(Dr. Stone) Tr. 12/19/16 at 108:19-22.

464. Tajon, who appeared on behalf of Kakalia, testified that in his opinion the TMT Project is not consistent with the purpose of the Conservation District because he felt there was no community input. Tr. 2/27/17 at 15:5-15:10. The extent of community input is not the proper standard by which to determine whether or not a project is consistent with the purpose of the Conservation District. Moreover, as discussed herein, the credible evidence demonstrates that significant community input was sought and generated for this project at various public approval stages. In any event, as discussed above, the TMT Project complies with the purpose of the Conservation District, as set forth in the applicable authorities. *See supra* at FOF Section IV.A.

465. Prof. Fujikane, a witness for KAHEA, testified that the TMT Project is not consistent with the purpose of the Conservation District because the TMT Project will be built in a pristine area of Mauna Kea that is viewed as the firstborn child of Papahānaumoku, Earth Mother, and Wākea, Sky Father. Ex. B.13a (WDT Prof. Fujikane) at 4.

466. Paradoxically, Prof. Fujikane also opined that Mauna Kea is overbuilt and that there are no mitigation measures that can remedy the area. Tr. 1/9/17 at 226:9-226:13.

467. White testified 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.

468. Dr. Kahakalau, a witness for the Flores-Case ʻOhana, argued that the TMT Project is not consistent with the Conservation District because any construction will have some impact on the existing environment. Dr. Kahakalau explained: "Conserving, conservation, means to take care of the things that are currently there. Any construction will have an impact on the things that are currently there, and therefore not conserving. Not just the individual things like rocks or whether there are plants or whether there are animals or insects and all of that, but also the entire atmosphere of this district that is designed to conserve the cultural, spiritual and natural landscape of that place." Vol. 23, 1/9/17 at 122:18-123:8.

469. Based upon reliable, credible evidence, the TMT Project is consistent with the purpose of the Conservation District.

B. <u>CRITERION TWO, HAR § 13-5-30(C)(2): "THE PROPOSED LAND USE IS CONSISTENT WITH THE OBJECTIVES OF THE SUBZONE OF THE LAND ON WHICH THE USE WILL OCCUR[.]"</u>

470. The Conservation District is divided into various subzones, some more restrictive than others. Uses that are not appropriate in the most restrictive subzone may be appropriate in the Resource subzone. (White) Tr. 10/20/16 at 60:15-61:1.

471. The TMT Project will be located in the Resource subzone. Ex. A-2/R-2 at SS-1.

472. Amendments to the Conservation District Rules were adopted by the BLNR on August

12, 2011. These amendments were signed into law by the Governor of the State of Hawai‘i on November 23, 2011, and became effective ten days thereafter. *See* HAR §13-5 et seq. (2011).

473. Under the version of HAR § 13-5-13(a) that was in effect when the CDUA was submitted to the BLNR, "[t]he objective of this [Resource] subzone is to develop, with proper management, areas to ensure sustained use of the natural resources of those areas."

474. Within the Resource subzone, astronomy facilities – such as the TMT Project – (along with other specifically enumerated uses such as commercial forestry, mining and extraction, and aquaculture) can be allowed with proper management. HAR § 13-5-24(c); WDT White at 5; (White) Tr. 10/20/16 at 61:8-61:11; (White) Tr. 10/24/16 at 17:16-18:15; Tr. 1/11/17 at 51:4-22; Ex. A-3/R-3 at 3-142, 3-155.

475. Evidence presented addressed whether the TMT Project will be properly managed to ensure the sustained use of the natural resources within the MKSR.

476. For purposes of the criteria in HAR § 13-5-30(c)(1) and (c)(2), the rules do not specify limits as to the size, appearance or other characteristics of an astronomy facility within the Resource subzone.

477. As an astronomy facility that will be subject to appropriate management aimed at ensuring the protection and sustained use of natural resources in the area, the TMT Project is consistent with the purposes of the Resource subzone.

478. One of the objectives of the Resource subzone is to develop and promote science through astronomical facilities constructed in the approved geographic areas, including the specific Area E location for the TMT Project within the Mauna Kea Astronomy Precinct.

479. The version of HAR § 13-5-24(c) in effect when the CDUA was submitted to the BLNR, clearly provided that "Astronomy facilities under an approved management plan" are permitted activities in the Resource subzone.

480. The version of HAR § 13-5-2 in effect when the CDUA was submitted to the BLNR, provided that a "'Management plan' means a comprehensive plan for carrying out multiple land uses."

481. The evidence presented at the hearing, and addressed further below, shows that the CMP, with its sub-plans, is a comprehensive plan for carrying out multiple land uses in the designated subzone. The CMP that was previously approved by the BLNR is still fully applicable and was in place and approved by the BLNR when the CDUA for the TMT Project was presented to the BLNR for approval.

482. The current amended version of HAR § 13-5-13(a), provides: "[t]he objective of this [Resource] subzone is to ensure, with proper management, the sustainable use of the natural resources of those areas."

483. The evidence presented demonstrates that the TMT Project, with proper management,

provides a mechanism for the sustainable use of the natural resources in areas affected by the TMT Project.

484. The current amended version of HAR § 13-5-24(c), provides that "Astronomy facilities under a management plan approved simultaneously with the permit" are permitted in the Resource subzone.

485. The current amended version of HAR § 13-5-2, provides that "'Management plan' means a project or site based plan to protect and conserve natural and cultural resources."

486. The TMT Management Plan is a project or site-based plan to protect and conserve natural and cultural resources, and was appended to and incorporated into the CDUA.

487. HAR § 13-5-13(a) seeks to "ensure, with proper management, the sustainable use" of the resources that are proposed to be used. Here, the TMT Project will not consume or significantly adversely affect Mauna Kea's "natural resources" – *i.e.*, Mauna Kea's high altitude, large fraction of clear nights, atmospheric stability, low mean temperature, low perceptible water vapor, distance from light pollution, and optimal latitude. The TMT Project is sustainable in that it does not actually consume the natural resources; it principally uses the existing natural environment as an optimal resource to observe the night sky and star light. The 5-acre area of land upon which the TMT Observatory will be built, will ultimately be restored and returned to its original state following its use after decommissioning. (Dr. Hasinger) Tr. 10/27/16 at 337:22-338:14.

488. The University and TIO have committed to managing the natural resources in the UH Management Area in a manner that fulfills the objectives of the Resource subzone and the purpose of the Conservation District. WDT White at 6; (White) Tr. 10/20/16 at 60:15-62:25 (White); *see* Exs. A-9 to A-13.

489. The proposed TMT Project meets the objectives of the Resource subzone by using the excellent natural astronomical resources that Mauna Kea possesses in a sustainable way in order to uphold Hawaii's position at the forefront of astronomical research, while also implementing and supporting overall Mauna Kea management activities in a way that promotes the sustainable use of the resources in the subzone area. WDT White at 6; *see* (White) Tr. 10/20/16 at 62:14-62:20 (White).

490. The University and TIO have committed themselves to develop and operate the TMT Project in compliance with the Conservation District rules, CMP, sub-plans, TMT Management Plan, and with all conditions attached to any resulting CDUP. Compliance with the Conservation District Rules, CMP, CRMP, NRMP, Decommissioning Plan, PAP, and the TMT Management Plan will ensure the appropriate and sustained use of the natural and cultural resources found on Mauna Kea. WDT White at 6; (White) Tr. 10/20/16 at 61:17-62:9.

491. The CMP and sub-plans comprise the BLNR-approved management documents for the UH Management Area on Mauna Kea. (Nagata) Tr. 12/8/16 at 28:23-29:17 (Nagata). The University has taken significant steps to implement the CMP and sub-plans and to manage the resources found in the UH Management Area on Mauna Kea to ensure the

sustainable use of those resources. Exs. A-9 to A-14; Ex. A-16 - A-22.

492. The TMT Management Plan adopts the approach, goals, objectives, findings, recommendations, and management strategies and actions of the CMP and sub-plans in their entirety. Exhibits A-1, Ex. B at S-2, 1-1 to 1-2; Ex. A-26 at 7. The TMT Management Plan commits to guide various activities and uses within the TMT Project area. The TMT Management Plan is consistent with HAR § 13-5-24(c). Ex. A-1/R-1, Ex. B at 1-1 to 1-2; (White) Tr. 10/20/16 at 59:15-60:18.

493. The TMT Management Plan contains a draft historic preservation mitigation plan, a construction plan, a historical and archaeological site plan, a maintenance plan, and an arthropod monitoring plan . These plans are consistent with and link to the broader CMP and sub-plans. Ex. A-1/R-1, Ex. B at App. A to App. E; Ex. A-7/R-7 at 46-47.

494. The TMT Management Plan will govern the TMT Project construction, operation and decommissioning. The TMT Management Plan will be updated every five years based on: (1) updates to the Mauna Kea CMP and sub-plans; (2) relevant new or modified laws, regulations, and policies; (3) results from the regular monitoring and reporting done by the TMT Project and OMKM; and (4) modifications to the operation of the TMT Observatory. Ex. A-1/R-1, Ex. B at 5-2.

495. Kehaunani Abad, PhD ("**Dr. Abad**"), a witness for KAHEA, testified that in her opinion, the CDUA does not meet the criterion stated in HAR § 13-5-30(c)(2) because an astronomy facility must "also meet the full spectrum of permitting requirements under § 13-5-30(c)." Ex. B.08a (WDT Dr. Abad) at 4-5. Among the many reasons Dr. Abad feels she is qualified to offer such an opinion are:

1. I received a masters and a doctoral degree in Anthropology from the University of Hawai‘i at Mānoa in 2000, specializing in Hawaiian archaeology in 1992 and 2000, respectively and including training in ‘ōlelo Hawai‘i (Hawaiian language).

2. I meet the standards established in HAR §13-281-3, §13-281-6, and §13-281-7 to serve as a principal investigator or researcher in archaeology, ethnography, or history.

3. I previously served as a Hawaiian cultural advisor, researcher and program developer for the Ho‘okahua Division of Kamehameha Schools in Honolulu, Hawai‘i (2005-2007) and later as the Kamehameha Schools’ director of Kamehameha Publishing overseeing such matters as the cultural integrity of its publications (2007-2012).

4. I have also served as the director of the Community Engagement Division of the Office of Hawaiian Affairs (2012-2015), overseeing the cultural integrity and historical accuracy of film and print publications produced by this communications unit.

5. I currently serve as the director of Kealaiwikuamo‘o at Kamehameha Schools, a division charged with supporting a collaborative network of preschool through

graduate school entities dedicated to forwarding Hawaiian language, culture, and ʻāina (land) based education (though this testimony is provided solely in my personal capacity, separate from my formal employment).

6. From 1994 to 2000, I served as the ʻEwa regional representative on the Oʻahu Island Burial Council and was involved in the determining the cultural appropriate treatment of previously identified Hawaiian burials and advising the State of Hawaiʻi Historic Preservation Division regarding inadvertently discovered Hawaiian burials.

7. From 2006 to 2012, I served as Kamehameha Schools' representative on the Oʻahu Island Burial Council.

8. I have prepared burial treatment plans and served as a cultural and archaeological monitor on behalf of the Queen Emma Foundation (John Young burial restoration) and Kamehameha Schools (Keanakamanō restoration). Kēhaunani Abad, PhD 10.10.16 Exhibit B.08a 3

9. I have served as an expert witness in cases involving Hawaiian burials as well as other sites of Hawaiian religious and cultural significance including the case of the City and County of Honolulu vs. Paulette Kaleikini (related to the Honolulu Rail project, 2011), Joseph A. Brescia vs. Kaʻiulani Edens-Huff, et all (related to the Nāue, Kauaʻi Brescia property burial treatment plan, 2008), State of Hawaiʻi vs. Paulette Kaleikini (related to the Ward Villages project, 2008), the ʻĪlioʻulaokalani Coalition, et al. vs. the United States Army (related to the Stryker Brigade, 2006).

10. I was qualified as an expert witness in archeology and Hawaiian cultural burial practices by Judge Ronald Ibarra during the trial of Kelly, et al., v. 1250 Oceanside Partners, et al. concerning burial protection issues involving the Hōkūliʻa subdivision development in South Kona (2001).

WDT of Kehaunani Abad, PhD, Ex. B.08a.

496. Dr. Abad contends that the TMT CDUA failed to: (1) identify existing natural resources within the surrounding area, community or region for inclusion in its analysis; and (2) adequately address the highly significant nature of sites in the region. She also argues that the TMT CDUA is significantly flawed in its discussion of project impacts.

497. The TMT Project is consistent with the objectives of the Resource subzone.

C. <u>CRITERION THREE, HAR § 13-5-30(C)(3): "THE PROPOSED LAND USE COMPLIES WITH PROVISIONS AND GUIDELINES CONTAINED IN CHAPTER 205A, HRS, ENTITLED 'COASTAL ZONE MANAGEMENT', WHERE APPLICABLE[.]"</u>

498. HRS § 205A-1 defines Hawaii's Coastal Zone Management Area ("**CZMA**") as consisting of "all lands of the State and the area extending seaward from the