

CARLSMITH BALL LLP

IAN L. SANDISON 5597
JOHN P. MANAUT 3989
LINDSAY N. McANEELEY 8810
ASB Tower, Suite 2100
1001 Bishop Street
Honolulu, HI 96813
Tel No. 808.523.2500
Fax No. 808.523.0842
isandison@carlsmith.com
JPM@carlsmith.com
lmcaneley@carlsmith.com

RECEIVED
OFFICE OF CONSERVATION
AND COASTAL LANDS

2017 JUN 13 P 1:19

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

Attorneys for Applicant
UNIVERSITY OF HAWAI'I AT HILO

WATANABE ING LLP
A Limited Liability Law Partnership

J. DOUGLAS ING 1538-0
BRIAN A. KANG 6495-0
ROSS T. SHINYAMA 8830-0
First Hawaiian Center
999 Bishop Street, Suite 1250
Honolulu, HI 96813
Telephone No.: (808) 544-8300
Facsimile No.: (808) 544-8399
E-mails: rshinyama@wik.com

Attorneys for
TMT INTERNATIONAL OBSERVATORY, LLC

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF

Contested Case Hearing Re Conservation
District Use Application (CDUA) HA-3568 for
the Thirty Meter Telescope at the Mauna Kea
Science Reserve, Ka'ohē Mauka, Hāmakua,
Hawai'i, TMK (3) 4-4-015:009

Case No. BLNR-CC-16-002

THE UNIVERSITY OF HAWAI'I AT
HILO AND TMT INTERNATIONAL
OBSERVATORY, LLC'S JOINT
RESPONSE TO TIFFNIE KAKALIA'S
PROPOSED FINDINGS OF FACT,
CONCLUSIONS OF LAW, DECISION
AND ORDER, FILED MAY 30, 2017
[DOC. 668]; APPENDICES A-B;

**THE UNIVERSITY OF HAWAI'I AT HILO AND TMT INTERNATIONAL
OBSERVATORY, LLC'S JOINT RESPONSE TO TIFFNIE KAKALIA'S PROPOSED
FINDINGS OF FACT, CONCLUSIONS OF LAW, DECISION AND ORDER,
FILED MAY 30, 2017 [DOC. 668]**

Applicant UNIVERSITY OF HAWAI'I AT HILO ("UH Hilo") and TMT
INTERNATIONAL OBSERVATORY, LLC ("TIO"), through their respective counsel, hereby
jointly submit this Response to Tiffnie Kakalia's ("**Kakalia**") *Proposed Findings of Fact,
Conclusions of Law, Decision and Order*, filed May 30, 2017 [Doc. 668] ("**Response**").

**I. STANDARD OF REVIEW FOR REVERSAL OR MODIFICATION OF
ADMINISTRATIVE FINDINGS, CONCLUSIONS, DECISIONS, OR ORDERS**

To prevent judicial reversal or modification of administrative findings of fact under
§ 91-14(g), Hawaii Revised Statutes ("**HRS**"), the Board of Land and Natural Resources
("**BLNR**") should, upon review of the record, reverse or modify findings that are "[c]learly
erroneous in view of the reliable, probative, and substantial evidence on the whole record." *In re
Gray Line Hawaii Ltd.*, 93 Hawai'i 45, 53, 995 P.2d 776, 784 (2000). A finding of fact is
clearly erroneous when: (1) the record lacks substantial evidence to support the finding or
determination; or (2) despite substantial evidence to support the finding or determination, the
BLNR is left with the definite and firm conviction that a mistake has been made. *Kienker v.
Bauer*, 110 Hawai'i 97, 105, 129 P.3d 1125, 1133 (2006).

Similarly, conclusions of law should be reversed or modified where the BLNR finds they
are in violation of constitutional or statutory provisions, in excess of the statutory authority or
jurisdiction of the Commission, or affected by other error of law. *Id.*

II. DISCUSSION

A. Responses to Tiffnie Kakalia's ("Kakalia") Proposed FOF and COL

The UH Hilo and TIO object to each of the FOF and COL in Kakalia's *Proposed Findings of Fact, Conclusions of Law, Decision and Order* ("Kakalia's Proposed FOF/COL") to the extent that they are irrelevant, inapplicable, immaterial, mischaracterize the evidence, misstate or misrepresent the record, rely on evidence that is not credible, biased, or incomplete, and/or not supported by the evidence. UH Hilo and TIO also object to Kakalia's Proposed FOF/COL to the extent they assert alleged "findings" that are beyond the scope of issues set forth in Minute Order No. 19.

Appendix A contains general objections to Kakalia's Proposed FOF/COL, which UH Hilo and TIO hereby incorporate by reference to its response to each of Kakalia's FOF and COL, to the extent applicable.

In addition to the general objections in Appendix A, UH Hilo and TIO have prepared a table of specific responses and objections to Kakalia's proposed FOF and COL, which is attached hereto as Appendix B. Citations to the evidence in the record provided herein are not intended to be exhaustive or comprehensive, but demonstrate evidentiary support for UH Hilo and TIO's responses and objections.

UH Hilo and TIO further object to Kakalia's Proposed FOF/COL to the extent they seek to challenge the FEIS for the TMT Project. This proceeding is not an EIS challenge under HRS Chapter 343. Kakalia's ability to make such a challenge expired long ago and she cannot reopen the FEIS approval process by improper arguments of sufficiency under the statutes and rules governing the EIS process. This proceeding is entirely governed by the applicable constitutional law and the Conservation District rules that are genuinely at issue here

The FOF/COL and page numbers referenced herein follow those as provided in Kakalia's

Proposed FOF/COL. References to the UH Hilo and TIO's Joint [Proposed] Findings of Fact, Conclusions of Law, and Decision and Order, filed on May 30, 2017 [Doc. 671] ("UH-TIO FOF/COL") are denoted by the prefixes "UH-TIO FOF" and "UH-TIO COL" for the numbered FOF and COL, respectively, in the UH-TIO FOF/COL.

Acronyms and defined terms used herein are defined in the Index of Select Defined Terms, which was filed as part of the jointly-submitted UH-TIO FOF/COL.

Any specific proposed finding or conclusion not specifically referred to or addressed below is deemed denied and disputed.

B. Responses to Kakalia's Proposed Decision and Order

Kakalia's proposed Decision and Order is not supported by the record. As set forth in the UH-TIO FOF/COL, substantial evidence has been adduced to show that the CDUA satisfies the eight criteria as set forth in Hawai'i Administrative Rule ("HAR") 13-5-30(c). The record also shows that the TMT Project is consistent with the UH Hilo's and the BLNR's obligations under the public trust doctrine, *Ka Pa'akai*, and Article XI, section I and Article XII, section 7 of the Hawai'i Constitution.

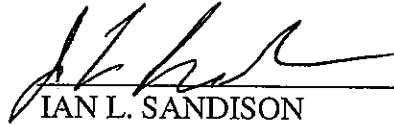
Ultimately, Kakalia is categorically opposed to the construction of TMT regardless of whether or not the TMT Project satisfies the eight criteria. No location on the mountain, and no combination of mitigation measures, will make the TMT Project acceptable to Kakalia. That position is not supported by the law.

III. CONCLUSION

For the reasons set forth herein and in the UH Hilo Pre-Hearing Statement, TIO's Pre-Hearing Statement, the UH-TIO FOF/COL, the testimony of the UH Hilo's and TIO's witnesses, the examination of the Petitioners' and Opposing Intervenor's witnesses, and in UH Hilo's and TIO's other filings, UH Hilo and TIO respectfully request that the Hearing Officer adopt the UH-

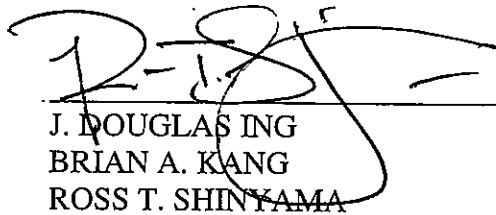
TIO FOF/COL, and reject Kakalia's Proposed FOF/COL.

DATED: Honolulu, Hawai'i, June 13, 2017.



IAN L. SANDISON
JOHN P. MANAUT
LINDSAY N. MCANEELEY

Attorneys for Applicant
UNIVERSITY OF HAWAI'I AT HILO



J. DOUGLAS ING
BRIAN A. KANG
ROSS T. SHINYAMA

Attorneys for
TMT INTERNATIONAL OBSERVATORY,
LLC

APPENDIX A

Appendix A

General Responses to Petitioners'/Opposing Intervenors' Proposed Findings of Fact ("FOF") and Conclusions of Law ("COL")	
Citation does not support the proposition.	The citation offered by Petitioners/Opposing Intervenors does not support the proposed FOF or COL.
Estoppel/Improper Reconsideration	The proposed FOF or COL or a portion thereof is improper to the extent it is barred by estoppel or waiver, or improperly seeks reconsideration of the Hearing Officer's or the BLNR's prior ruling.
Inaccurate/False	The proposed FOF or COL or a portion thereof is inaccurate or false.
Incomplete.	The proposed FOF or COL is materially incomplete.
Irrelevant/Inapplicable.	The information in the proposed FOF or COL is irrelevant or inapplicable in this contested case proceeding. <u>See</u> Minute Order No. 19 [Doc. No. 281].
Lack of Jurisdiction	The proposed FOF or COL exceeds the scope of the Hearing Officer's jurisdiction and/or delegated authority
Mischaracterization.	The proposed FOF or COL mischaracterizes legal authority or the contents of the record.
Misleading. Partial quotation.	The proposed FOF or COL contains a partial quote from legal authority or a document in the record, and the incompleteness of the quotation is likely to mislead the reader.
Misleading. Presented out of context.	The proposed FOF or COL presents law or information in the record out of context and/or in a way that is likely to mislead the reader.
Misrepresentation	The proposed FOF or COL affirmatively misrepresents legal authority or the contents of the record.
Not credible.	The proposed FOF or COL is not credible based on the totality of the evidence contained in the record and/or the demonstrated biases of the witness whose testimony is cited in support of the proposed FOF or COL.

Not in dispute.	Either (1) the proposed FOF or COL is not at issue in this proceeding, or (2) standing alone, the proposed FOF or COL is not objectionable. The designation of any individual proposed FOF or COL as “not in dispute” does not and should not be construed as an admission of said FOF or COL or a concession that said FOF or COL should be incorporated into the final FOFs and COLs. It also does not and should not be construed as assent to any inferences suggested or that may be suggested by Petitioners/Opposing Intervenors from, e.g., their misleading grouping or ordering of otherwise unrelated facts.
Not in evidence.	The proposed FOF or COL asserts “facts” and/or cites documents that are not in evidence.
Unsupported/Unsubstantiated	The proposed FOF or COL is not supported by information in the record or was not substantiated by the Petitioners/Opposing Intervenors through the contested case process.

APPENDIX B

Appendix B

Summary Table of Responses to Kakalia's Proposed FOF/COL

FOF/ COL #	Page	FOF/COL	Response
1-2	4	Public hearings on CDUA HA-3568 for the proposed Thirty Meter Telescope (TMT) in the Mauna Kea Conservation District, Mauna Kea Science Reserve, Ka'ōhe Mauka, Hamakua, Hawai'i, TMK (3) 4-4-015:009 were held 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)	Not in dispute. Irrelevant/Inapplicable. Estoppel/Improper Reconsideration. While UH-TIO do not object to general references to the first contested case hearing solely for procedural background purposes (<i>see</i> UH-TIO FOF 31-33), the BLNR's April 12, 2013 decision and order was vacated, and this matter was remanded for a new contested case hearing on the CDUA. UH-TIO FOF 34-35. The Hearing Officer denied admission of proposed exhibits arising from the prior contested case hearing because that hearing "has been disallowed by the Supreme Court." Accordingly, the record in the prior contested case hearing is not part of the record in the current proceeding. UH-TIO do not necessarily agree with the characterization of the record in the prior proceeding, and object to the citation to, and use of, the record in the prior contested case for substantive purposes in this proceeding.

3	4	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, Hāmākua, Hawai'i. (Ex. A059)	Not in dispute. Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2.
4	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 Pisciotto). (Ex. A059)	Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2.
5	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)	Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2.
6	5	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)	Irrelevant/Inapplicable. Designation of Mr. Aoki as "Hearing Officer" or "HO" creates potential confusion with Hearing Officer Amano.
7	5	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).	Not in evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2. Irrelevant/Inapplicable. Not in evidence.

B-2.

8	5	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; Pisciotto, Tr. May 13, 2011, 43:24-46:25)	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2. Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 1-2. Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO response to Kakalia's proposed FOF 1-2. Misleading. Presented out of context. Inaccurate and false. Their expertise was limited to their own individual cultural practice, and not that of others. UH-TIO object to the extent that this FOF is an improper attempt to qualify witnesses as "experts." This contested case proceeding was conducted with the assumption that no witnesses would be considered "experts." Instead, it was agreed that the background, education, experience, etc. of a particular witness would go to the weight of his/her testimony. <i>See</i> Tr. 10/20/16 at 52:24-53:21.
9	5	On August 25, 2011, Petitioners Neves, Ching, Pisciotto, 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	5	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)	<i>See supra</i> response to Kakalia's proposed FOF # 9.
11	6	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.	Irrelevant/Inapplicable. Not in evidence. <i>See supra</i> UH-TIO response to Kakalia's proposed FOF 1-2. As to the third sentence: Irrelevant/Inapplicable. Inaccurate/False. Unsupported/Unsubstantiated.
12	6	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. <i>Mauna Kea Anaina Hou v. Bd. of Land & Nat. Res.</i> , 136 Hawai'i 376, 363 P.3d 224 (2015).	Not in dispute.
13	6	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.	Irrelevant/Inapplicable. Inaccurate/False. Unsupported/Unsubstantiated.
14	6	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.	Estoppel/Improper Reconsideration. <i>See</i> Minute Order No. 4 [Doc. 14]. Mischaracterization. Given UH Hilo's anticipation of numerous objections by Petitioners to the Hearing Officer's appointment, which would result in delays in the contested case hearing process (which came to fruition), UH Hilo, while noting that the Hearing Officer was

B-4.

15	6	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.	eminently qualified and that the selection process was proper, reluctantly requested the BLNR to consider the appointment of another hearing officer to expedite the process. The University of Hawai'i at Hilo's Statement of Position on 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, Filed May 13, 2016 [Doc. 43]. Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Immaterial or moot. Not in evidence. Inaccurate / False. The Hearing Officer provided notice of the prehearing conference and conducted the conference pursuant to her authority under HAR Title 13, Chapter 1. Minute Order No. 5 [Doc. 16]. UH-TIO COL 37. Estoppel/Improper Reconsideration. At the May 16, 2016 prehearing conference, the Hearing Officer specifically asked the Petitioners' representative, Mr. Wurdeman, whether he had any objections to the prehearing conference. He answered that he had no objections. He also indicated on
----	---	---	---

B-5.

16	7	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".	the record that the Petitioners were unable to attend simply because the hearing was held on Oahu, rather than the island of Hawai'i. Tr. 5/16/16 at 5:7-12. Therefore, the Petitioners, including Kakalia, have waived any argument as to a lack of sufficient notice. Not in dispute. UH-TIO note that Minute Order No. 5 is dated May 9, 2016 (not May 6, 2016).
17	7	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.	Irrelevant/Inapplicable. Citation does not support the proposition. The Hearing Officer provided notice of the prehearing conference and conducted the conference pursuant to her authority under HAR Title 13, Chapter 1. Minute Order No. 5 [Doc. 16]. UH-TIO COL 37. By its terms, HRS § 91-9.5 pertains to notification of a "hearing" not a prehearing conference. The Hearing Officer provided the required notice of the contested case hearing in compliance with HRS § 91-9.5. Notice of Contested Case Hearing [Doc. 276] and Amended Notice of Contested Case Hearing [Doc. 325]. Estoppel/Improper Reconsideration

18			At the May 16, 2016 prehearing conference, the Hearing Officer specifically asked the Petitioners' representative, Mr. Wurdeman, whether he had any objections to the prehearing conference. He answered that he had no objections. He also indicated on the record that the petitioners were unable to attend simply because the hearing was held on Oahu, rather than the island of Hawai'i. Tr. 5/16/16 at 5:7-12. Therefore, the Petitioners have waived any argument as to a lack of sufficient notice.
	7	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	Not in dispute.
19	7	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".	Not in dispute.
20	7	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.	Unsupported/unsubstantiated. Misleading. Presented out of context. Estoppel/Improper Reconsideration.

B-7.

			Minute Order No. 7 provided notice that the Hearing Officer would discuss scheduling issues during the prehearing conference on June 17, 2016. Minute Order No. 7 [Doc. 44]. None of the Petitioners and anticipated Opposing Intervenor who were present had difficulty in estimating the number of witnesses that they anticipated calling, including Wurdeman, who represented Petitioners at that point. Tr. 06/17/16 (Scheduling Hearing) at 7:8 – 12:4. Nor did Mr. Wurdeman object when asked to estimate the number of potential witnesses to be called by the Petitioners.
21	7	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.	Inaccurate/False. The Temple of Lono was represented by Mr. Lanny Sinkin and thus did not participate <i>pro se</i> . Not in dispute.
22	7	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”.	UH-TIO note that the citation to “TR COL ii Titled: ‘Request for Admissions and Motions’” should instead be to “TR COL ii Titled: ‘Scheduling Hearing’”.
23	8	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”.	Not in dispute.
24	8	August 29, 2016, the fifth 5th pre-hearing conference was held at Hawaii	Not in dispute.

B-8.

		Community College Cafeteria, 1175 Manono, Hilo, Hawaii, 96720. Further Motions were heard. TR VOL vi. Titled "Motions Hearings".	
25	8	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".	Not in dispute.
26	8	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".	Not in dispute.
27	8	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 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	Inaccurate/False. Maelani Lee withdrew as a party. See UH-TIO FOF 17. UH-TIO note that, although Stephanie Malia Tabbada and Glen Kila were admitted as parties, neither physically appeared during the evidentiary portion of the contested case hearing which commenced on October 20, 2016 and ended on March 2, 2017. See UH-TIO FOF 23, 25. Proposed FOF misrepresents name of intervenor TMT International Observatory, LLC. Incomplete. Although several other individuals agreed to be witnesses for the Hearing Officer, only Ms. Holi testified as a Hearing Officer's witness at the hearing, and all other Hearing Officer witnesses were subsequently dismissed. UH-TIO FOF 47, COL 25-35.

		w. Intervenor Cindy Freitas x. Intervenor William Freitas y. Intervenor Perpetuating Unique Educational Opportunity (P.U.E.O.) z. Wilma Holi a. Several others, who had intended to be parties, agreed to be witnesses for the Hearing Officer as well	
28	9	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)	Inaccurate/False. Citation does not support proposition. "TMT Observatory Corporation" will not be involved in the construction/operation of the TMT Project. Instead, TIO will occupy this role. UH Hilo is not pursuing a CDUP "on behalf" of another party, although TIO will ultimately oversee construction and operation of the Thirty-Meter Telescope Project ("TMT Project"). Misleading. Presented out of context. UH-TIO object to this proposed FOF to the extent it raises issues relating to arguments regarding the validity of the CDUA because it references the TMT Corporation rather than TIO. The reference to TMT Corporation in the CDUA does not affect the validity of the CDUA. <i>See</i> UH-TIO COL 420-426. Irrelevant/Inapplicable. Misleading. Presented out of context. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 28.
29	9	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	9	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)	Irrelevant/Inapplicable. Misleading. Presented out of context. UH-TIO object to this proposed FOF to the extent it raises issues relating to the Petitioners' and Opposing Intervenor's arguments relating to the signatory for the CDUA. <i>See</i> Petitioners' Motion to Strike Conservation District Use Application, HA-3568, dated September 2, 2010 and/or Motion for Summary Judgment, filed July 18, 2016 [Doc. 94]. The signatory for the CDUA was proper. <i>See</i> UH-TIO COL 416-419.
31	9	Conservation land management is not listed as a purpose of the University system. HRS 304A-102.	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 30.
32	9	On July 21, 2016, the HO issued Minute Order 13 granting Ms. Kakalia standing in the 2016 contested case hearing. (Min. Ord. 13; Amano)	Not in dispute.
33	10	Petitioner Tiffnie Kakalia is a Native Hawaiian descendent of native inhabitants in Hawaii prior to 1778. [Doc. 54].	Misleading. Presented out of context. <i>See</i> UH-TIO FOF 6, 748,749
34	10	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]	Irrelevant/Inapplicable. <i>See</i> UH-TIO FOF 24.
35	10	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]	UH-TIO do not object to the fact that Ms. Kakalia made this statement. UH-TIO object to the adoption of such statement to prove the truth of the matter asserted, because Ms. Kakalia's statement is unsupported/unsubstantiated, is not credible, or otherwise impacts speculative

B-11.

				and unproven psychological impacts to unspecified persons.
36	10	Kakalia states that in understanding the three piko and Native Hawaiian health, one will understand the significance of this sacred site and its effect on wellness. [Doc. 54]		<i>See supra</i> response to Kakalia's proposed FOF 35.
37	10	Kakalia states that continued development of facilities in sacred space will increase the already disruptive flow of energies imposed on her practice of Aloha 'Aina, a cultural tradition significant to Native Hawaiian health and healing. [Doc. 54]		<i>See supra</i> response to Kakalia's proposed FOF 35.
38	10	Kakalia states that the quality of relationship, particularly to place sustains native Hawaiian wellbeing. [Doc. 54]		<i>See supra</i> response to Kakalia's proposed FOF 35.
39	10	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]		<i>See supra</i> response to Kakalia's proposed FOF 35.
40	10	Kakalia expresses that in understanding the three piko and Native Hawaiian health, one will understand the significance of this sacred site and its effect on wellness. [Doc. 54]		<i>See supra</i> response to Kakalia's proposed FOF 35.
41	10	Petitioners Mauna Kea Anaina Hou and Kealoha Pisciotto, 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.		Not in dispute.
42	10	Thereafter, Mauna Kea Anaina Hou and Kealoha Pisciotto, 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.		Inaccurate/False. <i>See</i> UH-TIO FOF 2-8 regarding the representation of the Flores-Case 'Ohana, MKAH, Pisciotto and Neves.
43	11	Tiffnie Kakalia represented herself pro se.		Not in dispute.
44	11	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		UH-TIO note that Mauna Kea Hui Petitioners' objection filed April 15, 2016 is Doc. 5 (not Doc. 6).

45	11	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.	Not in dispute.
46	11	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.	Not in dispute. UH-TIO note that Mauna Kea Hui Petitioners' motion for reconsideration filed May 13, 2016 is Doc. 31 (not Doc. 17).
47	11	By motion dated May 31, 2016, Mauna Kea Hui Petitioners filed [Doc. 52] Petitioners' submissions and positions on record; Exhibit "A."	Not in dispute.
48	11	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.	Not in dispute.
49	11	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.	Not in dispute.
50	11	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.	Not in dispute, except the motion was filed by TIO.
51	11	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.	Not in dispute.
52	12	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.	Not in dispute.
53	12	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.	Not in dispute. UH-TIO note that Petitioners Mauna Kea Anaina Hou et al.'s supplement to request for continuance on submissions on next

			hearing date was filed on July 12, 2016 (not July 14, 2016) and is Doc. 83 (not Doc. 87).
54	12	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 judgment.	Not in dispute.
55	12	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.	Not in dispute.
56	12	By motion dated July 18, 2016 Mauna Kea Hui Petitioners filed [Doc.103] Petitioners Mauna Kea Anaina Hou et al.'s witness list.	Not in dispute.
57	12	By motion dated July 18, 2016, Mauna Kea Hui Petitioners filed [Doc. 104] Petitioners Mauna Kea Anaina Hou et al.'s supplemental witness list.	Not in dispute.
58	12	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.	Not in dispute.
59	12	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	Not in dispute.
60	12	By motion dated August 1, 2016, Mauna Kea Hui Petitioners filed [Doc. 165] (email) Note for the record.	Not in dispute.
61	12	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.	Misrepresentation. Doc. 165 is MKAH's witness list resubmitted. UH-TIO note, however, that the correct citation to this document is Doc. 168.
62	13	By motion dated August 17, 2016, Mauna Kea Hui Petitioners filed [Doc. 218] Petitioners Mauna Kea Anaina Hou, et al.'s site visit recommendations	Not in dispute.
63	13	By motion dated August 22, 2016, Mauna Kea Hui Petitioners filed [Doc.	Not in dispute.

		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	13	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.	Not in dispute.
65	13	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.	Not in dispute.
66	13	By motion dated September 23, 2016, Mauna Kea Hui Petitioners filed [Doc. 282] Correspondence regarding notice of contested case hearing.	Not in dispute.
67	13	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.	Not in dispute.
68	13	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.	Not in dispute.
69	13	By motion dated October 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 341] Notice of withdrawal of counsel.	Misrepresentation. Notice of Withdrawal was filed by Richard Wurdeman, not MKAH Petitioners.
70	13	By motion dated October 10, 2016, Mauna Kea Hui Petitioners filed [Doc. 342] Petitioners Mauna Kea Anaina Hou and Kealoha Pisciotto, 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.	Not in dispute.
71	13	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.	Not in dispute.
72	14	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.	Not in dispute.

73	14	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].	Not in dispute.
74	14	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.	Not in dispute.
75	14	By motion dated March 9, 2017, Petitioner Tiffnie Kakalia filed [Doc. 503] Petitioners motion to admit exhibits and written direct testimony into evidence.	Not in dispute.
76	14	Petitioners motion of joinder of 1) Mauna Kea Anaina Hou 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.	Unsupported/Unsubstantiated (no citation, no information on date of filing).
77	14	Hearing Officer ordered Applicant and Petitioners to submit Witness Written Direct Testimony and Exhibits simultaneously on or by October 11, 2016.	Not in dispute.
78	14	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.	Unsupported/Unsubstantiated. Irrelevant/Inapplicable. UH-TIO note, however, that the shared documents are designated as record documents R-1 through R-8. Exhibits R-1 through R-8 submitted by Brannon Kamahana Kealoha were not admitted into evidence. <i>See</i> Amended Minute Order No. 44. UH-TIO have construed any citations to "R" exhibits as citations to the record documents and the corresponding "A" exhibits.
79	14	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. All exhibits were uploaded to the document library.

		versions. The parties did not have the opportunity to compare the documents and collectively agree on the documents to be used.	
80	14	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.	The parties had every opportunity to inspect and compare these documents. Inaccurate/False. The individual parties had the burden of determining what exhibits to use, reviewing those exhibits in light of other exhibits as necessary, introducing those exhibits the party wished to introduce into evidence, and monitoring what exhibits were used by other parties. Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Moot or otherwise resolved. Inaccurate/False. Misrepresentation. At the close of the hearing, the Hearing Officer did not state an intent "to accept all exhibits to be judged by her on weight." At the close of evidence, the Hearing Officer instructed the parties to move their exhibits into evidence by written motion, after which the parties could file "objections, responses, replies, joinders to the motions that were made." Tr. 03/02/17 at 287:24-288:16. The Hearing Officer stated that she would then "by Minute Order, identify all exhibits that I will be receiving in evidence." Tr. 03/02/17 at 288:17-20; <i>see also</i> arguments set forth in UH Hilo's Opp to Temple's

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 Applicants' arguments.	Mot. for Recon. of Minute Order No. 44 at 4-5 [Doc. 599]. Estoppel/Improper Reconsideration. <i>See</i> Temple's Mot. for Recon of Minute Order No. 44 at 4-11 [Doc. 569]; Minute Order No. 51 [Doc. 647] (rejecting various arguments that the evidence admission process was improper). <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Mischaracterization. Misleading. Presented out of context. UH and TIO filed appropriate objections to the Petitioners' and Opposing Intervenor's exhibits. <i>See</i> University of Hawai'i at Hilo's Opposition to Motions to Admit Exhibits and Written Direct Testimony [Doc. 514] and TMT International Observatory, LLC's Memorandum in Opposition to Motions to Admit Exhibits and Written Direct Testimonies [Doc. 511]. The Hearing Officer set forth the bases for her decisions regarding the exhibits in Minute Order No. 44 [Doc. 553].
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.	Misleading. Presented out of context. Unsupported/Unsubstantiated. UH-TIO object to this proposed FOF to the extent that it implicates any argument that Petitioners were prejudiced in his preparation of the FOF/COL. That argument has been rejected by the Hearing

83	15	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).	Officer. <i>See</i> Minute Order No. 50. The Hearing Officer issued Minute Order No. 44 nearly six weeks prior to the due date for the FOF/COL. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Misleading. Presented out of context. Unsupported / Unsubstantiated. Rather than "multiple uncollated lists," Minute Order No. 44 comprehensively organized the exhibits in tabular form, with columns for each exhibit, the objection(s) to each exhibit and the Hearing Officer's ruling. Minute Order No. 44 [Doc. 553]. Minute Order No. 51 granted in part and denied in part various motions for reconsideration of Minute Order No. 44 [Doc. 647]. As all parties had notice of the exhibits subject to the motions for reconsideration, there was no prejudice to the parties in their preparation of their FOF/COL. Amended Minute Order No. 44 [Doc. 649] merely amended Minute Order No. 44 to reflect the Hearing Officer's rulings on the motions for reconsideration on the exhibits. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Mischaracterization. Due to numerous issues raised by the Petitioners and Opposing Intervenor, the Hearing Officer determined during the third day of the
84	15	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.	

		hearing that she would permit the parties to offer the exhibits at the hearing but would wait until after all of the testimony was complete before making a determination on the receipt of the exhibits into evidence. Tr. 10/25/16 at 99:12-21. Thus, it was not inconsistent for the Hearing Officer to permit the parties to offer exhibits during the hearing but subsequently, after due consideration of the exhibit and applicable objection(s), to exclude the exhibit from evidence. <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Misleading. Presented out of context. Unsupported / Unsubstantiated. There was no prejudice to Petitioners arising from the alleged contradictory rulings on the exhibits. As noted in Minute Order No. 44 [Doc. 553] at 28 and 33, the exhibits at issue (Exs. B.38, B.39, B.40, B.41, and B.42) were duplicative of other exhibits that were admitted into evidence (<i>See</i> Exs. A-9, A-10, A-11, A-12, and A-13). <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Misleading. Presented out of context. Unsupported / Unsubstantiated. UH-TIO object to this proposed FOF to the extent	hearing that she would permit the parties to offer the exhibits at the hearing but would wait until after all of the testimony was complete before making a determination on the receipt of the exhibits into evidence. Tr. 10/25/16 at 99:12-21. Thus, it was not inconsistent for the Hearing Officer to permit the parties to offer exhibits during the hearing but subsequently, after due consideration of the exhibit and applicable objection(s), to exclude the exhibit from evidence.
85	15	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 on the other, they are denied.	
86	15	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			that it implicates any argument that Petitioners were prejudiced in his preparation of the FOF/COL. The Hearing Officer issued Minute Order No. 44 nearly six weeks prior to the due date for the FOF/COL. The motions for reconsideration on the exhibits were ruled upon by May 25, 2017 (Minute Order No. 51 [Doc. 646]), and Kakalia does not indicate what timely-filed dispositive motions were not ruled upon by the Hearing Officer prior to the submission of the FOF/COL.
	15	The references from the transcript do not match the exhibits admitted by the Hearing Officer.	Unsupported/Unsubstantiated. To the extent that there are differences between the exhibits references in the transcripts and the exhibits admitted by the Hearing Officer, such differences can be clarified in the applicable FOF/COL.
88	16	Some exhibits offered by witnesses who had already testified were later not received into evidence by the hearing officer.	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80. Mischaracterization. Due to numerous issues raised by the Petitioners and Opposing Intervenor, the Hearing Officer determined during the third day of the hearing that she would permit the parties to offer the exhibits at the hearing but would wait until after all of the testimony was complete before making a determination on the receipt of the exhibits into evidence. Tr. 10/25/16 at 99:12-21. Thus, it was not

B-21.

			inconsistent for the Hearing Officer to permit the parties to offer exhibits during the hearing but subsequently, after due consideration of the exhibit and applicable objection(s), to exclude the exhibit from evidence.
89	16	Citations to exhibits may be inconsistent throughout the record and the Findings of Fact will reflect the confusion.	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 80.
90	16	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 addressed in P.U.E.O.'s proposed order, the proposed order failed to include a number of issues important in this case.	Unsupported/Unsubstantiated. Incorrect/Inaccurate. Estoppel/Improper Reconsideration. <i>See</i> Minute Order No. 19 [Doc. 281]. Irrelevant/Inapplicable. <i>See</i> UH-TIO FOF 62-67, COL 78-125.
91	16	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	Not in dispute.
92	16	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.	Not in dispute.
93	16	"Mauna Kea is currently estimated to be between 600,000 and 1.5 million	Irrelevant/Inapplicable.

94	16	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	Citation does not support proposition.
1	17	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. 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.	Unsupported/Unsubstantiated. Not credible. Mischaracterization. No citation is provided for this proposed FOF. The TMT Project will not harm the aquifers. See Tr. 12/13/16 at 112:14-113:12. Because the TMT Observatory will use a zero-discharge wastewater system, wastewater will not be released from the TMT Project so no percolation of wastewater will reach the aquifer. UH-TIO FOF 431, 805. Misleading. Presented out of context.
2	17	The Astronomy Precinct is located entirely above the Waimea Aquifer. A010 NRMP 2.1-38	
3	17	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	Not in dispute as to statement. Misleading with respect to any conclusions implied therefrom. The reliable, probative,

B-23.

		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	and credible evidence establishes that the TMT Project will cause minimal surface runoffs, and the impacts of such runoff will not be significant. <i>See</i> WDT Nance at 2; Tr. 12/13/16 at 98:5-14 Misleading. Presented out of context. The evidence has shown that precipitation on Mauna Kea above 9,000 is low and evaporation rates are high. The majority of water runoff at or near the TMT Project would be lost to evaporation and therefore does not become groundwater recharge. Ex. A-10, 2.1.34 – 2.1-35, 2.1-39; <i>see also</i> UH-TIO FOF 804-805.
4	17	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	Not in dispute as to statement. Misleading with respect to any conclusions implied therefrom. The reliable, probative, and credible evidence establishes that the TMT Project will cause minimal surface runoffs, and the impacts of such runoff will not be significant. <i>See</i> WDT Nance at 2; Tr. 12/13/16 at 98:5-14
5	17	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)	Misleading. Presented out of context. <i>See</i> UH-TIO FOF 804-805
6	17	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)	Misleading. Presented out of context (this portion of Ex. A-3/R-3 is in reference to the surface runoff from the Mauna Kea Access Road, not all surface runoff on

B-24.

7	17	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)	Mauna Kea). Misleading. Presented out of context. The primary watershed recharge areas for Mauna Kea occur at lower levels below the summit, not in alpine deserts. UH-TIO FOF 805. There is no reasonable prospect of the TMT Project impacting groundwater. UH-TIO FOF 804. Misleading. Partial quotation. Excerpt goes on to state: “Scientific dating tests of the spring’s water indicate that it is recent, meaning that the water is not from the melting of ancient subsurface ice or permafrost, and analyses of the water shows it to be identical to rainfall at the summit. 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. Hale Pohaku is located above the Onomea Aquifer system (Figure 3-30). There are no wells in the vicinity of Hale Pohaku, because, similar to the summit area, the groundwater is at such a great depth that it is not considered economical to use it.” (Emphasis added). The reliable, probative, and credible evidence establishes that the TMT Project will cause minimal surface runoffs, and the impacts of such runoff will not be
---	----	---	--

B-25.

8	17	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.	significant. See WDT Nance at 2; Tr. 12/13/16 at 98:5-14. Mischaracterization. Misleading. Presented out of context. Misleading. Partial quotation. Testimony in response to line of questioning was as follows: Q: Now, there have been a lot of claims that TMT will harm the aquifer. First, could you explain to the Judge what an aquifer is from a hydrologist's perspective? A: Let me try to do that two different ways. An aquifer is a groundwater body typically defined by boundaries, defined by the type of groundwater occurrence of maybe high level groundwater that I just referred to, maybe basal groundwater, that's basically a lens of fresh, brackish water floating on saltwater, or it may actually even be a small little perched water body. How they fit physical on this island, I couldn't tell you, but there are many. The other way to look at that is the State Water Commission is the agency responsible for regulating low developed groundwater use has divided the island up into 24 separately identified and delineated aquifer systems. There are more actual aquifers then there are regulated aquifer systems. Q: Now, based upon your review of Mauna Kea and your knowledge of the
---	----	---	---

B-26.

			TMT project, will the TMT project in any way harm any of these aquifers? A It should not at all. 12/13/16 at 112:14 – 113:12 (emphasis added).
9	18	Three potable wells are tapped into high level dike-confined groundwater. Nance Tr.12.13.16 V16 at 113:7-8.	Citation does not support proposition. Misleading. Partial quotation. Nance testified as to the existence of four potable wells. Tr. 12/13/16 at 113:13-22. Nance further testified that the TMT Project would not affect any of these possible water sources. Tr. 12/13/16 at 114:14-16. Citation does not support the proposition.
10	18	Mauna Kea kuahiwi ku ha'o i ka mālīe (Mauna Kea is the astonishing mountain that stands in the calm). Ōlelo No 'eau. A001 CMP	Misrepresentation.
11	18	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.	Mischaracterization. Unsupported/Unsubstantiated.
12	18	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.	Citation does not support the proposition that the views to and from Mauna Kea are "significant." The TMT Project will not have a substantial adverse impact on the visual resources of Mauna Kea. See UH-TIO FOF 775-795. Citation does not support proposition. UH-TIO note that the correct citation for this proposed FOF is Ex. A-3/R-3 at 3-82.

			Misleading. Presented out of context. Appropriate excerpt states: “Eighteen representative viewpoints within the northern portion of the island have been identified as places that are of visual significance to the three viewer groups. The viewpoints are all located in the northern portion of the island because the location of the TMT Observatory is such that it will not be visible from the southern portion . . . From approximately 43 percent of the island area a viewer is able to potentially see at least one existing observatory. According to 2000 U.S. Census data, 72 percent of the population of the Island of Hawai’i, or about 107,000 people reside within the viewshed of the existing observatories.” Ex. A-3/R-3 at 3-81 – 3-82.
13	18	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	Not in dispute.
14	18	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	Citation does not support the proposition (correct citation should be to Ex. A-3/R-3). Misleading. Presented out of context (this section of Ex. A-3/R-3 goes on to state that “[t]he direct long-term visual impact of the TMT Observatory will be less significant.” Ex. A-3/R-3 at 3-103). The FEIS further notes that “When the TMT Observatory is combined with the

B-28.

15			existing conditions, the cumulative visual impact of development on and near the summit of Maunakea will continue to be significant, as discussed in detail in Section 3.16.4.” Ex. A-3/R-3 at 3-101. The incremental increase in cumulative visual impact due to the TMT Project will be less than significant. UH-TIO FOF 795. Misleading. Presented out of context. Excerpt is followed by the following: “Though no archaeological surveys were conducted prior to the construction of the summit road, which was completed in the mid-1960s, there is no indication that any archaeological sites on the “summit” were destroyed at that time, or at any time thereafter in the construction of the existing observatories. In 1998 Kapa Maly interviewed two Hawaiian men, Theodore “Teddy” Bell, who had worked for Morrison-Knudsen on the road to the summit, and Alike Lancaster, who had worked on the construction of the first observatories in the 1960s. Neither one had seen or heard of any human bones uncovered along the road, or on the summit (Maly 1999 Appendix A:123, A-232). The most important observation to be made about the summit (Kūkahau‘ula) is the meager evidence of human activity prior to the historic period. Indeed, with the exception of Site 21209, which is comprised of two features, a small rock
18			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 Līlinoe, 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

		outline and mound on the southeast rim of Pu`u Wekiu, there are no other known sites of probable pre-Contact age on the summit.” Ex. A-122 at 7-13 (emphasis added).
		No known traditional and customary practices are associated with the proposed 5-acre TMT Project site. The TMT Project will not have a substantial effect on shrine worship, pilgrimage, prayer, and offerings in the summit area. The principal areas traditionally used for these practices would not be affected by the TMT Project. <i>See</i> UH-TIO FOF 611-641.
		The reliable, substantial, and credible evidence demonstrates that the TMT Project will not result in any substantial adverse impact on native Hawaiian traditional and customary practices on Mauna Kea, and will not have a substantial adverse impact on any historic properties within the MKSR. Ex. A-3/R-3 at 3-37, 3-48 to 3-55; <i>see also</i> UH-TIO FOF 646-647.
16	19	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 Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 499, 748-49. Misrepresentation. Incomplete/Vague and Ambiguous (the

		disturbing to recreational users who hope for the pristine silence of wilderness. B.17a Ward WDT p 2	FOF is written from a "first person" perspective, with Ward as the apparent source, and is an improper FOF). Not credible. Unsupported/Unsubstantiated. Ward is not a native Hawaiian practitioner. While Ward's interest in Mauna Kea is for recreation and hiking, she had no prior experience of hiking in the rough lava areas of the TMT Project. Ward's use of Mauna Kea for recreation purposes began when there were telescopes already existing on Mauna Kea. During the 1980s and 1990s, Ward did not witness any native Hawaiians engaging in traditional or cultural practices on Mauna Kea. UH-TIO FOF 748-749. In any case, evidence in the record supports the conclusion that at least some native Hawaiian practices are facilitated, rather than hindered, by the existence of the observatories and infrastructure on Mauna Kea. UH-TIO FOF 345. The impacts complained of by Ward are present with or without the TMT Project.
17	19	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	Misleading. Partial quotation. Quoted excerpt is followed by the following: "The Pu'u Wekiu/Kukahau'ula Summit and Trailhead measurement locations experienced measured noise levels of 47 and 49 dBA L, and 50 and 53 dBAL.

18	19	Sounds from existing observatory HVAC exhaust systems were not noticeable during the summit location field measurement; despite its remote location, the summit was not completely silent. The dominant noise source for sound levels measured at recreational use sites was due to a steady wind of 5 to 14 mph moving from the direction of the nearby observatories toward the measurement locations. Winds in this range are typical for this area and generally dominate the ambient noise levels." Ex. A-3/R-3 at 3-176 (emphasis added). Misleading. Presented out of context. Operation of the TMT Project will not contribute to a noticeable increase in noise levels at the identified recreational sites in the surrounding area recognized as sensitive to noise, and any noise impact from the project will be less than significant. UH-TIO FOF 978-983. Misleading. Presented out of context. See UH-TIO FOF 952 – 953.
		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	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
20	19	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
21	19	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
22	19	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. It's 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	Unsupported/Unsubstantiated. Speculative. Not credible. See UH-TIO FOF 282-283, 952-953.
23	20	Social determinant affect the ability of indigenous people to exercise cultural identity and strengths. Tr. 02/23/17, V40 at 106: 6-13	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
24	20	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.

B-33.

25	20	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Not in evidence (the referenced UH Cancer Center studies/reports).
26	20	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
27	20	Research has been done on racism and discrimination both quantitatively and qualitatively 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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Speculative.
28	20	There are numerous studies across the U.S. that address effects on health and well-being. Tr. 02/23/17, V40 at 107: 22-23	Not in evidence (the referenced research). Irrelevant/Inapplicable.
29	20	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	Not in evidence (the referenced studies). Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
30	21	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	Not in dispute.
31	21	Native Hawaiians who hold strong cultural identity, meaning that they strongly identify with their kanaka maoli culture and choose to do	Unsupported/Unsubstantiated.

B-34.

		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	Overbroad/Speculative. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
32	21	Discrimination is psychosocial stressors that impact the health and well-being. Tr. 02/23/17, V40 at 114: 25, 115: 1	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
33	21	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
34	21	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	Irrelevant/Inapplicable.
35	21	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	Not in dispute
36	21	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 descendants 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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
37	21	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.

B-35.

38	22	Health is well-being by definition. Tr. 02/23/17, V40 at 119: 19-21	Unsupported/Unsubstantiated.
39	22	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated.
40	22	Mauna Kea is a symbol. It is a sacred place. Tr. 02/23/17, V40 at 121: 1-7	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
41	22	Disrespectful activity done on the mauna that counters policies in place is detrimental to wellbeing. Tr. 02/23/17, V40 at 122: 15-18	Unsupported/Unsubstantiated. Incomplete (does not indicate what "policies" are being referenced). Not credible. See UH-TIO FOF 282-283, 952-953.
42	22	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
43	22	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
44	22	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
45	22	Mauli 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	Irrelevant/Inapplicable.

		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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Speculative.
46	22	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Speculative.
47	22	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Speculative. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
48	23	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
49	23	Native Hawaiians have strong ties to their land and their cultural practice. Tr. 02/23/17, V40 at 131: 15-17	Not in dispute for most.
50	23	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283,

51	23	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	952-953. Unsupported/Unsubstantiated. Speculative. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
52	23	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Not in evidence (referenced 2008 group study).
53	23	Hyper-vigilance is associated with trauma. Tr. 02/23/17, V40 at 134: 9-18	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
54	23	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
55	23	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953. Misleading to the extent this proposed FOF implies that the TMT Project will result in

B-38.

			denial of access. <i>See</i> UH-TIO FOF 679, 681, 682.
56	23	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	Not in evidence (citation to statement made by cross-examiner). Speculative as to all. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
57	23	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,	Mischaracterization. Speculative. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
58	23	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	Irrelevant/Inapplicable
59	23	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
60	24	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	Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
61	24	Acute stress is how humans are designed, it's a fight 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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. <i>See</i> UH-TIO FOF 282-283, 952-953.
62	24	Studies on the potential health impact on Native Hawaiians have not been	Misleading. Presented out of context. UH

B-39.

		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	Hilo conducted a thorough analysis of whether the TMT Project would negatively impact public health, safety, and welfare. The term "public" includes Native Hawaiians. See UH-TIO FOF 503-774. Not credible. See UH-TIO FOF 282-283, 952-953.
63	24	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	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953. Speculative.
64	24	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953.
65	24	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	Irrelevant/Inapplicable.
66	24	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	Unsupported/Unsubstantiated. Not credible. See UH-TIO FOF 282-283, 952-953. Speculative.
67	24	Joseph Keawe'aimoku Kaholokula is a clinical psychologist with a specialty in behavioral medicine. Tr. 02/23/17, V40 at 168: 5-6	Incomplete. See UH-TIO FOF 952-953.
68	24	There are statistical techniques to partition out variances and factors such	Not in dispute as to existence of statistical

B-40.

		as health care, behavior, and physical environments as well as social factors. Tr. 02/23/17, V40 at 168: 17-25	techniques.
69	24	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	Not credible as to application of those methods in Kaholokula's research. Unsupported/Unsubstantiated.
70	25	TMT is psychologically affecting many Native Hawaiians, especially those who choose to practice and continue to Malama Aina and Aloha Aina. The accumulation and buildup 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	Not credible. See UH-TIO FOF 282-283, 952-953. Not in evidence. Irrelevant/Inapplicable. Speculative. Unsupported/Unsubstantiated.
71	25	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	Not credible. See UH-TIO FOF 282-283, 952-953. The TMT Project will not have a significant impact on archaeological and historic resource. UH-TIO FOF 503-610.
72	25	In 1974, George Ariyoshi expressed concerns that "social pressures for more intensive use of Mauna Kea for scientific, recreational, and other	Misleading. Presented out of context. Paragraph 4 of the General Lease states that "[t]he land hereby leased shall be used by the Lessee as a scientific complex, including without limitation thereof an observatory, and as a scientific reserve being more specifically a buffer zone to prevent the intrusion of activities inimical to said scientific complex." Ex. B.17f at 3. Citation does not support the proposition. See UH-TIO FOF 123-135.

B-41.

73		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. 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	Misleading. Presented out of context. The 1977 Management Plan is merely a policy guide not intended to impose rigid standards. See UH-TIO FOF 339. Misleading. Presented out of context. The 1977 Management Plan is merely a policy guide not intended to impose rigid standards. See UH-TIO FOF 339. Citation does not support proposition. Irrelevant/Inapplicable. See <i>supra</i> UH-TIO's response to Kakalia's proposed FOF 72.
74	25	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	Inaccurate/False. Certain portions of quotation are incorrect. Quotation properly reads: "The area covered by this plan shall extend from the summit down to about the 6,000-foot elevation and shall include all conservation district land from the summit of Mauna kea down to the Saddle Road." Ex. B.17g at 1. Irrelevant/Inapplicable. See <i>supra</i> UH-TIO's response to Kakalia's proposed FOF 72.
75	25	The objectives of the plan were to determine the capability of Mauna Kea's resources to accommodate various uses without unacceptable damage to	Inaccurate/False.

		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	Citation does not support proposition. Citation is incorrect. Ex. B.17g at 1. Irrelevant/Inapplicable. See UH-TIO's response to Kakalia's proposed FOF 72. Incomplete. Misleading. Presented out of context. The 1995 Management Plan (or "Revised Management Plan") was superseded by the 2009 Comprehensive Management Plan. Ex. A-9 at 2-3. Citation does not support the proposition. There is no Ex. D-10 in the record. UH-TIO note that the correct citation is Ex. B.17h at i.
76	25	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	26	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	See UH-TIO's response to Kakalia's proposed FOF 76.
78	26	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	See UH-TIO's response to Kakalia's proposed FOF 76. Irrelevant/Inapplicable. The TMT Project will be subject to management through the BLNR-approved CMP and sub-plans. See, e.g., UH-TIO FOF 359.
79	26	The 2000 Master Plan was never adopted nor approved by BLNR. Ex	Misleading. Presented out of context. The

B-43.

		A003 FEIS p 3-146	Master Plan is an internal policy and planning guide for the University to promote the goal of balanced stewardship of the UH Management Area. Therefore, it was adopted by the Board of Regents and there was no requirement that it be adopted or approved by BLNR. UH-TIO FOF 123. Misleading. Partial quotation. Full quotation states: "Similar to the 1983 Master Plan, the 2000 Master Plan was not adopted nor approved by BLNR." <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 76; <i>see also</i> UH-TIO FOF 123 ("[t]he Master Plan is an internal policy and planning guide for the University . . .").
80	26	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	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 76; <i>see also</i> UH-TIO FOF 123 ("[t]he Master Plan is an internal policy and planning guide for the University . . .").
81	26	The objective of the 2000 Master Plan is to preserve and protect the cultural, natural, recreational and scientific resources on UH lands. Ex A048	Misleading. Presented out of context. the 2000 Master Plan presented many objectives, some of which provide for the development of astronomy/science on Mauna Kea. <i>See generally</i> , Ex. A-48 at II-2 to II-4; UH-TIO FOF 124.
82	26	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)	<i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 231. Misleading. Presented out of context. <i>See</i> UH-TIO FOF 125.
83	26	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	Irrelevant/Inapplicable. Misleading. Presented out of context.

		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)	Excerpt is followed by statement that “[m]anagement actions to improve coordinated management and develop collaborative partnerships are detailed in Section 7” of the CMP. Ex. A-9 at 3-9. Misleading. Presented out of context. Management actions to improve coordinated management and develop collaborative partnerships are detailed in Ex. A-9 at 7-1 to 7-69. Additionally, the 1995 Management Plan (or “Revised Management Plan”) was superseded by the 2009 Comprehensive Management Plan. Ex. A-9 at 2-3. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University’s process in developing and/or implementing those plans; the University’s management of Mauna Kea in general; and/or the BLNR’s supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g.</i>, UH-TIO FOF 118-190.
84	26	The acceptance of the 2000 Master Plan by the UH Board of Regents	Misleading. Presented out of context.

B-45.

		prompted the creation of OMKM, the MKMB, and Kahu Kū Mauna. (Ex A-009 CMP P 3.9)	Excerpt subsequently states: “[t]he MKMB serves in an advisory capacity to the UH Hilo Chancellor. The MKMB has also established several advisory committees, including the MKMB Environmental Committee and the MKMB Hawaiian Cultural Committee.” Ex. A-9 at 3-9 While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University’s process in developing and/or implementing those plans; the University’s management of Mauna Kea in general; and/or the BLNR’s supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g.</i> , UH-TIO FOF 118-190.
85	26	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)	Misleading. Presented out of context. The MKMB recently approved the transfer of the management and oversight of MKSS to OMKM. Ex. A-9 at 3-11; <i>see also</i> Tr. 12/12/16 at 129:10-13 (Mauna Kea ranger services are under the control of OMKM). While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or

86			adequacy of the Master Plan, CMP, any of the sub plans; the University's process in developing and/or implementing those plans; the University's management of Mauna Kea in general; and/or the BLNR's supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g.</i>, UH-TIO FOF 118-190. Misleading. Presented out of context. Excerpt continues that "[t]he remaining 10,763 acres (4,356 ha) are designated a Natural/Cultural Preservation Area in order to protect natural and cultural resources within the UH Management Area." Ex. A-9 at 3-1. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University's process in developing and/or implementing those plans; the University's management of Mauna Kea in general; and/or the BLNR's supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these
26		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	

B-47.

87	27	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	matters. <i>See, e.g., UH-TIO FOF 118-190.</i> Misleading. Presented out of context. Excerpt is preceded by: “[i]n addition to the potential construction of new observatories, other possible changes to the astronomy facilities include redevelopment of existing sites (i.e., dismantling an existing facility and replacing it with a new one on the existing footprint), upgrades to or expansions of existing observatories, and removal of some obsolete observatories. Changes could also involve improving utility service.” Ex. A-9 at 6-8. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University’s process in developing and/or implementing those plans; the University’s management of Mauna Kea in general; and/or the BLNR’s supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g., UH-TIO FOF 118-190.</i> Citation does not support the proposition. The cited page of the CMP states in relevant part: “Using these criteria, the 2000 Master Plan updated designated
88	27	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-	

B-48.

57)		telescope siting areas within the Astronomy Precinct for existing observatories, proposed redeveloped facilities, and potential new facility sites. The most probable scenarios will be to site all new proposed astronomy facilities in the area within the Astronomy Precinct identified as the north plateau.” Ex. A-9 at 7-57. Misleading. Presented out of context. There are numerous siting criteria, other than consideration of updated cultural and natural resource information, defined in the 2000 Master Plan. <i>See, e.g.</i>, Ex. A-9 at 7-56.
89	27	Citation does not support proposition. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University’s process in developing and/or implementing those plans; the University’s management of Mauna Kea in general; and/or the BLNR’s supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g.</i>, UH-TIO FOF 118-190. UH-TIO further note that the CMP was

B-49.

		approved by the BLNR on April 9, 2009 and the sub plans were all approved by the BLNR on March 25, 2010. Ex. A-3/R-3 at 3-142. See also UH-TIO FOF 893. Misleading. Presented out of context. Excerpt is followed by: "[a] CMP for UH's Management Areas on Maunakea [sic] was approved by the BLNR on April 9, 2009. The BLNR placed conditions on their approval, including the production of . . . CMP sub plans within a year or prior to submittal of a CDUP application by a project . . . UH prepared these sub plans and they were all approved by the BLNR on March 25, 2010." Ex. A-3/R-3 at 3-142 - 3-143.
90	27	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 Mischaracterization. The quoted excerpt states: "Astronomy facilities are an identified use in the Resource subzone (see HAR § 13-5-24(c) [R3/D1]) under an approved management plan. This means that astronomy facilities with appropriate management have been deemed to be consistent with proper management of the natural resources in that subzone. In addition to being an identified use, as discussed throughout this CDUA, both the University and the TMT Observatory Corporation are committed to managing the natural and cultural resources throughout the MKSR in a way that fulfills

B-50.

91		the objective of the Resource subzone of the Conservation District. The proposed TMT Project would help meet the objectives of the Resource subzone by using the excellent astronomical resources that Mauna Kea possesses to maintain the MKSR at the forefront of astronomical research while implementing and supporting overall management activities that will promote the sustained use of the natural resources in the subzone. The proposed project would be developed and operated in compliance with the Conservation District Rules and with all conditions that may be attached to the Conservation District Use Permit. 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-1/R-1, Exhibit B at 3-11.	Incomplete. Citation does not contain pin cite. Misleading. Presented out of context. The quoted excerpt states: “This CMP provides the framework for managing multiple existing and future activities, such as astronomy, recreational and commercial activities, scientific research, and cultural and religious activities. More importantly, the CMP
27		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		provides a guide for protecting Mauna Kea's many unique cultural and natural resources. Once the CMP is adopted by the BLNR, it will also provide management guidelines and specific management recommendations to be included in BLNR's CDUPs." Ex. A-9 at 2-1.
27	The TMT Management Plan is a "project-specific management plan." Ex A-001 UH/TMT CDUA, p. 2-3.	<i>See</i> UH-TIO FOF 136. Misleading. Presented out of context. The TMT Management Plan is the management plan required under HAR § 13-5-24 and complements the CMP and sub plans. UH-TIO FOF 367-371. The quoted excerpt states: "In addition to supporting the implementation of the CMP, the TMT project has also developed a project-specific management plan. The TMT Management Plan provides a general description of the proposal, the existing conditions on the parcel, proposed land uses on the parcel and reporting schedule; it also adopts the approach, goals, objectives and management strategies and actions of the CMP and subplans in their entirety. Specifically, the TMT Management Plan implements all relevant action items and plans of the CMP and subplans on a site-specific basis ensuring that the management actions called for in

		the CMP and subplans which are applicable to the TMT project are effectively and responsibly implemented. Additionally, the TMT Management Plan sets forth mitigation measures in the form of Best Management Practices and conservation methods intended to mitigate the impacts of the TMT project on Mauna Kea's varied resources.
93	27	The TMT Management Plan is intended to provide site-specific information and be an extension of the CMP and subplans and together (CMP, subplans and TMT Management Plan), these documents are intended to fulfill the purpose of the Conservation District concerning the TMT project." Ex. A-1/R-1 at 2-3. Irrelevant/Inapplicable. Misleading. Presented out of context. Given the BLNR's approval of the CMP and sub plans (<i>see</i> UH-TIO FOF 893), which are the current, approved and operative plans, this proposed FOF is not relevant to the consideration of the CDUA. Mischaracterization. The CMP is in accordance with Judge Hara's decision; not "is described as being." <i>See supra</i> UH-TIO's response to Kakalia's proposed FOF 90.
94	27	In its 2007 decision and order, the Third Circuit Court found that the definition of management plan in HAR 13-5-2 requires the plan to be HAR

95	28	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)) 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)	See <i>supra</i> UH-TIO’s response to Kakalia’s proposed FOF 90.
96	28	As identified in the first management plan for the mountain, the Mauna Kea conservation district the 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)	Misleading. Presented out of context. The 1995 Management Plan (or “Revised Management Plan”) was superseded by the 2009 Comprehensive Management Plan. Ex. A-9 at 2-3. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University’s process in developing and/or implementing those plans; the University’s management of Mauna Kea in general; and/or the BLNR’s supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g.</i>, UH-TIO FOF 118-190. Misleading. Presented out of context. The 1995 Management Plan (or “Revised Management Plan”) was superseded by the 2009 Comprehensive Management Plan.
97	28	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		Ex. A-9 at 2-3. While the cited portion of the record speaks for itself, to the extent this proposed FOF is intended to support a finding and/or conclusion regarding the scope and/or adequacy of the Master Plan, CMP, any of the sub plans; the University's process in developing and/or implementing those plans; the University's management of Mauna Kea in general; and/or the BLNR's supervision and management of Mauna Kea, UH-TIO believe their proposed FOF are more comprehensive (and placed in the proper context), and therefore request the entry of their proposed FOF on these matters. <i>See, e.g., UH-TIO FOF 118-190.</i>
28	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. (<i>Mauna Kea Anaina Hou v. BLNR</i>, Civ. No. 4-1-397, 7 (3rd Cir. Haw. Jan. 19, 2007)) page 3-4)	Irrelevant/Inapplicable. The 1995 Management Plan was superseded by the 2009 Comprehensive Management Plan. Ex. A-9 at 2-3. Misleading. Presented out of context. Given the BLNR's approval of the CMP and sub plans (<i>See UH-TIO FOF 893</i>), which are the current, approved and operative plans, this proposed FOF is not relevant to the consideration of the CDUA. Mischaracterization. The CMP is in accordance with Judge Hara's decision; not "is described as being."

B-55.

99	28	“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.	Misleading. Presented out of context. The TMT Project is consistent with the CMP, sub plans and all other applicable plans. UH-TIO FOF 359. False/Inaccurate. The CMP is the approved management plan for any future land use. Ex. A-9 at 2-3.
100	28	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)	Citation does not support proposition. UH-TIO note that the correct citation for this Proposed FOF is Ex. A-9 at 7-55. Misleading. Presented out of context. The Decommission Plan addresses such issues. UH-TIO FOF 151-153. The TMT Project is consistent with the CMP, sub plans and all other applicable plans. UH-TIO FOF 359. Misleading. Presented out of context. Citation is incorrect. Quoted excerpt states: “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. The University's official position on proposed observatory and support facility development for the period

B-56.

101		of 2000-2020 was outlined in the 2000 Master Plan (Group 70 International 2000). The role of the CMP in considering future land use is to guide the evaluation of proposed projects from the standpoint of potential impacts to cultural and natural resources, and to provide management actions that can be adopted by BLNR as special conditions in any CDUPs that it may issue. The Board of Land and Natural Resources shall have final approval over all land uses on conservation lands pursuant to the Conservation District Use Permitting Process.” Ex. A-9 at 7-55. False/Inaccurate. The CMP is the approved management plan for any future land use. Ex. A-9 at 2-3. Citation does not support the proposition. See UH-TIO FOF 136-158. Misrepresentation. The Comprehensive Management Plan contains design guidelines, as well as siting criteria. Ex. A-9 at 7-48. See <i>supra</i> UH-TIO’s response to Kakalia’s Proposed FOF 100. The CMP further notes that the plan is to manage resources and that each “redevelopment or proposed new facility, including non-astronomy facilities, will
28	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			undergo individual project reviews, that will include an environmental analysis pursuant to Chapter 343, HRS, and a comprehensive analysis of the potential cultural impact. Ex. A-9 at 7-55. The TMT Project is consistent with the CMP, sub plans and all other applicable plans. UH-TIO FOF 359.
28		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)	Citation does not support the proposition. See UH-TIO FOF 136-158. Misleading. Presented out of context. The reference sections do not set forth concrete requirements. In fact, the majority of the provisions and sections merely state “additional considerations.” Burial treatment plan: A burial treatment plan was prepared for the entire MKSR and Mauna Kea Access Road Corridor, including the TMT Project site, which was approved by HIBC and SHPD. UH-TIO FOF 570; Ex. A-22 at 30; Ex. A-138, Ex. A-138a; Ex. A-139. Buffer zones: Management Action CR-12 requires buffer zones to “be established”. Ex. A-9 at 7-10. The creation of buffer zones around known historic sites is ongoing. Ex. A-22 at 30. Kahu Ku Mauna determined that the establishment of buffer zones should be determined on a case-by-case basis instead

		of immediate implementation. Ex. A-17 Appendix A at 4. Invasive species: Management Action NR-2 requires the limit of damage caused by invasive species through creation of an invasive species prevention and control program. This action is ongoing, and the TMT Project will develop an invasive species prevention and control program and has policies in place to control invasive species. Ex. A-22 at 31; UH-TIO FOF 457, 490-492. An invasive species management plan was prepared and approved in 2015. Ex. A-40; Ex. A-22 at 7. Hazardous spill protocol: Updating and implementing an emergency response plan is ongoing. Ex. A-9 at 7-62; Ex. A-22 at 28, 36. The TMT Project will implement a Materials Storage / Waste Management Plan, including a Spill Prevention and Response Plan, and there are extensive measures planned to store and dispose of all waste. UH-TIO FOF 320, 424-428, 824-839. Traditional and customary practices: Development of plans for the exercise of culturally appropriate placement and
--	--	---

103	29	removal of offerings, visitation of shrines and constructing new cultural resources are in progress and ongoing. Ex. A-22 at 30. The TMT Project will comply with requirements for public access and there will be no prohibitions on access to the areas outside of the TMT Observatory. UH-TIO FOF 679-682. Kahu Ku Mauna developed policies related to cultural practices, such as the appropriateness of construction of new cultural features, placement and removal of offerings. They were brought before MKMB at which time individuals opposed these policies. The MKMB recommended that Kahu Ku Mauna do some additional consultation. Previously, the MKMB approved guidelines for the visitation and use of ancient shrines. Ex. L-17; Ex. L-18; Ex. L-19; Ex. L-20; Tr. 12/12/16 at 19: 20 – 23:7, 60:17 – 61:9. Irrelevant/Inapplicable. Citation does not support proposition. Misrepresentation. <i>See, e.g.,</i> UH-TIO FOF 136. Misleading. Presented out of context. There is no requirement that such a timeline or process must be established under HRS Chapter 91. Additionally, included in the first annual report to the
		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			BLNR, was an estimated timeline for implementation of each CMP management actions. Ex. A-16, App. B. OMKM is required to produce an annual progress report on the management goals, objectives and actions to the BLNR. <i>See</i> Ex. A-22. The report in the record notes that major components of the plan are completed, ongoing or in progress. Ex. A-22. The BLNR is not required by law to hold a contested case hearing with respect to BLNR's review and oversight of the CMP. <i>See Mauna Kea Anaina Hou v. University of Hawai'i</i>, 126 Haw. 265 (Haw.App. 2012). Citation does not support the proposition. <i>See</i> UH-TIO FOF 136-158. Development of plans for the exercise of culturally appropriate placement and removal of offerings, visitation of shrines and constructing new cultural resources are in progress and ongoing. Ex. A-22 at 30. The TMT Project will comply with requirements for public access and there will be no prohibitions on access to the areas outside of the TMT Observatory. UH-TIO FOF 679-682. The TMT Project considers and provides efforts to mitigate any negative impacts to culture. Tr. 11/15/16 at 136:16-137:7.
29		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	

B-61.

105	29	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	Misleading. Presented out of context. Complete excerpt states: “OMKM is charged with the day-to-day management of the MKSR. OMKM works closely with the Mauna Kea Management Board (MKMB), the Kahu Ku Mauna Council, and several advisory committees. Seven members of the community who are nominated by the UH Hilo Chancellor and approved by the UH BOR comprise the MKMB. 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, non-voting members on the MKMB. MKMB guides the operations of OMKM and advises the Chancellor on activities, operations, and development. Kahu Ku Mauna - in Hawaiian, Guardians of the Mountain - is a nine-member council named by MKMB, and advises the MKMB, OMKM, and the UH Hilo Chancellor on cultural matters. Other advisory councils formed to advise the MKMB include an Environment Committee, a Hawaiian Culture Committee, a Public Safety and Conduct Committee, and a Wekiu Bug Scientific Committee. Ex. A-3/R-3 at 3-147.
-----	----	---	---

B-62.

106	29	“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	Citation does not support the proposition. See UH-TIO FOF 136-158. Misleading. Presented out of context. The 1995 Management Plan was superseded by the 2009 Comprehensive Management Plan. Ex. A-9 at 2-3; <i>see also</i> UH-TIO FOF 123. The CRMP goes on to note OMKM’s management initiatives to address these issues.” Ex. A-11 at 3-3 – 3-5. See UH-TIO FOF 123: In response to the concerns raised in an audit performed in 1998 that was critical of the University’s management of the cultural and environmental resources in the MKSR, the University began preparing a new master plan for the MKSR. Ex. B.17e. On June 16, 2000, after nearly two years of work by an advisory committee and two series of public meetings, the University Board of Regents (“BOR”) adopted the Mauna Kea Science Reserve Master Plan (“Master Plan”), which established management guidelines for the UH Management Area. The process reflected the Hawai’i Island community’s deeply rooted concerns over the use of Mauna Kea, including respect for Hawaiian cultural beliefs and practices, protection of environmentally sensitive habitat,
-----	----	---	---

B-63.

107		recreational use of the mountain, as well as astronomical research. The Master Plan is an internal policy and planning guide for the University to promote the goal of balanced stewardship of the UH Management Area through on-island community based management. WDT Nagata at 2; Tr. 12/8/16 at 27:6-8, 28:3-9; WDT Heen at 1; Ex. A-48 at Chapter XII. Citation does not support the proposition. See UH-TIO FOF 136-158.
29	The University of Hawaii is an educational institution, not a land management agency. HRS 304A-102	Mischaracterization. HRS § 304A-102 is not an exhaustive list of the permitted actions the University of Hawai'i (and its various branches) may take in pursuing its stated purpose. HRS § 304A-103(2) provides in relevant part that the University shall have the general power to: "To acquire in any lawful manner any property, real, personal, or mixed, tangible or intangible, or any interest therein; to hold, maintain, use, and operate that property; and to sell, lease, or otherwise dispose of that property at such time, in such manner, and to the extent deemed necessary or appropriate to carry out its purposes[.]" Additionally, the General Lease authorizes UH Hilo to manage the demised lands on Mauna Kea and to develop the lands into a scientific complex. See Ex. B.17f at 3-4. Moreover, the BLNR Approved CMP and

108			subplans require UH Hilo to exercise land management responsibilities. <i>See generally</i> , Exs. A-9 to A-13.
108	29	The rangers who work for OMKM, but work closely with Mauna Kea Support Services, do not have the primary enforcement authority. Tr. McLaren	Irrelevant/Inapplicable. Irrelevant / Inapplicable. Citation does not support proposition (incomplete cite). Misleading. Presented out of context.
109	29	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)	Irrelevant/Inapplicable. Misleading. Partial quotation Misleading. Presented out of Context Not in evidence. UH-TIO note, however, that the record in the separate proceeding speaks for itself.
110	29	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)	<i>See</i> UH-TIO FOF 136-158. Not in evidence. UH-TIO note, however, that the record in the separate proceeding speaks for itself. <i>See</i> UH-TIO FOF 136-158, 179-190. The CMP specifically states the development of the CMP used <i>KAPA 'AKAI</i> as a framework for the development of the CMP, including: 1) the identification and scope of valued cultural, historical or

111	30	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)	natural resources that are found within the UH Management Areas, including the extent to which traditional and customary Native Hawaiian rights are exercised in the areas; 2) The extent to which those resources – including traditional and customary Native Hawaiian rights – will be affected or impaired by the proposed action; and 3) The feasible action, if any, to be taken by the agency to reasonably protect Native Hawaiian rights if they are found to exist. Ex. A-9 at 2-7. Irrelevant/Inapplicable. Citation does not support proposition. <i>See</i> UH-TIO FOF 136-158. Unsupported/Unsubstantiated. Misleading. Presented out of context. The CMP and sub plans are clearly relevant and material to the BLNR's <i>Ka Pa`akai</i> analysis in connection with its consideration of the CDUA. <i>See</i> UH-TIO COL 324-354. The CMP specifically outlines the <i>Ka Pa`akai</i> framework used to develop the plan. <i>See</i> Ex. A-9 at 2-6 to 2-8.
112	30	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	Misleading. Presented out of context. The language of the FOF comes from the "first person" perspective and should be revised to reflect that the FOF is comprised

B-66.

		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	entirely of statements made by the Legislative Auditor with respect to the 1998 audit. Additionally, the FOF suggests that these statements pertain to conditions existing as of 2014 (or as of present day). In reality, these statements are a recap of conditions that existed as of the 1998 audit.. Since 1998, significant progress has been made to address the conditions identified in the 1998 audit. UH-TIO FOF 183, 188.
113	30	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	Misleading. Presented out of context. The language of the FOF comes from the "first person" perspective and should be revised to reflect that the FOF is comprised entirely of statements made by the Legislative Auditor with respect to the 2005 audit. Additionally, the FOF suggests that these statements pertain to conditions existing as of 2014 (or as of present day). In reality, these statements are a recap of conditions that existed as of the 2005 audit. Additionally, the 2014 audit recognized that UH Hilo had addressed many of the concerns raised in 2005. Ex. B.17k at 36.
114	31	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	See UH-TIO's response to Kakalia's proposed FOF 113.

B-67.

115	31	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 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	Misleading. Presented out of context. The language of the FOF comes from the "first person" perspective and should be revised to reflect that the FOF is comprised entirely of statements made by the Legislative Auditor with respect to the 2014 audit.
116	31	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.	Misleading. Presented out of context. The quoted excerpt states: "Within Area E, the TMT Observatory will be located on a roughly 5-acre site near the end of the existing 4-wheel drive road, at an elevation of approximately 13,150 feet (Figure 2-4). This site is known as 13N in reference to its elevation and its location on the northern plateau." Ex. A-3/R-3 at 2-10.
117	31	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	Misleading. Presented out of context. Quoted excerpt states: "Based on numerous previous studies, Area E was selected in Master Plans to be a suitable location for observatory

B-68.

		development because, for one, it would have either a limited or no adverse impact on physical cultural resources such as archaeological and historic resources. Within Area E, the site of the TMT Observatory, known as the 13N site, was selected in part because it is the portion of Area E most disturbed by previous activity. The Access Way maximizes the use of previously disturbed areas as well. Overall, roughly 6.2 acres of previously undisturbed land will be disturbed by the TMT Observatory and Access Way, with slight variations depending on which Access Way Option is selected." Ex. A-3/R-3 at 3-26.
		Misleading. Presented out of context. The proposed TMT Project site was selected in part because it is the portion of area that is most disturbed by previous activity. The access way maximizes the use of previously disturbed areas as well. Ex. A-3/R-3 at 3-26.
118	31	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 Misleading. Presented out of context. The staff report notes that the observatory footprint will be approximately 4.9 acres. Ex. B.70 at 1. See <i>also</i> UH-TIO FOF 252. The staff report further notes that "Approximately ten percent of the 13N Site in Area E has been previously disturbed;

B-69.

		approximately 1/3 of the existing Access Right of Way has been previously graded; and the Batch Plant site was initially graded as part of the road-paving project and was used as a staging area during the construction of several observatories.” Ex. B.70 at 7. Citation does not support the proposition that the Thirty-Meter Telescope will be built on “a pristine plateau.” Indeed, portions of the northern plateau have been previously disrupted. The proposed TMT Project site was selected in part because it is the portion of area that is most disturbed by previous activity. The access way maximizes the use of previously disturbed areas as well. Ex. A-3/R-3 at 3-26. Additionally, the FOF is misleading and presented out of context. The 8.5 acre (approx.) footprint includes not only the observatory dome and the Access Way, but also the support building, parking area, area disturbed by construction. <i>See</i> Ex. A-1/R-1 at 3-5. Moreover, a 2.5 acres of the total 8.5 acre footprint has previously been disturbed. <i>See</i> UH-TIO FOF 850. Not in dispute. However, this is more properly a COL.
119	31	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

B-70.

		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	32	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	Misleading. Partial quotation. The quoted excerpt states thereafter: “The sublease will be negotiated after the Project receives a CDUP and will be consistent with the existing Master Lease between UH and the BLNR, adopted under HRS Chapter 171.” Ex. A-3/R-3 at 3-159. See UH-TIO FOF 208-209. Not in dispute as per cite in exhibit only.
121	32	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	32	The TMT would take approximately five years to decommission. Sanders Tr. August 15, 2011, P 82: 2-5	Citation does not support the proposition. See UH-TIO FOF 375. Not in evidence. The record of the prior CDUA proceeding is not in evidence. UH-TIO note, however, that the record in this proceeding reflects that the TMT will take approximately 3-4 years to decommission, and decommissioning will be in compliance with the Decommissioning Plan. UH-TIO FOF 331.
123	32	Mr Hayes, project manager for the TMT EIS, stated that Overall the existing level of cumulative visual impacts from the past projects at the	False. Misstates and misrepresents the cited testimony.

B-71.

124		summit Is considered to be substantial, significant and adverse. Tr. 10/25/16, V.3 at 155:10-25	Misleading. Presented out of context. See UH-TIO FOF 439-440.
125	32	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	Misleading. Partial quotation. Mr. Hayes went on to state "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 at 181:1-10.
126	32	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	Misleading. Presented out of context. See UH-TIO FOF 439-440.
127	33	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	Not in dispute.
128	33	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)	Misleading as to any legal conclusions drawn from the statement. The incremental increase in the cumulative visual impact due to the TMT project will be less than significant. WDT Hayes at 21-23.
		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	Not in evidence (citation to statement made by cross-examiner).
			Misleading. Partial quotation.
			Not in dispute as to statement;
			Misleading as to any legal conclusions drawn therefrom.

129	33	the Mauna Kea Management Board's Hawaiian Culture Committee, toward the development of appropriate procedures and protocols regarding cultural issues. [EXHIBIT O-4]	Irrelevant/Inapplicable. Unsupported/Unsubstantiated.
130	33	S Kakalia states that KKMCM 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) 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]	Not in dispute.
131	33	Kakalia states that this type of direction supports the proactive intent of founding KKMCM 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	Incomplete. Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Not credible.
132	33	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)	Citation does not support proposition. CR-2 of the Comprehensive Management Plan does not speak to any requirement for community engagement based on priorities of development. See Ex. A-9 at 7-7.
133	33	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)	Misrepresentation. The Final Environmental Impact Statement ("FEIS") does not state that UH Hilo "failed" to fully determine the significance of impact to the alpine stone desert ecosystems from activities to date. The FEIS merely states that such a determination had not yet been

		made. Ex. A-3/R-3 at S-8. Additionally, the FEIS does not state that all resources have been substantially and adversely impacted. For example, the FEIS states that the past cumulative impact on other resources such as water, sonic environment, and traffic has been less than significant. Ex. A-3/R-3 at S-8. Misleading. Presented out of context. The FEIS states: "the Project will add a limited increment to the current level of cumulative impact... For those resources that have been impacted to a less than significant degree by past and present actions, the Project would not tip the balance from a less than significant level to a significant level and the less than significant level of cumulative impact would continue." Ex. A-3/R-3 at S-9; <i>see also</i> UH-TIO FOF 466-502.
		The displacement of roughly 6 acres of alpine stone desert lava habitat is less than significant because this represents less than 0.5% of this type of habitat available. UH-TIO FOF 474.
134	34	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 Citation does not support proposition (incorrect cite). Misleading. Proposed FOF does not address specific impacts of TMT. Presented out of context. The quoted

B-74.

	excerpt states: “The Project impacts will occur within the context of the current conditions at Project sites. That context includes the presence of observatories and roads in the summit region that have had direct impacts to roughly 63 acres of the cinder cones. As detailed in Section 3.16.2, the past actions on Maunakea have resulted in substantial, significant, and adverse impacts to geologic resources, primarily due to the alteration of the cinder cone morphology. The TMT Observatory and the Access Way will unavoidably remove any surface geologic structures present, such as lava flow morphology and glacial features in the summit region. However, such geologic features are not unique on Maunakea and are better developed at many other areas, especially on the southern summit area adjacent to the Mauna Kea Access Road in the MKSR Natural/Cultural Preserve Area and the Ice Age NAR. Nevertheless, the destruction of any surface geologic features denigrates the Mauna Kea NNL; however, the Project will destroy less than 0.01 percent, roughly 6.2 acres (with slight variations depending on which Access Way Option is selected), of the surface geology within the 83,900 acre Mauna Kea NNL. At most, this destruction of surface geologic features would only include
--	--

		roughly 0.2 acres of a cinder cone. Ex. A-3/R-3 at 3-111 – 3-112 (emphasis added).
		Misleading. Presented out of context. The FEIS notes that the potential environmental impacts will occur within the context of current conditions, which include the context of impacts upon cinder cones, and past actions that have resulted in substantial, significant, and adverse impacts to geologic resources, primarily due to the alteration of the cinder cone morphology. Ex. A-3/R-3 at 3-111
135	34	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 Misleading. Presented out of Context Misleading. Partial Quotation Mr. White's full response was: “The decommissioning commitment upon the end of facilities used is to restore the site as nearly as possible to the way it is now. I am not aware of any of the -- of any sites, historic sites that are on that property that would be destroyed and could not be -- so could you get it back so that you -- there was absolutely no evidence that it had ever been there? That's kind of doubtful, but given the nature of the terrain, it could be restored to the point I think where those looking at it from a distance would not recognize a big scar on the land. So in that sense, I would say, yes, it is

136			restorable.” See Tr. 10/20/16 at 80:21-81:7 (emphasis added). TIO Sublease requires TIO to restore the site at the end of the useful life of the TMT Observatory. UH-TIO FOF 208, 322-323, 331-337. Misleading, presented out of context. UH-TIO object to this proposed FOF to the extent that it is intended to imply that the TMT Project will have a substantial adverse impact on hydrology resources. See UH-TIO FOF 796-823. The NRMP states that the pathway for introduction is unknown. The reliable, probative, and credible evidence establishes that the TMT Project will cause minimal surface runoff, and the impacts of such runoff will not be significant. See WDT Nance at 2; Tr. 12/13/16 at 98:5-14 TMT Project will not have a substantial adverse impact on the water resources and hydrology of Mauna Kea, including Lake Waiau and the groundwater underlying Mauna Kea. UH-TIO FOF 796-823. It is not physically possible for surface runoff from the TMT Observatory to flow
34	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			to and over the Pu'u Waiau crater rim into the lake. UH-TIO FOF 799-801. The TMT Observatory will have a zero-discharge wastewater system. UH-TIO FOF 802. Mr. Lee testified that the waters "have always been clean," even despite the presence of the existing observatories. UH-TIO at 811. Misleading. Presented out of Context The chance of a spill entering the surrounding environment is negligible. UH-TIO FOF 824-839. The TMT Project will employ mitigation measures to minimize the potential for an accidental spill while waste materials are in transit down the mountain to a proper disposal site. UH-TIO FOF 427. Additionally, the implementation of a Ride-Sharing Program that will reduce the number of vehicle trips per day to the summit. UH-TIO FOF 492. Misleading. Presented out of Context. This finding of fact does not pertain to specific impacts caused by TMT. The document states, following the quoted excerpt: "Threats to the natural environment due to escape and possible subsequent migration of contaminants vary depending upon the type of contaminant, release volume, and
34	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	
138	34	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	

B-78:

		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. Recognizing that most of these activities are not OMKM's responsibility, natural resource management staff nonetheless must be aware of materials being stored, used, and transported, to assist them in responding to potential contaminant releases and minimizing impacts to natural and cultural resources." Ex. A-10 at 4.2.13. The TMT Project will implement measures to mitigate the risk of an accident spill to the extent logically and reasonably practicable based on best means and methods available to mitigate against such events. UH-TIO FOF 426-430. The TMT Project's storage and waste management include a Spill Prevention and Response Plan and a Materials Storage/Waste Management Plan. UH-TIO FOF 430, 829-834. In handling all hazardous materials, TIO will comply with existing federal and state laws. Hazardous materials will be stored in areas with secondary containment that will capture any material that may accidentally
--	--	---

B-79.

139	35	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 NRMF 4.2-13	escape the primary storage unit. The TIO will utilize Environmental Protection Agency-licensed contractors to transport any hazardous waste off of Mauna Kea to be disposed of appropriately. UH-TIO FOF 828, 970. See supra UH-TIO's response to Kakalia's proposed FOF 138.
140	35	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	Citation does not support proposition Irrelevant/Inapplicable – spills that occurred in the past cannot be attributable to the TMT Project that has yet to be built. The TMT Project will implement measures to mitigate the risk of an accident spill to the extent logically and reasonably practicable based on best means and methods available to mitigate against such events. UH-TIO FOF 426-430. The TMT Project's storage and waste management include a Spill Prevention and Response Plan and a Materials Storage/Waste Management Plan. UH-TIO FOF 430, 829-834. No mercury will be used by or at the Observatory, and no hazardous

B-80.

141	35	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. waste is anticipated to be generated at the TMT Observatory. UH-TIO FOF 824-828. Misleading. Presented out of Context. Proposed FOF does not pertain to specific impacts of the TMT Project. The quoted document states, in relevant part: “The cesspools, septic tanks, and associated leach fields at the summit and Hale Pohaku have been designed to meet State DOH permit requirements for sanitary waste systems. With telescope facility upgrades, many of the original cesspools have been replaced with septic tanks. Currently there are eight septic tanks with leach fields or disposal pits and three cesspools (NASA 2005). Solid and liquid waste discharged into these approved systems should minimize direct discharge of solid waste in the effluent and into the ground and allow for physical and bio-processing.” Ex. A-10 at 3-33 – 3-34. Irrelevant/Inapplicable. The Project will not utilize a septic system to dispose of domestic wastewater. All wastewater will be trucked off the mountain for disposal. Ex. A-3/R-3 at 3-33. The TMT Project will implement measures to mitigate the risk of an accident spill to the extent logically and reasonably practicable based on best means and
-----	----	---

			methods available to mitigate against such events. UH-TIO FOF 426-430. The TMT Project's storage and waste management include a Spill Prevention and Response Plan and a Materials Storage/Waste Management Plan. UH-TIO FOF 430, 829-834.
142	35	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).	Irrelevant/Inapplicable Misleading. Presented out of Context. Proposed FOF does not pertain to specific impacts of the TMT Project.
143	35	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.	Misleading. Presented out of Context. This citation does not pertain to specific impacts of the TMT Project. UH-TIO object to this proposed FOF to the extent that it is intended to imply that the TMT Project will have a substantial adverse impact on hydrology or biological resources. <i>See</i> UH-TIO FOF 466-502, 796-823. The TMT Project will implement measures to mitigate the risk of an accident spill to the extent logically and reasonably practicable based on best means and methods available to mitigate against such events. UH-TIO FOF 426-430. The TMT Project's storage and waste management include a Spill Prevention and

B-82.

144	35	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	Response Plan and a Materials Storage/Waste Management Plan. UH-TIO FOF 430, 829-834. Misleading. Presented out of Context. Misleading. Partial quotation. Mr. Nance testified that the TMT Observatory and a portion of the access road would create less than two acres of impervious surfaces. Tr. 12/13/16 at 98:5-14. Relevant testimony was as follows: “The TMT Observatory and a portion of the access road would create less than two acres of impervious surfaces that would cause runoff to occur during precipitation events. This runoff, because of the location of the observatory on the north flank and below the summit, the runoff would start downhill to the north. It's very likely it wouldn't traverse very far before being lost to percolation into the permeable natural ground, and otherwise wouldn't be an issue.” Tr. 12/13/16 at 98:5-14 (emphasis added). The reliable, probative, and credible evidence establishes that the TMT Project will cause minimal surface runoffs, and the impacts of such runoff will not be significant. <i>See</i> WDT Nance at 2; Tr. 12/13/16 at 98:5-14 Contamination of groundwater is
-----	----	---	---

B-83.

145	35	extremely remote and very unlikely from the TMT Project. UH-TIO FOF 431-432, 796-823. It is not physically possible for surface runoff from the TMT Observatory to flow to and over the Pu'u Waiau crater rim into the lake. UH-TIO FOF 799-801. The TMT Observatory will have a zero-discharge wastewater system. UH-TIO FOF 802. Any discharge on the summit would be naturally treated and filtered through thousands of feet of the porous lavas, thereby removing any contamination in that discharge by the time it reaches groundwater. UH-TIO FOF 804. Misleading. Presented out of context. UH-TIO object to this proposed FOF to the extent that it is intended to imply that the TMT Project will have a substantial adverse impact on hydrology resources. See UH-TIO FOF 796-823. Document states in relevant part: "Trash and other solid waste generated as part of the activities associated with the TMT at both the TMT Observatory and at Hale Pohaku will result in a minor increase in the generation and disposal of solid waste from Maunakea. It is anticipated
		TMT project managers anticipate the generation of approximately 120 cubic feet of trash per week. Ex A-003 FEIS Vol.1, p. 3-129.

		that the TMT will generate trash at a rate similar to that of the Keck observatory, approximately 120 cubic feet per week. Solid waste and trash generated by the daily operation will be primarily composed of waste paper, spent containers, and limited amounts of food waste. Like the existing observatories, in compliance with the existing regulations, the Project's waste or leftover material will be recycled and reused to the extent possible. Scrap metal, plastic, and glass will be collected for recycling, and the remaining solid waste rubbish will be removed and trucked off the mountain for disposal in a landfill. Between pickups, rubbish will be stored indoors in lidded trash containers. Cans, plastic, and glass bottles, paper and cardboard, and scrap metal will be collected in separate containers and transported to Headquarters for reuse or recycling. Wastes such as used oil and glycol, will be removed to also be recycled by licensed contractors. No solid waste will be disposed of at the summit.” Ex. A-3/R-3 at 3-129.
146	35	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. Misleading. Presented out of context. UH-TIO note that this FOF refers to potable water, and the use is less than significant. Ex. A-3/R-3 at 3-120. Document states in relevant part:

B-85.

		“The Project will slightly increase the amount of freshwater used island-wide due to water use by employees at the various Project facilities. Assuming a maximum daily use of 20 gallons a day per person at the work place, the following daily uses of potable water are estimated 480 gallons at the TMT Observatory, possibly 200 gallons at the potential TMT Mid-Level Facility, and 1,600 gallons at the Headquarters. This represents less than 0.01 percent of the current island-wide daily potable water pumpage, and 0.0001 percent, of the estimated sustainable use of freshwater from the island's aquifers. Also, in compliance with the existing requirements, water efficient fixtures will be installed and water efficient practices implemented to reduce the demand on freshwater resources. Therefore, this impact will be less than significant.” Ex. A-3/R-3 at 3-120 (emphasis added).
147	35	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
148	36	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
		Citation does not support proposition. See UH-TIO FOF 427. Unsupported/Unsubstantiated. Misleading. Presented out of context. FOF fails to demonstrate how this relates to the TMT Project. The FEIS goes onto conclude that “the impact of the Project on air quality and the climate will be less than

		pollutants is aided by strong winds. (Ex A-003 FEIS, p. 3-182)	significant." Ex. A-3/R-3 at 3-185. Misleading. Partial quotation. Quoted language is preceded by the following statement: "Air quality monitoring has been performed at the Mauna Loa Observatory at an elevation of approximately 11,140 feet since its construction in 1956. This monitoring station provides data most representative of the conditions at Maunakea. The data gathered at this station indicate that the air quality at the Mauna Loa Observatory is excellent and in attainment status with State and National Ambient Air Quality Standards (NAAQS). Given the similarities between the two locations (Maunakea and Maunaloa), it has been inferred that the overall air quality at Maunakea is excellent as well. " Ex. A-3/R-3 at 3-182 (emphasis added).
149	36	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	Incomplete. See UH-TIO FOF 433-464. Misleading. Presented out of context. See UH-TIO FOF 978-983. This Proposed FOF does not address specific impacts of the TMT Project. The FEIS states that "the impact of the Project on air quality and the climate will be less than significant." Ex. A-3/R-3 at 3-185.

B-87.

150	36	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	The noise impacts from the TMT Project will be less than significant. UH-TIO FOF 978-983; Ex. A-3/R-3 at 3-201 to 203. Incomplete. See UH-TIO FOF 433-464. Misleading. Presented out of context. These comments were made with regards to the Draft Environmental Impact Statement (during the comment period). The Department of Land and Natural Resources' concerns regarding visual impacts were specifically addressed in the FEIS, as noted in Ex. A-4/R-4 at 21 of 531. Among other revisions, the FEIS included a new visualization and discussed other viewplanes. The FEIS noted that the TMT Observatory would not block or substantially obstruct the identified views and viewplanes and its impact is considered less than significant. Ex. A-004 at 21 of 531. Not credible (D.Ward not a cultural practitioner). Unsupported/Unsubstantiated. See UH-TIO FOF 704, 775-795, 868-913. Assumes facts not in evidence as it was not established by any evidence that such view planes were part of any bundle of rights traditionally and culturally exercised.
151	36	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	

B-88.

152			UH-TIO's FOF regarding visual and aesthetic resources is more credible and supported by the record. UH-TIO FOF 775-795.
153	36	Applicant does not define "noise sensitive areas." Ex A-003 FEIS Section 3.13 Noise p 3-179	Inaccurate/False. The FEIS provides various descriptions of "noise sensitive" locations, areas, and sites. <i>See, e.g.,</i> Ex. A-3/R-3 at 3-173 (identifying noise sensitive sites near the TMT Project), 3-175 (identifying Kūkahau'ula as a noise sensitive location), 3-179 (describing all noise sensitive areas located in the summit region); <i>see also</i> UH-TIO FOF 980. The noise impact from the TMT Project will be less than significant. UH-TIO FOF 978-983. Inaccurate/False. Misrepresentation. The TMT Project operations are not expected to cause a significant noise impact, and although no mitigation measures (beyond compliance with applicable regulations are required) mitigation measures will be employed, the finding of less than significant impact to noise sensitive areas addresses the cultural impact. Ex. A-3/R-3 at 3-179-180; UH-TIO FOF 978-983.
154	37	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	Misrepresentation. Misleading. Presented out of Context.
	37	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	Misrepresentation. Misleading. Presented out of Context.

B-89.

		and Decommissioning p 3-202	UH did not concede that “significant” noise would result. Noise impacts from construction will be mitigated through compliance with conditions in Noise Permits and the Noise Variance. Construction noise at the TMT Observatory site is likely to be inaudible from a relatively short distance from the source due to the existing background noise associated with the strong wind conditions at the summit. Ex. A-3/R-3 at 3-203.
155	37	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	Misleading. Misrepresentation. The EIS states that proper steps will be taken to ensure that construction complies with all applicable noise regulations. <i>See</i> Ex. A-3/R-3 at 3-203. A noise variance would be obtained in connection with noise permits so that construction noise will comply with the variance and permits, and the TMT Project will comply with all variance and permit conditions. Ex. A-3/R-3 at 3-203. Misleading. Presented out of context. UH-TIO clarified that no explosives or blasting will be done to construct the TMT Project. <i>See</i> UH-TIO FOF 283.
156	37	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	

B-90.

		to dig foundations for the TMT Observatory. FEIS Section 3.15 Construction and Decommissioning p 3-202	The sound does not project very far under most conditions. UH-TIO FOF 978. The noise impacts from the TMT Project will be less than significant. Construction noise at the TMT Observatory site is likely to be inaudible from a relatively short distance from the source due to the existing background noise associated with the strong wind conditions at the summit. UH-TIO FOF 978-983; Ex. A-3/R-3 at 3-201 to 203.
157	37	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	Misleading. Presented out of context. The noise generated by the TMT Observatory will be minimal. UH-TIO FOF 978-986. The sound does not project very far under most conditions. UH-TIO FOF 978. The noise impacts from the TMT Project will be less than significant. UH-TIO FOF 978-983; Ex. A-3/R-3 at 3-201 to 203. Misleading. Partial quotation. The quoted portion is followed by this statement: “The Pu‘u Wekiu/Kukahau‘ula Summit and Trailhead measurement locations experienced measured noise levels of 47 and 49 dBA Leq, and 50 and 53 dBA L10. Sounds from existing observatory HVAC exhaust systems were not noticeable during the summit location field measurement;

			despite its remote location, the summit was not completely silent. The dominant noise source for sound levels measured at recreational use sites was due to a steady wind of 5 to 14 mph moving from the direction of the nearby observatories toward the measurement locations. Winds in this range are typical for this area and generally dominate the ambient noise levels.” Ex. A-3/R-3 at 3-176 (emphasis added).
158	37	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)	Citation does not support proposition (incomplete citation). This citation to the record is unclear. UH-TIO do not dispute, however, that, as a mitigation measure, TMT Observatory operations will be minimized for up to four days per year to accommodate cultural activities on culturally sensitive days of the year. UH-TIO FOF 686; Ex. A-3/R-3, at S-12. Misleading. Presented out of context. The noise generated by the TMT Observatory will be minimal. UH-TIO FOF 978-986. Mischaracterization of applicant’s legal position. Incomplete. See UH-TIO FOF 343.
418	37	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	37	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	Misleading. Presented out of context. The mitigation measures presented in this FOF are a few of many mitigation measures that will be employed by UH and TIO. See,

		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	e.g., Exhibit B to Exhibit A-1 (CDUA) at 4-1 to 4-44; Ex. A-71; Ex. A-3/R-3 at S-12 to S-19.
420	38	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	Citation does not support proposition. Inaccurate/False. The TMT Project could have been constructed at the summit. The northern plateau was chosen for a variety of reasons. See UH-TIO FOF 169, 306, 307.
421	38	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.	Not in dispute as to statement in CMP. Misleading as to any legal conclusions implied therefrom.
422	38	“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))	Irrelevant/Inapplicable. Misleading. Presented out of context. Misleading. Partial quotation. HRS § 304A-2170 also provides that the funds may be used for the enforcement of administrative rules related to Mauna Kea. Administrative rules are a tool that is used to manage and protect resources on Mauna Kea.
423	38	Mauna Kea Lands Fund does not provide for the management of	See <i>supra</i> UH-TIO’s response to Kakalia’s

424	38	conservation district resources. (HRS §304A-2170(b)(1)) 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.	proposed FOF 422. Unsupported/Unsubstantiated. Argumentative.
425	38	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	Citation does not support proposition. Otherwise, FOF not in dispute.
426	38	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	Unsupported/Unsubstantiated. Not credible. Irrelevant/Inapplicable. Lack of Jurisdiction. Argumentative.
427	39	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	Citation does not support proposition. Misleading. Partial quotation. The quoted excerpt is preceded by the following sentence: "The fundamental flaw that Sierra Club et al. make is not recognizing that strong management - which they fought for - requires significant investment." Ex. A-7/R-7 at 60.
428	39	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.	Unsupported/Unsubstantiated. Not credible.

B-94.

		No decommissioning project will restore the cultural and natural landscape that has been altered. The impact is irrevocable. Ex B.17a Ward WDT	Argumentative.
429	39	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. 1/19/12017)	Citation does not support proposition. Unsupported/Unsubstantiated. Lacks evidentiary support.
430	39	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. 1/19/12017, Vol 27:159:22-25, 160:1-3	Unsupported/Unsubstantiated. Not credible. Inaccurate/False. There are no unique species or assemblages of species at the TMT Project site. See UH-TIO FOF 474, 477-479.
431	39	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	Citation does not support proposition. Unsupported/Unsubstantiated. Misleading. Presented out of context. The starting point for determining the level to restore a site begins with full restoration. UH-TIO FOF 336; Ex A-13 at 26.
438	40	The TMT project satisfies the regulatory definition of "significant effect" because it proposes to construct a new 18-story, 5-acres 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.	Unsupported/Unsubstantiated.
439	40	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	Irrelevant/Inapplicable. The time for a challenge to the FEIS under Chapter 343 has passed. See UH-TIO COL 385.

		economic welfare, social welfare, or cultural practices of the community and State.”	
440	40	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	Citation does not support proposition. Mischaracterization.
441	40	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	Misleading. Partial quotation. Quoted section of the document states thereafter: “In general, the Project will add a limited increment to the current level of cumulative impact. Therefore, those resources that have been substantially, significantly, and adversely impacted by past and present actions would continue to have a substantial, significant, and adverse impact with the addition of the Project. For those resources that have been impacted to a less than significant degree by past and present actions, the Project would not tip the balance from a less than significant level to a significant level and the less than significant level of cumulative impact would continue.” Ex. A-3/R-3 at S-9.
442	40	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	Unsupported/Unsubstantiated. Misleading. Presented out of context. The TMT Project would not result in a substantial, significant, and adverse impact to traditional and customary practices. See UH-TIO FOF 433-839, COL 177-217.

443	40	Project specific impacts would have a significant effect on the natural, cultural, archaeological, and historic resources. FOF # 291-405	Citation does not support proposition (cited FOF do not exist) Unsupported/Unsubstantiated. Not credible. Incorrect/Inaccurate. See UH-TIO FOF 433-839, COL 177-217; Ex. A-3/R-3 at S-9 to S-19. Unsupported/Unsubstantiated. See UH-TIO FOF 611-774, COL 177-217. Misleading. Presented out of context. Although the TMT Observatory would add a new visual element, the project's visual impact will be less than significant under HAR § 11-200-12. UH-TIO FOF 777. Misleading. Partial quotation. Quoted portion is preceded by the following statement: "The Project's visual impact is perceived by some to be significant; however, in the context of the existing observatories and the fact that the TMT Observatory will not block or substantially obstruct the identified views and viewplanes of the mountain, which is the applicable significance criteria in § 11-200-12 of the HAR, the Project's visual impact will be less than significant." Ex. A-3/R-3 at 3-101.
444	40	Project specific impacts would have a significant effect on the continued practice of traditional and customary Native Hawaiian practices.	
445	41	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	

B-97.

446	41	The Applicant concedes that construction of the TMT would destroy natural wildlife habitat that would need 100 years to recover. FOF#303-310	Citation does not support proposition (cited FOF does not exist). Unsupported/Unsubstantiated. Citation does not support proposition (cited FOFs do not exist). Not credible. Unsupported/Unsubstantiated. Not credible. Inaccurate/False. See UH-TIO FOF 373, 796-823, COL 177-217; Ex. A-3/R-3 at 3-122 (“The mitigation measure will further reduce the level of impact to water resources, which is considered less than significant without any mitigation”). Unsupported/Unsubstantiated. Citation does not support proposition. Inaccurate/False. See Ex. A-3/R-3 at S-8 (stating that the existing cumulative impact to water resources on Mauna Kea is less than significant); Ex. A-3/R-3 at 3-122 (“The mitigation measure will further reduce the level of impact to water resources, which is considered less than significant without any mitigation”); UH-TIO FOF 373.
447	41	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	41	The existing potential risk to water resources on Mauna Kea is significant. FoF #345	

449	41	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	See <i>supra</i> UH-TIO's response to Kakalia's proposed FOF 447. Inaccurate/False. See UH-TIO FOF 796-823. Unsupported/Unsubstantiated. Citation does not support proposition (cited FOFs do not exist). Citation does not support proposition. Unsupported/Unsubstantiated. Not credible. Incorrect/Inaccurate. See UH-TIO FOF 433-839. Unsupported/Unsubstantiated. Inaccurate/False. See Ex. A-3/R-3 at 3-101 ("in the context of the existing observatories and the fact that the TMT Observatory will not block or substantially obstruct the identified views and viewplanes of the mountain, which is the applicable significance criteria in § 11-200-12 of the HAR, the Project's visual impact will be less than significant"). Misleading. Presented out of context. Although the TMT Observatory would add a new visual element, the project's visual impact will be less than significant under HAR § 11-200-12. See UH-TIO FOF 777; WDT Hayes at 19 ("The standard industry
450	41	Based on the findings of fact above, the TMT may have a significant effect on water resources, rare, native species, and air quality.	
451	41	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	41	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	

B-99.

			practice for conduct a visual impact analysis is to consider the context of the proposed land use. In other words, the impact of the proposed Project must be assessed in the context of the Mauna Kea Astronomy Precinct. The Astronomy Precinct is not a bare mountaintop with no telescope structures. Rather, there are 11 other observatories in the Astronomy Precinct. The TMT Observatory will not substantially obstruct or block existing views of Maunakea from around the island of Hawai'i. The TMT Observatory will be visible from only about 14 percent of the island area. The new area where the TMT Observatory will be visible and where currently none of the existing observatories can be seen is approximately only 1.2 percent of the area of the island. Furthermore, the TMT Observatory will be visible to only about 15.4 percent of the population, and the great majority of those residents already can see one or more observatories from their residences. Therefore, while the TMT Observatory will be a new visual element among the existing observatories, it does not substantially alter the current overall visual impact of the Astronomy Precinct area"(emphasis added)).
453	41	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-	Citation does not support proposition. Mischaracterization. This COL implies that Mr. Hayes stated that the TMT Project

B-100.

6			would result in a substantial, significant, and adverse impact to the visual resources on Mauna Kea. However, Mr. Hayes testified that the TMT Project would merely add an increment to the cumulative impact, but would not "tip any of the evaluated impacts from a significant -- or from a less than significant to a significant level." Tr. 10/25/16 at 181:6-10. Misleading. Partial quote. The complete question and testimony are as follows: Q: 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? A: 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 at 181:1-10. Irrelevant/Inapplicable. Title 11, Chapter 200 of the Hawai'i Administrative Rules pertains to environmental impact statements. The time for objecting to the FEIS in this matter has long passed.
454	41	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	41	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. Detrimentially 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	42	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.”	Irrelevant/Inapplicable. Title 11, Chapter 200 of the Hawai‘i Administrative Rules pertains to environmental impact statements. The time for objecting to the FEIS in this matter has long passed.
457	42	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.	Citation does not support proposition.
458	42	Based on the findings of fact above, however, the foreseeable impacts of	Mischaracterization.

		the TMT proposal are both individually and cumulatively significant.	Unsupported/Unsubstantiated. Incomplete (the COL does not specify the nature of the alleged impacts, nor whether such impacts are adverse or positive). Misleading. Presented out of context. Although the TMT Observatory would add a new visual element, the project's visual impact will be less than significant under HAR § 11-200-12. UH-TIO FOF 777. Unsupported/Unsubstantiated. See UH-TIO FOF 433-839, COL 177-217. Assumes facts not in evidence.
459	42	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.	Unsupported/Unsubstantiated. See UH-TIO FOF 433-839, COL 177-217.
460	43	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.	Inaccurate/False. Misrepresentation re: "the admitted significant effects of the TMT project." Unsupported/Unsubstantiated. See UH-TIO FOF 433-839, COL 177-217. Assumes facts not in evidence.
461	43	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.	Unsupported/Unsubstantiated. Mischaracterization. HAR § 13-1-35(k) states that "The party initiating the proceeding and, in the case of proceeding on alleged violations of law, the department, shall have the burden of proof, including the burden of producing evidence as well as the burden of persuasion. The quantum of proof shall be a preponderance

462	43	HAR § 11-200-17 (M) provides that: Q “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.” (b)	of the evidence.” Similarly, HAR § 13-5-30(c) provides that “[t]he applicant shall have the burden of demonstrating that a proposed land use is consistent with.” There is no rule that imposes a specific burden of proof on the applicant to demonstrate that the effects of a proposed project are mitigated to a level less than significant. Irrelevant/Inapplicable. Title 11, Chapter 200 of the Hawai‘i Administrative Rules pertains to environmental impact statements. The time for objecting to the FEIS in this matter has long passed.
-----	----	--	--

463	43	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”	Irrelevant/Inapplicable.
464	44	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, <i>Morimoto v. Bd. of Land & Natural Res.</i> , 107 Haw. 296 (2005)	Citation does not support proposition. Misrepresentation. The <i>Morimoto</i> case does not state any requirement that there be a direct nexus between the harm caused by the proposed project and the mitigation effort promised.
465	44	In addition, there must be an assurance that compensation offered will result in minimizing the impacts caused by the project. See, <i>Morimoto v. Bd. of Land & Natural Res.</i> , 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).	Citation does not support proposition. Misrepresentation. The <i>Morimoto</i> case does not state any requirement that the applicant provide assurances regarding minimization of the impacts caused by the proposed project.
466	44	Applicant UH-Hilo is legally responsible for all obligations and/or liabilities resulting from a finally approved CDUP. TMT is not a legal	Misleading. Presented out of context. The TIO Sublease requires TIO to comply with

		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.	the permit. Ex. B.02f at 3: The construction and operation of the Subleased Premises shall be conducted in strict compliance with the terms and conditions of Conservation District Use Permit HA-3568 approved by the Lessor on April 12, 2013 (the "TMT COUP"), including performance of all mitigation conditions set forth therein, and any amended or subsequent Conservation District Use Permit.
467	44	"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) 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.	Unsupported/Unsubstantiated. The 1977 Management Plan is merely a policy guide not intended to impose rigid standards. <i>See</i> UH-TIO FOF 339.
468	44		Unsupported/Unsubstantiated. The 1977 Management Plan is merely a policy guide not intended to impose rigid standards. <i>See</i> UH-TIO FOF 339.
469	44	The findings of fact in this case do not demonstrate that the Applicant has satisfy the requirements for mitigation of significant effects.	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Mischaracterization. There is no specific requirement that the applicant mitigate impacts. Mitigation efforts are a factor that should be considered in determining the merits of the CDUA. <i>See Morimoto v. Board of Land and Natural Resources</i> , 107 Hawai'i 296, 302-304 (2005). As such, there is no specific mitigation "requirement" to "satisfy," as Ms. Kakalia

470	44	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.	appears to assert. Unsupported/Unsubstantiated.
471	44	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.	Irrelevant/Inapplicable. Not in evidence.
472	45	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.	Unsupported/Unsubstantiated. Not credible. Inaccurate/False. Misleading. Presented out of context. The subsequent implementation of the CMP is monitored/evidenced by the annual reports to the BLNR. See Exs. A-15 to A-22.
473	45	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.	Unsupported/Unsubstantiated. Not credible.
474	45	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.	Unsupported/Unsubstantiated. Not credible.
482	45	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.	Incomplete. See UH-TIO FOF 463.
483	45	The sublease rent amount has not been negotiated, thus it is unknown how much money would be deposited into the fund.	Unsupported/Unsubstantiated. Not credible.

484	45	The Mauna Kea Lands Fund special fund is established under section 2170 of Chapter 304A, HRS. (HRS §304A-2170)	Inaccurate/False. See UH-TIO FOF 208. Inaccurate/False. HRS § 304A-2170 states in relevant part that “[t]here is established the Mauna Kea lands management special fund, into which shall be deposited . . . All net rents from leases, licenses, and permits, including fees and charges for the use of land and facilities within the Mauna Kea lands.” Not in dispute.
485	45	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	45	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”	Misleading. Partial quotation. HRS § 304A-2170 also provides that the funds may be used for the enforcement of administrative rules related to Mauna Kea.
487	45	“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))	Irrelevant/Inapplicable. Misleading. Partial quotation. HRS § 304A-2170 also provides that the funds may be used for the enforcement of administrative rules related to Mauna Kea. Administrative rules are a tool that is used to manage and protect resources on Mauna Kea

488	45	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.	Irrelevant/Inapplicable. Unsupported/Unsubstantiated. Misleading. Presented out of context. The fund is one of many tools that will be used to ensure protection, preservation, and conservation of resources on Mauna Kea.
489	46	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.	Inaccurate/False. There is no mitigation “requirement.” Additionally, there is no requirement that mitigation be “direct and enforceable.” <i>See supra</i> UH-TIO’s response to Kakalia’s proposed COL 469.
490	46	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.	Inaccurate/False. There is no mitigation “requirement.” Additionally, there is no requirement that mitigation be “direct and enforceable.” <i>See supra</i> UH-TIO’s response to Kakalia’s proposed COL 488.
491	46	“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).	Incomplete (unclear as to the implication of the quote). Citation does not support proposition. The cited case does not contain a passage stating that “Mitigation plans to monitor conditions and develop data in the future are insufficient.”
496	46	The University asserts that the TMT Observatory Corporation will commit a \$1 million annually to various workforce development and public	Irrelevant/Inapplicable. This citation is to case law from another jurisdiction that has its own distinct set of statutes, rules, and case law. Not in dispute. UH-TIO do note that it is TIO, not TMT Observatory Corporation,

497		education efforts. 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.	that will commit this funding. Irrelevant/Inapplicable. Misleading. Presented out of context. Misrepresentation. UH-TIO are not arguing that the \$1 million dollar contribution authorizes the BLNR to stray from complying with its duties/obligations. Inaccurate/False. The donation of funds is directly relevant to "Criteria 8" as provided under HAR § 13-5-30(c)(8), regarding public health, safety, and welfare. <i>See</i> UH-TIO FOF 937-938, COL 286-289.
498	46	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.	Inaccurate/False. Unsupported/Unsubstantiated.
499	46	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.	Decommissioning is relevant with regards to mitigation of overall impacts.
500	46	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.	Inaccurate/False. Decommissioning is relevant with regards to mitigation of overall impacts. Unsupported/Unsubstantiated. There is substantial evidence regarding TIO's and UH Hilo's commitment to the decommissioning process, as well as the binding nature of the decommissioning requirement. <i>See, e.g.</i> , UH-TIO FOF 140, 151-166, 208, 331-337.
501	47	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	Unsupported/Unsubstantiated.

B-110.

502	47	no telescopes on Mauna Kea by 2033. 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 permit to build the TMT in the conservation district of Mauna Kea.	Inaccurate/False. Unsupported/Unsubstantiated. Not credible. Contrary to Haw. S. Ct. ruling in <i>Kilakila 'O Haleakala</i> . See UH-TIO COL 116-121.
503	47	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.	Inaccurate/False. Unsupported/Unsubstantiated.
504	47	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	Not credible. Not in dispute.

		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	48	Under HAR 13-5-30(c), UH has the burden to demonstrate that the proposed land use is consistent with the above criteria.	Mischaracterization.
506	48	UH has failed to demonstrate that the proposed land use will not be materially detrimental to the public health, safety, and welfare.	Inaccurate/False. Unsupported/Unsubstantiated.
507	48	In a plain reading the words, "materially detrimental" may be interpreted to mean damaging or harmful in a sufficiently significant way.	Not credible. <i>See generally</i> UH-TIO FOF 937-1000, COL 273-293. Unsupported/Unsubstantiated.
508	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
509	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
510	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
511	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
512	48	Distress has been observed by experts in Native Hawaiians that are impacted by the TMT project.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.

513	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
514	48	The findings of fact above D and the record as a whole D is replete with evidence that the desecration of Mauna Kea is a source of immense pain for many people, especially Native Hawaiians.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
515	48	These facts have been known to the University at least since 2005 and the publication of Kepa Maly's Oral History of Mauna Kea.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
516	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
517	48	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.	<i>See supra</i> UH-TIO's response to Kakalia's proposed COL 506.
518	48	Moreover, the Applicant failed to refute concerns for the contamination of groundwater sources.	Unsupported/Unsubstantiated. Inaccurate/False. <i>See</i> UH-TIO FOF 796-823.
519	48	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.	Unsupported/Unsubstantiated. Mischaracterization. Misleading. Presented out of context. There will be no substantial, significant, and adverse impact to water resources on Mauna Kea as a result of the TMT Project. <i>See</i> UH-TIO FOF 796-823, COL 177-217.
520	49	It is also undisputed that telescope activity on Mauna Kea has resulted in the release of hazardous chemicals into the environment.	Unsupported/Unsubstantiated. Irrelevant/Inapplicable (as to past occurrences not related to the TMT Project).

			Mischaracterization.
521	49	The overall cumulative impact of telescope activity on Mauna Kea is acknowledged as being "significant, substantial, and adverse."	Misleading. Presented out of context. Mischaracterization. Past telescope activities have resulted in a significant and adverse impact to certain resources on Mauna Kea. The TMT Project will not result in a significant, substantial, and adverse impact to any resources on Mauna Kea. <i>See</i> UH-TIO FOF 433-839, COL 177-217.
522	49	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.	Unsupported/Unsubstantiated. <i>See</i> UH-TIO FOF 503-610, COL 177-217.
523	49	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.	Unsupported/Unsubstantiated. <i>See</i> UH-TIO FOF 503-774, COL 177-217.
524	49	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.	Unsupported/Unsubstantiated. <i>See</i> UH-TIO FOF 937-1000, COL 273-393293.
525	49	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.	Unsupported/Unsubstantiated. <i>See</i> UH-TIO FOF 466-774, COL 177-217.
526	49	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	Not in dispute.

527	49	of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.” <u>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:</u> 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.	Not in dispute.
628	49	<u>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:</u> ii. To preserve and protect traditional and customary native Hawaiian rights, the Board examines the following factors:	Not in dispute.
629	50	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;	Not in dispute.
630	50	The extent to which those resources, including traditional and customary native Hawaiian rights, will be affected or impaired by the proposed action; and	Not in dispute.
631	50	The feasible action, if any to be taken to reasonably protect native Hawaiian rights if they are found to exist.	Misleading. Presented out of context. This quote is with regards to the specific factual scenario underlying the <i>Ka Pa‘akai</i> case.

		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”) É 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	50	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.	Misleading. Partial quotation. The full quote is as follows: “[i]t is therefore, the intent of the legislature to conserve, protect, and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare. ” (Emphasis added).
633	50	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)	<i>See supra</i> UH-TIO’s response to Kakalia’s proposed FOF 28.
634	51	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-	Citation does not support the proposition.

635	51	003, p.3-128 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.	Misleading. Presented out of context. Additionally, as previously noted, "TMT Corporation" will not be involved in the construction or operation of the TMT Project. Otherwise not in dispute.
636	51	There is no dispute the TMT Corporation is in fact not named as the "applicant" on the CDUA-HA-3568.	Misleading. As previously noted, "TMT Corporation" will not be involved in the construction or operation of the TMT Project. Otherwise not in dispute.
637	51	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 <i>Ka Pa'akai</i> 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 <i>Ka Pa'akai</i> 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	Unsupported/Unsubstantiated. Misleading. Presented out of context. The CMP specifically outlines the <i>Ka Pa'akai</i> framework used to develop the plan. See Ex. A-9 at 2-6 to 2-8. This proceeding is being conducted pursuant to the rules and regulations of BLNR; and BLNR will make its <i>Ka Pa'akai</i> findings based upon the entire record of this case. BLNR has not delegated this responsibility
638	51	As the findings of fact show, the record is replete with confirmation that the Native Hawaiian petitioners in this case engage in constitutionally protected	Unsupported/Unsubstantiated. See UH-TIO FOF 611-774, COL 177-217; see also UH-TIO COL 86-87, 100-109, 327-335.

B-117.

		traditional and customary practices.	The evidentiary record is wholly lacking in reliable probative and substantial evidence that practices of Petitioners are constitutionally protected.
639	51	The findings of fact above demonstrated that:	Incomplete.
640	51	the entire conservation district of Mauna Kea is a known sacred landscape with viewplanes associated with navigation and many ancient trails (FOF #103)	Citation does not support proposition.
641	51	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)	Unsupported/Unsubstantiated.
642	51	the traditional and customary and religious practices include the collection of water, depositing piko, burial ceremonies, and religious observances.	Citation does not support proposition.
643	51	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)	Unsupported/Unsubstantiated.
644	52	these practices are of the class of practices protected by Article XII, sec. 7 of the Constitution and the related caselaw.	Unsupported/Unsubstantiated. See UH-TIO FOF 611-774, COL 177-217; see also UH-TIO COL 86-87, 100-109, 327-335.
645	52	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.	See supra UH-TIO's response to Kakalia's proposed COL 638.
646	52	Article 11, Section 1. "For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's	Unsupported/Unsubstantiated. See UH-TIO FOF 611-774, COL 177-217; see supra UH-TIO's response to Kakalia's proposed COL 638.
			Misleading. Presented out of context. The Public trust doctrine has never been extend

647	52	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. 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."	beyond the context of water resources. UH-TIO FOF 1007, COL 295-323.
648	52	In <i>Re Water Use Permit Applications</i>, 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.	Misleading. Presented out of context. The Public trust doctrine has never been extend beyond the context of water resources. UH-TIO FOF 1007, COL 295-323.
649	52	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."	With regards to the quotations of the "Waiahole Ditch Case": Not in dispute. With regards to legal conclusions/application of the Waiahole Ditch Case: Incorrect/False. See UH-TIO COL 295-323.
650	53	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	Citation does not support proposition. Misleading. Presented out of context.

651	53	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. 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.	Incorrect/False. See UH-TIO COL 295-323.
			Incorrect/False. See UH-TIO COL 295-323.

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII

IN THE MATTER OF

Contested Case Hearing Re Conservation
District Use Application (CDUA) HA-3568 for
the Thirty Meter Telescope at the Mauna Kea
Science Reserve, Ka'ohē Mauka, Hāmākua,
Hawai'i, TMK (3) 4-4-015:009

Case No. BLNR-CC-16-002

CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned certifies that the above-referenced document was served upon the
following parties by email unless indicated otherwise:

DLNR Office of Conservation and Coastal
Lands ("OCCL")
dlnr.maunakea@hawaii.gov

MICHAEL CAIN
Office of Conservation and Coastal Lands
1151 Punchbowl Street, Room 131
Honolulu, HI 96813
michael.cain@hawaii.gov
Custodian of the Records
(original + digital copy)

DAVE M. LOUIE, ESQ.
CLIFFORD K. HIGA, ESQ.
NICHOLAS R. MONLUX, ESQ.
Kobayashi Sugita & Goda, LLP
dml@ksglaw.com
ckh@ksglaw.com
nrm@ksglaw.com
Special Deputy Attorneys General for
ATTORNEY GENERAL DOUGLAS S. CHIN,
THE DEPARTMENT OF THE ATTORNEY
GENERAL, and DEPUTY ATTORNEYS
GENERAL IN THEIR CAPACITY AS
COUNSEL FOR THE BOARD OF LAND AND
NATURAL RESOURCES and HEARING
OFFICER

WILLIAM J. WYNHOFF, ESQ.
Deputy Attorney General
bill.j.wynhoff@hawaii.gov
Counsel for the BOARD OF LAND AND
NATURAL RESOURCES

J. DOUGLAS ING, ESQ.
douging@wik.com
ROSS T. SHINYAMA, ESQ.
rshinyama@wik.com
SUMMER H. KAIawe, ESQ.
skaiawe@wik.com
Watanabe Ing LLP
*Counsel for TMT INTERNATIONAL
OBSERVATORY, LLC*

JOSEPH KUALII LINDSEY CAMARA
kualiic@hotmail.com

HARRY FERGERSTROM
P.O. Box 951
Kurtistown, HI 96760
hankhawaiian@yahoo.com
(via email & U.S. mail)

WILLIAM FREITAS
pohaku7@yahoo.com

TIFFNIE KAKALIA
tiffniekakalia@gmail.com

BRANNON KAMAHANA KEALOHA
brannonk@hawaii.edu

GLEN KILA
makakila@gmail.com

JENNIFER LEINA'ALA SLEIGHTHOLM
leinaala.mauna@gmail.com
leina.ala.s808@gmail.com

LANNY ALAN SINKIN
lanny.sinkin@gmail.com
Representative for the Temple of Lono

MAUNA KEA ANAINA HOU
c/o Kealoha Pisciotta
keomaivg@gmail.com

LINCOLN S.T. ASHIDA, ESQ.
lsa@torkildson.com
NEWTON J. CHU, ESQ.
njc@torkildson.com
Torkildson, Katz, Moore, Hetherington &
Harris
*Counsel for PERPETUATING UNIQUE
EDUCATIONAL OPPORTUNITIES (PUEO)*

DWIGHT J. VICENTE
2608 Ainaola Drive
Hilo, HI 96720-3538
[dwightjvicente@gmail.com](mailto:dwrightjvicente@gmail.com)
(via email & U.S. mail)

RICHARD L. DELEON
kekaukike@msn.com

CINDY FREITAS
hanahanai@hawaii.rr.com

C. M. KAHO'OKAHI KANUHA
kahookahi.kukiaimauna@gmail.com

KALIKOLEHUA KANAELE
akulele@yahoo.com

MEHANA KIHAI
uhiwai@live.com

STEPHANIE-MALIA: TABBADA
s.tabbada@hawaiiantel.net

DONNA H. KALAMA, ESQ.,
Deputy Attorney General
donna.h.kalama@hawaii.gov
*Counsel for the Honorable DAVID Y. IGE, and
BLNR Members SUZANNE CASE and
STANLEY ROEHRIG*

E. KALANI FLORES
ekflores@hawaiiantel.net

DEBORAH J. WARD
cordylinicolor@gmail.com

YUKLIN ALULI, ESQ.
Law Offices of Yuklin Aluli
yuklin@kailualaw.com
DEXTER KAIAMA, ESQ.
Law Offices of Dexter K. Kaiama
cdexk@hotmail.com
*Counsel for KAHEA: THE ENVIRONMENTAL
ALLIANCE*

IVY MCINTOSH
3popoki@gmail.com
Witness for the Hearing Officer

PATRICIA P. IKEDA
peheakeanila@gmail.com
Witness for the Hearing Officer

CRYSTAL F. WEST
crystalinx@yahoo.com
Witness for Hearing Officer

CLARENCE KUKAUAKAHI CHING
kahiwaL@cs.com

B. PUALANI CASE
puacase@hawaiiantel.net

PAUL K. NEVES
kealiikea@yahoo.com

WILMA H. HOLI
P. O. Box 368
Hanapepe, HI 96716
w_holi@hotmail.com
*Witness for the Hearing Officer
(via email & U.S. mail)*

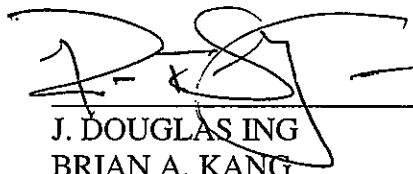
MOSES KEALAMAKIA, JR.
mkealama@yahoo.com
Witness for the Hearing Officer

DATED: Honolulu, Hawai'i, June 13, 2017.



IAN L. SANDISON
JOHN P. MANAUT
LINDSAY N. MCANEELEY

Attorneys for Applicant
UNIVERSITY OF HAWAI'I AT HILO



J. DOUGLAS ING
BRIAN A. KANG
ROSS T. SHINYAMA

Attorneys for
TMT INTERNATIONAL OBSERVATORY,
LLC