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DEPT. OF LAND &
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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'ohe Mauka, Hāmākua,
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 KAHEA: THE HAWAIIAN
ENVIRONMENTAL ALLIANCE'S
PROPOSED FINDINGS OF FACT AND

**THE UNIVERSITY OF HAWAI‘I AT HILO AND TMT INTERNATIONAL
OBSERVATORY, LLC’S JOINT RESPONSE TO KAHEA: THE HAWAIIAN
ENVIRONMENTAL ALLIANCE’S PROPOSED FINDINGS OF FACT AND
CONCLUSIONS OF LAW; EXHIBIT A FILED MAY 30, 2017**

Applicant UNIVERSITY OF HAWAI‘I AT HILO (“UH Hilo”) and TMT
INTERNATIONAL OBSERVATORY, LLC (“TIO”), through their respective counsel, jointly
submit this Response to KAHEA: THE HAWAIIAN ENVIRONMENTAL ALLIANCE’S
Proposed Findings of Fact and Conclusions of Law; Exhibit A, filed May 30, 2017
 (“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 KAHEA: The Hawaiian Environmental Alliance's ("KAHEA") Proposed FOF and COL

The UH Hilo and TIO object to each of the FOF and COL in KAHEA's *Proposed Findings of Fact, Conclusions of Law and Decision and Order* ("KAHEA'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 KAHEA'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 KAHEA's Proposed FOF/COL, which UH Hilo and TIO hereby incorporate by reference to its response to each of KAHEA'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 KAHEA'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.

The UH Hilo and TIO further object to KAHEA'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; KAHEA's ability to make such a challenge expired long ago, and it cannot

reopen the FEIS approval process through improper arguments of insufficiency 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 KAHEA'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 KAHEA's Proposed Decision and Order

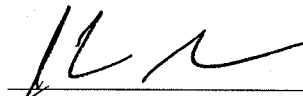
KAHEA's proposed Decision and Order is not supported by the record. As set forth in the UH-TIO FOF/COL, substantial evidence has been adduced to show that the CDUA satisfies the eight criteria as set forth in Hawai'i Administrative Rule ("HAR") § 13-5-30(c). The record also shows that the TMT Project 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, KAHEA 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 KAHEA. That position is not supported by the law.

III. CONCLUSION

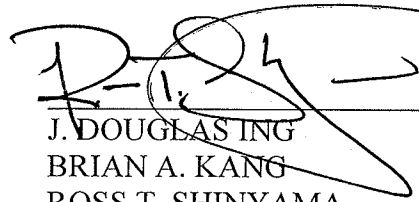
For the reasons set forth herein and in the UH Hilo Pre-Hearing Statement, TIO's Pre-Hearing Statement, the UH-TIO FOF/COL, the testimony of the UH Hilo's and TIO's witnesses, the examination of the Petitioners' and Opposing Intervenor's witnesses, and in UH Hilo's and TIO's other filings, UH Hilo and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

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



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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

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

FOF #	Page	FOF	Response
1	3	KAHEA: The Hawaiian-Environmental Alliance (hereafter "Kahea") is a non profit corporation incorporated in the [sic] Hawaii in 2001, whose mission is to advocate for the protection of environmentally significant and culturally sacred places in Hawaii.	Not in dispute that KAHEA is a nonprofit corporation, but more accurately stated in UH-TIO FOF 8.
2	3	The University of Hawaii at Hilo is the applicant for a conditional use permit for the construction of [a] thirty meter telescope (hereafter TMT project) on a portion of its lands at the Mauna Kea summit area /northern plateau held under General Lease No. S-1491. This conditional use permit application was submitted in 2010. A001	Not in dispute that the University is the applicant for a conditional use permit for the construction of a thirty meter telescope, but more accurately stated in UH-TIO FOF 1. Inaccurate/False. Mischaracterization. Unsupported/Unsubstantiated. The proposed FOF refers to the construction of a thirty meter telescope "on a portion of <u>its</u> lands at the Mauna Kea summit" (bold underlined emphasis added) where "its" refers to the University. However, the University is the lessee of the lands. See UH-TIO FOF 113 (regarding the General Lease entered into between State of Hawai'i, through the BLNR, and the University of Hawai'i for the Mauna Kea Science Reserve). Inaccurate/False. Misleading. Unsupported/Unsubstantiated. Not in evidence. The proposed FOF states that the TMT project will be located on lands "at the Mauna Kea <u>summit area</u>" (bold underlined emphasis added). However, site 13N is located on the upper elevations of Mauna Kea, but below the summit. UH-TIO FOF 242(a).

			Not in dispute that the conditional use permit application was submitted in 2010, although, more accurately, it was submitted on September 2, 2010 as stated in UH-TIO FOF 31.
3	3	TMT International Observatory LLC (hereafter TIO) is a Delaware limited liability corporation with a tax exempt status under Section 501 of the Internal Revenue Code. B.58 and B.59	Inaccurate/False. Unsupported/Unsubstantiated. TIO is a nonprofit organization, not a corporation. UH-TIO FOF 10.
4	3	Perpetuating Unique Educational Opportunities (hereafter P.U.E.O.) is a Hawaii non profit corporation.	Not in dispute, but more accurately stated in UH-TIO FOF 11.
5	3	PARA 5. Identify the individual intervenenors [sic] who participated in the contested case hearing.	Incomplete. See UH-TIO FOF 2-3 (identifying Mauna Kea Anaina Hou ("MKAH")).
6	3	PARA 6	Incomplete. See UH-TIO FOF 4 (identifying "Clarence Kukauakahi Ching ("Ching")).
7	3	PARA 7	Incomplete. See UH-TIO FOF 5 (identifying "The Flores-Case 'Ohana).
8	3	PARA 8	Incomplete. See UH-TIO FOF 6 (identifying "Deborah Ward ("Ward")).
9	3	PARA 9	Incomplete. See UH-TIO FOF 7 (identifying "Paul Neves ("Neves")).
10	4	PARA 10	Incomplete. See UH-TIO FOF 12 (identifying "Mehana Kihoi ("Kihoi")).
11	4	PARA 11	Incomplete. See UH-TIO FOF 13 (identifying "C.M. Kaho'okahi Kanuha ("Kanuha")).
12	4	PARA 12	Incomplete. See UH-TIO FOF 14 (identifying "Harry Fergerstrom ("Fergerstrom")).
13	4	PARA 13	Incomplete. See UH-TIO FOF 15 (identifying "Joseph Kual'i Lindsey Camara ("Camara")).
14	4	PARA 14	Incomplete. See UH-TIO FOF 16 (identifying "Jennifer Leina'ala Sleightholm ("Sleightholm")).
15	4	PARA 15	Incomplete. See UH-TIO FOF 17 (identifying "Maelani Lee ("Maelani Lee")).

16	4	PARA 16	Incomplete. See UH-TIO FOF 18 (identifying "Richard Maele Deleon ("Deleon"))).
17	4	PARA 17	Incomplete. See UH-TIO FOF 10 (identifying "Cindy Freitas ("C. Freitas"))).
18	4	PARA 18	Incomplete. See UH-TIO FOF 20 (identifying "William Freitas ("W. Freitas"))).
19	4	PARA 19	Incomplete. See UH-TIO FOF 21 (identifying "The Temple of Lono ("Temple"))).
20	4	PARA 20	Incomplete. See UH-TIO FOF 22 (identifying "Kalikolehua Kanaele ("Kanaele"))).
21	4	PARA 21	Incomplete. See UH-TIO FOF 23 (identifying "Stephanie-Malia-Tabbada ("Tabbada")); see also UH-TIO FOF 24 (identifying "Tiffnie Kakalia ("Kakalia")); see also UH-TIO FOF 25 (identifying "Glen Kila ("Kila")); see also UH-TIO FOF 26 (identifying "Dwight Vicente ("Dwight Vicente")); see also UH-TIO FOF 27 (identifying "Brannon Kamahana Kealoha ("Kealoha"))).
22	4	The land upon which the proposed TMT project would be situated is located in the Mauna Kea Summit Region Historic District and was determined to be eligible for listing on the National Register in 1999 (Ex. A055, FAIS-AP, p 1-1). See also McCoy Ex. A-122 at iii; Nees, Tr. 12/05/16, Vol. 12 at 11:9-18.	Not in dispute that the land upon which the proposed TMT project would be situated is located within the Mauna Kea Summit Region Historic District. UH-TIO FOF 521. Misleading. Inaccurate/False. Incomplete. See UH-TIO FOF 242(a) (Site 13N is located on the upper elevations of Mauna Kea, but below the summit). Citation to A055, FAIS-AP, p 1-1 does support the proposed FOF to the extent the FOF represents that the Mauna Kea Summit Region Historic District was determined eligible for listing on the National Register in 1999. Citation to A-122 at iii (discussing the historic district) does not support the proposed FOF.

		Citation to Nees, Tr. 12/05/16, Vol. 12 at 11:9-18 (regarding Exhibit A-122) does not support the proposed FOF. Misleading. "The site proposed for the TMT Observatory is nearly one-half mile northwest of Kūkahau'ula Although Kūkahau'ula has neither been nominated nor placed on the National Register of Historic Places, SHPD has previously stated that this historic property [Kūkahau'ula] and the entire summit region of Mauna Kea <u>may be eligible</u> for inclusion on the National Register as a historic district." (bold underlined emphasis added). Ex. A-1, at p. 4-3. The Mauna Kea Summit Region Historic District is not currently listed on the National Register of Historic Places. UH-TIO FOF 522 (citing Ex. A-1/R-1 at 4-3). Not in dispute that the subject property is leased to the Applicant, but more accurately stated in UH-TIO FOF 113. Not in dispute that Section 5 of the General Lease states "The Lessee shall not sublease, sub-rent, assign or transfer this lease or any rights thereunder without the prior written approval of the Board of Land and Natural Resources." Ex. B.17f at 4. Not in dispute that the Applicant has given notice of the preparation of an environmental impact statement for a newly proposed Master Lease for the Mauna Kea Science Reserve. Nevertheless, the proposed FOF is irrelevant. Not in dispute that the University, entered into a sublease with TIO in 2014, but more accurately stated in UH-TIO FOF 208 (regarding the TIO Sublease, Ex. B.02f). Citation does not support the proposition.
23	4	The subject property is leased to the Applicant by the State of Hawaii and that lease will terminate in 2033. This lease requires the approval of the Board of Land and Natural Resources (hereafter BLNR) to a sublease, assignment, or transfer of any rights conferred under said General Lease No. S-4191. Ex. B.17f
24	4	The UH has proposed new Master Leases for the Mauna Kea Science Reserve and has given notice of the preparation of an environmental impact statement for said Master Leases. Ex. B.02k
25	4	The Applicant had entered into a sublease with TIO in 2014 (Ex. B.02f) which has been vacated by the Third Circuit Court in its orders dated April 5, 2016 in Civ. No. 14-1-324. Ex. B.02g

			Inaccurate/False. Mischaracterization. To the extent the proposed FOF states that the “sublease” has been vacated by the Third Circuit Court in its orders dated April 5, 2016, this proposed FOF is inaccurate/false and mischaracterizes the Circuit Court’s ruling. <i>See</i> UH-TIO COL 408 (regarding the Third Circuit Court’s decision in a separate matter to vacate the consent to the sublease for the TMT Project).
26	5	The Applicant has entered into an Operating Agreement with TIO for the construction and operation of the TMT project on that portion of land which is subleased to TIO.	Mischaracterization. Inaccurate. Misleading. The reference to an “Operating Agreement” between the University and TIO mischaracterizes the evidence in the record and is inaccurate and/or misleading. <i>See</i> UH-TIO FOF 359 (regarding the management of the TMT Project through the BLNR-approved CMP and sub-plans, the TMT Management Plan, the BLNR imposed conditions to the CDUP, and the University’s internal Master Plan); <i>see also</i> UH-TIO FOF 367-371 (regarding the TMT Management Plan).
27	5	That portion of the land being subleased by the State of Hawaii to the Applicant as the proposed site of the TMT project is described in the sublease and is appended hereto as Exhibit A. Ex. B.02f.	Not in dispute. <i>See</i> UH-TIO FOF 208, 209 (regarding the sublease and its receipt into evidence).
28	5	On December 29, 2015 the Hawaii Supreme Court entered its Judgment on Appeal vacating the Third Circuit Court’s affirmation of the BLNR’s issuance of a CDUP to the applicant. The matter was remanded to the circuit court for remand to the BLNR “so that a contested hearing can be conducted before the Board or a new hearing officer, or for other proceedings consistent with the opinion.”	Not in dispute. UH-TIO FOF 30 (regarding remand).
29	5	The Order of Remand on February 22, 2016 in Civ. No. 13-1-0349 adopted the same language as that of the Hawaii Supreme Court.	Incomplete. Irrelevant/Inapplicable. UH-TIO FOF 30.

30	5	I. <u>MAUNA KEA IS SACRED TO NATIVE HAWAIIANS</u> Mauna Kea is born of the gods Wakea and Papa, these same gods are also the progenitors of the Hawaiian race. Kanahele, Tr. 1/24/17, Vol. 29, at 143: 1-9; Ex. B.11a at 2.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. <i>See</i> UH-TIO FOF 618 (noting that some Native Hawaiians have traditionally viewed the summit region as the realm of ancestral akua.). The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382.
31	5	The summit of Mauna Kea is wao akua, the place where the gods reside, where water, snow and mists are found, far removed from the wao kanaka where humans can reside. Kanahele, Tr. 1/24/17, Vol. 29, at 143-44: 25-3.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. For the same reasons, this proposed FOF is also misleading and presented out of context. <i>See</i> UH-TIO FOF 618 (noting that some Native Hawaiians have traditionally viewed the summit region as the realm of ancestral akua.); UH-TIO FOF 381, 621, 647 (regarding

		testimony that the Wao Akua is actually not traditionally considered an area above the tree-line or near the summit area, but it was an area below the tree-line); UH-TIO FOF 667 (“Petitioners offered the testimony of Kanahahele to rebut Dr. Paul Coleman’s testimony concerning Mauna Kea’s significance. Tr. 1/24/17 at 138:11-139:2, 142:8-144:11. However, Petitioners appear to have misinterpreted Dr. Coleman’s personal views that Mauna Kea is not as sacred as other sites in Hawaii. Rather, Dr. Coleman testified that each person must make his or her own determination regarding the sacredness of Mauna Kea. Ex. C-17 (WDT Coleman) at 2-3 Tr. 1/5/17 at 132:10-133:3.”). The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. See HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382. Incomplete. UH-TIO FOF 381, 621, 647. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. See UH-TIO FOF 618. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no
32	6	Citing to E O E Mauna Kea, in her testimony Kanahahele described the specific water akua residing in Mauna Kea wao akua, being Poliahu, Lilinoe, Waiau and Kalauakolea, the snow, the mists, the lake and the fog drip. Tr. 1/24/17, Vol. 29 at 148; Ex. B.11a, p.3.

33	6	It is the belief of Hawaiian people that the summit of Mauna Kea touches the sky in a unique and important way, as a piko by which connections to the ancestors are made known to the them, as, too, is their collective knowledge. Tr. 1/24/17, Vol. 29, at 147-49: 21-25, 1-25.	reliable probative and substantial evidence that the substance of the belief is factual. Irrelevant/Inapplicable. UH-TIO FOF 667. Incomplete. UH-TIO FOF 381, 621, 647. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. <i>See</i> UH-TIO FOF 618. For the same reasons, this proposed FOF is also misleading and presented out of context. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual.
34	6	Mauna Kea can be considered the piko ho'okahi, the single navel, which ensures spiritual connections, genealogical connections, and the rights to the regenerative powers of all that is Hawaii. It is from this "world navel" that the Hawaii axis emerges. Ex. A009 at ii.	Irrelevant/Inapplicable. UH-TIO FOF 667. Incomplete. UH-TIO FOF 381, 621, 647. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual.
35	6	Mauna Kea is an ancestor. It was a purpose of the birth chant, E O E Mauna Kea, to establish the relationship of the Hawaiian people to their primordial parents, Papa and Wakea, and to their ancestor, Mauna Kea. Kanahele, Tr. 1/24/17, Vol 29 at 162: 3-11.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Incomplete. UH-TIO FOF 381, 621, 647. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no

			reliable probative and substantial evidence that the substance of the belief is factual. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. <i>See</i> UH-TIO FOF 618. For the same reasons, this proposed FOF is also misleading and presented out of context. Irrelevant/Inapplicable. UH-TIO FOF 667.
36	6	Mauna Kea is considered sacred by people all over the world. Neves, Tr. 1/31/17, Vol. 33 at 193:21-25. However, it is specifically the calling of Native Hawaiians to maintain their relationship with Mauna Kea. Tr. 1/24/17, Vol. 33 at 206-207. "We were given this kuleana...we [have] to do all the things we do to keep that mountain in unblemished form." Tr. 1/31/17, Vol. 33 at 207:19-22.	Incomplete. UH-TIO FOF 381, 621, 647. Unsupported/unsubstantiated as to "Mauna Kea is considered sacred by people all over the world." Petitioners and Opposing Intervenor have presented no evidence in support of this proposition. Unsupported/unsubstantiated to the extent the proposed FOF suggests that this belief is universally shared by all native Hawaiians. <i>See</i> UH-TIO FOF 618, 665, 668. For the same reasons, this proposed FOF is also misleading and presented out of context. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382.

37	6	In fact, Mauna Kea, as the first born of Papa and Wakea and piko of the island, has all the hallmarks of what Mircea Eliade referred to as a “sacred center”. McCoy Ex. A-122 at 7-11.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Misleading/presented out of context. McCoy Ex. A-122 at 7-11 states in part “Mauna Kea, <u>believed</u> to be the firstborn of Papa and Wakea and regarded by Native Hawaiians as the ‘center’ or ‘piko’ of the island” (emphasis added). The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. See HAR 13-5-30(c); see also UH-TIO COL 88-103, 355-382.
38	7	“Rising to a majestic 13,796 feet above sea level, Mauna Kea, the highest mountain peak in the Hawaiian Islands, is of profound importance in Hawaiian culture. The summit region is sacred to Native Hawaiians, and because of its spiritual qualities, traditional and customary cultural practices are exercised throughout the summit area.” <i>Mauna Kea Anaina Hou v. Board of Land and Natural Resources</i>, concurring opinion; 136 Hawai’i 376, 399; 363 P.3d 224 247 (2015).	Incomplete and misleading/presented out of context to the extent it suggests that customary and traditional cultural practices were not considered. No known customary and traditional practices occur within the Area E location site of the TMT Observatory. The TMT Project will not result in any substantial adverse impact on the cultural practices of the community or State or native Hawaiian traditional and customary practices on Mauna Kea. See UH-TIO FOF 454, 624-774.
39	7	The TMT FEIS states that the upper mountain region, is a sacred landscape. The TMT FEIS states: “Due to the spiritual and sacred attributes of Maunakea in Native Hawaiian traditions, traditional and customary	Misleading/presented out of context. The TMT Project will be located <u>below</u> the summit. See UH-TIO FOF 242(a). No known customary and traditional practices occur within

		cultural practices are performed [sic] in the summit region, including... Practices associated with the belief in that the upper mountain region of Mauna Kea, from the Saddle area up to the summit is a sacred landscape, personifying the spiritual and physical connection between one's ancestors, history, and the heavens." Ex A003 (TMT FEIS) at S-4.	the Area E location site of the TMT Observatory. The TMT Project will not result in any substantial adverse impact on the cultural practices of the community or State or native Hawaiian traditional and customary practices on Mauna Kea. See UH-TIO FOF 624-774. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. See HAR 13-5-30(c); see <i>also</i> UH-TIO COL 88-103, 355-382.
40	7	Adopting the same interpretation as that of witness Kuulei Kanahahele of Mauna Kea as hiapo to all Native Hawaiians and the origin point or piko of the island, McCoy describes the ascent of Mauna Kea as "a walk upward and backward in time to cosmological origins" and opines that "[b]ased 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...[t]he ritual landscape that exists today is almost certainly the result of journeys by a number of families and adze makers over many generations." Ex. A-122 at 7-12.	Mischaracterization to the extent the proposed FOF claims that McCoy adopted the interpretation of witness Kuulei Kanahahele. Irrelevant/Inapplicable. UH-TIO FOF 667. Misleading. Presented out of context. The TMT Project site has been extensively and intensively surveyed. There are no known historic properties located in the TMT Project area or on the TMT Project site. UH-TIO FOF 571, 674. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. See HAR 13-5-30(c); see <i>also</i> UH-TIO COL 88-103, 355-382.

41	8	More importantly, McCoy opines that archaeological evidence of ascent and descent routes littered with lithic artifacts, ritual stations, burials, and propitiation ahu, supports a pan-island production system having political and land use implications on the Island of Hawaii. Ex. A-122 at 7-43 to 7-49, 7-60 to 7-61; Fig 7.6 at 7-46.	Misleading/presented out of context to the extent it suggests that traditional and customary cultural practices were not considered. The TMT Project site has been extensively and intensively surveyed. There are no known historic properties located in the TMT Project area or on the TMT Project site. UH-TIO FOF 571, 674.
42	8	The applicant called only one archaeologist to testify in the course of these proceedings, Richard Nees, on December 5, 2017.	Incomplete. UH-TIO FOF 505. Mischaracterization to the extent it suggests that Nees only provided live testimony. UH-TIO FOF 93, 140, 505, 514, 515, 517, 521, 527, 529, 538-543, 560, 572-578, 580-586, 589-590, 593-594, 685, 688, 689, 692, 693 (regarding written direct testimony of Nees). Misleading to the extent it suggests that the UH Hilo was obligated to call more than one archaeologist to testify and/or that Nees' testimony is less credible because another archaeologist didn't testify on behalf of UH Hilo.
43	8	Nees worked with Dr. Patrick McCoy from 2005 through 2013 in his work on Mauna Kea. Tr. 12/5/17, Vol 12 at 121:21-25, at 122:1.	Not in dispute, but more accurately stated in UH-TIO FOF 505.
44	8	Nees is listed as the coauthor of Ex. A122. Id. Vol. 12 at 121:9-19.	Not in dispute, but more accurately stated in UH-TIO FOF 505.
45	8	Nees agrees with the conclusions of A122 as they relate to the sacredness of Mauna Kea and the activities that took place there. Id. Vol. 12 at 123:8-25, at 124: 1-13.	Mischaracterization to the extent the Proposed FOF overgeneralizes the cited testimony. Not in dispute that Nees testified as to the extent of cultural and historic resources present in the Mauna Kea Summit Region Historic District. Incomplete. Mr. Nees opined that the TMT Project would not

			result in a substantial adverse impact to such resources within the surrounding area, community or region. UH-TIO FOF 505. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382.
46	8	Nees agreed that the activities which took place in the adze quarry took place throughout the upper mountain region. <i>Id.</i> Vol 12 at 125: 2-25.	Inaccurate/False; Mischaracterization as to the phrase “throughout the upper mountain region” which instead should state “throughout the summit.” Incomplete. UH-TIO FOF 505, 524, 527, 530, 856, 857 (regarding the adze quarry). Misleading. Presented out of context. The TMT Project site has been extensively and intensively surveyed. There are no known historic properties located in the TMT Project area or on the TMT Project site. UH-TIO FOF 542, 571, 674. Mischaracterization. <i>Tr.</i> Vol. 12:126:25-4 (“Q: And how did you come to make this drawing in this manner? A: Based on the archaeological evidence, we found flakes from the adze quarry extending in all those directions, little workshops.”). <i>See</i> UH-TIO FOF 505. Irrelevant/Inapplicable. Not Credible. UH-TIO FOF 950 (“Dr. Meyer’s testimony is that the TMT Project will have a substantial adverse impact on Hawaiian culture and cultural practices or public health, safety, and wellness. Dr. Meyer’s testimony/theory is not supported by any empirical data. <i>Ex.</i> B.05a; <i>Tr.</i> 1/26/17 at 68:20-69:21. Dr. Meyer did not otherwise establish the validity of her theory. Dr. Meyer conceded that, under the “one truth epistemology” approach
47	8	Nees stated that he drew Figure 7.6 on page 7-46 of Exhibit A122. <i>Id.</i> Vol 12 at 126: 1-25, at 127: 1-25, at 128: 1-5. He also confirmed his agreement with the conclusions in the report as to what is depicted in Fig. 7.6.	
48	8	In her WDT, Dr. Meyer stated that we cultivate transpatial relationships with Maunakea, or relationships that transcend space and distance. <i>Ex.</i> B.05a at 1.	

		of modern academia, the TMT Project will not be detrimental to the public health, safety, and welfare. Tr. 1/26/17 at 88:8-18. Accordingly, there is no persuasive rational basis to accept Dr. Meyer's theories as factually true. Dr. Meyer conceded that she did not read the CDUA or related documents. Tr. 1/26/17 at 35:3-7. Accordingly, no significant weight is given to the opinions offered by Dr. Aluli-Meyer regarding the merits of the CDUA"). Misleading/presented out of context; Unsupported/unsubstantiated to the extent it suggests that the TMT Project would prevent cultural or spiritual practices. No known customary and traditional practices occur within the Area E location site of the TMT Observatory. The TMT Project will not result in any substantial adverse impact on the cultural practices of the community or State or native Hawaiian traditional and customary practices on Mauna Kea. See UH-TIO FOF 624-774.
49	8	According to Dr. Meyer, indigenous epistemologies, or ways of knowing, are integral for understanding those things that are ineffable, or too grand to be measured for value using "mainstream" or "empirical" methods. Maunakea, she argued, is one such entity that must be understood with indigenous wisdom if we are to truly understand why it is "beloved" to people. Ex. B.05a at 2.
50	9	Irrelevant/Inapplicable. Not Credible. UH-TIO FOF 950. Unsupported/unsubstantiated to the extent it suggests beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Irrelevant/Inapplicable. Not Credible. UH-TIO FOF 950. Unsupported/unsubstantiated to the extent it suggests beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942.

51	9	Dr. Meyer affirmed that she believed her Hawaiian ancestors identified places and natural resources that had healing powers. Tr. 04/01/17 vol. 31 at 83.	Irrelevant/Inapplicable. Not Credible. UH-TIO FOF 950. Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Irrelevant/Inapplicable. Not Credible. UH-TIO FOF 950. Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Unsupported/unsubstantiated to the extent it suggests that the TMT Project would prevent cultural or spiritual practices. No known customary and traditional practices occur within the Area E location site of the TMT Observatory. The TMT Project will not result in any substantial adverse impact on the cultural practices of the community or State or native Hawaiian traditional and customary practices on Mauna Kea. See UH-TIO FOF 624-774.
52	9	Dr. Meyer affirmed that Mauna Kea was identified by Hawaiian ancestors as a place of great healing. She explained that it was in the wao akua and was a place of inspiration, or renewal and rejuvenation. Tr. 04/01/17 vol. 31 at 84.	Irrelevant. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 949, 950. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
53	9	Spirituality, as Dr. Meyer explained, is often dismissed. Indigenous epistemologies, or ways of knowing, similarly, are often dismissed as "soft science" by the so-called "hard sciences." But this leads to dysfunction. Spirituality is real and cannot be confused with religion. Tr. 04/01/17 vol. 31 at 117-119.	

54	9	In response to questioning, Dr. Meyer explained that wailua, or spirit, is a reality. Although it is unseen, and therefore has no form, we see the expression of wailua in life: in places, in natural elements, etc. If these things are then polluted, then the spirit will find its end. Tr. 04/01/17 vol. 31 at 120.	Irrelevant. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 949-950. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
55	9-10	Based on her knowledge and expertise, Dr. Meyer affirmed that the proposed mitigation that the "TMT project facilities will be furnished with items to provide a sense of place and acknowledge the cultural sensitivity and spiritual attributes of Mauna Kea" is not a sufficient mitigation. Tr. 04/01/17 vol. 31 at 139.	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950.
56	10	In her WDT, Dr. Meyer stated that continuing to change or drastically alter the environment will force Native Hawaiians to also compromise cultural values and relationships with the environment, relationships that are found within indigenous epistemologies. Ex. B.05a at 1	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
57	10	Contemporary expressions of Aloha 'Ā ina, as Dr. Meyer explained, grew from older understandings of aloha 'āina: treating 'āina as "beloved ancestor who has give us our [Native Hawaiian] lives" and caring for the 'āina as being "central to continuity." Ex. B.05a at 1, 2.	Not credible. Unsupported/unsubstantiated. UH-TIO FOF 949, 950.
58	10	Dr. Meyer articulated that "mainstream" interpretations of "ownership" in a capitalist system allow for exclusion and not for the "necessity of care," which has ultimately led to the "destruction of our planet." Tr. 04/01/17 vol. 31 at 28.	Irrelevant/Inapplicable. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
59	10	Dr. Meyer made the distinction that "spirituality" has nothing to do with "religion" and that being asked for physical evidence of "religion," like a church,	Irrelevant/Inapplicable. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950.

60		collapses spirituality. It implies that there is only one way, one truth, one agreed upon way of being. Tr. 04/01/17 vol. 31 at 37, 39-40.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
60	10	Spirituality, as Dr. Meyer explained, is a “synonym for indigeneity and for continuity and therefore aloha.” Tr. 04/01/17 vol. 31 at 41.	Irrelevant/Inapplicable. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950.
61	10	As an employee of the University of Hawai‘i system, hired under the Papa o ke Ao directive, Dr. Meyer affirmed that the university’s application for another facility on Mauna Kea is not in alignment with the university’s strategic directive to become an indigenous serving institution. Tr. 04/01/17 vol. 31 at 109-110.	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Irrelevant/Inapplicable. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950.
62	11	As a UH employee, specifically under the Papa o ke Ao directive, Dr. Meyer understood that it was her job to say “no,” that the TMT is not in alignment with the university’s indigenous-serving goals. As an individual, however, she also explored the “why,” or why the TMT is not appropriate for our time. She stated that there are other ways to learn about the stars. Tr. 04/01/17 vol. 31 at 110.	Not credible. Irrelevant/inapplicable. Unsupported/Unsubstantiated. UH-TIO FOF 233, 948, 949, 950, 999.
63	11	Dr. Meyer defined culture as the “best practices of a people,” and argued that Hawaiian culture is what allowed Hawaiians to survive in Hawai‘i for so long. Tr. 04/01/17 vol. 31 at 48.	Not credible; Unsupported/unsubstantiated to the extent it suggests that Hawaiian culture and practices would be negatively impacted by the TMT Project. UH-TIO FOF 233, 948, 949, 950.
64	11	Dr. Meyer testified that the TMT project will adversely impact traditional cultural practices as well as cultural and spiritual views of the mauna. Tr. 04/01/17 vol. 31 at 70.	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 233, 949, 950. There is no reliable probative and substantial evidence that the referenced practices are within the bundle of rights protected by Article XII, Section 7 of the Hawaii State Constitution.

65	11	Ms. Rios testified that she descends from a line of “seers, of medicine people” and that healing is in her lineage; this is where her practices come from. She is also a dancer and chanter. (Tr. 2/14/2017 vol.36 at 130-131)	Irrelevant/Inapplicable. <i>See generally</i> , UH-TIO FOF 603 (“Rios testified that the examination of archaeological/historic resources failed to take into account the intangible relationships between certain features on Mauna Kea. Rios’s testimony was based primarily on her alleged ability to connect with and receive information from a spiritual realm. Rios testified that she received ‘ike kupuna (or ancestral insight) that certain ahu or shrines are energetically connected to one another, are aligned with certain tides, and connect as a portal to the celestial bodies of the universe. Tr. 2/15/17 at 149:1-152:23. Rios’s testimony does not prove unverifiable and intangible connections between certain ahu or shrines on Mauna Kea that may be affected by the TMT Project. Even if such connections were assumed, Rios’s testimony failed to provide tangible, logical, scientific, or admissible evidence of specific connections that would be affected by the TMT Project.”).
66	11	Ms. Rios testified that Mauna Kea is a temple, one of highest significance, a place of prayer and worship where ceremonies are conducted. These ceremonies are about the supreme law of the universe. (Tr. 2/14/2017 vol. 36 at 131-132)	Not credible; Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942.
67	11	Ms. Rios testified that she is a haka, a seer, a medium that has received these gifts genealogically. This is a traditional gift that allows her to receive ancestral insight. Her mediumship has taken place on Mauna Kea in areas at the Northern Plateau, Lake Waiau and different pu’u. Mediumship allows her to receive information that others like archaeologists might not receive. (Tr. 2/14/2017 vol.36 at 142-144)	Irrelevant. UH-TIO FOF 603. Misleading; Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Misleading; Unsupported/unsubstantiated to the extent it suggests that the TMT Project Site has not been adequately surveyed for historic properties. UH-TIO FOF 542.

68	12	Ms. Rios testified that she has received ancestral knowledge through mediumship in areas on the Northern Plateau. Ms. Rios explained the significance of shrines along the Northern Plateau, its connection to one another, their alignment with the constellations and tides at certain times of the year, and that they are portals which connect to celestial bodies of the universe. In particular, the Northern Plateau is a place of learning, a celestial realm in the cosmos that is also connected to voyaging. She describes the Northern Plateau as “a very sacred space of higher learning, spiritual learning, higher consciousness” (Tr. 2/14/2017 vol.36 at 149-152). These shrines were built and cared for by certain families and that there is knowledge that is embedded into the site. She explained that: “The knowledge from these ancient beings of a celestial realm and of the kupuna realm are in the fabric of the mountain. They are a part of the portal that exists there. They’re not separate.	Irrelevant. UH-TIO FOF 603. Misleading; Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Misleading; Unsupported/unsubstantiated to the extent it suggests that the TMT Project Site has not been adequately surveyed for historic properties. UH-TIO FOF 542. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382.
69	12	Ms. Rios testified that by destroying one particular site or ahu you cause destruction to others. If built, the TMT project would cause destruction to some of these sites severing, permanently closing, access to knowledge of the celestial realm. (Tr. 2/14/2017 vol.36 at 153-154)	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 603. Misleading; Unsupported/unsubstantiated to the extent it suggests that the TMT Project will adversely impact customary and traditional practices. No known customary and traditional practices occur within the Area E location site of the TMT Observatory. The TMT Project will not result in any substantial adverse impact on the cultural practices of the community or State or native Hawaiian traditional and customary practices on Mauna Kea. <i>See</i> UH-TIO FOF 624-774.

70	12	Ms. Pua Case testified that the chanting, the dancing and the practices, the foundation of which has carried Case all through her life, from Pu'u Huluhulu to the Wekiu, the top of Mauna a Wakea. Tr.1/11/17 vol 25 at 128	Mischaracterization. Ms. Case testified that the chanting, the dancing and the practices, the foundation of which is "what I have carried all through my life" (not which has carried Case all through her life). Tr.1/11/17 vol 25 at 128. Misleading; Incomplete. UH-TIO FOF 764 ("The Area E site is not a place that she identified as having performed any historical traditional or customary practices. Her information has been fully considered and given the appropriate weight in these findings."). Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. UH-TIO FOF 764. There is no reliable probative and substantial evidence that the referenced practices are within the bundle of rights protected by Article XII, Section 7 of the Hawaii State Constitution. Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. UH-TIO FOF 764. There is no reliable probative and substantial evidence that the referenced practices are within the bundle of rights protected by Article XII, Section 7 of the Hawaii State Constitution.
71	13	Customary and traditional practices relating to the Northern Plateau of Mauna Kea include going there at sunrise to welcome the sun In the only way that you can on that spot, reciting particular chants in which the vantage points that we look at dictate that we are there, honoring the ancestors whose bones are there. Tr.1/11/17 vol 25 at 129, 130	
72	13	Case and her daughters go to the Northern Plateau to pray and chant and make correct for those who would disturb that area, to make pono in the best way, to pray the forgiveness chants, to shed tears, and to pray that chants assure our ancestors that we will do whatever can be done that they may never know that disturbance. Tr.1/11/17 vol 25 at 130	
73	13	The prayers and the chants done on the Northern Plateau and the ceremonies are different than what would be done else where Tr.1/11/17 vol 25 at 227, 228	Mischaracterization. UH-TIO FOF 764 (Ms. Case's testimony was limited to the prayers, chants, and ceremonies that she does, not what is done by others or all native Hawaiians). Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed

			any historical traditional or customary practices. UH-TIO FOF 764.
74	13	In this contested case hearing members of Case's ohana identified as cultural practitioners with connections to Mauna a Wakea. Tr. 1/11/17 vol 25 at 131	Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. UH-TIO FOF 764.
75	13	Case indicated she had not ever been consulted regarding "traditional customary practices" related to Mauna Kea by DLNR, the Office of Mauna Kea Management, and Kahu Ku Mauna. Tr. 1/11/17 vol 25 at 130, 131	Inaccurate. Misleading/presented out of context. Incomplete. Not credible. UH-TIO FOF 220 (regarding written comments on the CDUA submitted on behalf of the Flores-Case 'Ohana, among others); UH-TIO FOF 222 (regarding live testimony by the Flores-Case 'Ohana at the Kona hearing on December 3, 2010 regarding the CDUA); UH-TIO FOF 236 (regarding efforts by Ms. Case, along with the Flores-Case 'Ohana, Pisciotto, Ching, Ward, and Neves actively calling for a boycott of the University's ongoing consultation efforts); UH-TIO FOF 751 (acknowledgment by Flores of Flores-Case 'Ohana that he received an email soliciting his input into the FEIS).
76	13-14	No archeologists who conducted surveys on Mauna Kea Science Reserve consulted with Case Tr. 1/11/17 vol 25 at 132	Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. See UH-TIO FOF 201. Inaccurate; Misleading/presented out of context; Incomplete; Not Credible to the extent it suggests that Case and/or the Flores-Case 'Ohana did not actively participate in the EIS process. UH-TIO FOF 220, 222, 236, 751. Misleading to the extent it suggests that the TMT Project Site has not been adequately surveyed for historic properties. UH-TIO FOF 542.
			Misleading/presented out of context; Incomplete to the extent

77	14	No archeologists consulted with Case with regard to the significance of cultural sites on the Northern Plateau. Tr. 1/11/17 vol 25 at 132	it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. <i>See</i> UH-TIO FOF 201. Inaccurate; Misleading/presented out of context; Incomplete; Not Credible to the extent it suggests that Case and/or the Flores-Case 'Ohana did not actively participate in the EIS process. UH-TIO FOF 220, 222, 236, 751. Misleading to the extent it suggests that the TMT Project will adversely impact traditional and cultural practices. UH-TIO FOF 453. Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. <i>See</i> UH-TIO FOF 201.
78	14	Ms. Case testified that between the last contested case hearing and now, she has not been consulted in any way including under 106, by the TMT, BLNR, Board of Land and Natural Resources, the University of Hawaii at Hilo, the University of Hawaii at Manoa, or the Institute for Astronomy. Tr. 1/11/17 vol 25 at 156	Irrelevant; Misleading/presented out of context because Section 106 of the NHPA was not required nor allowed for the TMT Project. UH-TIO FOF 509.
79	14	No one from the University of California or Caltech asked Case to consult. Tr. 1/11/17 vol 25 at 157	Inaccurate; Misleading/presented out of context; Incomplete; Not Credible to the extent it suggests that Case and/or the Flores-Case 'Ohana did not actively participate in the EIS process. UH-TIO FOF 220, 222, 236, 751. Irrelevant; Misleading/presented out of context because Section 106 of the NHPA was not required nor allowed for the TMT Project. UH-TIO FOF 509. Misleading/presented out of context; Incomplete to the extent

80	14	No one has asked Case in all of these years to consult as to the impact of the TMT project. Tr. 1/11/17 vol 25 at 157	it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. <i>See</i> UH-TIO FOF 201. Inaccurate; Misleading/presented out of context; Incomplete; Not Credible to the extent it suggests that Case and/or the Flores-Case 'Ohana did not actively participate in the EIS process. UH-TIO FOF 220, 222, 236, 751. Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. <i>See</i> UH-TIO FOF 201. Not credible. The Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. <i>See</i> UH-TIO FOF 764. Inaccurate/False. Misleading. Presented out of context. Unsupported/Unsubstantiated. UH-TIO FOF 783 ("The Northern Plateau is not an open space with no telescope structures on it; SMA roads and facilities are already on the Northern Plateau. Tr. 10/20/16 at 63:18-25. However, the open space characteristic of the Northern Plateau will still be preserved after the construction of the TMT Observatory because the observatory will only take up five of the 2,000 acres. Tr. 12/12/16 at 163:21-164:5."). Not credible. UH-TIO FOF 669 (regarding evidence that in 2016, Ms. Case water originating from Mount Shasta (California) into Lake Waiau, which is inconsistent with the cultural norm not to do so as described by Kanahele). Not credible; Inaccurate/False; Unsupported/unsubstantiated to the extent it suggests that the TMT Project would have a significant or adverse on area water resources on Mauna Kea.
81	14	Ms. Case testified that the TMT project, if built, would obstruct the open space characteristics of the Northern Plateau. Tr. 1/11/17 vol 25 at 239	
82	14	Ms. Case states: "In chants the way water was regarded was water was sacred, Hawai'i wai'ola, Hawai'i wai kapu, water is life, and so the place that the water fell upon, if we could just keep that clean, sacred. So if we don't have a business going to where the first water falls, perhaps we didn't need to go there. When the water falls on the mauna, it's going to end up being somebody's water, because it is our	

83		water aquifer, it is our watershed, it is the spirit of our water." Tr. 1/11/17 vol 25 at 176, 177	See UH-TIO FOF 796-823; see also UH-TIO COL 174, 192.
14-15		Pua testified she is one of the 14 percent, who would see it every day, every moment of the day. Her window faces the mauna. She would see it from the moment her eyes open until the moment that she goes to bed. Her life would change. Tr. 1/11/17 vol 25 at 136	Not credible; Unsupported/unsubstantiated on the basis that there is no evidence suggesting that the presence of existing observatories has prevented or substantially impacted cultural practices and no evidence that the TMT Project would have a significant impact on any customary and traditional practice. UH-TIO FOF 641, 697, 764; UH-TIO COL 201, 342, 364. Incomplete; Misleading/presented out of context as to the visibility of the TMT Observatory. UH-TIO FOF 778, 784. Not credible. See UH-TIO FOF 787 (finding that while several of the Petitioners participated in the public consultation and information processes to develop the CMP, the CIA, the CRMP for the TMT Project from 2008 through 2011, at no time prior to this contested case hearing did Petitioners and Opposing Intervenor contend that the TMT Observatory would impede views from the summit of Pu'u Poli'ahu.").
84	15	When asked, Case affirmed that if the Thirty Meter Telescope was built without doing their part to prevent it, it would cause her such guilt and despair that she would also be embarrassed to go there and try to pretend as though nothing happened. Tr. 1/11/17 vol 25 at 179	Not credible; Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. UH-TIO FOF 764.
85	15	The telescope would block the mo'o's views, block the portal's piko to Ke Akua. Tr. 1/11/17 vol 25 at 222	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance

			of the belief is factual.
86	15	The TMT would impact the mo' o and other religious and gods that dwell on the summit or deities Tr. 1/11/17 vol 25 at 223. If the TMT project was built on the Northern Plateau, it would curtail Pua's traditional and customary cultural practices. Tr. 1/11/17 vol 25 at 239	Not credible. Unsupported/unsubstantiated. UH-TIO FOF 641, 697, 764; UH-TIO COL 201, 342, 364. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 641, 697, 764; UH-TIO COL 201, 342, 364. Lack of jurisdiction as to the alleged desecration. UH-TIO COL 391-407. Not credible. Unsupported/Unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. See UH-TIO FOF 378, 453, 459, 611-774 (regarding cultural resources and practices); <i>see also</i> UH-TIO COL 201, 342, 364 (same); <i>see generally</i> UH-TIO FOF 858 (finding Townsend's testimony that the TMT Project constitutes desecration of a sacred place unpersuasive, contradicted by her own admission that the lower part of Mauna Kea was used as an adze quarry, unpersuasive based on her personal negative feelings against the TMT Project, lacking credibility based on alleged inconsistent statements, and noting that Townsend admitted that she would oppose the TMT Project even if there was minimal impact); UH-TIO FOF 943-947 (finding Dr. Taualii's testimony that alleged desecration of sacred spaces negatively impacts the cultural
87	15	No matter where this project is put on the mountain, it's still going to be at least 12-and-a-half acres of construction, destruction and desecration, and Pua stated its should that it should impact her, because she loves this Hawaii more than anything. It's her home land. Tr. 1/11/17 vol 25 at 240	

		identity and health of native Hawaiians insufficient and not based on prove, credible or admitted evidence); UH-TIO FOF 952 (finding testimony by Prof. Kaholokula that the perception of the desecration of Mauna Kea is detrimental to the health and well-being of native Hawaiians not supported by any research directly targeting the issue of the TMT Project or any studies with regard to partitioning the cause of stress from TMT and Mauna Kea from all other stress-causing factors for native Hawaiians).
88	15	In the same way that Case has experienced this loss of hula traditions tied to place over the years, she sees that it would happen again if the Thirty Meter Telescope is built in the upper region of our Mauna. Ex. B21.a at 5 (Case WDT). Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Pin citation does not support the Proposed FOF. Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices, to the extent the Proposed FOF intended to reference Ex. B21.a at 4. <i>See</i> UH-TIO FOF 764. Not credible. Unsupported/Unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. <i>See</i> UH-TIO FOF 378, 453, 459, 611-774; <i>see also</i> UH-TIO COL 201, 342, 364. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
89	15	The traditional practice of ceremonies including chanting, dancing, honoring at these places would be impacted by the building of the eighteen stories. The place with its pristine form would be no more, it would be under concrete along with an enormous visual eyesore, the place would have been desecrated, Irrelevant; Misleading; Incomplete to the extent the Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices, to the extent the Proposed FOF intended to reference Ex. B21.a at 4. <i>See</i> UH-TIO FOF 764.

90		The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual. Lack of jurisdiction as to the alleged desecration. UH-TIO COL 391-407. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 378, 453, 459, 611-774, 739,764, 858, 942, 952, 955. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence.
16	The kanaka maoli and those who share these practices physically and spiritually would not be able to recite and perform the hula traditions there because of the overwhelming sense of despair and guilt that we would be consumed with. Ex. B.21a at 6 (Case WDT)	Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Pin citation does not support the proposed FOF. To the extent the Proposed FOF intended to reference Ex. B21.a at 4, it is irrelevant, misleading; incomplete on the basis that Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices,. See UH-TIO FOF 764. Not credible. Unsupported/unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. See UH-TIO FOF 378, 453, 459, 611-774; see also UH-TIO COL 201, 342, 364. Not credible; Unsupported/unsubstantiated to the extent it suggests that the TMT Project will be materially detrimental to the public health, safety, and welfare. See UH-TIO FOF

91	16	The people cannot stand by and witness the desecration, destruction and construction and then conduct the same ceremonies we have done for years on the mountain. Ex. B.21a at 6 (Case WDT)	858, 937-1000; <i>see also</i> UH-TIO COL 273-293. Mischaracterization of stated beliefs of some as fact, and, therefore, assumes facts not in evidence. Lack of jurisdiction as to the alleged desecration. UH-TIO COL 391-407. Pin citation does not support the Proposed FOF. To the extent the Proposed FOF intended to reference Ex. B21.a at 5, it is not credible and is unsupported and unsubstantiated. <i>See</i> UH-TIO FOF 378; 453, 459; 611-774; 739,764; 858; 942; 952; 955. Not credible. Not in evidence. Area E site is not a place Ms. Case identified as having performed any historical traditional or customary practices. <i>See</i> UH-TIO FOF 764. Not credible; Unsupported/Unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. <i>See</i> UH-TIO FOF 378, 453, 459, 611-774; <i>see also</i> UH-TIO COL 201, 342, 364.
92	16	For Case, it would be akin to forfeiting her right to be there if she was unsuccessful in protecting the mountain. She could not return there to chant, dance and sing in the same manner. She would not be able to pray in the way that she have been led to do. A connection would be lost between the ancestral realm and the human realm. Information shared and knowledge passed down ancestrally would be lost. Interaction between the mountain and the human would be diminished like a loss of a family member, and the death of a way of life. Ex. B.21a at 6 (Case WDT)	
		II. <u>CDUA FAILS TO MEET CRITERIA FOR APPROVAL</u>	
93	16	Dr. Fujikane, is an English professor specializing in Hawai'i literary and cultural studies and has published work on the mo'olelo (stories/histories) of Māui in Wai'anāe. Ex. 8.13a at 1.	Irrelevant. UH-TIO FOF 680 (noting that Prof. Fujikane did not offer any source that states the land under the TMT Project site is referenced in Mo'olelo, and finding that while Prof. Fujikane testified that the excavation of the TMT Project site would eliminate the ability to connect the land to the Mo'olelo because the land formations will have been changed, that is not an appropriate standard for determining a cultural

94	16-17	Dr. Fujikane's testimony was made in two parts: the first part focused on the rhetorical problems, the faulty and self-contradictory logic in the TMT's Conservation District Use Application (CDUA) that attempt to make substantial, adverse, and significant impacts "disappear." The second part focused on the cultural value of the integrity of land embodied in mo'ō'āina land divisions, where relationships between land forms are unseverable.	resource.). Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 381 (finding, <i>inter alia</i>, that Prof. Fujikane's assertion that the University's CDUA improperly directs the Board's attention to the proposed mitigation measures proposed by the TMT Project is not supported by the record. The University has shown that it considered all eight criteria applicable to its CDUA, and that the TMT Project complies with the purpose of the Conservation District, as set forth in the applicable authorities."); UH-TIO FOF 349 (regarding Prof. Fujikane's admission that she did not consider the Hawai'i Supreme Court's recent decision in <i>Kilakila 'o Haleakala v. Board of Land and Natural Resources</i>, 138 Hawai'i 383, 382 P.3d 195 (2016), which extensively discussed several of the same eight criteria).
95	17	Dr. Fujikane stated that the TMT CDUA cannot fulfill the 8 Conservation District Use Criteria because cumulatively, the TMT project would add to the impacts of existing observatories that are "substantial, adverse, and significant." Tr. 01/9/2017, V. 23 at 209-210.	Not credible. Unsupported/Unsubstantiated. See UH-TIO FOF 307; 381; 680; see also UH-TIO FOF 382 (finding Prof. Fujikane's opinion that Mauna Kea is already so overbuilt and that there are no mitigation measures that can remedy the area, Tr. 1/9/17 at 226:9-226:13, in contradiction with the credible testimony of White that because of the proposed mitigation measures the construction and operation of the TMT Project will not have a substantial adverse impact on natural resources in the area. WDT White at 7-8. Additionally, Prof. Fujikane's statement that Mauna Kea is overbuilt is inconsistent with and contradicts her previous testimony that the TMT Project will be built in a pristine area. Tr. 1/9/17 at 224:1-224:3."); see also UH-TIO FOF 452 (finding Prof. Fujikane's argument that the TMT FEIS's conclusion that the TMT Project will add a limited increment to the level of cumulative impact is not persuasive and does not consider the TMT Project as a whole with its proposed mitigation efforts; noting that her opinion focused on a limited

			view of the cumulative impact of the TMT Project, with all existing observatories, as an added impact on the cultural concerns of certain native Hawaiian practitioners, B.13a (WDT Fujikane) at 2, and that this is not the proper standard for evaluating this criterion; UH-TIO FOF 906 (finding that Prof. Fujikane did not present any credible evidence in support of her generalized statement that the TMT Project will have a substantial negative impact on traditional or historic cultural practices and presented no credible evidence of what cultural practices are conducted at the TMT Project site and whether they constitute traditional cultural practices).
96	17	Dr. Fujikane reaffirmed NASA's 2005 Final Environmental Impact Statement for the Outrigger Telescopes project on Mauna Kea where it concluded that the impact of existing astronomical activities on Mauna Kea has been substantial, adverse and significant: "From a cumulative perspective, the impact of the past, present, and reasonably foreseeable future activities on cultural and biological resources is substantial, adverse and significant" (Ex. B13d at 4-124).	Irrelevant. Misleading. Presented out of context. UH-TIO FOF 307, 349, 381, 382, 452, 680, 759, 766, 770, 906, 987, 996, 999.
97	17	Dr. Fujikane states that as NASA's FEIS indicates, Mauna Kea is already overbuilt. The EIS claims that the TMT Project will add a "limited increment" to the level of cumulative impact is irrelevant because what must be considered is not the individual impact of the TMT Project but the cumulative impact of the TMT Project and the existing observatories. Tr. 01/9/2017, V. 23 at 211.	Irrelevant; Misleading/presented out of context to the extent the FEIS referenced in the Proposed FOF was prepared for the Outrigger Telescopes project, not the TMT Project. Not credible. UH-TIO FOF 307, 349.

98	17	HAR § 11-200-12 “Significance criteria” provides the state’s definition of “significance.” The 8th criterion states: “In most instances, an action shall be determined to have a significant effect on the environment if it “Is individually limited but cumulatively, has considerable effect upon the environment or involves a commitment for larger actions.” Ex. B.13e at 1.	Misleading. Presented out of context. UH-TIO FOF 452. Incomplete. UH-TIO FOF 777, 792 (regarding significance criterion in HAR § 11-200-12).
99	18	Dr. Fujikane testified that the TMT’s FEIS Vol. 1 also acknowledges that cumulatively, the TMT can only add to the substantial, significant and adverse impact on Mauna Kea: “From a cumulative perspective, the impact of past and present actions on cultural, archaeological, and historic resources is substantial, significant, and adverse; these impacts would continue to be substantial, significant, and adverse with the consideration of the Project and other reasonably foreseeable future actions” Ex. B32 at S-8. Tr. 01/9/2017, V. 23 at 210.	Not credible. UH-TIO FOF 452 (regarding testimony by Prof. Fujikane regarding the TMT FEIS). Misleading. Presented out of context. UH-TIO FOF 433. Irrelevant. UH-TIO FOF 200 (finding that the time to legally challenge the formal acceptance of the FEIS expired on August 7, 2010); UH-TIO FOF 201 (no challenges to the FEIS were ever filed).
100	18	Dr. Fujikane [sic] states that the TMT’s CDUA claims, “As detailed in this CDUA, locating the TMT project in Area E will result in less than significant impact on historic properties, cultural practices and Native Hawaiian rights, as well as viewplanes, species habitat and existing facilities.” (Ex. A002 at 2-27, cited in Ex. B.13a at 3) is contrary to the CDUA which points out that “As the Astronomy Precinct is the site of many existing astronomical observatories, the TMT project will be compatible with existing land uses” (Ex. A002 at 2-27).	Not credible. UH-TIO FOF 307, 349. Misleading. Presented out of context. UH-TIO FOF 775.
101	18-19	Dr. Fujikane testified that, instead, however, the proposed TMT site is located in a pristine area that falls in the Mauna Kea Summit Region Historic	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 381, 382, 759, 906.

102	19	District and the TMT site is an integral part of the cultural and natural resources of Mauna Kea. Ex. A002 at 2-6, Exhibit B.13c at 2-31, cited in Ex. B.13a at 3. Dr. Fujikane has conducted research on the ways Hawaiians culturally valued the integrity of land, and that cultural value is encoded in a land division known as “mo‘o‘āina.” Tr. 01/9/2017, V. 23 at 214-215.	See <i>supra</i> UH-TIO response to proposed FOF 81. Misleading to the extent it suggests that the TMT Project will adversely impact traditional and cultural practices. See UH-TIO FOF 378, 453, 459, 611-774; see also UH-TIO COL 201, 342, 364. Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942 (regarding various beliefs in Mauna Kea’s significance).
103	19	“Mo‘o‘āina “ is defined by Mary Kawena Pukui and Samuel H. Elbert as a “narrow strip of land, smaller than an ‘ili.” Ex. B.13j at 253-254. Mo‘o‘āina as a series of smaller land divisions that is part of a larger land base. Mo‘o‘āina foreground the relationality between land formations. Mo‘o‘āina are defined by what lies on their borders, by their relationality to other mo‘o‘āina. Exhibit B.13c is LCA Award 3131 illustrating a mo‘o‘āina land division. Key here is that mo‘o‘āina are not defined by abstract cardinal directions north, south, east or west but in their relation to other land formations. Tr. 01/9/2017, V. 23 at 214-215.	Misleading to the extent it suggests that the TMT Project will adversely impact traditional and cultural practices. See UH-TIO FOF 378, 453, 459, 611-774; see also UH-TIO COL 201, 342, 364. Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Irrelevant. Not material.

104	19	The term “mo’o’āina,” then, indicates that Mo’oinanea’s presence on Mauna Kea is also about the integrity of land there, and that the undivided ahupua’a of Ka’ohe represents an even higher expression of this integrity of land. Ex. B.13.m at 2-5, cited in Ex B.13a at 10. As surveyor Curtis J. Lyons explained in 1875, “The whole main body of Mauna Kea belongs to one land from Hamakua, viz., Ka’ohe.” Ex. B.13o at 14, cited in Ex. B.13a at 10. Siting the TMT on the northern plateau would violate this integrity of the land.	Unsupported/Unsubstantiated. UH-TIO FOF 169, 242, 306, 343, 647, 773, 791 (regarding siting the TMT Project below the summit ridge in a locality known as Area E); UH-TIO FOF 840-867 (regarding the appropriateness and compatibility of the TMT Project for/to the astronomy precinct). Irrelevant. Not material. Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea’s significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942. Lack of jurisdiction as to the alleged desecration. UH-TIO COL 391-407. Not credible. Unsupported/Unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. <i>See</i> UH-TIO FOF 378, 453, 459, 611-774; <i>see also</i> UH-TIO COL 201, 342, 364. Not credible. Unsupported/Unsubstantiated. The TMT Project will not have a significant impact on any customary and traditional practice. <i>See</i> UH-TIO FOF 378, 453, 459, 611-774; <i>see also</i> UH-TIO COL 201, 342, 364; <i>see generally</i> UH-TIO FOF 858 (finding Townsend’s testimony that the TMT Project constitutes desecration of a sacred place unpersuasive, contradicted by her own admission that the lower part of Mauna Kea was used as an adze quarry, unpersuasive based on her personal negative feelings against the TMT Project, lacking credibility based on alleged inconsistent statements, and noting that Townsend admitted that she would oppose the TMT Project even if there was
105	19-20	Dr. Fujikane stated that the CDUA failed to address the State Desecration Law. Ex. B.13h, cited in Tr. 01/9/2017, V. 23 at 214-215. “if all of Mauna a Wakea is considered sacred from Saddle Road up to the summit, and the NASA Environmental Impact Statement for the Outrigger project deemed that there is already adverse, substantial-that there is cumulative, adverse, substantial and significant impact, the building of the TMT would be desecrating a place that is held sacred by Hawaiians and by many who are not Hawaiian. And in that sense, I think that the CDUA doesn’t address the Desecration Law at all, and I’m not sure why there’s that huge omission, because one of the questions has to do with the protection of Native Hawaiian rights and cultural practices.” Tr. 01/9/2017, V. 23 at 222-223.	

		minimal impact); UH-TIO FOF 943-947 (finding Dr. Taulaii's testimony that alleged desecration of sacred spaces negatively impacts the cultural identity and health of native Hawaiians insufficient and not based on prove, credible or admitted evidence); UH-TIO FOF 952 (finding testimony by Prof. Kaholokula that the perception of the desecration of Mauna Kea is detrimental to the health and well-being of native Hawaiians not supported by any research directly targeting the issue of the TMT Project or any studies with regard to partitioning the cause of stress from TMT and Mauna Kea from all other stress-causing factors for native Hawaiians).
106	20	The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382. Lack of jurisdiction as to the alleged desecration. Not in evidence. Irrelevant. UH-TIO COL 391-407.
107	20	Dr. Fujikane also recalled charges of desecration proposed by the Office of Hawaiian Affairs in a letter to Stephanie Nagata, Director of the Office of Mauna Kea Management (OMKM) calling for the investigation of an OMKM staff member who bulldozed an ahu (altar) erected at the TMT site. Tr. 01/9/2017, V. 25 at 68-69. The CDUA fails to address Mauna Kea itself as a cultural resource. Tr. 01/9/2017, V. 23 at 249-250. Dr. Fujikane states that this is a result of a discrepancy between the TMT's CDUA quoting the State Land Use Law (Chapter 183C, Hawai'i Revised Statutes) instead of Hawai'i Administrative Rule §13-5-1 as it is cited in the first application question (Exhibit B.13f: HAR §13-5-1). Ex. B.13a at 3-4. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 611-774 (regarding cultural resources considered). Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 124, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942 (regarding various beliefs in Mauna Kea's significance).

108	20	These two texts differ, and the result is that the TMT's CDUA omits the protection of "cultural resources" as stated on the actual application. The TMT's CDUA states the purpose of the Conservation District is to conserve, protect, and preserve the natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare." Ex. A002 at 2-1.	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 611-774 (regarding cultural resources considered).
109	21	The application itself actually states that it is the "natural and cultural resources" that is to be conserved, protected and preserved. The application states, "The purpose of the Conservation District to conserve, protect, and preserve the natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare" (emphasis mine). The TMT project cannot "conserve, protect, and preserve" the natural or cultural resources of the northern plateau, the sacred ground that will be desecrated by the construction of the TMT. Tr. 01/9/2017, V. 23 at 225.	Misleading. Presented out of context. Unsupported/Unsubstantiated. See UH-TIO FOF 464 (demonstrating that the TMT Project will not cause substantial adverse impact to the existing natural resources within the surrounding area, community, or region under HAR §135-30(c)(4)); see also UH-TIO FOF 611-774 (regarding cultural resources considered); see also UH-TIO FOF 466-502 (regarding biologic resources considered). Lack of jurisdiction as to the alleged desecration. UH-TIO COL 391-407. The fact that some native Hawaiians consider Mauna Kea to be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. See HAR 13-5-30(c); see also UH-TIO COL 88-103, 355-382.
110	21	Dr. Fujikane states, "what the CDUA is trying to say is that cultural practices will not be infringed upon, but it says nothing about the cultural resources, and the land is a cultural resource because it reminds us of the mo'olelo. Some people will try to argue that you can still remember the mo'olelo if you build the TMT, but it will not be the same. So the land itself is	Not credible. UH-TIO FOF 307 (regarding Prof. Fujikane's testimony). Mischaracterization. Unsupported/Unsubstantiated. UH-TIO FOF 680 (finding, in part, that Prof. Fujikane did not offer any source that states the land under the TMT Project site is referenced in the mo'olelo).

		a map that reminds us of the mo'olelo, and certain features of the land will trigger connections that we can make to other mo'olelo. But if it's built upon we will lose that capacity to connect mo'olelo through, you know, being in those places." Tr. 01/9/2017, V. 23 at 225.	The fact that certain individuals may hold and/or express such religious or spiritual beliefs is not in dispute, but the legal impact of such beliefs is clearly in dispute. There is no reliable probative and substantial evidence that the substance of the belief is factual.
111	22	Dr. Fujikane stated that viewplanes are an important cultural resource on Mauna Kea, and that city and county ordinances in Honolulu recognize that viewplanes are an important aspect of preserving natural beauty. Tr. 01/9/2017, V. 23 at 90.	Incomplete. UH-TIO FOF 906 (finding Prof. Fujikane did not present any credible evidence in support of her generalized statement that the TMT Project will have a substantial negative impact on traditional or historic cultural practices and presented no credible evidence of what cultural practices are conducted at the TMT Project site and whether they constitute traditional cultural practices). Misleading to the extent it suggests that the TMT Project will have an adverse impact on viewplanes. <i>See</i> UH-TIO FOF 777 ("The TMT Observatory will not substantially affect scenic vistas and viewplanes identified in the Hawaii County General Plan or the South Kohala Development Plan. The TMT Observatory will be visible in the view of Mauna Kea from Pahoa-Kea'au, Volcano-Kea'au Roads, and various Puna subdivisions or from locations where Hilo Bay is visible in the view of Mauna Kea from portions of the South Kohala district and the area around Waimea, it will not block or substantially obstruct the views and viewplanes of the mountain. Therefore, the TMT Project's visual impact will be less than significant under HAR § 11-200-12. Ex. A-3/R-3 at 3-84 to 3-85."); <i>see also</i> UH-TIO FOF 784, 785, 786. Not credible. <i>See</i> UH-TIO FOF 787 (finding that while several of the Petitioners participated in the public consultation and information processes to develop the CMP, the CIA, the CRMP for the TMT Project from 2008 through 2011, at no time prior to this contested case hearing did

112	22	“So viewplanes are recognized in the CDUA application itself when it asks whether a development project will preserve open space and natural beauty. That to me is a recognition of the importance of viewplanes, and it’s also again reinforcing other kinds of city ordinances, where you need height variance applications when you build a building beyond a certain height.” Tr. 01/9/2017, V. 23 at 90.	Petitioners and Opposing Intervenor contend that the TMT Observatory would impede views from the summit of Pu‘u Poli‘ahu.”). Misleading to the extent it suggests that the TMT Project will have an adverse impact on viewplanes. UH-TIO FOF 777. Incomplete; Misleading to the extent it suggests that the Northern Plateau is an open space with no telescope structures on it. UH-TIO FOF 783 (“The Northern Plateau is not an open space with no telescope structures on it; SMA roads and facilities are already on the Northern Plateau. Tr. 10/20/16 at 63:18-25. However, the open space characteristic of the Northern Plateau will still be preserved after the construction of the TMT Observatory because the observatory will only take up five of the 2,000 acres. Tr. 12/12/16 at 163:21-164:5.”); UH-TIO FOF 906; 770 (“Prof. Fujikane also testified that while standing on the Northern Plateau, the viewplane facing the summit already includes the existing observatories. Tr. 1/11/17 at 79:18-80:3.”). Irrelevant. Not credible. UH-TIO FOF 770, 906. Misleading to the extent it suggests that the TMT Project will have an adverse impact on viewplanes. UH-TIO FOF 777. Not in evidence. It has not been established by reliable, probative, and substantial evidence that the TMT would block such viewplanes. Inaccurate/False; Misleading to the extent it suggests that the Northern Plateau is an open space with no telescope structures on it. UH-TIO FOF 783, 770. The fact that some native Hawaiians consider Mauna Kea to
113	22	Dr. Fujikane specifies the viewplanes of Mauna Kea: “So the viewplanes in the mo‘olelo are very important because there are recognized viewplanes from Mauna a Wākea all the way to Kaua‘i where there is an ahu, the Ahu o Poli‘ahu on Kaua‘i. And I have heard on a clear day--and this is in the Cultural Impact Assessment of the TMT--you can see Kaua‘i from--I think you can see Kaua‘i from Mauna a Wākea, but why do you have an ahu on Kaua‘i, Ahu o Poliahu, unless there is a viewplane and a connection between these sacred points?” Tr. 01/9/2017, V. 23 at 90-91.	

			be sacred does not act as an absolute bar on development. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382.
		III. THE CDUA FAILS TO PROVIDE A REGIONAL AND EMIC ANALYSIS OF THE IMPACTS AND EFFECTS OF THE PROPOSED TMT PROJECT	
114	22-23	Mauna Kea is rich in mo'olelo, mele, and olelo no'eau associated with akua and storied places (wahi pana). Ex. b.44 at 4.	Misleading; Mischaracterization to the extent it suggests that that traditional and customary cultural practices were not considered. UH-TIO FOF 611-743 (regarding cultural resources considered). Inaccurate/false; Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 24, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942 (regarding various beliefs in Mauna Kea's significance). Inaccurate/False; Misleading; Mischaracterization to the extent it suggests that that traditional and customary cultural practices were not considered. UH-TIO FOF 611-743 (regarding cultural resources considered). Inaccurate/false; Unsupported/unsubstantiated to the extent it suggests that beliefs regarding Mauna Kea's significance were not considered. UH-TIO FOF 24, 612, 618, 642, 650, 655, 668, 692, 698, 728, 744, 858, 864, 865, 942 (regarding various beliefs in Mauna Kea's significance). Not credible. Unsupported/Unsubstantiated. <i>See</i> UH-TIO FOF 559 (finding that Prof. Mills admitted that he had not read the CDUA and the FEIS in their entirety. Tr. 1/25/17 at
115	23	The cultural landscape that is Mauna Kea cannot be viewed as one that is bounded by lines on a map. Rather, like the quarry that features so predominantly at the summit, it should be viewed as a "process, of ascent, production, and descent, that involved a series of changes in the social persona, thus, emphasizing the 'being' and 'becoming' aspects of social life." Ex. A122 at 7-18.	
116	23	As has been attested to by Dr. Peter Mills in his written and oral testimony, the CDUA has failed to adequately determine the "Area of Potential Effect"	

		(APE) of the proposed TMT project as required under 36 CFR Sec. 800.16(b) and the Guidelines for Assessing Cultural Impacts. Ex. B.12a, B.12c; Tr.1/25/17, Vol. 30 at 89:11-14. In particular, the CDUA has wholly failed to consider the adverse effects of the altered setting which would occur by building the proposed TMT project. Tr. 1/25/17, Vol 30 at 15:16.	130:9-132:3. On cross-examination, Prof. Mills acknowledged that—contrary to his understanding—SHPD sites 16169 and 21447 are in fact referenced in the CDUA. See Tr. 1/25/17 at 152:1-153:7; Ex. A-1/R-1 at Fig. 4.1. He further testified that the comment letter he submitted during the public comment period for the EIS makes no reference to “intangible interest” or the “area of effects” alleged in his present testimony. Tr. 1/25/17 at 135:19-138:16; Ex. A-4/R-4 at 343. Prof. Mills also acknowledged that the time period to challenge the EIS or the AIS had expired. Tr. 1/25/17 at 139:23-140:2.).
117	23	Further, the CDUA has failed to consider intangibles in its assessment of cultural impacts, giving value only to historical properties lying within the project site and no value in the natural object or thing having great significance with cultural practice and in the minds of the cultural practitioner. Id. at 43:16-25, at 97: 16-23, at 83-84, at 97-98; Abad Tr. 1/19/17, Vol 27 at 36-37; Ex. B.08j.	Not credible. See UH-TIO FOF 559; see also UH-TIO FOF 349 (finding in part that “Petitioners, Opposing Intervenor, and their witnesses repeatedly admitted that they did not even consider or read the Hawai’i Supreme Court’s recent decision in <i>Kilakila ‘o Haleakala v. Board of Land and Natural Resources</i> , 138 Hawai’i 383, 382 P.3d 195 (2016), which extensively discussed several of the same eight criteria. See Tr. 1/11/17 at 84:25-85:15 (Fujikane); Tr. 1/19/17 at 129:2-11 (Abad); Tr. 1/25/17 at 147:18-24 (Mills); Tr. 1/30/17 at 229:3-6 (Flores); Tr. 1/31/17 at 135:7-10 (Ward); Tr. 2/22/17 at 132:20-133:8 (Ho); Tr. 2/28/17 at 263:15-20 (Trask); Tr. 3/1/17 at 202:22-25 (Camara).”). Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 140 (regarding the Cultural Resources Management Plan and other sub-plans); UH-TIO FOF 141-142, (regarding the Cultural Resources); UH-TIO FOF 210 (noting in part that “Multiple levels of consultation with native Hawaiians and other interested parties regarding the TMT Project, including cultural practices and activities, were initiated in the 2000s.”); UH-TIO FOF 226 (finding in part that “consideration of traditional and contemporary cultural and religious practices,

			and the impacts thereto, were specifically included in the CIA for the FEIS. Ex. A-5/R-5, App. D; Tr. 11/15/16 at 28:12-23, 45:2-47:7.”); UH-TIO FOF 227 (finding in part that “[t]he substantial evidence of the history of the TMT Project, consideration of historical, traditional and cultural resources and practices, as well as contemporary and religious practices and impacts to those practices and resources by the TMT Project supports the finding that sufficient and significant consultation with the Petitioners, Opposing Intervenor, and the public at large occurred at several stages of the planning process and were specifically included in the FEIS and the CIA for the FEIS, as well as the CDUA. Ex. A-3/R-3 at 3-9 to 3-21; Ex. A-5/R-5, App. D; Ex. A-1/R-1 at § 4; Tr. 10/24/16 at 223:17-224:20; Tr. 11/15/16 at 23:11-23.”); UH-TIO FOF 326 (regarding the institution of a Cultural and Natural Resources Training Program that all TMT Project staff and all construction workers will be required to attend annually).
118	23	The TIO Archaeological Inventory Survey (Ex. C-12) is also found to be incomplete and hence inadequate in its failure to mention the genealogical chant of Kauikeouli (Tr. 1/25/17, Vol. 30 at 22:14-20, at 23:4-12, 16) as well as a review of pertinent literature (Id. at 21-22, at 93, at 92:1-10).	Not credible. UH-TIO FOF 559. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 503-610 (regarding the consideration of archaeological and historic resources).
119	24	The CDUA and its accompanying EIS (Ex. A003, A004, A005) fail to provide the wide -lens focus on regions as required under HAR Sec. 11-200-17(g) and 13-5-30(c)(4). Ex. B.08a at 6; Abad Tr. 1/19/17, Vol. 27 at 22:17-25.	Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 619 (“Notwithstanding the University’s position that cultural practices do not appear to be encompassed by the definition of “Natural resource” contained in Haw. Admin. R. § 13-5-2, both the University and the DLNR identified and assessed such practices as resources to be considered under the criterion of Haw. Admin. R. § 13-5-30(c)(4).”). Not credible. UH-TIO FOF 604 (noting that Dr. Abad was

		unable to specify exactly what larger region should have been considered in the CDUA and admitted that the CDUA did in fact address areas of concern in a larger region outside of the project area, outside the MKSR, and within the historic district, including Lake Waiau and Kūkahu‘ula. Dr. Abad also admitted that section 3 through 8 of the AIS were included in the CDUA for consideration. Tr. 1/19/17 at 22:2-25:6, 129:14-133:21; UH-TIO FOF 606 (finding Dr. Abad’s opinion that the proposed mitigation measures for the TMT Project do not “outweigh” the negative impacts of the project unpersuasive given her personal biases and her opinion that the TMT Project would cause harm no matter where it is located on Mauna Kea. Tr. 1/19/17 at 135:18-23); UH-TIO FOF 608 (noting that “While Dr. Abad claimed her views are based in part on applicable law, she is not an attorney, and has not reviewed applicable case law, including the Hawai‘i Supreme Court’s <i>Kilakila O Haleakalā</i> opinion, in preparing her testimony. Tr. 1/19/17 at 129:2-11”).
120	24	Misleading. Presented out of context. (“With the completion of the archaeological inventory survey of the Science Reserve and the NAR there is new evidence that the summit region of Mauna Kea was comprised of several different places, each with its own defining characteristics, but also exhibiting evidence of inter-connections”). McCoy Ex. A122, Sec.7.2.3.1.
121	24	Not credible. UH-TIO FOF 349, 559,757 (regarding Prof. Mills). Not credible. UH-TIO FOF 102, 349, 415, 600, 604, 605, 606, 607, 608, 866 (regarding Dr. Abad).
		The summit region of Mauna Kea can be best understood as comprising different places, each with its own defining characteristics, but also exhibiting evidence of inter-connections. McCoy Ex. A122, Sec.7.2.3.1.
		Both Mills and Abad hold PhDs in anthropology and are qualified archaeologists who meet the standards of the Secretary of the Interior (36 CFR Part 61) and HAR 13-281-8). See Ex. B.12a and B.08b. Both testified to the need for an emic cultural perspective to have been considered at all levels of analysis, which are notably missing from the submissions tendered by the applicant and TIO. Id. at 26:7-11, at

		27:8-11, 14-21, at 28: 7-14; Mills Tr. 1/25/17, Vol 30 at 97.	
122	24	The applicant's CDUA lacks such a regional and emic analysis.	Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 604. Irrelevant. Not material.
		IV. THE DRAFT EIS SUBMITTED BY THE UH DID NOT INCLUDE ANY OF THE RECOMMENDATIONS MADE IN THE PRELIMINARY DRAFT REPORT FOR REVIEW	
123	24-25	The Draft EIS for the proposed TMT project did not include in its Summary any of the recommendations made in the Preliminary Draft Report for Review (Ex. B.44 at 13, B.45 at vii, A148 at vii) including that "no further development, including the TMT Observatory Project and the Mid-Level Support facilities at Hale Pohaku, take place on Maunakea." Hayes, Tr. 10/31/16 at 108-112, Ex. B-57 at 1.	Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 ("Cruz, a rebuttal witness called by KAHEA and one of the authors of a preliminary draft of the Cultural Impact Assessment ("Preliminary Draft CIA"), claimed that the DEIS did not comply with HRS Chapter 343 because his recommendation that project proponents should strongly consider no further development atop Mauna Kea, which was included in the Preliminary Draft CIA, was not included in the Draft CIA that was attached to the DEIS. Tr. 2/28/17 at 123:24-124:1. Cruz's claim is not supported by law or the record. Initially, as detailed above, no one, including Cruz, challenged the approval of the FEIS. Cruz also admitted during his testimony that he does not have any expertise or experience in the preparation of an EIS. Tr. 2/28/17 at 161:7-19. He also conceded in his testimony that he did not read the DEIS in its entirety; but only read the CIA portion. Tr. 2/28/17 at 159:19-160:4. Notably, the Executive Summary in the beginning part of the DEIS specifically identifies and discusses a no action alternative to the building of the TMT Project. Ex. A-148a at S-9; see also Ex. A-148. The no action alternative is also identified and discussed in other parts of the DEIS. Ex. A-148a at 1-2, 4-5 through 4-7. Neither Cruz nor KAHEA cite to any law that was allegedly violated by presenting the no action alternative in the manner

124	25	FEIS Vol. 1 at page 7, signed by UH Hilo Chancellor Rose Tseng and dated April 26, 2010 states that: “The Final EIS and all ancillary documents were prepared under the University of Hawai’i at Hilo’s (University) direction or supervision and the information submitted, to the best of the University’s knowledge, fully addresses the document content requirements as set forth in Hawai’i Administrative Rules section 11-200-17 and 11-200-18.” Ex. A-003 at 4/Ex.B.32 at 7.	that it was presented in the DEIS. Accordingly, Mr. Cruz’s assertion that the DEIS did not comply with HRS Chapter 343 is not credible. <i>See</i> Exs. A-147, A-149”). Incomplete. <i>See</i> UH-TIO FOF 198 (regarding the preparation of the FEIS); UH-TIO FOF 199 (regarding the review and approval of the FEIS; UH-TIO FOF 200 (finding that “[t]he time to legally challenge the formal acceptance of the FEIS expired on August 7, 2010.”). Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. <i>See</i> UH-TIO FOF 201. Inaccurate/False to the extent it suggests that the TMT Project has not complied with the EIS process. UH-TIO FOF 202 (“The TMT Project has complied with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200.”). Irrelevant. Misleading. Presented out of context. UH-TIO FOF 203 (regarding Cruz’s testimony). Irrelevant. Misleading. Presented out of context. UH-TIO FOF 203. <i>See supra</i> UH-TIO response to proposed FOF 123 and the identification and discussion of a “no action” alternative in the Executive Summary in the beginning part of the DEIS.
125	25	A Preliminary Draft Cultural Impact Assessment (Draft CIA) was prepared by Cultural Surveys Hawaii (Mr. Brian Cruz) and submitted to Parsons Brinckerhoff for the TMT Project in early March, 2009. Ex B.44; Tr. 02/28/16 Vol. 42:102:22-25.	
126	25	The Draft CIA included recommendations “that Project proponents strongly consider no further development, including the TMT Observatory Project and the Mid-Level Support Facilities at Hale Pohaku, take place on Maunakea. Consequent to this determination of no action, it is further suggested that Project proponents consider alternative proposals and remediation measures suggested by CIA study participants (see Community Consultation Results	

127		above) (hereinafter referred to as “no further development” recommendation). Ex B.44, 13; Tr. 02/28/16 Vol. 42:102:22-25.	
128	25	The Draft CIA also recommended measures to help minimize the adverse impact, should the project move forward in Hawai‘i (hereinafter referred to as recommended “mitigation measures”). Ex B.44, 13-15.	Irrelevant. Misleading. Presented out of context. UH-TIO FOF 203.
129	26	Shortly following submission of the Draft CIA, Brian Cruz was contacted by Jim Hayes of Parsons Brinckerhoff, demanding Mr. Cruz remove the “no further (action) development” from the Draft CIA. Mr. Cruz refused to remove the recommendations from the Draft CIA Tr. 02/28/16 Vol. 42: 103: 2-5.	Irrelevant. Misleading. Presented out of context. UH-TIO FOF 203.
130	26	On March 9, 2009 the Draft EIS was published for the 45-day commentary period without recommendations in the Draft CIA submitted to Parsons Brinckerhoff, including the (do not build) “no further development” recommendation. Ex. B.45; Tr. 02/28/16 Vol 42: 103: 5-10; 116: 7-14.	Irrelevant. Misleading. Presented out of context. UH-TIO FOF 203. Incomplete. UH-TIO FOF 197 (“On May 23, 2009, the Draft Environmental Impact Statement (“DEIS”) for the TMT Project was published in the Environmental Notice. KAHEA, MKAH, and Neves submitted written comments on the DEIS. Ward submitted written comments on the DEIS on behalf of the Sierra Club’s Hawai‘i Chapter. WDT Hayes at 2-3; Ex. A-76; Ex. A 77; Ex. A-78; Ex. A-80; Exs. A-82 to A-85; Exs. A-88 to A-91; Tr. 2/13/17 at 203:1-203:11.”). Irrelevant. Not credible. UH-TIO FOF 203.
	26	Sometime after publication of the Final Environmental Impact Assessment (FEIS) in May, 2010, Cruz learned that the “no further development” and mitigation measures recommendations were “put back in” the CIA for the Final EIS. Exh. A-5/R-5, App. D at xiv- xv; Exh. B.34, App. D at xiv-xv; Tr. 02/28/16 Vol42: 103: 11-13.	

131	26	Thereafter Cruz made a complaint to the Office of Environmental Quality Control (OEQC), to address the discrepancy between the CIA for the Draft and Final EIS, submitted by Parsons Brinckerhoff had taken out those recommendations. No action was taken by OEQC on the complaint made by Mr. Cruz. Tr. 02/28/16 Vol 42: 103: 13-21.	Irrelevant. Not credible. UH-TIO FOF 203. Incomplete and/or misleading partial quotation. Tr. 02/28/16 Vol. 42:103:18-21 (referring to the OEQC, "They told me that there was not much they could do because Parsons Brinckerhoff owned the intellectual property rights for the draft EIS, including my CIA").
132	26	Hawaii Administrative Rule, HAR 11-200-17, requires the Draft EIS to include the mitigation measures and alternative measures or alternative actions. Tr. 02/28/16 Vol 42: 103: 22-25; 104: 1-3; 106:13-25; 107: 1-3.	Not credible; Misleading/presented out of context to the extent it is relying on Cruz's testimony. UH-TIO FOF 203.
133	27	Cruz testified that failure to include those ("no further development" and mitigation measures) recommendations means that a key component is missing from the Draft EIS and renders the CIA to the Final EIS flawed and invalid. Tr. 02/28/16 Vol 42: 106: 13-25; 107: 1-3 and 15-22; 111:10-25; 116: 7-22; 117: 7-17; 123: 24-25; and 124: 1-4	Inaccurate/False to the extent it suggests that the TMT Project has not complied with the EIS process. UH-TIO FOF 202. Not credible. Inaccurate/False. Unsupported/unsubstantiated. UH-TIO FOF 203.
		V. THE CDUA DID NOT CONSIDER IMPACTS OF THE PROPOSED TMT PROJECT ON THE UNIQUE HABITAT OF THE MAUNA KEA SUMMIT REGION	
134	27	Eric Hansen holds both a bachelors and masters degree in Environmental Sciences from UH Hilo (Ex. B.10b) and led a fieldcrew for five months doing a baseline botanical survey at the alpine and subalpine zones of Mauna Kea beginning in May 2011. Hansen, Tr. 1/19/17, Vol. 27 at 143:12-14, at 144:22-25, at 145:1-6, at 150:9-21, at 173: 22-24; Ex. B. 10a at 1, B.10.b at 3.	Not in dispute, but more accurately stated in UH-TIO FOF 477.

135	27	In conducting the 2011 Mauna Kea Baseline Botanical Report (Ex.B.64) on the northern plateau where is situated the proposed TMT site, fieldwork disclosed unique assemblages of botanical communities and species not present in other areas at the same or similar elevations on Mauna Kea. Hansen, Tr. 1/19/17, Vol 27 at 148: 7-25, at 194: 4-6 Ex. B.10a.	Citation to Tr. 1/19/17, Vol 27 at 148:7-25 does not support the Proposition. Mischaracterization of testimony cited at Tr. 1/19/17, Vol 27 at 194:4-6. Incomplete; Misleading/presented out of context to the extent it suggests there are unique biologic species within the proposed site. UH-TIO FOF 472 (“There are no unique plants within the proposed project site. Tr. 12/1/16 at 154:5-156:10, 171:11-172:4.”); UH-TIO FOF 474 (finding in part “[t]here are no species of flora unique to the TMT Project site. Based on this, the TMT Project will not have a significant impact on botanical resources because species and habitat of these areas are not unique to the Project site and are found elsewhere on Mauna Kea and/or on other islands of Hawai‘i.”).
136	27	The substrate of the northern plateau and hence the TMT site is pahoe-hoe, unlike the cinder substrate upon which the other observatories are built. Vol. 27 at 154:3-18, 156:25, 157:1-8, 184:3-11, 185:11-15.	Misleading/presented out of context to the extent it suggests the lava substrate in Area E is habitat for unique biologic species. See UH-TIO FOF 486 (finding in part that “[t]he lava substrate in Area E is not considered an ideal wēkiu bug habitat.”).
137	27-28	Cinder cones are not conducive for providing habitat for species of botanical origins. Id. Vol. 27 at 180:14-16.	Irrelevant. Misleading/presented out of context to the extent it suggests the lava substrate in Area E is habitat for unique biologic species. UH-TIO FOF 486.
138	28	Moving rocks and altering substrate will destroy the highly evolved, unique botanical assemblages found in the northern plateau and the site of the proposed TMT. Ex. B.10a at 2, Vol. 27 at 148:13-19, 158: 14-25, 159: 1-3, 11-12.	Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 480 (“Hansen testified that, in his opinion, the CDUA does not meet criterion 4 because the development of the TMT Project will “dig into the mountain, move rocks and alter substrate.” Ex. B.10a (WDT Hansen) at 2. However, the mere fact that a project will require excavation is insufficient to disqualify a project from approval under HAR § 13-5-30(c). To hold otherwise would render nearly every proposed project insufficient under HAR § 13-5-30(c).”); UH-TIO FOF 911 (“Hansen testified that, in his opinion, the CDUA does not meet criterion 6 because the development of the TMT

139	28	After substrate disturbance in the northern plateau recolonization of these unique assemblages would be very slow, if possible at all. Id. Vol 27 at 159: 22-25, 160: 1-3, 11-13.	Project will “dig into the mountain, move rocks and alter substrate.” Ex. B.10a (WDT Hansen) at 2. As discussed above, Hansen’s position is unreasonable, and the mere fact that a project will require excavation does not automatically disqualify a project from approval under HAR § 13-5-30(c). Since allowable uses in the Resource subzone specifically include “mining and extraction of any ... natural resource...” his position is contradicted by regulations governing the conservation district. HAR § 13-5-24(c); R-6.”). Misleading. Presented out of context. Incomplete. UH-TIO FOF 472, 474, 480, 486, 911.
140	28	The TMT FEIS (Ex. A003/B.32, A004/B.33, A005/B.34) were prepared before the Botanical Baseline Survey (Ex. B.64), were not comprehensive, and did not include any of that survey’s findings. Id. Vol. 27 at 161:2-5, 162:5-9, 163:1-5.	Unsupported/Unsubstantiated. Not credible. Inaccurate/False to the extent it suggests that the FEIS was not comprehensive. UH-TIO FOF 459 (“The approved and unchallenged FEIS for the TMT Project identifies several mitigation measures, both direct and indirect, that are aimed at ameliorating potential impacts on the environment and cultural practices. These measures mitigate the Project’s potential impacts on the environment and cultural practices so that the TMT Project will not create a substantial adverse impact to these areas.”); UH-TIO FOF 464 (“The TMT FEIS addresses the existing natural resources within the surrounding area, community, or region, as well as the potential impacts of the TMT Project. The incremental nature of a project’s impacts, standing alone, cannot endlessly justify development within an existing developed area. However, in this case, the TMT Project’s compliance with all applicable rules, regulations, and requirements, the Master Plan, CMP, sub-plans, and the TMT Management Plan, along with the mitigation measures committed to in the TMT FEIS, CDUA, and TMT Management Plan, demonstrate that the TMT Project will not

		cause substantial adverse impact to the existing natural resources within the surrounding area, community, or region under HAR § 13-5-30(c)(4). WDT White at 7; Tr. 10/20/16 at 73:1-21.”). Incomplete. UH-TIO FOF 518 (“There were no challenges to the acceptance of the Astronomy Precinct AIS. Tr. 12/05/16 at 215:24-216:2. There were also no legal challenges to the TMT FEIS, including the AISs that were attached. Tr. 12/05/16 at 216:3-8.”).
141	28	Inaccurate/False. Unsupported/Unsubstantiated. Not credible. UH-TIO FOF 478 (“Hansen is not a trained entomologist and admitted that he is not an expert in lichen, even though the significant majority of his testimony focused on the lichens present on Mauna Kea. He identified two endemic lichen species present on Mauna Kea, but he was unsure if they were endemic to Mauna Kea only, or could be found throughout the Hawaiian Islands. Tr. 1/19/17 at 160:4-10, 167:8-10. Hansen testified to the presence of unique assemblages of lichens found at the TMT Project site. However, Hansen admitted that those species of lichen can be found elsewhere on the mountain and that the particular assemblages of lichens found at the TMT Project site could be found elsewhere. Tr. 1/19/17 at 147:7-25, 192:6-22”); UH-TIO FOF 479 (“When asked about the report prepared by his superior, Dr. Gerrish, which did not focus significantly on the assemblages of lichens that he testified to, Hansen admitted that there were differences between his opinion and that of his superior, Dr. Gerrish. Specifically, Hansen admitted that the report prepared by Dr. Gerrish did not consider the lichen assemblage to be “significant.” Tr. 1/19/17 at 194:7-195:14. Therefore, the lichen assemblage is not sufficient to halt the planned development and is not considered to be a significant

			factor in the evaluation of this criterion"); UH-TIO FOF 480 ("Hansen testified that, in his opinion, the CDUA does not meet criterion 4 because the development of the TMT Project will "dig into the mountain, move rocks and alter substrate." Ex. B.10a (WDT Hansen) at 2. However, the mere fact that a project will require excavation is insufficient to disqualify a project from approval under HAR § 13-5-30(c). To hold otherwise would render nearly every proposed project insufficient under HAR § 13-5-30(c)").
		VI. TIO HAS NOT COMPLIED WITH THE DECOMMISSIONING PLAN (EXHIBIT A013)	
142	28	TIO is a Delaware limited liability company formed in May 2014 and obtained its tax exempt status in May 2015. Ex. B.47 at 7 and 13.	Inaccurate/False. Incomplete. TMT International Observatory, LLC ("TIO") was formed on May 6, 2014 as a Delaware limited liability company. TIO is a not-for-profit entity and an exempt organization under IRS regulations. UH-TIO FOF 10, 206.
143	28	Gary Sanders (hereafter Sanders) has been the project manager for the TMT project since 2004. Ex. C-2 at 1.	Not in dispute.
144	28	Sanders testified "[w]e assume the [master] lease extension will take place." Tr. 1/3/17, Vol 20 at 30:10-11.	Misleading. Presented out of context. Tr. 1/3/17, Vol 20 at 30:17-31:11 ("Q: You state on Page 2 of your testimony that the current lease for the Mauna Kea Science Reserve Expires in 2033; is that correct? A: Correct. Q: Has anyone given you any assurance that the general lease will be extended? A: No. Q: Did you have any discussions with people in political office? A: No. Q: What assurances have you and the funders been given that the general lease will be extended? A: I am not aware of any assurances. Q: Have you proposed this project based on an assumption that the lease will be extended? A: We assume that the lease extension will take place. Q: Why do you assume that? A: I'm not sure. It's an assumption and it's a risk issue that the board has to

145	29-30	Sanders testified that he did not sign the Decommissioning Funding Plan (Ex. C-39) because “[i]t was not necessary for him to sign it because financial assurances were provided later in the document by the people I report to.” Id. at 139:16-23.	consider.”). Incomplete. UH-TIO FOF 159 (“TIO has committed to performing under the Decommissioning Plan. TIO formation documents include commitments by each of the members to be responsible for decommissioning. Tr. 1/3/2017 at 32:13-32:21, 55:1-55:6. The TMT Initial Decommissioning Funding Plan (Ex. C-39) is a commitment by the members of TIO to its decommissioning obligations. The plan calls for a sinking fund of a million dollars per year with adjustments for inflation commencing upon observatory operation to fund eventual decommissioning. The sinking fund will be fully funded and sufficient up to the end of the 50-year useful life of the TMT Project. Tr. 1/3/17 at 40:14-41:16, 147:20-148:1; Ex. C-39.”). Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159; UH-TIO FOF 331 (“At the end of the TMT Observatory’s useful life, the TMT Observatory and the portion of the Access Way exclusively used to access the TMT Observatory will be dismantled and the site restored in compliance with the Decommissioning Plan. TMT will take approximately 3-4 years to decommission. Tr. 11/2/16 at 201:16-20. Deconstruction and site restoration efforts will be managed by TMT Project staff with oversight by OMKM. TIO is committed to adequately fund decommissioning. Ex. C-2 (WDT Sanders) at 11-12; Tr. 11/02/16 at 233:8-17. Even if the General Lease, which expires in 2033, is not extended, TIO members have committed to providing the funds needed for decommissioning of the TMT Observatory and portion of the Access Way exclusively used to access the TMT Observatory. Tr. 12/19/16 at 120:7-121:2, 178:7-179:6; Tr. 11/02/16 at 201:16-20.”); UH-TIO FOF 338 (“During the
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		evidentiary hearing, Petitioners and Opposing Intervenor argued that the CDUA should be denied because they claimed that TIO does not yet have all the funds necessary to build the TMT Project. <i>See, e.g.</i>, B.19a at 5, 6-7. Dr. Sanders, the Project Manager for the TMT Project, provided uncontroverted testimony that TIO has already received substantial funds and will undertake additional fundraising efforts once a decision has been made as to the project approval. Tr. 1/3/17 at 35:15-20. The members of TIO have committed to providing their respective shares of the operating budget. Tr. 1/3/17 at 55:1-6. If the TMT Project is permitted, sufficient funds would be committed to decommission it by the current termination of the General Lease in 2033. Tr. 11/02/16 at 233:8-17"); UH-TIO FOF 339 (finding in part "Ching did not dispute Dr. Sanders's testimony. Nonetheless, he posited that the TMT Project has not taken proper steps to ensure funding of the project. Ching cites Section II(C) of the Mauna Kea Plan (1997), which provides that "[n]o application or 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[.]").
146	29	Financial assurance mechanisms are addressed in 3.2 of Exhibit A013 at 15-17.
147	29	The statements of intent appended to Ex. C-39 were all dated May 6, 2014, without the presence of Sanders. Tr. 1/3/17, Vol. 20 at 152:25.
148	29	When asked whether the Statements of Intent were signed by persons purporting to be whom they are with no other corresponding authority for the
		Not in dispute, but more accurately stated in UH-TIO FOF 159, 331, 338, 339.
		Misleading. Presented out of context.
		Irrelevant; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339.
		Irrelevant; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339.

		governments they purportedly represent, Sanders stated: "As far as I know, these people signed these in good faith understanding their authority." Id. at 152:18-23.	
149	29	When asked how he knew that the signatures were duly authorized and binding on their respective governments Sanders replied: "I don't know that they are, but I have no reason to doubt it." Id at 153-154:23-25, 1-4.	Incomplete; Irrelevant; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339.
150	29	The Statements of Intent appended to Exhibit C-39 do not conform with the formalities and authorizations set forth on the Guarantee Given on Behalf of Her Majesty's Government in the United Kingdom to the Board of Land and Natural Resources of the State of Hawaii, dated July 18, 1978, appended to Exhibit B.03f, last page.	Misleading/presented out of context; Unsupported/unsubstantiated to the extent it is asserting that the Statements of Intent appended to Exhibit C-39 are invalid.
151	29	The process for approval of decommissioning funding plans requires approvals by first the Mauna Kea Management Board, then the President of the University of Hawaii, then its Board of Regents, and finally the BLNR. Ex. A013 at 14, Table 4.	Irrelevant; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339. Citation does not support the proposition.
152	30	A Decommissioning Funding Plan is required of TIO under Para 10 the sublease (Ex. B.02f at 8-9).	Incomplete. UH-TIO FOF 159 (regarding the TMT Initial Decommissioning Funding Plan).
153	30	Sanders acknowledged that he was not aware of any other approvals of the Decommissioning Funding Plan. Tr. 1/3/17, Vol. 20 at 145:6-9.	Irrelevant; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339. Not in dispute, but more accurately stated in UH-TIO FOF 159.
154	30	Under the terms of the Decommissioning Plan, Ex.A013 at 13, para 3.2, there must be support for all assumptions made in the financial assurances of the	Misleading/presented out of context and/or incomplete; Mischaracterization to the extent it suggests that the TMT Project is not committed to funding decommissioning. UH-TIO FOF 159, 331, 338, 339. Citation does not support the proposition.
			Mischaracterization to the extent it suggests that the TMT

155	30	Decommissioning Funding Plan. When asked whether Ex C-39 was prepared under his supervision, Sanders answered in the negative and was unable to provide a basis for the assumption of 3% inflation in columns A and B of the Sinking Fund Plan, nor was there any source cited within the plan itself. Tr. 1/3/17, Vol 20 at 156: 6-7, 15-19, at 157:3-5.	Project is not committed.to funding decommissioning. UH-TIO FOF 159, 331, 338, 339. Mischaracterization. Tr. 1/3/17, Vol 20 at 156:1-14 (“Q: And with respect to the two assumptions that are made with, you know, for inflation and deflation, that didn’t come from you? A: No, but I do believe they’re reasonable assumptions. Q: And on what do you base that assumption? A: Historical trends, and it also says, I believe in the document that three percent is the current estimate for the inflation looking forward and that the plan will be revised, I think it’s every 15 years. I think that’s a requirement. And so one looks at the historical evolution, the actual evolution of inflation and then revises cost estimate periodically.”).
156	30	When asked if the sinking fund will fund decommissioning sufficiently by 2033, Sanders replied: “It-the idea of the sinking fund is to be sufficient at the end of the 50 year lifetime. I believe it’s a positive balance in the year, the 27th year.” Id. Vol 20 at 40:22-25.	Mischaracterization to the extent it suggests that the TMT Project is not committed.to funding decommissioning. UH-TIO FOF 159, 331, 338, 339. Mischaracterization to the extent it suggests that the TMT Project is not committed.to funding decommissioning. UH-TIO FOF 159, 331, 338, 339.
157	30	Sanders deemed himself unqualified to explain the discrepancy between his testimony that the members of TIO had contributed \$129 million in cash and the TIO financials as stated in Ex. B.47 which reflects \$10 million in assets. Id.Vol 20 at 171-172:18-25,1-7.	Mischaracterization to the extent it suggests that the TMT Project is not committed.to funding decommissioning. UH-TIO FOF 159, 331, 338, 339.
		VII. NATIVE HAWAIIANS WHO EXERCISE THEIR TRADITIONAL AND CUSTOMARY PRACTICES ON OR ABOUT MAUNA KEA WILL SUFFER HARM FROM THE CONSTRUCTION	

		OF THE PROPOSED TMT ON ITS NORTHERN PLATEAU	
158	31	Dr. Maile Taualii (hereafter Taualii) is an assistant professor of Public Health at the University of Hawaii, Office of Public Health Studies, as well as an assistant professor at the Hawaiinuikea School of Hawaiian Knowledge. Ex. B.04b. Her expertise is in public health informatics, epidemiology, genetics and indigenous health. Tr. 1/24/17, Vol29 at 16:10-13.	Misleading. See UH-TIO FOF 942 (“Petitioners presented the testimony of Dr. Taualii, who has a background in public health, specifically with regards to indigenous communities. Ex. B.04.b; Tr. 1/24/17 at 7:9-23”) (emphasis added).
159	31	Statistically Native Hawaiians have the highest rates of heart disease in the United States, which are attributed in part to the high stress levels associated with cultural desecration, language loss, loss of access to lands. Tr. 1/24/17, Vol.29 at 11:9-20, 12:8-20.	Irrelevant. Not credible. Unsupported/unsubstantiated. Not in evidence. UH-TIO FOF 943 (“Dr. Taualii’s testimony is insufficient to support a finding that the TMT Project will have materially detrimental impacts on the physical health of Native Hawaiians, or the general public”); UH-TIO FOF 944 (“First, Dr. Taualii’s opinion is based on an unproven theory set forth in her unpublished research, which has yet to undergo the peer review process designed to subject such research to scrutiny by other individuals in the field in order to confirm or deny its legitimacy. Tr. 1/24/17 at 36:20-37:5, 48:11-12, 132:20-137:21. Petitioners and Opposing Intervenor did not submit Dr. Taualii’s research and resulting report into evidence because it was not public as of the evidentiary proceeding. Tr. 1/24/17 at 51:18-19, 86:6-11. Accordingly, the Parties and the Hearing Officer were unable to examine the statistics underlying Dr. Taualii’s assertions”); UH-TIO FOF 945 (“Second, Dr. Taualii’s research was limited in scope, and does not address the welfare of the general public. Dr. Taualii’s research was confined to a study of the TMT Project’s impacts on Native Hawaiians who opposed the TMT Project. Tr. 1/24/17 at 77:8-78:14. The research did not account for impacts on the health of Native Hawaiians who support the TMT Project, nor did it consider the impacts on general public beyond the Native Hawaiian

		community. Tr. 1/24/17 at 134:3-135:7.”); UH-TIO FOF 946 (“Third, even if Dr. Taulii’s research is accepted as true, it does not establish that the TMT Project alone will be materially detrimental to public health, safety, and welfare. This is because the TMT Project would be one of many factors that ostensibly impacts cultural identity, and therefore, health. Dr. Taulii testified that cultural identity and health are affected by factors such as the destruction of sacred spaces, loss of native language, loss of connection to the land, and environmental deprivation. Ex. B-04.a. Cultural identity and health are also impacted by factors contributing to the colonization, assimilation, and learned helplessness of Native Hawaiians. Ex. B-04.a, Tr. 1/24/17 at 12:17-15:22, 23:11-24:15, 46:22-47:11, 61:6-62:12, 96:6-97:4, 113:7-11.”); UH-TIO FOF 947 (“Finally, Dr. Taulii’s personal bias tainted the outcome of her research and opinion. Dr. Taulii initially requested to be a party to this proceeding to oppose the TMT Project. Tr. 1/24/17 at 131:18-132:3. Additionally, Dr. Taulii was not aware of any peer review studies that supported her claims of trauma to native Hawaiians as a result of the TMT Project. Her own study was developed after forming a belief or bias that would oppose the TMT Project so the scientific credibility of her study is unverified. See Tr. 1/24/17 at 132:12-19. Accordingly, less weight is afforded to Dr. Taulii’s research and testimony.”).
160	31	Irrelevant; Misleading/presented out of context; Not credible; Unsupported/Unsubstantiated; Inaccurate/False to the extent it suggests that the TMT Project will be materially detrimental to the public health, safety, and welfare. See UH-TIO FOF 858, 937-1000; see also UH-TIO COL 273-293. Not material.
		A physical effect of this stress is high blood pressure, which is associated with high levels of cortisol, which is a chemical that’s released in the body when you undergo fight or flight, the reaction that we normally have when we’re under attack or feeling stressed, that can cause high blood pressure. It can cause heart related conditions. Id at 13:11-18.

161	31	Taualii went on to describe the impact of micro aggressions such as the daily barrage of cultural identity being shrift away, the daily attack on the spiritual self, and the macro aggressions such as the building of the telescope on Mauna Kea, produce the production of cortisol. Studies show that native populations then suffer from cortisol which doesn't react appropriately anymore, it gets out of whack, and it can affect your heart. Id at 120-121: 14-25, 1-25.	Irrelevant; Misleading/presented out of context; Not credible; Unsupported/Unsubstantiated; Inaccurate/False to the extent it suggests that the TMT Project will be materially detrimental to the public health, safety, and welfare. See UH-TIO FOF 858, 937-1000; see also UH-TIO COL 273-293. Not material.
		VIII. THE OCCL RECOMMENDATION DID NOT CONSIDER INFORMATION OR REPORTS AFTER FEBRUARY 25, 2011	
162	32	Samuel Lemmo (hereafter Lemmo) is the administrator of the Office of Conservation of Coastal Lands of the Department of Land and Natural Resources (hereafter OCCL). Tr. 2/27/17, Vol. 41 at 215:10-15.	Not in dispute, but more accurately stated in UH-TIO FOF 340.
163	32	The CDUA which is the subject of the contested case hearing was submitted in 2010. The OCCL was responsible for compiling the staff report dated February 25, 2011. Ex. R-7, Vol 41 at 217:4-9, at 219: 22-25, 1-3.	Not in dispute, but more accurately stated in UH-TIO FOF 340.
164	32	Exhibit R-7 was presented to the BLNR at its February 25, 2011 meeting. Id. Vol. 41 at 255: 5-8.	Not in dispute, but more accurately stated in UH-TIO FOF 340.
165	32	Information included in the staff report was extracted from documents submitted by the applicant, UH. Id. Vol. 41 at 225: 19-23.	Incomplete. Mischaracterization. UH-TIO FOF 340; UH-TIO FOF 341 ("OCCL's conclusion that astronomy is an economically and environmentally sustainable use was the result of very difficult, deep analysis, reflection, and concern. It looked at all actions in the context of the setting in which the action might take place, the framework that is currently in

166	32	Exhibit R-7 (the OCCL staff report) states that the UH is seeking a permit on behalf of the TMT Observatory Corporation. Tr. 2/27/17, Vol 41 at 238: 22-25, 249: 1-2.	place, and the outcomes that it believes will occur if it should recommend approval. Tr. 2/28/17 at 65:10-66:6.”); UH-TIO FOF 342 (describing basis of the OCCL’s recommendation); UH-TIO FOF 343 (“Lemmo further testified that the TMT Project met all eight of the criteria applicable to conservation district use applications, as set forth in HAR § 13-5-30, and thus, recommended approval of the CDUA to the BLNR. OCCL considered the cultural and religious issues and concluded that the site location below the summit ridge in Area E mitigated the impacts of the new telescope in the area. While the TMT Project represents an incremental impact, the TMT Project in and of itself is not a significant impact in the context of the proposed mitigation measures and the already existing significant impacts within the Astronomy Precinct. Tr. 2/28/17 at 66:7-70:22.”).
167	32	Lemmo agreed that in preparing its staff report, the OCCL cannot take the applicant’s Ka Pa‘akai analysis verbatim. Instead the staff needs to take a look at the information presented and consider whether they must look at independent sources of information. Id. Vol 41 at 253:1-13.	Not in dispute, but more accurately stated in UH-TIO FOF 340. Not credible; Unsupported/unsubstantiated; Misleading/presented out of context to the extent the Proposed FOF suggests that the CDUA is somehow invalid because it references the TMT Corporation rather than TIO. UH-TIO FOF 420-426 (regarding CDUA reference to TMT Corporation rather than TIO). Incomplete. Misleading. Presented out of context. UH-TIO FOF 340, 341, 342, 343.
168	32-33	OCCL determined an adequate Ka Pa‘akai analysis had been made by looking at the cultural impact	Incomplete. Mischaracterization. UH-TIO FOF 340, 341, 342, 343.

169		statement which accompanied the CDUA and by “ask[ing] applicant[s] to do the Ka Pa ‘akai analysis. Tr. 2/28/27, Vol 42 at 75:5-20.	
33		OCCL did not conduct a cultural impact assessment for Mauna Kea, nor did it solicit comments from Kahu Ku Mauna. Tr. 2/27/17, Vol 41 at 253:21-22, Tr. 2/28/17, Vol 42 at 45:22-25, at 46: 1-5.	Incomplete. Misleading. Presented out of context. UH-TIO FOF 340, 341, 342, 343.
170	33	Lemmo testified that the OCCL cannot rely solely on information from the applicant to determine whether or not Native Hawaiian values, interests, and beliefs have been assessed and consider whether mitigation measures have been imposed that reduce impacts to those values and interests. Tr.. 2/27/17, Vol 41 at 254:1-8.	Incomplete. Misleading/presented out of context to the extent it is suggesting that the OCCL relied solely on information from the Applicant. UH-TIO FOF 340, 341, 342, 343.
171	33	Lemmo testified that OCCL’s recommendation in favor the TMT application was based on the fact that: “The mountain is already experiencing significant impact, cultural and environmental impact ... That there’s a significant effect already from astronomy development. Does that make me happy? Not really. It’s a beautiful mountain.....In fact, my first impression was surprise at what happened to the summit when I first went there in 1996.” Tr. 2/28/17, Vol. 42 at 69: 10-20, at 70:1.	Incomplete. Misleading. Presented out of context. UH-TIO FOF 340, 341, 342, 343.
172	33	Lemmo further acknowledged that he did not have the information presented at the contested case hearing relating to public health issues “when the report was written.” Id. Vol 42 at 71:3-17.	Incomplete. UH-TIO FOF 340, 341, 342, 343. Irrelevant because Taulii’s testimony is not credible and is unsupported/unsubstantiated. UH-TIO FOF 942, 943, 944, 945, 946, 947 (regarding Taulii’s testimony).
173	33-34	Further Lemmo acknowledged that with respect to the Ka Pa ‘akai assessment done by the OCCL staff: “I ask the staff to consider the Ka Pa ‘akai analysis in terms of, in their own words as much as possible, do	Incomplete. Mischaracterization. UH-TIO FOF 340, 341, 342, 343.

		they feel that the valued cultural resources and cultural practices are protected, not to rely exclusively on what the applicant or the applicant's consultant has said. I ask them to kind of think about it, you know, find the truth, and to basically make a quick conclusion about the matter." Id. Vol 42 at 75: 12-20.	
174	34	When asked if he was aware that the cultural impact assessment in the draft EIS was not the same as the cultural impact assessment provided in the final EIS, Lemmo was unable to provide or recall that level of detail. Id. Vol. 42 at 76: 5-24. He did however acknowledge that a recommendation in the cultural impact assessment would have been given "quite a bit" of weight. Id. Vol 42 at 77:12-24.	Incomplete. Mischaracterization. UH-TIO FOF 340, 341, 342, 343.
175	34	Lemmo did acknowledge that OCCL report did not consider information after February 25, 2011. Id. Vol. 42 at 91: 9-22.	Irrelevant. UH-TIO FOF 340, 341, 342, 343.
		IX. RECENTLY VACATED SUBLEASE TO TIO CONSTITUTES A SUBDIVISION OF LAND AND INTENSIFICATION OF LAND USE IN IN THE CONSERVATION DISTRICT	
176	34	UH has entered into 13 subleases and/or operating agreements for the construction and operation of observatories on the summit of Mauna Kea. All of said subleases and/or operating agreements contemplate or contain a metes and bounds description of a demise. Ex. B.03e, B.03f, B.03g, B.03h, B.03i, B.03j, B.03k, B.03l, B.03m, B.01ac, B.01ad, B.01ae, B.01af.	Irrelevant. Misleading/presented out of context to the extent it suggests that the TMT Project involves a subdivision of land. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project).

177	34	In each instance the operator/sublease [sic] was to construct its own facilities and provide for its own electric metering.	Irrelevant. Misleading/presented out of context to the extent it suggests that the TMT Project involves a subdivision of land. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project). Not in dispute, but more accurately stated in UH-TIO FOF 113.
178	34-35	General Lease No. S-4191 (Exhibit B.17f) contains a property description of one parcel of land consisting of 13,321.054 acres.	
179	35	HAR 13-5-30(c)(7) forbids that subdivision of land be utilized to increase the intensity of land uses in the conservation district.	Misleading/presented out of context to the extent it suggests that the TMT Project involves a subdivision of land. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project).
180	35	Land use is defined in HRS Sec. 183C-2(4) as the construction, reconstruction, demolition, or alteration of any structure, building, or facility on land.	Incomplete. UH-TIO COL 97 ("In so doing, the legislature specifically defined "land use" as including "[t]he construction, reconstruction, demolition, or alteration of any structure, building, or facility on land[.]" HRS § 183C-2; accord HAR § 13-5-2. In keeping with the legislative intent and specific delegation of authority, DLNR identified astronomy facilities within the Resource subzone. HAR § 13-5-24(a), (c).").
181	35	Subdivision is not defined in HRS Chapter 183C-2.	Incomplete. UH-TIO FOF 916 ("HAR § 13-5-2 defines a 'subdivision' as a 'division of a parcel of land into more than one parcel.'").
182	35	The UH has by its subleases and operating agreements on the lands described in the general lease, identified multiple construction sites on a single parcel of land so as to create a building development. This is a subdivision.	Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project).
183	35	Dr. Fujikane testified that the 7th Conservation District Use criterion clearly states that conservation lands are not to be subdivided. Doc. B.13a at 6-7.	Inaccurate/False. UH-TIO FOF 914 ("The seventh criterion in HAR § 13-5-30(c)(7), provides: "Subdivision of land will not be utilized to increase the intensity of land uses in the

		conservation district[.]”).
184	35	Misleading/presented out of context to the extent it suggests that the TMT Project involves a subdivision of land. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project). Not credible. Inaccurate/False. Unsupported/unsubstantiated. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project).
185	35	Mischaracterization. Misleading. Presented out of context. UH-TIO COL 254 (“Finally, <i>Kilakila</i> confirms that HAR § 13-5-30(c)(6) should be interpreted and applied in the context of Astronomy Precinct within the MKSR and in light of the mitigation measures proposed in connection with the TMT Project. <i>See Kilakila</i>, 138 Hawai’i at 407, 382 P.3d at 219 (affirming BLNR’s findings and conclusions that the solar telescope project met the sixth criterion because the project “will be consistent with and will preserve the existing physical and environmental aspects of the land (the Haleakalā High Altitude Observatory site, which housed other existing observatories), and further noting that BLNR properly considered the numerous mitigation commitments for the project with respect to this criterion).”); UH-TIO COL 255 (“Therefore, HAR § 13-5-30(c)(6) can only make sense by

		interpreting it as requiring that the TMT Project, and specifically its visual impacts, be assessed in the manner set forth above, in the context of its surrounding environment – including the uses and development that has already occurred.”); UH-TIO COL 256 (“For all these reasons, and for the reasons set forth in the findings of fact above, the proposed land use is not inconsistent with existing uses and preserves or improves upon the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, and therefore satisfies the sixth criterion.”); UH-TIO FOF 121 (“Existing astronomical observatories are prominent visual elements in the summit area of Mauna Kea. At least one of the existing observatories on the summit ridge is visible from approximately 43 percent of Hawai‘i Island. According to 2000 U.S. Census data, 72 percent of the Island’s population reside within that viewshed area. At the summit ridge, the existing observatories obscure portions of the 360-degree panoramic view from the summit area. Overall, the existing level of the cumulative visual impact from past observatory construction projects at the summit ridge area has been considered to be substantial, significant, and adverse. Ex. A-3/R-3 at 3-217 to 3-218; Tr. 11/15/16 at 24:1-8; Ex. A-5/R-5, App. M at 50-54; Ex. A-54 at 50-54.”).
186	36	Dr. Fujikane states that by claiming that the TMT project is consistent with these “many astronomical observatories” to prove consistency with existing uses, the CDUA describes the intensification of land use for astronomical observatories in a subdivision that is a part of the Mauna Kea Summit Region Historic District. Ex. B.13a at 4; Tr. 01/09/2017, V. 23 at 229.
187	36	Not credible. Inaccurate/False. Unsupported/Unsubstantiated. Mischaracterization. UH-TIO FOF 260, 914-936 (finding no subdivision of land as part of the TMT Project).
		Not in dispute that KAHEA was a party to the first contested

		Club (Hawai'i), former Director of Petitioner KAHEA and party participant to the first contested case hearing for the TMT project testified that "HAR13-5-2 defines subdivision as division of a parcel into more than one parcel. Section 22 under those regulations indicates that subdivision is a concern in Conservation Districts because it increases the density and the intensity of land uses." Tr. 01/10/2017: Vol. 24:13:19-23; 45:16-25; 46:1-15	case for the TMT Project. However, 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. Accordingly, the record in the prior contested case hearing is not part of the record in the current proceeding. The proposed FOF is irrelevant to the extent it relies on the record or parts of the record in the prior contested case for substantive purposes in this proceeding. Not credible. UH-TIO FOF 932 ("Petitioners and Opposing Intervenor argue the University's subleases to observatories constitute a 'subdivision' of land simply because they include references to use areas in parcel 'metes and bounds descriptions.' Ex. B.03a at 1 (asserting that the exhibits to Ms. Townsend's testimony 'include maps denoting the metes and bounds of the land area to be demised'). The documents referenced by Petitioners and Opposing Intervenor do not, however, contain metes and bounds descriptions"). Not credible. Unsupported/Unsubstantiated. Inaccurate/False. UH-TIO FOF 838 ("Townsend, appearing on behalf of KAHEA, believes the impact analysis and mitigation measures in the FEIS and CDUA are inadequate. Tr. 1/10/17 at 41:1-21, 50:24-51:3, 67:10-72:2, 75:2-76:2. Her belief is unpersuasive and biased in light of her admission that she would oppose the TMT Project even if there was minimal impact. Tr. 1/10/17 at 84:10-85:23. Her position is even less credible because despite her claims of inadequacy, she never formally challenged the FEIS for the TMT Project within the appropriate legal challenge time. Tr. 1/10/17 at 136:5-20. Townsend further admitted that she has never been designated as a land use expert in any proceeding, and that she was not a scientist, botanist, hydrologist, entomologist, or geologist. Tr. 1/10/17 at 80:25-81:16, 136:21-137:11.");
188	36	"The TMT CDUA represents the exact type of urban sprawl and intensifying of land uses that the Conservation District rules were designed to prevent. Exhibit 8,03t, the report by Gall Atwater, documents the logic behind the Conservation District rules. And while the rules have been updated, the relevant sections are still in the current rules. And it states that the purpose of the Conservation District is to protect natural resources of Hawaii, the things that make Hawaii unique." Tr. 01/10/2017: vol. 24:15:16-25	

189	36-37	“The problem with the approach the University takes to subleasing sections of the Astronomy Precinct is that it is a subdivision. It functions as a subdivision. Even if it doesn’t go through specific county subdivision approval, it-- because you have metes and bounds, maps drawn with lines that indicate, you know, a specific telescope operator’s land and distinct from some-- a different telescope operator’s land. It has the effect of subdividing of the parcel and increasing the land use. And it is de facto subdivision, it meets the definition of subdivision in the regulations and is therefore not allowed in the Conservation District.” Tr. 01/10/2017: Vol. 24:16:16-23; Vol. 24:59:22-25; Vol. 24:60:1-17.	Not credible. Unsupported/Unsubstantiated. Inaccurate/False. UH-TIO FOF 932.
190	37	On urban sprawl on the mountain. Ms. Townsend testified that the UH master plan calls for 40 telescopes, construction of one telescope justifies the construction of a second telescope, which is used to justify a third telescope, on so forth and so on. Tr. 01/10/2017: Vol.24:93: 21-25; 94:1-25: 95:1-4	Not credible. Unsupported/Unsubstantiated. Inaccurate/False. UH-TIO FOF 859 (“Importantly, witnesses for the Petitioners and Opposing Intervenor admitted that the summit area was already substantially, if not completely, developed for astronomy use. Townsend described the summit as follows, “There are nearly a dozen telescopes crowded together creating an industrial park atmosphere. It is “urban sprawl and intensifying of land uses”. Tr. 1/10/17 at 15:10-17. She goes on to say that there are 20-25 buildings at the summit and that it is “an industrial park up there.” Tr. 1/10/17 at 95:13-19. Townsend also testified that during a site visit to Mauna Kea in June 2011, she observed that the landscape at the summit was dominated by industrial land uses, including many telescope facilities and ancillary structures. WDT Townsend at 2; Tr. 1/10/17 at 15:8-15, 67:4-22.”).
191	37	Additionally on urban sprawl and impact to viewplanes, Ms. Townsend testified that “As It Is now, we find substantial adverse impacts to	Not credible. Unsupported/Unsubstantiated. Inaccurate/False. UH-TIO FOF 859.

		viewplanes, but at least now you can still find a few quiet places where you can't hear the hum of air-conditioning, where you can't see the shiny silver or white Industrial buildings that need a paint job. You know, you can find those places, and unfortunately the Northern Plateau of Mauna Kea, one of those last few places. And so if we build there, we would be engaging in urban sprawl that will allow the Industrial footprint of the telescopes to spread into a new area and it's that kind of urban sprawl that the Conservation District rules seek to prevent." Tr. 01/10/2017: Vol. 24:23:25: 24: 1-12.	
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COL #	Page	COL	Response
1	38	The proposed TMT project will cause significant and substantial adverse impacts to the existing natural, cultural, archaeological and historic resources of the Mauna Kea summit region down to Hale Pohaku.	Mischaracterization of the applicable legal standard. See UH-TIO COL 177 ("The fourth criterion, set forth in HAR § 13-5-30(c)(4), states: "The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community, or region[.]"). Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO COL 126-127 (concluding that the TMT Project is consistent with the eight criteria under HAR § 13-5-30(c)); UH-TIO COL 177-217 (concluding that the TMT Project is consistent with the fourth criterion). Not credible. UH-TIO COL 186 ("Petitioners and Opposing Intervenor have argued repeatedly that because UH Hilo acknowledges that the summit area of Mauna Kea has already sustained significant and adverse impacts, it "admits" the TMT Project will itself have substantial adverse impacts.

		Petitioners and Opposing Intervenor misconstrue UH Hilo's position. The UH Hilo has never made such an admission, and, as set forth in these findings of fact and conclusions of law, the TMT Project will not cause substantial adverse impacts.); UH-TIO COL 187 ("By arguing that the summit area of Mauna Kea has suffered "unlawful" significant and adverse impacts in the past, Petitioners and Opposing Intervenor also imply that no project can be undertaken in that area without first <i>reducing</i> the <i>existing</i> cumulative impacts to a level that is less than significant and adverse. Petitioners' and Opposing Intervenor's arguments are legally unsupported."); UH-TIO COL 192 ("The reliable, probative, substantial, and credible evidence, specifically including but not limited to the testimonies of White, Hayes, Nees, Dr. Smith, Nance, Dr. Sanders, and Rechtman, and applicable exhibits, demonstrates that the TMT Project will not cause substantial adverse impact to existing plants, aquatic life and wildlife, cultural, historic, and archaeological sites, minerals, recreational sites, geologic sites, scenic areas, ecologically significant areas, and watersheds."); UH-TIO COL 193 ("Petitioners and Opposing Intervenor did not offer reliable, probative, substantial, and credible evidence, whether from witnesses or exhibits, that would support the conclusion that the TMT Project would cause substantial adverse impact to existing plants, aquatic life and wildlife, cultural, historic, and archaeological sites, minerals, recreational sites, geologic sites, scenic areas, ecologically significant areas, or watersheds."); UH-TIO COL 198 ("The reliable, probative, substantial, and credible evidence demonstrates that the TMT Project will not cause substantial adverse impacts to cultural, historical, and archaeological sites.").
2	38	The proposed TMT project will cause substantial and significant adverse impact to existing natural Mischaracterization as to the applicable legal standard to the extent the proposed FOF purports to address the fourth

	resources within the surrounding area, community, and region.	criterion. UH-TIO COL 177. Inaccurate/False; Unsupported/unsubstantiated to the extent the proposed FOF purports to address the fourth criterion. UH-TIO COL 126-127 (concluding that the TMT Project is consistent with the eight criteria under HAR § 13-5-30(c)); UH-TIO COL 177-217 (concluding that the TMT Project is consistent with the fourth criterion). Not credible to the extent the proposed FOF purports to address the fourth criterion. UH-TIO COL 186, 187, 192, 193, 198. Mischaracterization as to the applicable legal standard to the extent the proposed FOF purports to address the fifth criterion. UH-TIO COL 218 ("The fifth criterion, set forth in HAR § 13-5-30(c)(5), states: '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[.]'"). The appropriate locality to be considered is the summit area of Mauna Kea within the MKSR, and more specifically, the Astronomy Precinct of the MKSR. <i>See Kilakila</i>, UH-TIO FOF 840-867, UH-TIO COL 220. Not credible; Inaccurate/False; Unsupported/unsubstantiated to the extent the proposed FOF purports to address the fifth criterion. UH-TIO COL 126-127 (concluding that the TMT Project is consistent with the eight criteria under HAR § 13-5-30(c)); UH-TIO COL 218-226 (concluding that the TMT Project is consistent with the fifth criterion).
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3	38	The proposed TMT project substantially and adversely impacts the traditional and customary practices of Native Hawaiians on the Island of Hawaii and throughout Hawaii.	Mischaracterization as to the applicable legal standard to the extent the proposed FOF purports to address the fourth criterion. UH-TIO COL 177-217. Inaccurate/False; Unsupported/unsubstantiated to the extent the proposed FOF purports to address the fourth criterion. UH-TIO COL 126-127; UH-TIO COL 177-217. Not credible to the extent the proposed FOF purports to address the fourth criterion. UH-TIO COL 186, 187, 192, 193, 198. There is no reliable probative and substantial evidence that the referenced practices are within the bundle of rights protected by Article XII, Section 7 of the Hawaii State Constitution. Inaccurate/False; Unsupported/unsubstantiated as to the assertion that the TMT Project would substantially and adversely impact traditional and customary practices. UH-TIO COL 324-352, 354 (regarding the protection of customary and traditional native Hawaiian rights); UH-TIO COL 353 (concluding that the “[a]pproval of the CDUP for the TMT Project is consistent with and satisfies the BLNR’s and UH Hilo’s obligations under Article XII, section 7 to recognize and protect customary and traditional native Hawaiian rights to the extent feasible. <i>Ka Pa ‘akai</i>, 94 Hawaii‘i at 47, 7 P.3d at 1084; <i>Hanapi</i>, 89 Hawaii‘i at 187, 970 P.2d at 495.).
4	38	The proposed TMT project on the northern plateau of the Mauna Kea summit region is not consistent with the purpose of the conservation district of Mauna Kea.	Mischaracterization of the applicable legal standard. See UH-TIO COL 128 (“The first criterion, set forth in HAR § 13-5-30(c)(1), states: “The proposed land use is consistent with the purpose of the conservation district[.]”). Inaccurate/False. Unsupported/Unsubstantiated. Not in

5	38	The sublease with TMT is a subdivision of land which intensifies land uses on the property described in Exhibit A.	evidence. UH-TIO COL 129-141; UH-TIO COL 142 (“For all of these reasons, and for the reasons set forth in the findings of fact above, the TMT Project is therefore consistent with the broad purposes of the Conservation District, in satisfaction of HAR § 13-5-30(c)(1). See <i>Kilakila</i>, 138 Hawai‘i at 408, 382 P.3d at 220.”). Incomplete as to the applicable legal standard. UH-TIO COL 257 (“The seventh criterion, set forth in HAR § 13-5-30(c)(7), states: “Subdivision of land will not be utilized to increase the intensity of land uses in the conservation district[.]”). Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO COL 258 (“The TMT Project will not utilize subdivision of land to increase the intensity of land uses in the Conservation District, in satisfaction of HAR § 13-5-30(c)(7).”); UH-TIO COL 259-271; UH-TIO COL 272 (“For all these reasons, and for the reasons set forth in the findings of fact above, the proposed land use will not utilize subdivision of land to increase the intensity of land uses in the Conservation District, and therefore satisfies the seventh criterion, HAR § 13-5-30(c)(7).”).
6	38	The Department of Land and Resources of the State of Hawaii, through its OCCL, failed to undertake an independent Ka Pa‘akai analysis so as to support its recommendation.	Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 340-343 (regarding the OCCL’s findings and recommendation that the DLNR approve the University’s CDUA); UH-TIO COL 336 (“The BLNR, through consideration of the CDUA and through the testimony and evidence in this proceeding, conducted a thorough review and analysis of the identity and scope of “valued cultural, historical or natural resources” in the TMT Project application area, including the extent to which traditional and customary native Hawaiian rights are exercised in the application area. <i>Ka Pa ‘akai</i>, 94 Hawai‘i at 47, 7 P.3d at 1084.”).

7			Not credible to the extent the proposed COL is based on Petitioners' and Opposing Intervenor's arguments that their religious beliefs and practices require that the CDUA for the TMT Project be denied, and that nothing be built on Mauna Kea to "protect" and further the Petitioners' and Opposing Intervenor's religious practices. The Board must evaluate the proposed project under the eight criteria. <i>See</i> HAR 13-5-30(c); <i>see also</i> UH-TIO COL 88-103, 355-382. Incomplete as to the applicable legal standard. UH-TIO COL 273 ("The eighth criterion, set forth in HAR § 13-5-30(c)(8), states: 'The proposed land use will not be materially detrimental to the public health, safety, and welfare.'"). Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO COL 274 ("The TMT Project will not be materially detrimental to the public health, safety, and welfare, in satisfaction of HAR § 13-5-30(c)(8)."); UH-TIO COL 275-293.
8	38	The proposed TMT project will irrevocably destroy or cause the loss of the natural and cultural resources within the Mauna Kea summit region, within the area leased to the UH, on the Island of Hawaii, and throughout the State of Hawaii.	Mischaracterization as to the applicable legal standard. Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO COL 126, 127 (concluding that the TMT Project satisfies the eight (8) criteria of HAR §13-5-30(c)); UH-TIO COL 165-174 (concluding that the TMT Project satisfies with the third criterion, set forth in HAR §13-5-30(c)(3)); UH-TIO COL 177-217 (concluding that the TMT Project satisfies the fourth criterion, set forth in HAR § 13-5-30(c)(4)); UH-TIO COL 218-226 (concluding that the TMT Project satisfies the fifth criterion, set forth in HAR § 13-5-30(c)(5)); UH-TIO COL 227-256 (concluding that the TMT Project satisfies the sixth criterion, set forth in HAR § 13-5-30(c)(6)); and UH-TIO COL 273-293 (concluding that the TMT Project satisfies the eighth criterion, set forth in HAR § 13-5-30(c)(8)).

9	39	The proposed mitigation measures of the OCCL and the applicant fail to reduce the significant adverse effects of the proposed project.	Inaccurate/False. Not credible. Unsupported/Unsubstantiated. Not in evidence. UH-TIO COL 126, 127 (concluding that the TMT Project satisfies the eight (8) criteria of HAR §13-5-30(c)); UH-TIO COL 128-142 (concluding that the TMT Project satisfies the first criterion, set forth in HAR § 13-5-30(c)(1)); UH-TIO COL 143-164 (concluding that the TMT Project satisfies the second criterion, set forth in HAR 13-5-30(c)(2)); UH-TIO COL 165-174 (concluding that the TMT Project satisfies with the third criterion, set forth in HAR §13-5-30(c)(3)); UH-TIO COL 177-217 (concluding that the TMT Project satisfies the fourth criterion, set forth in HAR § 13-5-30(c)(4)); UH-TIO COL 218-226 (concluding that the TMT Project satisfies the fifth criterion, set forth in HAR § 13-5-30(c)(5)); UH-TIO COL 227-256 (concluding that the TMT Project satisfies the sixth criterion, set forth in HAR § 13-5-30(c)(6)); and UH-TIO COL 273-293 (concluding that the TMT Project satisfies the eighth criterion, set forth in HAR § 13-5-30(c)(8)).
10	39	A community benefits package as proposed by TIO and the applicant is not a mitigation measure.	Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO COL 211 (concluding in part that “under <i>Kilakila</i> , the Hearing Officer may take into consideration the scientific, economic and educational benefits of the TMT Project in determining that the project meets the criteria of HAR § 13-5-30(c)(4). See <i>Kilakila</i> , 138 Hawai‘i at 405-06, 382 P.3d at 217-18.”); UH-TIO COL 214 (“Further, TIO has committed to a substantial community benefits package that has provided over \$2.5 million to date for grants and scholarships for STEM education to benefit Hawai‘i students, and TIO has committed to providing \$1 million annually for this program.”); UH-TIO COL 136 (“As noted in the findings of fact above and in these conclusions, the TMT Project will promote the health, safety and welfare of the public through the advancement of

			scientific study, providing educational benefits in the form of telescope viewing time for the University students and researchers, advancing STEM educational opportunities for Hawai'i residents through the community benefits package, and other measures.”).
11	39	The Public Trust Doctrine Applies to the TMT Project.	Incomplete. <i>See generally</i> UH-TIO FOF 297-300 (regarding the Community Benefits Package). Inaccurate/False; Unsupported/unsubstantiated on the basis that the public trust doctrine does not apply to consideration of the TMT Project. UH-TIO COL 295-301. Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent suggests that the TMT Project does not satisfy the public trust doctrine. <i>See</i> UH-TIO COL 302-323.
12	39	Article XI, Section 1 of the Hawai'i State Constitution provides: For the benefit of present and future generations, the <i>State and its political subdivisions shall conserve and protect Hawai'i natural beauty and all natural resources, including land</i> , 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. [Emphasis added].	The language of Article XI, Section 1 of the Hawai'i State Constitution is not in dispute. UH-TIO COL 296.
13	39	The Hawai'i Supreme Court, in its concurring opinion in <i>Mauna Kea Anaina Hou v. Board of Land and Natural Resources</i> , 136 Hawai'i 376, 408; 363	Misleading/presented out of context to the extent the proposed COL suggests that the public trust doctrine applies to consideration of the TMT Project. UH-TIO COL 295-301.

		P.3d 224, 256 (2015), following its comprehensive analysis of the public trust, held as follows: “Accordingly, based on the plain language of Art. XI, Sec.1, the application of principles guiding interpretation of constitutional provisions, the special history of the public trust doctrine in this State, and this court’s precedents implicating the public trust doctrine in land cases ... <i>Mauna Kea, as state conservation land, is within the public trust and entitled to the protections that the public trust doctrine provides.</i>” Id. At 408 [Emphasis added].	Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent suggests that the TMT Project does not satisfy the public trust doctrine. See UH-TIO COL 302-323.
14	40	The Board of Land and Natural Resources acknowledges the applicability of the public trust doctrine covering the site of the proposed TMT project. “In assessing the project and determining whether the criteria of the [Department of Land and Natural Resources rules] have been satisfied, and <u>the State must protect the public trust and the customary and traditional rights and practices of native Hawaiians.</u>” <i>Mauna Kea Anaina Hou v. Board of Land and Natural Resources, concurring opinion, footnote 10</i>, 136 Hawai’i at 406; 363 P.3d at 255 (2015) [Emphasis added].	Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO COL 295-301. Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent suggests that the TMT Project does not satisfy the public trust doctrine. See UH-TIO COL 302-323.
15	40	The State and Applicant UH Hilo have failed to meet their obligations and duties under the public trust doctrine.	Misleading/presented out of context to the extent the proposed COL suggests that the public trust doctrine applies to consideration of the TMT Project. UH-TIO COL 295-301. Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent suggests that the TMT Project does not satisfy the public trust doctrine. See UH-TIO COL 302-323.

16	40	Removal of “no further development, including the TMT Observatory Project and the Mid-Level Support Facilities at Hale Pohaku, take place on Maunakea.” (hereinafter referred to as “no further development”) recommendation and the recommended mitigation measures from the Preliminary Draft Cultural Impact Assessment [Exh. B.44, pages 12-15] in the Draft EIS [Exh. B.45] for the public commentary period subverts the EIS process provided under HRS Chapter 343 and violates the authorities, duties and obligations mandated under the public trust doctrine as follows: (a) to the University of Hawaii at Hilo, as the applicant, a political subdivision of the State; and the party responsible (either directly or through its agent) for its removal, from the CIA in the Draft EIS and its post-public review and comment period replacement in the CIA of the Final EIS, of the “no further development” and mitigation measures recommendations; and (b) to the State, through its political subdivision agent, the Office of Environment Quality Control (OEQC), responsible for ensuring compliance with the HRS Chapter 343 process, in failing to take necessary corrective measures to the FEIS, after having been so informed of the removal of “no further development” and mitigation measures recommendations in submission of the DEIS for review and comment under the provisions and protections provided under HRS Chapter 343.	Misleading/presented out of context to the extent the proposed COL suggests that the public trust doctrine applies to consideration of the TMT Project. UH-TIO COL 295-301. Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 (regarding Cruz’s testimony). Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent it suggests that the TMT Project does not satisfy the public trust doctrine. <i>See</i> UH-TIO COL 302-323.
17	41	Removal of “no further development” and mitigation	Not credible. Inaccurate/False. Unsupported/Unsubstantiated.

18	measures recommendation, from the CIA in the Draft EIS and the post public review and commentary period reinstatement of the CIA in the Final EIS invalidates Final Approval of the FEIS and CDUA application.	UH-TIO FOF 203 (regarding Cruz's testimony). Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 198-202 (regarding compliance with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200). Irrelevant. UH-TIO COL 386-391 (regarding waiver of challenges to the FEIS). Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 (regarding Cruz's testimony). Inaccurate/False. Not credible. Unsupported/Unsubstantiated. UH-TIO FOF 198-202 (regarding compliance with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200). Irrelevant. UH-TIO COL 386-391 (regarding waiver of challenges to the FEIS). Not credible. See UH-TIO FOF 787 (finding that while several of the Petitioners participated in the public consultation and information processes to develop the CMP, the CIA, the CRMP for the TMT Project from 2008 through 2011, at no time prior to this contested case hearing did Petitioners and Opposing Intervenor contend that the TMT Observatory would impede views from the summit of Pu'u Poli'ahu."). Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. See UH-TIO FOF 201.
41	Evidence and testimony submitted and received in this Contested Case Hearing supports invalidation of the Final EIS, notwithstanding its prior final approval. The removal, and consequent withholding, of the "no further development" and mitigation measures recommendations from public scrutiny process, provided pursuant to HRS Chapter 343, violates the compelling and affirmative duties and obligations mandated by the public trust doctrine. Significantly, the withholding of the recommendations in Ex. B.44 inherently taints submission of the CDUA for approval in this case.	

19	41	HAR 11-200-17 requires ("shall") required inclusion of the "no further development" and mitigation measures recommendation in the CIA of the Draft EIS. Its omission can only be associated with a decapitation of the HRS 343 process.	Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 (regarding Cruz's testimony). Misleading. Presented out of context. UH-TIO FOF 198-202 (regarding compliance with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200). Irrelevant. UH-TIO COL 386-391 (regarding waiver of challenges to the FEIS). Not credible. See UH-TIO FOF 787 (finding that while several of the Petitioners participated in the public consultation and information processes to develop the CMP, the CIA, the CRMP for the TMT Project from 2008 through 2011, at no time prior to this contested case hearing did Petitioners and Opposing Intervenor contend that the TMT Observatory would impede views from the summit of Pu'u Poli'ahu."). Misleading/presented out of context; Incomplete to the extent it suggests that the Petitioners and/or Opposing Intervenor did not actively participate and/or have opportunities to participate in the EIS process. See UH-TIO FOF 201.
20	42	The CDUA is incomplete and requires an updated revision and resubmission for consideration. Approval of the current CDUA facilitates a subversion of HRS 343 process, undermines the duties and obligations imposed by public trust doctrine, and encourages an atmosphere of concealment instead of full transparency and disclosure. Approval of the current CDUA for the TMT project must be rejected.	Inaccurate/False. Not credible. Unsupported/Unsubstantiated. See UH-TIO FOF 347 ("The CDUA was prepared in 2010. Whether a CDUA requires revisions or updates does not depend upon the mere passage of time; rather, it depends on the particular facts of the situation. Tr. 10/24/16 at 186:10-13. White, the primary author of the CDUA, testified that he knows of no new fact that would change his assessment of the CDUA. Tr. 10/24/16 at 187:9-18. The other parties have not presented any reliable, credible and material evidence that contradict White's testimony and conclusion."); see also UH-

		TIO COL 1 (“This contested case hearing requires the BLNR to consider whether the proposed land use as provided in the CDUA for the TMT Project, complies with: 1) the statutory and regulatory requirements for a development within the Conservation District; 2) Article XII, Section 7 of the Hawai‘i State Constitution and <i>Ka Pa‘akai O Ka ‘Aina v. Land Use Comm’n State of Hawai‘i</i>, 94 Hawai‘i 31, 7 P.3d. 1068 (2000); and, if applicable, 3) Article XI, Section 1 of the Hawai‘i State Constitution and the public trust doctrine.”); UH-TIO COL 126-293 (concluding that the TMT Project satisfies the eight (8) criteria of HAR § 13-5-30(c)); UH-TIO COL 294-323 (regarding the public trust doctrine). Not credible. UH-TIO COL 384 (“As described above, Petitioner Flores claims that the CDUA is incomplete and should be denied because it fails to identify certain “find spots.” For the reasons articulated in the above findings of fact, Petitioner Flores’ claims are factually unfounded and therefore do not provide a basis for the BLNR to deny the CDUA.”). Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 (regarding Cruz’s testimony). Unsupported/Unsubstantiated. UH-TIO FOF 198-202 (regarding compliance with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200). Irrelevant. UH-TIO COL 386-391 (regarding waiver of challenges to the FEIS). Not credible. See UH-TIO FOF 787. Not credible. Inaccurate/False. Unsupported/Unsubstantiated. UH-TIO FOF 203 (regarding Cruz’s testimony).
21	42	Additionally, by its removal of the “no further development” mitigation measures recommendations from public review and comment, provided for under HRS Chapter 343, UH Hilo failed to meet its compelling duty to consider the cumulative impact of existing and proposed diversions on trust purposes for the TMT project. The UH failed to implement reasonable measures to mitigate its impact, including the use of alternative sources.
22	42	The State, through the OEQOC, violated this compelling duty, when it failed to take corrective

	measures to the FEIS, prior to its final approval, after having been so informed of the removal of "no further development" recommendations from the CIA to the DEIS.	Unsupported/Unsubstantiated. UH-TIO FOF 198-202 (regarding compliance with the EIS process required under HRS Chapter 343 and HAR, Title 11, Chapter 200). Irrelevant. UH-TIO COL 386-391 (regarding waiver of challenges to the FEIS). Not credible. <i>See</i> UH-TIO FOF 787. 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. Accordingly, the record in the prior contested case hearing is not part of the record in the current proceeding. The Proposed COL is irrelevant to the extent it relies on the record or parts of the record in the prior contested case for substantive purposes in this proceeding. Misleading/presented out of context to the extent the proposed COL suggests that the public trust doctrine applies to consideration of the TMT Project. UH-TIO COL 295-301. Even assuming the public trust doctrine applies, the proposed COL is misleading/presented out of context to the extent suggests that the TMT Project does not satisfy the public trust doctrine. <i>See</i> UH-TIO COL 302-323. Unsupported/Unsubstantiated. UH-TIO COL 466 ("Based upon the evidence and testimony presented in this contested case hearing, and the files and records herein, UH Hilo has proven by a preponderance of the evidence that it meets the requirements for the granting of the CDUA for the TMT Project. HAR § 13-5-30(c).").
23	42-43	Ultimately, evidence and testimony produced in this Contested Case Hearing (as well as produced in the first contested case hearing) convincingly establishes that the Applicant UH Hilo cannot meet its burden of proof and compelling, affirmative duties, under the public trust doctrine, to address the additional impacts on archaeological and historic properties, cultural practices and Native Hawaiian custom and usage, as well as viewplanes, species habitat and existing facilities. The TMT project will add to the impacts that cumulatively are already substantial, adverse, and significant.

BOARD OF LAND AND NATURAL RESOURCES
FOR THE STATE OF HAWAII

IN THE MATTER OF

A Contested Case Hearing Re Conservation
District Use Permit (CDUP) HA-3568 for the
Thirty Meter Telescope at the Mauna Kea Science
Reserve, Kaohe Mauka, Hamakua District, Island
of Hawaii, TMK (3) 4-4-015:009

Case No. BLNR-CC-16-002

CERTIFICATE OF SERVICE

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The undersigned hereby certifies that the foregoing document was served upon the following parties

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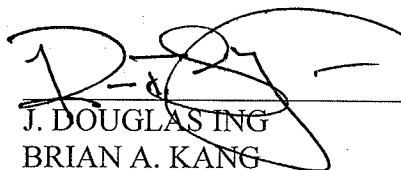
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