there would be a full list of accepted exhibits with which to establish Findings of Fact. Instead petitioners received multiple uncollated lists (MO 44/Doc 553), which included responses to Applicants' objections. On the last working day (May 26, 2017) prior to the filing deadline for Findings, the Hearing Officer issued a revised set of admitted exhibits. (MO 59/Doc 647, MO Amended 44/Doc 649).
 84. The Hearing Officer had countervailing positions regarding what docs should be admitted or not. For example, in some instances she required that laws that were relied on in witness testimony to entered as an exhibit, while later she denied that document's receipt into evidence.
 85. More importantly, Minute Order 44 (Doc 553) issued 4.20.2017 regarding documentary evidence clearly demonstrates the problem. The Order is contradictory, in that on one page several exhibits are received, while on another page the same exhibits are denied. For example, in Minute Order 44 see pages 28 and 33 to compare the decisions on exactly the same documents; on one page they are received, and and on the other, they are denied.
 86. Therefore, petitioner asserts the due process injuries are as follows:
As of this date (last working day before for submission of these findings of fact), the record is incomplete because there are outstanding dispositive motions, and motions for reconsideration regarding exhibits.
 87. The references from the transcript do not match the exhibits admitted by the Hearing Officer.

88. Some exhibits offered by witnesses who had already testified were later not received into evidence by the hearing officer.
89. Citations to exhibits may be inconsistent throughout the record and the Findings of Fact will reflect the confusion.

Issues to be Decided

90. During the August 29, 2016 hearing, the petitioners articulated on the record a number of issues to be addressed in the contested case hearing. While some of these issues were address in P.U.E.O.'s proposed order, the proposed order failed to include a number of issues important in this case.

C. EVIDENTIARY HEARING

The Conservation District of Mauna Kea

91. The Mauna Kea summit region is designated as part of the State of Hawaii Conservation District Resource subzone and as such, uses on the land are subject to the Conservation District rules (HAR 13-5) and permit conditions. The conservation district is administered by the State of Hawaii Department of Land and Natural Resources (DLNR) as directed by the Board of Land and Natural Resources (BLNR). Effective January 1, 1968, the BLNR leased the land (General Lease S-4191) to the University of Hawaii; the lease terminates on December 31, 2033. A001 p 1-1
92. Mauna Kea was listed as a National Natural Landmark in 1972. One of the reasons given for placing the mountain on this register by the National Park Service is that Mauna Kea is the “Most majestic expression of shield volcanism in the Hawaiian Archipelago, if not the world” as a result of its singular topography, morphology, and geology. Ex A009 CMP Appendix 4, p. 9., Ex A003 FEIS, p. 3-106.
93. “Mauna Kea is currently estimated to be between 600,000 and 1.5 million years old and is considered by the U.S. Geological Survey (USGS) to be an active post-shield volcano. While there has been no recent volcanic activity at Mauna Kea, volcanologists believe that it “**is likely to erupt again**”. Ex A009 CMP, p. 5-24 – 5-25
94. The proposed TMT location is entirely underlain by a single lava flow. A single chemical analysis of this lava flow shows the flow to be of typical “hawaiite” composition (a type or alkali-rich basalt). Ex A003 FEIS, Vol. 1 p. 108.

Natural, Cultural, Spiritual, and Wellness Resources of Mauna Kea

1. On an ocean island two thousand miles from the next nearest land mass, fresh water is the source of life. Protection of the aquifer is tantamount to providing the generations to come with life-giving sustenance. The summit of Mauna Kea, the highest point in the Pacific, is the apex of the aquifers that radiate from the summit.
2. The Astronomy Precinct is located entirely above the Waimea Aquifer. A010 NRMP 2.1-38
3. The regional aquifer beneath the summit of Mauna Kea is entirely fresh water. As evidenced by most seeps and springs, shallow groundwater does exist in the mountains flanks below the summit area. Analysis of spring water shows it to be recent and identical to rainfall at the summit. at least some of the water percolates downward to ultimately discharge as a spring or seep. Ex A003 FEIS Section 3.7 Water Resources and Wastewater p 3-115, 117
4. Four components of the hydrology of the Mauna Kea summit region remain unknown: 1) watershed calculations of snow-water distribution, 2) outcomes of leachate and liquid waste from septic and cesspool systems, 3) distribution and impacts of permafrost, and 4) groundwater maps of water levels, flow paths, and recharge rates. Ex A010 CMP NRMP, p. 2.1-39
5. Applicant states that Groundwater transportation rates in the summit region of Mauna Kea are unknown, and no flow paths have been identified. Groundwater flow-paths are important to understanding the potential movement of leachate from underground waste water systems. Exhibit A009 CMP 5-32 (pdf p 82)
6. The surface runoff does not extend to or below an elevation of 6,000 feet, which means that the majority of the water ultimately ends up percolating and becoming groundwater recharge with only a small amount lost to evaporation. A003 FEIS Vol I 3-219 (pdf p 307)
7. As evidenced by modest spring and seeps, shallow groundwater does exist in the mountain's flanks below the summit area. The most prominent of these springs and seeps are the series of springs found near Pōhakuloa and Waikahalulu Gulches... This indicates that at least some of the rainfall and snow melt at the summit percolates downward to a perching layer to ultimately discharge at the ground surface as a spring or seep. A003 FEIS Vol I 3-117 (pdf p 205)
8. Mr Nance stated that an aquifer is a groundwater body defined by boundaries, high-level or basal. How they fit together on this island he couldn't say. There are

more aquifers than there are regulated aquifer systems. Nance Tr.12.13.16 V16 p. 112:19-25, 113:1-2.

9. Three potable wells are tapped into high level dike-confined groundwater. Nance Tr.12.13.16 V16 at 113:7-8.
10. *Mauna Kea kuahiwi ku ha 'o i ka mālie* (Mauna Kea is the astonishing mountain that stands in the calm). Ōlelo No'eau. A001 CMP
11. The views of Mauna Kea and the view from Mauna Kea are significant and have been for centuries. Ex A-010 CMP NRMP, p. 2.1-47.
12. Approximately 72 percent of the Hawai'i Island population resides in an area impacted by views of telescopes on Mauna Kea. Ex A-308 FEIS, p. 3-82.
13. Different categories of people that view Mauna Kea (E.G. residents, sightseers, and cultural practitioners) have differing expectations, and these differences greatly affect their perception of the observatories. A001 p 7-2
14. The Applicant concedes that the visual impact of past actions on Mauna Kea, such as the 11 observatories currently located within the Astronomy Precinct, is considered substantial, significant and adverse. Ex A-308 FEIS Section 3.5 Visual and Aesthetic Resources p 3-101
15. Based on the large number of shrines in the summit area it is clear that Hawaiians went to the top of the mountain with a sacred purpose in mind, but it is doubtful that large numbers were involved at any one time. The ritual landscape that exists today is almost certainly the result of journeys by a number of families and adze makers over many generations. Ethnographic information suggests that the "summit," as just defined, was most probably known in the past by a single name, Kūkahau`ula, that on present evidence referred to both a legendary figure and to a character in traditional histories and genealogies. The place name evidence thus indicates that the "summit" was at the very least a legendary place (wahi pana Pukui and Elbert 1971, 1986). The archaeological evidence indicates that it was much more than that. While there is little archaeological evidence of human activity on the "summit" itself, the large numbers of shrines that encircle the mountain, just below indicate that the top of the mountain was the focal point of ritual practices. There is no knowledge of what these practices entailed, but it is reasonable to infer that they were centered on the worship of local mountain gods and goddesses, such as Poli`ahu and Līlīnoe, and presumably Kūkahau`ula as well. The summit is thus interpreted to have been the focal point of a major pilgrimage site or center. A122 Archaeological Survey of Mauna Kea NAR p 7-12,13

16. 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 view plane, 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. B.17a Ward WDT p 2
17. Noise level in the vicinities of the existing observatories varied from 38 dBA to 77dBA Leq, and 40-78 dBA L10, with noise levels at or below 60 dBA Leq beyond a distance of 50 feet from HVAC exhausts. The loudest noise levels of 68 and 77 dBA Leq and 69 and 78 dBA L10, were measured at locations within 15 feet of HVAC exhaust outputs. A003 FEIS Section 3.13 Noise p 3-175, 176
18. Joseph Keawe‘aimoku Kaholokula is a professor and the Chair of the Department of Native Hawaiian Health. He has over 20 years of experience both clinically and academically regarding Native Hawaiian health issues. Co-Authored over 60 publications, both peer review chapters and academic books that specifically speaks to indigenous health, Native Hawaiian and Pacific Islander health. He is knowledgeable of health determinants, Hawaiian spiritual beliefs and practices and scientific research on Native Hawaiians. He has clinical experience working with Native Hawaiians and issues on psychological distress related to access to sacred places. Tr. 02/23/17, V40 at 103: 4-21, 104: 5-16
19. Social factors cause a chain of events that happen before lifestyle issues, disease and physiological risk occurs. Factors include, discrimination, racism, where people live, access to good education, whether they have a livable wage amongst other things. Tr. 02/23/17, V40 at 103: 104: 16-24
20. Social determinants of health are basically political socio-economic forces are factors that influence the hierarchy in society -- how health, wealth and resources are distributed across different segments of the population. That affects an individual’s health. Tr. 02/23/17, V40 at 105: 8-12
21. Cultural determinants of health are very unique to being applied to indigenous people across the U.S – across the U.S., the world in Aotearoa New Zealand, Australia with the first nations, the people of Canada as well. Cultural determinants of health are unique to the indigenous populations. Unlike other

- populations in the U.S., there are either immigrants, descendants of slaves, refugees and so forth, historically. Tr. 02/23/17, V40 at 105: 13-21
22. Native people are original habitants of territories occupied by the United States. And it's a little different relationship and experience that they have with the U.S. Its one that they were forced to abandon their traditional ways, practice, often violently and through legislative acts such as in Hawaii, the banning of native Hawaiian language and government affairs in school systems, which almost led to the extinction of our Hawaiian language.. Tr. 02/23/17, V40 at 105: 22-25, 106: 1-5
 23. Social determinant affect the ability of indigenous people to exercise cultural identity and strengths. Tr. 02/23/17, V40 at 106: 6-13
 24. Imposed cultural values and aspirations of a dominant group add to frustration and distress to those experiencing cultural trauma . Cultural trauma speaks to a whole process of happiness historically as well as the present. It is manifested in different ways through things of discrimination and alienation of cultural values between a dominant, mainstream culture and that of native peoples. Tr. 02/23/17, V40 at 106: 14-24
 25. UH Cancer Center found that Native Hawaiians who report a lot of cultural trauma and also a lot of discrimination experience more substance use and abuse than Hawaiians do who report less.. Tr. 02/23/17, V40 at 107: 1-6
 26. The stronger they were in their Hawaiian identity of pride, it was a buffer and they saw less substance use in that population. And that is an example of cultural determinants of health and how cultural trauma is manifested in the present. Tr. 02/23/17, V40 at 107: 7-11
 27. Research has been done on racism and discrimination both quantitatively and qualitatively. evidence converges to Native Hawaiians experience a lot of the stress around the inability to live up to their aspirations in a society that often they have to be challenged and face issues like Mauna Kea. Tr. 02/23/17, V40 at 107: 12-1
 28. There are numerous studies across the U.S. that address affects on health and well-being. Tr. 02/23/17, V40 at 107: 22-23
 29. Severe psychological distress mainly through depression puts a person three times at risk for diabetes. Native Hawaiians have the highest depression prevalence in

- the State of Hawaii, as well as among the highest in diabetes. Tr. 02/23/17, V40 at 108: 4-8
30. Joseph Keaweaimoku Kaholokula is the Chair of the Department of Native Hawaiian Health within John A. Burns School of medicine up at the University of Hawaii at Manoa. Tr. 02/23/17, V40 at 113: 15-17
 31. Native Hawaiians who hold strong cultural identity, meaning that they strongly identify with their kanaka maoli culture and choose to do activities, affiliate and practice report more distress, more depression, for example. It is more associated with diabetes risk, and is's a source of stress. It is a marker for psychosocial stressors that are occurring. Tr. 02/23/17, V40 at 114: 12- 20
 32. Discrimination is psychosocial stressors that impact the health and well-being. Tr. 02/23/17, V40 at 114: 25, 115: 1
 33. Those that practice strongly and hold to the traditional beliefs and who access resources for their practice as part of their spiritual and cultural beliefs are most affected by cultural trauma. Tr. 02/23/17, V40 at 115: 5-10
 34. Roughly 93% of Native Hawaiians strongly identify and for the most part solely identify with NH heritage as their primary ethnic identity. Tr. 02/23/17, V40 at 115: 15-19
 35. Maui ola is defined as access to safe and well resourced neighborhoods, excellent education and healthy food options, physical activity opportunity and quality of healthcare. Tr. 02/23/17, V40 at 117: 16-19
 36. The quality of health for indigenous people are related to the quality of health of the land because of their connections and ancestral relations to the land. Native people have a historical responsibility, a cultural responsibility under aloha aina and malama aina. Malama aina is stewardship of land we are obligated as descendents of this aina to protect it in perpetuity. It is an obligation that many of us learn from a very young age. Aloha aina, patriotism, is being loyal to the tradition of obligated stewardship. Both aloha aina and malama aina are considered maui ola.. Tr. 02/23/17, V40 at 118: 15-25
 37. Well-being is defined by the world health organization since the 1940s. It is still used today. Well-being is a state of balance between the physical emotional and social and spiritual well-being of an individual.. Tr. 02/23/17, V40 at 119: 11-15

38. Health is well-being by definition. Tr. 02/23/17, V40 at 119: 19-21
39. Being incongruent in ones environment restricts the ability express spiritual physical other aspects of well-being. It can threaten one health and physical and mental health. Tr. 02/23/17, V40 at 119: 25, 120: 1-3
40. Mauna Kea is a symbol. It is a sacred place. Tr. 02/23/17, V40 at 121: 1-7
41. Disrespectful activity done on the mauna that counters policies in place is detrimental to wellbeing. Tr. 02/23/17, V40 at 122: 15-18
42. Mitigation measure that benefit one group of Hawaiians over another will cause more distress to Native Hawaiians. Tr. 02/23/17, V40 at 125: 1-8
43. Access and the ability to express aloha aina and malama aina as well as the ability to continue to practice customary and religious traditions is an important factor to health and well-being. Tr. 02/23/17, V40 at 125: 22-25, 126:1-2
44. The proposed land use, the TMT is being proposed to be constructed on Mauna Kea, will be materially detrimental to the public health, safety and welfare of, in particular, the Hawaiian community. Tr. 02/23/17, V40 at 126: 14-19
45. Maui Ola is a traditional concept around health. It is optimal health. There are proverbs dating back in time that reflect maui ola. An example would be Kihei Maui Ola. It is said after someone sneezes and it literally means “Sneeze and let there be life.” Ka la I ka maui ola is often heard in chants. The sun rises and so there is life. There is an olelo no‘eau, Mohala I ka wai, ka maka o ka pua, the flower blossoms because the living conditions are good. It is a metaphor for people, and it speaks to the concept of Maui Ola. Tr. 02/23/17, V40 at 128: 4-, 18-25, 129: 1-4
46. Symptoms suffered due to a sense of injustice by not having a voice or the feeling of alienation include depression, anger, frustration, hyper vigilance, hypersensitivity and psychological distress among Native Hawaiians. Tr. 02/23/17, V40 at 129: 18-25
47. Physical impacts of perceived racism include issues with hypertension and body mass index, obesity and other indices such as cortisol distress and biological factors. Tr. 02/23/17, V40 at 130: 2-19

48. The relationship between the stress hormone cortisol and discrimination is that the more discrimination you have the less cortisol output, which is indicative of chronic stress. Tr. 02/23/17, V40 at 130: 20-24
49. Native Hawaiians have strong ties to their land and their cultural practice. Tr. 02/23/17, V40 at 131: 15-17
50. The belief that one is not able to live up to cultural obligations will cause distress. Tr. 02/23/17, V40 at 131: 24-25
51. Construction of the TMT will result in the denial of access to malama aina or aloha aina for cultural practitioners causing distress for them Tr. 02/23/17, V40 at 132: 4-10
52. A 2008 group study in Kapa'au, Hawi, North Hawai'i focused on stress and coping and how it affects wellbeing. Restricted access is a bothersome issue. The feeling of difficulty to be Native Hawaiian and experiencing cultural loss will cause hyper-vigilance. Tr. 02/23/17, V40 at 132: 24-25, 133: 1-25, 134: 5
53. Hyper-vigilance is associated with trauma. Tr. 02/23/17, V40 at 134: 9-18
54. Studies have been done on the effects of adverse childhood events that impact physical and mental health as adults. The more stressors you have, the more traumatic events you have over a lifetime and will increase risk of chronic disease and early death. Tr. 02/23/17, V40 at 135: 16-23
55. Denied access to malama aina and aloha aina will result in negative impacts on cultural practitioners, Native Hawaiians, other Hawaiian or non-Hawaiians who are connected to the TMT issue. Tr. 02/23/17, V40 at 136: 11-15
56. Native Hawaiians relate to being part of the land and environment. To hurt the environment is to hurt Native Hawaiians. Tr. 02/23/17, V40 at 140: 6-13
57. Native Hawaiians that are cultural practitioners and uphold Aloha Aina and Malama aina goes beyond opposing the telescope. Tr. 02/23/17, V40 at 142: 25, 143: 1-3,
58. It would be a great study to research the direct impacts on the TMT issue. Tr. 02/23/17, V40 at 142: 25, 143: 15-17
59. Traumatic events psychologically affect people and impedes ones ability to work and function on a daily basis.02/23/17, V40 at 142: 25, 145: 22-25

60. Psychological wear and tear on the human response system puts one at risk for disease versus acute stress. Chronic stress is stress that doesn't go away, like poverty and economic instability. Tr. 02/23/17, V40 at 146: 12-19
61. Acute stress is how humans are designed, it's a flight or flight response. Homeostasis is once that stress is gone one goes back to baseline. Tr. 02/23/17, V40 at 146: 22-25, 147: 1-3
62. Studies on the potential health impact on Native Hawaiians have not been conducted by the TMT Corporation, TIO Corporation, University of Hawaii or the Board of Land and Natural Resources. Tr. 02/23/17, V40 at 149: 1-10
63. The Department of Psychiatry is looking at cultural loss and issues related to cultural factors that put youth at risk for suicide. Yuen, et al conclude that there is a cultural conflict occurring. Resilience enables youth to deal with suicide issues effectively. Tr. 02/23/17, V40 at 150: 9-19
64. The Thirty Meter Telescope project will cause adverse health affects on populations of Native Hawaiian youth at a higher level than the population of Native Hawaiian adults. Tr. 02/23/17, V40 at 151: 12-17
65. Observations of kia'i (protectors) in distress were apparent during the June 24th prayer session held in protection of Mauna Kea. Tr. 02/23/17, V40 at 156: 2-12
66. The Native Hawaiian Educational Assistance cites a new type of depression among Native Hawaiians. It is a "beaten down" kind of depression due to years of cultural loss that led to disadvantages in education, housing and other things. Tr. 02/23/17, V40 at 165: 1, 167: 14-20
67. Joseph Keawe'aimoku Kaholokula is a clinical psychologist with a specialty in behavioral medicine. Tr. 02/23/17, V40 at 168: 5-6
68. There are statistical techniques to partition out variances and factors such as health care, behavior, and physical environments as well as social factors. Tr. 02/23/17, V40 at 168: 17-25
69. The American Journal of Public Health finds that more people die due to social segregation than from heart attacks in the U.S. Tr. 02/23/17, V40 at 170: 4-6
70. TMT is psychologically affecting many Native Hawaiians, especially those who choose to practice and continue to Malama Aina and Aloha Aina. The accumulation and build up of observatories at the summit negatively impact the

health of practitioners. Health impacts are more severe for practitioners that use the mauna. Tr. 02/23/17, V40 at 171: 8-25

Oversight of UH Activities on Mauna Kea

General Lease

71. The General Lease (S-4191), dated June 21, 1968, states that the university 12.)“shall not damage, remove excavate, disfigure, deface, or destroy and object of antiquity, prehistoric ruin, or monument of historic value.” Exhibit B.17f, General Lease (S-4191) p5

Mauna Kea Plan, May 1977

72. In 1974, George Ariyoshi expressed concerns that “**social pressures for more intensive use** of Mauna Kea for scientific, recreational, and other purposes **pose a threat to the priceless qualities of that mountain...**” He wrote to Sunao Kido, then Chairman of the BLNR, directing that the agency “develop and promulgate, as **expeditiously as possible**, a Master Plan for all of Mauna Kea above the Saddle Road.” This Master Plan was directed to include provide for Plan enforcement and amendment. Ex. B.17g DLNR, The Mauna Kea Plan (May 1977), p. 2.
73. The Mauna Kea Plan is a policy guide on land use and management was prepared by DLNR staff, and approved on February 11, 1977 following two public hearings. Ex D-3 p 10; Ex. B.17g p 2-3
74. The area covered by this plan extends from the summit down to about 6,000 feet, and includes all conservation district land from the summit of Mauna Kea down to the Saddle Road. Ex. B.17g p 1
75. The objectives of the plan were to determine the capability of Mauna Kea’s resources to accommodate various uses without unacceptable damage to biotic and other natural values and historic values, and the visual appearance of the mountain, and to recognize the significance of MK’s summit for astronomical research and let a **limitation on facilities based on need and environmental concerns**. Ex D-3 p 1

The 1995 Revised Mauna Kea Management Plan

76. In 1995 the BLNR and the University sought to amend the MKSRCDP to address Commercial Use and Public Access. Some controls are eliminated and/or modified and new ones added to reflect UH’s experience in the past ten years, especially since the major portions of the road have been paved. **The primary**

criterion for controls, however, has been and continues to be public safety. Ex D-10 p (i) 1995 Management Plan

77. Management and enforcement of public and commercial use of Mauna Kea is the responsibility of DLNR—except for specific rights reserved to UH. Ex. B.17h 1995 Management Plan P 1
78. The 1995 Revised Plan --Part III: Management and Controls on page 7, states: “Astronomy-related uses in the UH Management Area are controlled by the 1977 DLNR Mauna Kea Plan, the Hale Pohaku Master Plan, the SRCDP, and the CDUA process.” Ex. B.17h p 7 1995 Management Plan

2000 Master Plan

79. The 2000 Master Plan was never adopted nor approved by BLNR. Ex A003 FEIS p 3-146
80. In the 2000 Master Plan, the University concluded that there was a need for a single entity to manage the comprehensive plan for the Science Reserve. Ex A009 CMP P 3.8
81. The objective of the 2000 Master Plan is to **preserve and protect the cultural, natural, recreational and scientific resources on UH lands.** Ex A048
82. In accordance with the 2000 Master Plan, UH-Hilo Chancellor established the OMKM on August 1, 2000, charged with ensuring compliance with and implementation of the 2000 Master Plan. (Ex A-009 CMP P 3.8)
83. The 2000 Master Plan acknowledged that joint management by DLNR and the University, and layers of management requirements and recommendations outlined in historical leases, plans, permits and written or verbal commitments, have created a **complex and often confusing pattern of management responsibility** (Group 70 International 2000). (Ex A-009 CMP P 3.9)
84. The acceptance of the 2000 Master Plan by the UH Board of Regents prompted the creation of OMKM, the MKMB, and Kahu Kū Mauna. (Ex A-009 CMP P 3.9)
85. Under the 2000 Master Plan, at least some of MKSS’ services are to be transferred to OMKM, but no deadline was specified and the transfer has not occurred. (Ex A009 CMP P 3-11)
86. The University’s 2000 Master Plan for the UH Management Area designated approximately 525 acres (212 ha) of the leased land as an “Astronomy Precinct,”

where **development is to be consolidated to maintain a close grouping of astronomy facilities, roads and support infrastructure** (Group 70 International 2000). Ex A-009 CMP P 3-1

87. Any future development would occur within the Astronomy Precinct portion of the UH Management Areas, as delineated in the 2000 Master Plan (Group 70 International 2000). Ex A-3009 CMP P 6-8
88. Any potential future observatories will be located inside the Astronomy Precinct. **The goal of this process is to refine telescope siting areas defined in the 2000 Master Plan based on updated cultural and natural resource information** (see Section 7.1.1 and Section 7.1.2). (Ex A-009 CMP Pg 7-57)
89. An approved management plan must be in place prior to the construction and operation within a resource subzone (HAR 13-5-39); a BLNR- approved comprehensive management plan must also be developed prior to construction and operation of such as facility. ExA-003 FEIS Section 3.10 p 3-142

The University's Comprehensive Management Plan (UH CMP)

90. The Applicant relies on the UH CMP and its four subplans and the TMT Management Plan to fulfill the "approved management plan" requirement for its CDUP application (CDUA HA-3568) under HAR §13-5-24. The Applicant claims the proposed use is consistent with the provisions of the CMP and subplans, the approved management documents for the UH Management Areas on Mauna Kea. Ex A-001 CDUA TMT Management Plan p 3-11 Section 3 Management and Controls
91. The CMP is described as “the framework for managing multiple existing and future activities, such as astronomy, recreational and commercial activities, scientific research, and cultural and religious activities.” (Ex A009)
92. The TMT Management Plan is a “project-specific management plan.” Ex A-001 UH/TMT CDUA, p. 2-3.
93. The CMP is described as being in accordance with the Third Circuit Court’s ruling in 2007 regarding the inadequacy of the University’s management plan proposal at the time. (Ex A009)
94. In its 2007 decision and order, the Third Circuit Court found that the the definition of management plan in HAR 13-5-2 requires the plan to be HAR 13-5-2 “comprehensive,” that is an “all-covering, all-embracing, all-inclusive”

- “plan for carrying out multiple land uses” for the conservation of resources on Mauna Kea. *Mauna Kea Anaina Hou v. BLNR*, Civ. No. 4-1-397, 7 (3rd Cir. Haw. Jan, 19, 2007))
95. The Third Circuit Court also found that the “resource that needs to be conserved, protected, and preserved is the summit area of Mauna Kea,” *Mauna Kea Anaina Hou v. BLNR*, Civ. No. 4-1-397, 7 (3rd Cir. Haw. Jan, 19, 2007)
96. As identified in the first management plan for the mountain, the Mauna Kea conservation district extends from the summit down to the 6,000-foot elevation and includes all lands from the summit to Saddle Road, including the Mauna Kea Forest Reserve and Game Management Area, and Ka`ohe Game Management Area. (Ex. B.17g, page 1)
97. The CMP only applies to the “UH Management Areas” (described as “the Mauna Kea Science Reserve (Science Reserve), the mid-level support facilities at Hale Pohaku, and the Summit Access Road...”). (Ex. A009 page 2-1)
98. The Third Circuit Court also found that where the 1995 management plan “was virtually silent” on the number and size of future telescopes on Mauna Kea, it did not satisfy the requirement for a comprehensive management plan. (*Mauna Kea Anaina Hou v. BLNR*, Civ. No. 4-1-397, 7 (3rd Cir. Haw. Jan, 19, 2007)) page 3-4)
99. “Proposed new development on Mauna Kea, including the Thirty Meter Telescope (TMT)” is outside of the scope of the CMP. Ex A-009 CMP, p. 2-3.
100. The Applicant acknowledges that “this CMP does not address development plan issues related to future observatories, including whether new observatories should be located on Mauna Kea to support the astronomy program or if observatories should have their leases extended or be decommissioned.” (Ex. A009, page 7-54)
101. The CMP does not provide a limit on the number or size of future telescopes in the Mauna Kea Conservation District. (Ex. A009 page 7-56)
102. The CMP describes the need to complete, among other things:
a burial treatment plan because Mauna Kea is a known burial site (A009, page 7-10)
buffer zones to protect archaeological sites (A009, page 7-10, 7-56)
invasive species control plan (A009, page 7-16 thru 7-18)
emergency hazardous spill protocol (A009, page 7-44)
permitting process for traditional and customary practices deemed appropriate (Ex A009 page 7-8 thru 7-10)

103. The CMP does not provide a timeline for completing these tasks and provides no process for public or agency oversight consistent with Chapter 91, HRS. (Ex. A009)
104. The CMP specifically identifies **the following measures as being among those Native Hawaiian rights for which access will be maintained insofar as they are consistent with other management actions: ...gathering of cultural resources..., Access for families to visit iwi kupuna..., Access to scatter ashes..., Access through trails for hunting and gathering..., Access to deposit piko..., Access for traditional...religious and spiritual observances..., Pilgrimage, offerings, and prayers, and Access to Lake Waiau to gather water for religious and spiritual purposes.** Exh A-007 Staff Report Feb 25, 2011, p.11
105. Upon approval of the CMP, the BLNR made the UH BOR responsible for implementing the CMP. In accepting that responsibility, the UH BOR delegated implementation of the CMP through normal UH governance channels to UH Hilo, OMKM, and MKMB and also assigned two members of the UH BOR to sit as ex-officio, nonvoting members on the MKMB. Ex A-003 FEIS section 3.10 Land Use Plans, Policies and Controls p 3-148
106. “OMKM’s responsibilities are complicated by the fact that the UH Management areas are governed by two overarching documents—the Master Plan 2000, which was not approved by the Board of Land and Natural Resources, thus requiring UH to continue to comply with the rights and responsibilities outlined in the 1995 Revised Management Plan.” Ex A-011 CRMP 3.2.1 OMKM Mission and Responsibilities 3-3
107. The University of Hawaii is an educational institution, not a land management agency. HRS 304A-102
108. The rangers who work for OMKM, but work closely with Mauna Kea Support Services, do not have the primary enforcement authority. Tr. McLaren
109. At the oral arguments before the Intermediate Court of Appeals on the appeal of the BLNR’s decision to deny a contested case hearing on the CMP to some of the Petitioners in the present case, counsel for the University conceded that the CMP “do[es] not take action”. (See, http://www.courts.state.hi.us/courts/oral_arguments/archive/oaica30397.html, accessed on November 13, 2011 at minute 43:29)
110. University counsel said: the “management plan itself demonstrates these are management measures that the University has been doing for quite some time and

can do.” (See, http://www.courts.state.hi.us/courts/oral_arguments/archive/oaica30397.html, accessed on November 13, 2011, at minute 41:46)

111. Neither the BLNR’s April 9, 2009 approval of the CMP or the March 25, 2010 approval of the 4 subplans document any specific findings by the BLNR regarding the 3-part analysis required by the Court’s decision in Kapa`akai. (Ex. B-41, B-42)

Legislative Auditor’s Reports regarding Management

112. The Legislative Auditor conducted two prior audits of the management of Mauna Kea and the Mauna Kea Science Reserve. Our 1998 Audit of the Management of Mauna Kea and the Mauna Kea Science Reserve (Report No. 98-6) found that UH’s management of the science reserve was inadequate to ensure the protection of Mauna Kea’s natural resources. The university had focused primarily on the development of Mauna Kea and tied the benefits gained to its research program. Policies and action plans to ensure the protection of Mauna Kea outlined in management plans were often late and weakly implemented. New technology also required the university to change its approach to future development within the science reserve. We also found that DLNR needed to improve its protection of Mauna Kea’s natural resources, particularly the conservation district permitting process and enforcement. The department’s administrative requirements were frequently overlooked or not completed in a timely manner. B.17k Legislative Audit of Mauna Kea Management 2014

113. In the 2005 Follow-up Audit of the Management of Mauna Kea and the Mauna Kea Science Reserve (Report No. 05-13), we found that while UH and DLNR had made improvements in managing Mauna Kea and the science reserve, more needed to be done. The university still lacked administrative rule-making authority, exercised weak permit monitoring, and management plans for the science reserve needed to be updated to reflect current use and management and to provide increased transparency and accountability of the university. We also found that the leases, subleases, and permits were dated and that DLNR, as landowner, did not provide a mechanism to ensure compliance with lease and permit requirements. The department’s divisions did not coordinate their efforts in protecting natural resources, and a management plan for the Mauna Kea Ice Age Natural Area Reserve was needed. B.17k B.17 2014 Legislative Audit of Mauna Kea Management p.15-16

114. The Legislative Auditor found UH issued unauthorized permits to regulate and assess fees for commercial tour activities, putting Mauna Kea's resources and UH's Mauna Kea revenues at risk... In the absence of rules, the office issued unauthorized permits to regulate commercial tour operators and charge commercial tour fees. The office also lacks enforcement authority to protect the mountain's resources from the impacts of public and commercial activities, even though it is responsible for protecting those resources. B.17k 2014 Legislative Audit of Mauna Kea Management p.15-16

115. Commercial tour fees, approximately \$391,000 annually, are an important source of funding for the maintenance of infrastructure on Mauna Kea and the office's ongoing stewardship efforts. (Exhibit 2.3 shows a commercial tour group visiting the Mauna Kea summit.) We found, however, that UH issued temporary commercial tour permits without obtaining final approval from the Board of Regents and relied on those permits to charge commercial tour fees. Between FY2009 and FY2013, UH assessed unauthorized tour operator fees totaling nearly \$2 million, representing between 12 and 22 percent of the office's total available funds for those years. In addition, UH continues to recognize those unauthorized permits and collect fees via informal agreements with tour operators. Such arrangements put both the mountain's resources and the office's funding at risk. B.17k 2014 Legislative Audit of Mauna Kea Management p.19

The Thirty Meter Telescopes Observatory Proposal

116. The proposed site for the TMT Observatory is a roughly 5-acre area at the end of a four-wheel drive road at an elevation of 13,150 feet on the Northern Plateau of Mauna Kea. Ex A- 003 FEIS, Vol. 1 p. 2-10.

117. Roughly 6.2 acres of previously undisturbed land will be disturbed by the TMT Observatory and Access Way. Ex A- 003 FEIS Section 3.2 Cultural Resources Page 3-26

118. The TMT's footprint will be a minimum of 8.5 acres on a pristine plateau. Ex A-007 DLNR staff report Feb 25, 2011 p.K-1

119. HAR 11-200-12 states: "In Determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences, both primary and secondary, and the cumulative as well as the short term and long term effects of an action. In most instances, an action shall be determined to have significant impact if it: (13)

Requires significant energy consumption.” HRS 11-200-12 (Significance Criteria).

120. The building and operation of the TMT Observatory on Maunakea will require a sublease from UH, which lease this ceded land from DLNR. The sublease will be subject to approval first from the TMT board and the UH BOR followed by approval from BLNR. Ex A- 003 FEIS section 3.10 Land Use Plans, Policies and Controls p 3-159
121. The current UH lease expires in 2033 and the TMT Observatory will be required to be decommissioned and restore the site at that time, unless a new lease is obtained from the BLNR. Ex A- 003 FEIS section 3.10 Land Use Plans, Policies and Controls p 3-160
122. The TMT would take approximately five years to decommission. Sanders Tr. August 15, 2011, P 82: 2-5
123. Mr Hayes, project manager for the TMT EIS, stated that Overall the existing level of **cumulative visual impacts** from the past projects at the summit Is considered to be **substantial, significant and adverse**. Tr. 10/25/16, V.3 at 155:10-25
124. When asked what is the difference between increment and cumulative, Mr Hayes responded ”cumulative impacts is the sum of increments”. When asked if the TMT would add to the cumulative visual impact that you have already stated is substantial, significant and adverse, he agreed that it is. Tr. 10/25/16, V.3 at 155:10-25, 156;1-6
125. Mr Hayes was asked , as project manager for the EIS and a collaborator on the CDUA, Is It still your position that all of these Impacts do not add to the already significant adverse and substantial cumulative Impact in the Historic District? He answered “ As I've said, this project will add an Increment to the cumulative impact, however, it will not tip any of the evaluated Impacts from a significant or from a less than Significant to a significant level. Tr. 10/25/16, V.3 at 181:1-10
126. Asked of Jim Hayes: Is there anything in the proposed project that would reduce those impacts that have been already determined to be substantial to less than substantial? A: No. Tr. 10/25/16, V.3 at 215:11-19

Impacts of the Proposed Project

127. Kakalia points out that the Comprehensive Management Plan states management “...objectives and desired outcomes to increase understanding and appreciation of Native Hawaiian history, and cultural practices to ensure that these practices are protective and respected.” (EXHIBIT O-3, page 1)
128. Kakalia points out that CR-1 of the Comprehensive Management Plan states that Kahu Kū Mauna shall work with families with lineal and historical connections to Mauna Kea, *kūpuna*, cultural practitioners, the Office of Hawaiian Affairs and other Native Hawaiian groups, including the Mauna Kea Management Board’s Hawaiian Culture Committee, toward the development of appropriate procedures and protocols regarding cultural issues. [EXHIBIT O-4]
129. S Kakalia states that KKMC has reached out in official meetings and publicly (EXHIBIT O-5) for focused dialogue inclusive of the Native Hawaiian community and the Office of Hawaiian Affairs. Kakalia notes that both Chancellor Straney and Director Nagata agreed but have yet to move forward with any sort of commitment in doing so. (PHS)
130. Kakalia points out that CR-2 of the Comprehensive Management Plan states that the Office of Maunakea Management will support application for designation of the summit region of Mauna Kea as a Traditional Cultural Property, per the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq. in consultation with the larger community. [EXHIBIT O-6]
131. Kakalia states that this type of direction supports the proactive intent of founding KKMC members to include descendants, practitioners, and community member including the Office of Hawaiian Affairs in discussion around management to protect and preserve the cultural integrity of our mauna prior to setting policy. (PHS)
132. Kakalia notes that OMKM has only recently initiated community engagement based on priorities of development, not community participation, contradictory to what is stated in CR-2 of the Comprehensive Management Plan. (PHS)
133. 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 A003 FEIS S-8-9)

Impacts to Geology

134. Telescope activities on Mauna Kea have resulted in substantial, significant and adverse impacts to geologic resources, primarily due to alteration of the cinder cone morphology. Ex A-308 FEIS Section 3.6 Geology, soils, and Slope Stability p 3-111
135. Mr White stated that it was doubtful that, given the terrain, it could be restored to the point that those looking at it from a distance would not recognize a big scar on the land. Tr. 10/1/16 Vol 1:81:3-7

Water Resources

Human Threats to high level aquifers on Mauna Kea.

136. Threats to the hydrology of Mauna Kea include those associated with human presence and activity on the mountain and climate change. Human activities that have the potential to impact water resources quality, and to a lesser degree quantity, include any actions that add to the current wastewater volume or that change in-situ patterns of water movement. Examples are: leaking facility pipes; accidental spills of contaminants; and improperly filtered wastewater. These contributions may affect the quality of water seeped to springs along Mauna Kea's flanks, as well as the fresh water aquifers beneath the mountain. Ex A-010 CMP NRMP, p. 2.1-38.
137. Risk assessment and spill response planning provides a measure of safety for human health and for the protection of the cultural and natural resources of Mauna Kea. Although the observatories have individual spill response plans, such plans are lacking for other transporters or users, such as those that might result from vehicle accidents. Ex A-010 CMP NRMP 4.2-14

History of Hazardous Materials Release (Examples)

138. Observatory facilities and support operations housing any potentially hazardous materials are required by law to have spill response and associated safe handling protocols in place. Situations in which a potential release might occur include discharge of liquid waste from septic tanks and cesspools, malfunction of sewage pipes, transport of sewage and hazardous materials, activities requiring the handling of potential contaminants, and vehicle use. Ex A-010 CMP NRMP 4.2-13

139. Threats to the natural environment due to escape and possible subsequent migration of contaminants vary depending upon the type of contaminant, release volume, and location. The fate and transport of byproducts and potentially hazardous materials used on Mauna Kea have not been determined, and an assessment of the potential risks following a release has not been developed. Ex A-010 CMP NRMP 4.2-13
140. Spills of oil, sewage and hazardous chemicals have been repeatedly reported by researchers working at the summit, and they note that oil, in particular, will take a long time to biodegrade because of cold and dry conditions (Howarth 2003). Ex A-005 App K Englund
141. There are eight septic tanks with leach fields or disposal pits and three cesspools in the UH Managed Areas. Ex A-010 CMP NRMP, p. 3-33.
142. Approximately 53,990 gallons of wastewater are generated each month by existing telescopes on the summit. (Calculations based on Ex A-010 CMP NRMP, p. 3-9).

Impacts of proposed TMT to Water Resources

143. The highest probability of impact [on surface water, groundwater, and flora or fauna] is from petroleum products (e.g., fuel for vehicles and backup generators, lubricants, and cleaning fluids) and human waste. Ex A-009 CMP, p. 6-14.
144. The TMT Observatory and a portion of the access road would create two acres of impervious surfaces that would cause runoff. Runoff would percolate into permeable natural ground. Nance Tr.12.13.16 V16 p.98

TMT Resource Use and Waste

145. TMT project managers anticipate the generation of approximately 120 cubic feet of trash per week. Ex A-003 FEIS Vol.1, p. 3-129.
146. UH estimates 2,080 gallons per day will be used by the (480 gpd) TMT Observatory and the Headquarters. (1,600 gpd). Ex A-003 FEIS Vol. 1, p. 3-120.
147. To transport 14,600 gallons of water generated by the TMT Observatory down the mountain each month would require a tanker truck to use the Access Way at least 1-2 times each month. Ex A-003 FEIS Vol 1: 3-120

Impacts to Air Quality

148. Locally generated contributors to air pollution above the inversion level include vehicle exhaust, chemical fumes from construction and maintenance activities, and fugitive dust from various sources, including vehicles traveling on unpaved surfaces and road grading and construction or other activities conducted on unpaved areas. Rapid dispersion of pollutants is aided by strong winds. (Ex A-003 FEIS, p. 3-182)
149. Threats to Mauna Kea's air quality and sonic environment primarily revolve around the presence of humans and their levels of activity. Potential future increases in the number of people visiting, working, and recreating at the UH Management Areas may increase the levels of these impacts. Ex A-010 CMP NRMP p. 2.1-46

Visual Impacts

150. The DLNR feels that the visual impacts have been downplayed in the analysis. The analysis does not seem to account for the visual impact of the project on the individuals that move within and between impacted viewplanes, impact on visitors, and more importantly, the impact of viewing a new very large observatory from the perspective within the summit area. Laura Thielen, Chair, DLNR Ex A-004 FEIS Vol II p 21 of 531
151. 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. B.17a Ward WDT p 15

Noise

152. Applicant does not define "noise sensitive areas." Ex A-003 FEIS Section 3.13 Noise p 3-179

153. Applicant does not conduct an analysis the cultural impacts of noise levels and offers no analysis of noise from culturally significant places like Pu`u Poliahu. FEIS Section 3.13 Noise p 3-179
154. The Applicant concedes that significant noise would result from construction activities such as excavation, trenching, grading, pouring of foundations, and erection of structures. FEIS Section 3.15 Construction and Decommissioning p 3-202
155. Construction of the proposed project would violate noise regulations, such that a noise variance would be required under HAR 11-46-8 for construction of the TMT Observatory. FEIS Section 3.15 Construction and Decommissioning p 3-202
156. The Applicant acknowledges the proposed project would generate construction-related noise in the 80-100 dBA range at 50 feet for front-end loaders, backhoes, tractors, scrapers, graders, pavers, trucks, concrete mixers, concrete pumps, cranes, compressors, pneumatic wrenches, jack hammers, and rock drills. Short periods of blasting may also be necessary to dig foundations for the TMT Observatory. FEIS Section 3.15 Construction and Decommissioning p 3-202
157. Noise level in the vicinities of the existing observatories varied from 38 dBA to 77dBA Leq, and 40-78 dBA L10, with noise levels at or below 60 dBA Leq beyond a distance of 50 feet from HVAC exhausts. The loudest noise levels of 68 and 77 dBA Leq and 69 and 78 dBA L10, were measured at locations within 15 feet of HVAC exhaust outputs. Ex A-003 FEIS Section 3.13 Noise p 3-175, 176
158. At the public hearing, OCCL **Staff acknowledged that telescope activities do interfere with the quiet enjoyment of the mountain** and thus added a condition to the TMT CDUA requiring that **4 days be set aside for reduced activities** at the TMT. The OCCL staff said: “Shut the lights down a bit; shut the process down so that **on certain days Native Hawaiians can have even more solitude.**” (Ex. BLNR Minutes, page 8)

Mitigation

418. The Applicant contends that because impacts are already substantial, adverse and significant, adding more to that impact is not going to change those impacts, while simultaneously claiming their proposed mitigation measures will offset and reduce the negative impacts to less than significant.
419. The CDUA outlines three project-level mitigations for the known visual impacts of the proposed TMT observatory; (1) The location of the TMT project is the primary impact avoidance measure, as it is north of and below the summit.; (2) The design of the

observatory also mitigates the visual impact. The dome has been designed to fit very tightly around the telescope, and the telescope has been designed to be much shorter than usual. (3) Also, the coating of the dome will be a reflective aluminum- like coating, which during the day reflects the sky and reduces the visibility of the structure. Ex. A001 (CDUA), p. 2-17, 7-13

420. Figure 1-3: Mauna Kea Summit Region: Existing Facilities, Features, & Future Development Areas in the CDUA shows that the location of TMT north of and below the summit is due to the fact there is no available room on the summit within the designated Astronomy Precinct due to the existing observatories. This is not a mitigation measure for eliminating the visual impact of the TMT observatory. Ex. A0011(CDUA), p. 1-4, 7-13

421. Use of ceded lands for \$1 a year or nominal consideration”, “[s]ubleases between the University and the observatories”, “[p]roposed new development on Mauna Kea, including the Thirty Meter Telescope (TMT) and Pan Starrs”, “[c]ommunity benefit package with increased educational benefits”, and “[g]uaranteed employment opportunities for Native Hawaiians and the people on the Island of Hawai‘i” are “Issues and Concerns Beyond the Scope of the CMP” that “policy makers are urged to consider in their broader decision making related to Mauna Kea.” Ex A-009 CMP, p. 2-3.

422. “Managing the Mauna Kea lands” fails to mention the protection, preservation, or conservation of natural and cultural resources as a purpose of the special fund. (HRS §340A-2170(b)(1))

423. Mauna Kea Lands Fund does not provide for the management of conservation district resources. (HRS §304A-2170(b)(1))

424. The Applicant did not present evidence to show that depositing an unknown quantity of money into the Mauna Kea Land Fund will ensure protection, preservation, and conservation of resources in the Mauna Kea conservation district.

425. The Applicant and DLNR staff discuss both decommissioning of the TMT site, as well as decommissioning of other telescopes as methods for mitigating the significant, substantial, adverse impact of the TMT proposal. Ex. A-311, p. 2-7

426. DLNR staff contends that a lack of staff and funding prevents them from carrying out management actions. This is because BLNR violated its fiduciary duties under Section 5(f) of the Hawaii Admission Act and its statutory duty under HRS § 171-33(5) by disposing of the Section 5(b) lands on Mauna Kea without a proper appraisal and at less than their independently appraised fair-market value. DLNR, by not collecting payment of lease rents at fair-market value, places an unacceptable burden on Hawaii taxpayers, who must subsidize international astronomy. Ward WDT B.17a

427.OCCL Staff Report for the TMT CDUA states that

- a. “Environmental protection costs money. Protecting historic and cultural resources costs money. Education costs money. Maintaining public access and ensuring public safety costs money. Routine infrastructure maintenance costs money. Stopping TMT, and fighting all development will not restore the mountain to a pre-contact condition. The existing roads, electric lines, and facilities will not disappear. Rather, as funds dry up, active and strong management will become difficult, maintenance and renovations will slow, infrastructure will crumble—and the very cultural and environmental resources that Sierra Club et al purport to protect will suffer.” Ex A007 p 62

428.The statement in the CDUA that potential impacts to cultural, archaeological, and historical resources (omitting 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. The impact is irrevocable. Ex B.17a Ward WDT

429.It was disclosed by Mr Hansen during cross-examination that it would take 100 years for flora to regenerate after the proposed excavation & disturbance at TMT site. (Hansen, Tr. Tr. 1/19/2017)

430.Mr Eric Hansen stated that after substrate disturbance in Area E, recolonization of the highly evolved, unique lichen and moss assemblages in the area would be very slow, if possible at all. Tr. 1/19/2017, Vol 27:159:22-25, 160:1-3

431.The University claims there will be fewer telescopes when the lease expires, but the CMP decommissioning plan leaves specifics regarding the extent of site restoration undefined. As a result, the costs and risks associated with decommissioning are difficult to gauge. Ex. A013

III. Conclusions of Law

THE TMT PROJECT WOULD HAVE SIGNIFICANT EFFECTS

438. The TMT project satisfies the regulatory definition of “significant effect” because it proposes to construct a new 18-story, 5-acre industrial structure on undeveloped land. The foreseeable significant harm of the proposal include significant viewplanes interrupted, open space lost, the historic district degraded, traditional and customary practices violated, and increased risk to groundwater resources.

A. TMT meets regulatory definition of “significant effect”

439. HRS 343-2 defines "Significant effect" to mean “the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic welfare, social welfare, or cultural practices of the community and State.”

440. The development of observatories within the Astronomy Precinct substantially altered the appearance of the summit, and the presence of these observatories continues to affect the performance of religious and cultural practices. Ex. A-003, (TMT FEIS Section 3.16 Cumulative Impacts), p.3-225

441. From a cumulative perspective, the impact of past and present actions on **cultural, archaeological, and historic resources** is **substantial, significant, and adverse**; the impacts would continue to be substantial, significant and adverse with the consideration of the Project and other reasonably foreseeable future actions. (Emphasis added) Ex. A-003, TMT FEIS, p. S-8

442. From cumulative perspective, the impact of past and present actions on the **traditional and customary practices of Native Hawaiians** has been **substantial, significant and adverse**; the impacts would continue to be substantial, significant, and adverse with the consideration of the Project

443. Project specific impacts would have a significant effect on the natural, cultural, archaeological, and historic resources. FOF # 291-405

444. Project specific impacts would have a significant effect on the continued practice of traditional and customary Native Hawaiian practices.

445. The Applicant concedes that the project would add a new visual element to the summit area of Mauna Kea, where the visual impact of past actions on Mauna Kea, such as the 11 observatories currently located within the Astronomy Precinct, is already considered substantial, significant and adverse. Ex A-003 FEIS Section 3.5 Visual and Aesthetic Resources p 3-101, FOF #201

446. The Applicant concedes that construction of the TMT would destroy natural wildlife habitat that would need 100 years to recover. FOF#303-310

447. Because the proposal includes increased industrial activity over known aquifers, the TMT project would increase the likely damage to water resources on Mauna Kea. (FoF #372-381, 385-387

448. The existing potential risk to water resources on Mauna Kea is significant. FoF #345

449. Given the high permeability of the cinder on Mauna Kea and the existence of five aquifer under the summit area, the project specific and cumulative impact of telescope activity on water resources is significant, substantial, and adverse, and poses a risk to public health FoF 374-378

450. Based on the findings of fact above, the TMT may have a significant effect on water resources, rare, native species, and air quality.

B. B. Applicant Misstates the Standard for Assessing Significant Effect

451. Overall the existing level of cumulative visual impacts from the past projects at the summit is considered to be substantial, significant and adverse. If the TMT is built, the TMT would add the cumulative visual impact that has already been substantial, significant and adverse.

452. The TMT project would represent an additional increment. It would add to the cumulative visual impact of astronomy development. Tr. 10/25/16, V.3 at 155:10-25, 156:1-6

453. Asked what is the difference between increment and cumulative, Mr Hayes responded "cumulative impacts is the sum of increments". When asked if the TMT would add to the cumulative visual impact, Mr. Hayes stated is substantial, significant and adverse. Tr. 10/25/16, V. 3 at 155:10-25, 156:1-6

454. Mr Hayes was asked, as project manager for the EIS and a collaborator on the CDUA, held the position that this project will add an increment to the cumulative impact but will not tip any of the evaluated impacts from a significant, or from a less than significant, to a significant level. Tr. 10/25/16, V.3 at 181:1-10

455. Hawaii Administrative Rules 11-200-12(b) says “In determining whether an action may have a **significant effect on the environment**, the agency shall consider every phase of a proposed action, the expected consequences, both primary and secondary, and the cumulative as well as the short-term and long-term effects of the action. In most instances, **an action shall be determined to have a significant effect on the environment if it:**

- C. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;
- D. Curtails the range of beneficial uses of the environment;
- E. Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;
- F. Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;**
- G. Substantially affects public health;**
- H. Involves substantial secondary impacts, such as population changes or effects on public facilities;
- I. Involves a substantial degradation of environmental quality;
- J. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;**
- K. Substantially affects a rare, threatened, or endangered species, or its habitat;
- L. Detrimentally affects air or water quality or ambient noise levels;
- M. Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;
- N. Substantially affects scenic vistas and view planes identified in county or state plans or studies; or,
- O. Requires substantial energy consumption.”

456. HAR 11-200-2 defines “Cumulative impact” to mean “the impact on the environment which **results from the incremental impact** of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

457. Based on HAR 11-200, the analysis to determine whether a project would have a significant effect is not based on a threshold, but on the extent accumulated impacts.

458. Based on the findings of fact above, however, the foreseeable impacts of the TMT proposal are both individually and cumulatively significant.

459. The mitigation measures offered do not directly address threats to water resources, cultural practices, obstructed view planes, among the many significant impacts identified in these findings of fact.

SIGNIFICANT EFFECTS OF TMT PROJECT NOT MITIGATED

460. The Applicant and Project entity propose a wide range of mitigation measures to reduce the admitted significant effects of the TMT project. These mitigation measures, however, fail to reduce the significant effects of the specific project, as well as the cumulative impact of telescope activity on Mauna Kea, to a level that is less than significant.

461. The Applicant has the burden of proof in demonstrating that the significant effects of the proposed project are mitigated to a level that is less than significant.

Q. Standards for Mitigation Measures Not Met

462. HAR § 11-200-17 (M) provides that:

R.

“The draft EIS shall consider mitigation measures proposed to avoid, minimize, rectify, or reduce impact, including provision for compensation for losses of cultural, community, historical, archaeological, fish and wildlife resources, including the acquisition of land, waters, and interests therein. **Description of any mitigation measures included in the action plan to reduce significant, unavoidable, adverse impacts to insignificant levels, and the basis for considering these levels acceptable shall be included.** Where a particular mitigation measure has been chosen from among several alternatives, the measures shall be discussed and reasons given for the choice made. Included, where possible and appropriate, should be **specific reference to the timing of each step proposed to be taken in the mitigation process, what performance bonds, if any, may be posted, and what other provisions are proposed to assure that the mitigation measures will in fact be taken.**”

463. In federal law, 40 CFR § 1508.20, “mitigation” is defined as

- i. (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or

environments”

464. To be relevant mitigation must be focused on the restoration of the adverse impact caused by the project. There must be a direct nexus between the harm caused by the proposed project and the mitigation effort promised. See, Morimoto v. Bd. of Land & Natural Res., 107 Haw. 296 (2005)

465. In addition, there must be an assurance that compensation offered will result in minimizing the impacts caused by the project. See, Morimoto v. Bd. of Land & Natural Res., 107 Haw. 296 (2005) (finding U.S. government was capable of creating new, more preferable palila habitat, where the project proposed to destroy less preferable habitat; the requirement was legally enforceable).

466. Applicant UH-Hilo is legally responsible for all obligations and/or liabilities resulting from a finally approved CDUP. TMT is not a legal party or participant to this CDUA process. Because the record provides no evidence of an Operational Agreement or any type of legal document between the Applicant and TMT, there is no mechanism for BLNR to require the TMT Corporation comply with permit terms and conditions.

467. "No application for any proposed facility shall have final approval without the applicant having first filed, with the Board, adequate security equal to the amount of the contract to construct the telescope facilities, support facilities and to cover any other direct or indirect costs attributed to the project. ..." The 1977 Mauna Kea Plan - II (C)

468. The CDUA does not include any indication that "adequate security equal to the amount of the contract to construct the telescope facilities" has been filed.

469. The findings of fact in this case do not demonstrate that the Applicant has satisfy the requirements for mitigation of significant effects.

“Strong Management Framework” Inadequate

470. The Applicant and DLNR staff cite the “Comprehensive Management Plan” as one of the main reasons the significant impacts of the TMT will be mitigated to a level that is less than significant. The conclusion of the Applicant and staff is not supported by the record.

471. Before the Intermediate Court of Appeals, the Applicant described the CMP as a plan that does “not take action” and is no different from the previous activities the University has undertaken on the UH managed lands.

472. As the Findings of Fact above demonstrate, the CMP is incomplete. It identifies hundreds of “needs” without any enforceable timelines or benchmarks to ensure those identified needs are met.

473. The CMP is concerned with only a limited subset of the overall conservation district of Mauna Kea and fails to provide limitations on the number and size of future telescope projects.

474. The CMP does not provide a strong management framework that ensures the significant impacts of the TMT and all existing telescope activity are reduced to a level that is less than significant.

T. Mauna Kea Lands Fund is Not Mitigation

482. Applicant asserts that sublease rental payments will be deposited in the Mauna Kea Land Funds special fund and used for management of Mauna Kea’s natural and cultural resources.

483. The sublease rent amount has not been negotiated, thus it is unknown how much money would be deposited into the fund.

484. The Mauna Kea Lands Fund special fund is established under section 2170 of Chapter 304A, HRS. (HRS §304A-2170)

485. Per Chapter 304A, the University is authorized to: “give thorough instruction and conduct research in, and disseminate knowledge of, agriculture, mechanic arts, mathematical, physical, natural, economic, political, and social sciences, languages, literature, history, philosophy, and such other branches of advanced learning as the board of regents from time to time may prescribe and to give such military instruction as the board of regents may prescribe and that the federal government requires...” (HRS §304A-102)

486. Section 2170 of Chapter 304A, HRS, states in relevant part:

“(b) The proceeds of the special fund shall be used for:

(1) Managing the Mauna Kea lands, including maintenance, administrative expenses, salaries and benefits of employees, contractor services, supplies, security, equipment, janitorial services, insurance, utilities, and other operational expenses”

487. “Managing the Mauna Kea lands” fails to mention the protection, preservation, or conservation of natural and cultural resources as a purpose of the special fund. (HRS §340A-2170(b)(1))

488. The Applicant did not present evidence to show that depositing an unknown quantity of money into the Mauna Kea Land Fund will ensure protection, preservation, and conservation of

resources in the Mauna Kea conservation district.

489. Because the Mauna Kea Lands Fund does not provide for the management of conservation district resources, depositing money into this fund does not satisfy the requirements for direct and enforceable mitigation of the existing and anticipated significant, substantial, and adverse impact of telescope activity on Mauna Kea.

490. Therefore, as the findings of fact demonstrate, the record does not support the Applicant's conclusion that money by itself will reduce the significant impact to a level that is less than significant.

491. "Mitigation plans to monitor conditions and develop data in the future are insufficient. Oregon Natural Desert Assoc. v. Singleton, 47 F. Supp. 2d 1182, 1194 (D. Or. 1998).

V. Community benefits package not relevant to resource protection or restoration

496. The University asserts that the TMT Observatory Corporation will commit a \$1 million annually to various workforce development and public education efforts.

497. The Applicant provides no rule or statute authorizing the BLNR to consider such payments in lieu of strict compliance with the Department's permitting requirements, statutory mandates, and constitutional obligations.

498. Donation of funds for community benefit purposes is outside the scope of the CDUA at issue in this hearing and goes beyond the scope of the BLNR's authority to manage and protect natural and cultural resources. Thus, these donations do not factor into the decision whether this permit application should be granted.

W. Decommissioning

499. Decommissioning of a telescope – either a current telescope or of the TMT should it be built – is not within the scope of the CDUA at issue in this hearing.

500. The possibility that a telescope may be decommissioned in the future – without facts about the extent and method of that decommissioning or the permit vehicle to ensure it happens – is pure

speculation that cannot serve as a basis for the BLNR's decision on the contents of CDUA-HA-3568.

501. The University asserts that it "envisions" less telescopes on Mauna Kea in the future. Indeed, by the terms of General Lease S-4191, there would be no telescopes on Mauna Kea by 2033.

TMT FAILS TO SATISFY THE EIGHT CRITERIA FOR A CONSERVATION DISTRICT USE PERMIT

502. As outlined below, the TMT project cannot satisfy the eight criteria requirements for issuing a CDUP under HAR 13-5-30. The TMT is not consistent with the purpose of the conservation district, the resource subzone, or requirements of the CZMP. Moreover, it is an acknowledged and unmitigated source of substantial adverse impact that is not compatible with, nor improves upon the wide-open space of the northern plateau. The TMT would further subdivide the conservation district for the purpose of intensifying land use. Lastly, it poses a further risk to the public's health and welfare. For these reasons, the BLNR cannot permission to build the TMT in the conservation district of Mauna Kea.

503. The TMT project cannot satisfy the eight criteria for issuing a CDUP under HAR 13-5-30. The TMT poses a further risk to the public's health and welfare. For this reason, BLNR cannot give permission to build the TMT in the conservation district of Mauna Kea.

504. HAR 13-5-30(c) defines the following criteria that BLNR shall apply when evaluating the merits of a proposed land use: (1) The proposed land use is consistent with the purpose of the conservation district;

(2) The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur;

(3) The proposed land use complies with provisions and guidelines contained in chapter 205A, HRS, entitled Coastal Zone Management," where applicable;

(4) The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region;

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

(6) The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable;

(7) Subdivision of land will not be utilized to increase the intensity of land uses in the conservation district; and

(8) The proposed land use will not be materially detrimental to the public health, safety, and welfare.

505. Under HAR 13-5-30(c), UH has the burden to demonstrate that the proposed land use is consistent with the above criteria.

506. UH has failed to demonstrate that the proposed land use will not be materially detrimental to the public health, safety, and welfare.
507. In a plain reading the words, “materially detrimental” may be interpreted to mean damaging or harmful in a sufficiently significant way.
508. The proposed land use is harmful or damaging in sufficiently significant ways as it relates to the health, safety and welfare of the public as the project has, is, and will cause negative health impacts such as cause chronic stress for Native Hawaiians.
509. Chronic stress has occurred for the public due to many years of mismanagement of Mauna Kea, despite the existence of laws and policies to prohibit mismanagement.
510. Chronic stress has occurred in the public due to many years of development of Mauna Kea, despite the existence of laws and policies to prohibit development.
511. Acute stress has occurred in the public due to many years of development of Mauna Kea, despite the existence of laws and policies to prohibit development.
512. Distress has been observed by experts in Native Hawaiians that are impacted by the TMT project.
513. Hawaiian practitioners are members of the public with experience cultural trauma that are aggravated by the continued development of Mauna Kea by the TMT project.
514. The findings of fact above – and the record as a whole – is replete with evidence that the desecration of Mauna Kea is a source of immense pain for many people, especially Native Hawaiians.
515. These facts have been known to the University at least since 2005 and the publication of Kepa Maly’s Oral History of Mauna Kea.
516. The Applicant offered no evidence to demonstrate that the pain suffered by some Native Hawaiians from the desecration of Mauna Kea does not undermine the health and well-being of Native Hawaiians.
517. The Petitioners presented evidence, not refuted by the Applicant, that the pain some Native Hawaiians suffer due to the desecration of Mauna Kea could be connected to the poor public health standards of Native Hawaiians.
518. Moreover, the Applicant failed to refute concerns for the contamination of groundwater sources.
519. The findings of fact above demonstrate that Mauna Kea is a place of water. It is undisputed that the summit of Mauna Kea is above 5 aquifers for the Island of Hawaii.

520. It is also undisputed that telescope activity on Mauna Kea has resulted in the release of hazardous chemicals into the environment.

521. The overall cumulative impact of telescope activity on Mauna Kea is acknowledged as being “significant, substantial, and adverse.”

522. The cumulative impacts to the traditional and cultural properties and associated traditional and customary Native Hawaiian practices resulting from the storage, use, and release of the large quantities hazardous materials has not been assessed.

523. Based on the abovementioned facts regarding the traditional and customary practices, the use of the sacred waters, snow and ice from Lake Waiau and summit region, and the University’s failure to assess the significant impacts to those resources and practices from hazardous waste spills, human waste leech fields, and construction related contamination, the Applicant cannot its burden to show that the land use “will not be materially detrimental to public health, safety and welfare.

524. Because the Applicant cannot prove that the proposed TMT project would not be materially detrimental to the public health, safety, and welfare, this criterion is not satisfied and CDUA-HA-3568 cannot be granted.

TMT Violates Constitutional Protections for Traditional and Customary Practices

525. The record is replete with confirmation of the long-standing traditional and customary practices on Mauna Kea. The BLNR has an obligation to protect reasonable traditional and customary practices. The TMT proposal is not consistent with this obligation and thus cannot be granted.

BLNR Illegally Delegated its Authority to the University

526. Article 12, Section 7. “The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.”

527. **In Public Access Shoreline Hawai`i v. Hawaii County Planning Commission, 79 Hawai`i 425, 903 P.2nd 1246 (1995), (hereafter “PASH”)**, the Hawai`i Supreme Court stated:

- i. The State’s power to regulate the exercise of customarily and traditionally exercised Hawaiian Rights, necessarily allows the State to permit development that interferes with such rights in certain circumstances... Nevertheless, the State

is **obligated** to protect the reasonable exercise of customary and traditionally exercised rights of Hawaiians to the extent feasible.

628. **In Ka pa`akai O Ka `Aina v. Land Use Commission (hereafter “Ka Pa`akai v. LUC”), 94 Hawai`i 31, 47, 7 P.3d 1068, 1068 (2000)** the Hawai`i Supreme Courts states:

ii. To preserve and protect traditional and customary native Hawaiian rights, the Board examines the following factors:

629. The identity and scope of cultural, historical, and natural resources in the application area, including the extent to which traditional and customary native rights are to have been exercised in the application area;

630. The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and

631. The feasible action, if any to be taken to reasonably protect native Hawaiian rights if they are found to exist.

Ka Pa`akai v. LUC further states:

iii. Equally important, the Land Use Commission (“LUC”) made no specific findings or conclusions regarding the effects on or the impairment of any Article XII, section 7 [Hawai`i State Constitution] uses, or the feasibility of the protection for those rules. Instead, as mentioned, the LUC delegated unqualified authority to Ka`upulehu development (“KD”) ... This wholesale delegation of responsibility for the preservation and protection of native Hawaiian rights to KD, a private entity, however, was improper and misses the point...

632. Chapters 205A-2 and 15, and 183C, HRS, obligate the BLNR to “to conserve, protect, and preserve the important natural resources of the State” that are designated as conservation districts. HRS 183C-1.

633. The Applicant the University of Hawai`i at Hilo (UH), is seeking a conservation district use permit (CDUP) relative to CDUA HA-3568, on behalf of TMT Observatory Corporation (“TMT”). Ex. A-001, p.13, K-1 (CDUA)

634. Upon approval of the UH Comprehensive Management Plan (UH CMP) the BLNR made the University Board of Regents (UH BOR) Responsible for implementing the CMP, in accepting that responsibility the UH BOR delegated implementation of the CMP through normal UH

governance channels to UHH, OMKM, MKMB, and also assigned two members of the UH BOR to sit as ex-officio, non-voting members on the MKMB. Ex. A-003, p.3-128

635. There is no dispute the University of Hawai'i, is the only Applicant named on the Conservation District Use Application for the proposed TMT Telescopes Project.

636. There is no dispute the TMT Corporation is in fact not named as the "applicant" on the CDUA-HA-3568.

637. The record of the BLNR's decision to approve the UH CMP and CDUA-HA-3568 did not include specific findings of fact as to three elements of the *Ka Pa`akai* due process analysis. (Ex. B-41, B-42). Indeed, the Applicant's admitted lack of process for addressing claims of traditional and customary Native Hawaiian practitioners harmed by decisions made ostensibly in compliance with the UH CMP indicates that the appropriate due process analysis required by *Ka Pa`akai* has not been met in this case. Thus, approval of CDUA-HA-3568 would further the inappropriate "wholesale delegation" BLNR's legal obligations, in violation of the constitutional due process rights of Native Hawaiian practitioners.

The cultural practitioner petitioners engage in constitutionally protected traditional and customary practices

638. As the findings of fact show, the record is replete with confirmation that the Native Hawaiian petitioners in this case engage in constitutionally protected traditional and customary practices.

639. The findings of fact above demonstrated that:

640. the entire conservation district of Mauna Kea is a known sacred landscape with viewplanes associated with navigation and many ancient trails (FOF #103)

641. the historic properties in the Mauna Kea Science Reserve are "are of importance to Native Hawaiians because they possess traditional cultural significance derived from associated cultural practice and beliefs," (FOF #103)

642. the traditional and customary and religious practices include the collection of water, depositing piko, burial ceremonies, and religious observances.

643. these ancient practices continue today and have evolved into contemporary practices ; the construction of ahu, releasing of cremated remains, and other contemporary cultural practices evolved from ancient practices and **considered reasonable practices**. (FOF #105, #106)

644. these practices are of the class of practices protected by Article XII, sec. 7 of the Constitution and the related caselaw.

645. These findings of fact demonstrate that the current practices of some of the Petitioners were previously identified as NHTCP (thus meeting both the Constitutional requirements and court requirement (PASH and State v. Hanapi)) and have been known to the University for more than a decade.

BLNR must reasonably protect traditional and customary practices

646. Article 11, Section 1. "For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people.

647. Article 12, Section 4. "The lands granted to the State of Hawaii by Section 5(b) of the Admission Act and pursuant to Article XVI, Section 7, of the State Constitution, excluding therefrom lands defined as "available lands" by Section 203 of the Hawaiian Homes Commission Act, 1920, as amended, shall be held by the State as a public trust for native Hawaiians and the general public."

648. In *In Re Water Use Permit Applications*, 94 Hawai'i 97, 9 P.3d 409 (2000) ("the *Waiahole Ditch Case*"), the Hawai'i Supreme Court recognized that public trust doctrine was "a fundamental principle of constitutional law in Hawai'i." Haw. Const., Art. XI, section 1, P.133, 9 P.3d at 444.

649. The duties imposed by the public trust doctrine in this case are not supplanted or made superfluous by HRS Chapter 183C or the regulations promulgated there under. "Mere compliance by [agencies] with their legislative authority is not sufficient to determine if their actions comport with the requirements of the public trust doctrine. The public trust doctrine at all times forms the outer boundaries of permissible government action with respect to public trust resources." *Id.* at 132, 9 P.3d at 445 (citing to *Kootenai Envtl. Alliance v. Panhandle Yacht Club, Inc.*, 105 Idaho 622, 671 P.2d 1085, 1095 (Idaho 1983)). Thus, BLNR, like the Commission on Water Resource Management in the *Waiahole Ditch Case*, has an "affirmative duty" to take the public trust into account in permitting the use of public lands located in the conservation district and "**to protect the public trust uses whenever feasible.**"

650. There is no dispute that Mauna Kea is a “public natural resource” of the class protected under Article XI, section 1 of Hawaii’s Constitution. See, *Waiahole Ditch Case* at 133, 9 P.3d at 444. Mauna Kea is part of the “ceded lands trust,” lands ceded by the federal government back to the State of Hawai`i by Section 5(b) of the Admission Act and pursuant to Article XVI, Section 7, of the Hawai`i Constitution. These lands are held by the State as “a public trust for native Hawaiians and the general public.” Haw. Const., Art. XII, sec. 4. Mauna Kea has also been designated a National Natural Landmark because of its unique geological and biological features. It is eligible for listing in the National Register of Historic Places as a traditional cultural property. There is no doubt that it is a public natural resource of invaluable worth to the public and Native Hawaiians.

651. Therefore, BLNR must independently uphold the Constitutional mandate that it “shall conserve and protect Hawaii’s natural beauty and all natural resources...in a manner consistent with their conservation.” Haw. Const., Art. XI, sec. 1.

DECISION AND ORDER

Based on the above Findings of Fact and Conclusions of Law the University of Hawai`i’s Conservation District Use Permit Application (HA-3568) is deficient and hereby DENIED/REVOKED.